



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

February 27, 1981

MEMORANDUM FOR: Michael A. Parsont, Chief  
Radiological Health Standards Branch, OSD

FROM: Diane S. Flack, Radiobiologist  
Radiological Health Standards Branch, OSD

SUBJECT: STATUS REPORT ON TMI WORKER REGISTRY

BACKGROUND

In response to an April 1, 1979 memorandum from former HEW Secretary Joseph A. Califano, a cooperative NRC/NIOSH effort was initiated to establish a registry of persons on the Three Mile Island Site. Documentation of who had been on site and their radiation exposure records was considered essential for proper follow-up for health effects and protection of the public health. Since the initiation of this effort, NRC has worked with Met-Ed and NIOSH to assure that the proper information is collected and stored at TMI. This is one of a series of updates of our activities in this area.

During a September 19, 1980 meeting between NRC and Met-Ed representatives it was determined that the dosimetry program at TMI was satisfactory for the purpose of a worker registry. Furthermore, with the long-term maintenance of NRC-required records, it was felt that this program met the dosimetry objectives of the radiation worker registry requested by former Secretary Califano in April 1979. *(but not the epidemiological records - medical, identifiers etc) JF*

CURRENT STATUS

Since the September 1980 meeting at TMI, I have called James Hildebrand, Manager, Radiological Support Services, Three Mile Island, once a month to discuss programs related to the worker registry. The primary purpose of these discussions has been to determine if there have been any changes in: 1) the status of the program areas related to the registry; 2) the types of records, other than NRC-required records, kept on site workers; and 3) the retention of employee records. We have also discussed the monthly entries into the containment building in regard to: 1) the number and type of workers participating in the entries; 2) the doses received by the entry teams; 3) the records kept on entry team personnel; and 4) the medical data being collected before and after the entries.

During the period October 1980 to January 1981 there was no change in the status of the dosimetry records, security records, and personnel records,

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i.e., the same information was being collected as was previously collected and the records are still being stored on site. The status of the industrial hygiene group is also still the same, with no immediate plans for expansion due to Met-Ed's financial problems and large layoffs of site personnel. (undistorted on IIR)

Several decisions and changes have been made in the medical program. Met-Ed/GPU management has decided not to employ a full time physician on site at this time, but they have neither agreed upon nor disapproved of the revised medical program that was similar to the Navy's NAVMED P-5055. However, blood and urine testing is now being offered to persons at the time of annual respiratory physicals. This additional data will become part of those employee's medical records.

SC  
not →  
quit  
extension  
Testing  
only good  
of time  
of record.

ENTRY  
team  
working  
c.c.  
small.

Because of the potential for significant radiation exposures, the records kept on the personnel currently entering the containment building merit special consideration. A list of people on each entry team is kept in the TMI Dosimetry Office, but all additional data kept on them is in their individual files. Extensive medical exams are being done on the entry teams prior to the entries. Met-Ed is doing complete physical exams only on its employees, but is giving respiratory exams to all of the entry team personnel. Medical exams for entry personnel working for contractors, such as Bechtel, are being left up to their companies. All personnel involved in entry are given whole body counts and urinalyses. Urinalyses routinely show the presence of tritium for all entry personnel. The tritium levels are low-yielding calculated doses of less than 1 mrem/yr/worker. Air samples are being taken to correlate the airborne tritium levels with urine levels. As of January 1980, entry personnel have received an average whole body exposure per entry of about 260 mr, with 400 mr being the maximum exposure to one worker on an entry team.

In addition to the information supplied via telephone, the TMI Dosimetry Section continues to send monthly computer printouts on the TLD and self-reading dosimeter data. These data are then compiled (Attachment 1) for distribution to RHSB, OHSB and Region I. Bimonthly reports of the TLD monitoring data by whole body exposures ranges are sent to Dr. Oddvar Nygaard for distribution to the NIH TMI Follow-up Research Subcommittee.


FUTURE PLANS

No changes are foreseen in the immediate future for the monitoring of TMI data and programs related to the TMI worker registry.

*Diane S. Flack*

Diane S. Flack, Radiobiologist  
Radiological Health Standards Branch  
Office of Standards Development

Attachment: As stated

✓ cc: Paul Strudler, NIOSH 

SUMMARY REPORT  
TMI STATION-UNITS I & II  
CURRENT OCCUPATIONAL EXTERNAL RADIATION EXPOSURE

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Report period 01/01/80-12/31/80

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Personnel monitored 10,761

No measurable exposure 8,433

Rem  
Exposure less than 0.1 1,356

0.1 to 0.25 539

0.25 to 0.5 304

0.5 to 0.75 62

0.75 to 1.0 35

1.0 to 2.0 81

2.0 to 3.0 1

3.0 to 4.0

4.0 to 5.0

5.0 to 6.0

6.0 to 7.0

7.0 to 8.0

8.0 to 9.0

9.0 to 10.0

10.0 to 11.0

11.0 to 12.0

More than 12.0

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THE STATION - CURRENT OCCUPATIONAL EXTERNAL RADIATION EXPOSURE  
1960 TLD MONITORING DATA

Report period	1/01/60 - 1/31/60	2/01/60 - 2/29/60	3/01/60 - 3/31/60	4/01/60 - 4/30/60	5/01/60 - 5/31/60	6/01/60 - 6/30/60	7/01/60 - 7/31/60	8/01/60 - 8/31/60	9/01/60 - 9/30/60	10/01/60 - 10/31/60	11/01/60 - 11/30/60	12/01/60 - 12/31/60
Personnel monitored	3,736	3,475	3,627	2,342	3,132	3,333	3,209	3,082	3,028	2,974	2,765	2,229
of measurable exposure	2,458	2,539	2,694	1,679	2,193	2,476	2,394	2,313	2,377	2,187	2,168	1,677
Rem exposure less than 0.1	1,146	890	871	621	873	788	776	711	605	693	650	522
0.1 to 0.25	120	41	63	32	59	67	37	50	41	37	16	17
0.25 to 0.5	10	3	8	10	7	2	2	6	4	6	12	8
0.5 to 0.75	2	2	1						1	4		4
0.75 to 1.0	•											1
1.0 to 2.0												
2.0 to 3.0												
3.0 to 4.0												
4.0 to 5.0												
5.0 to 6.0												
6.0 to 7.0												
7.0 to 8.0												
8.0 to 9.0												
9.0 to 10.0												
10.0 to 11.0												
11.0 to 12.0												
More than 12.0												
Monthly total	62,716	34,884	36,788	26,746	34,166	33,098	27,438	26,998	24,844	28,076	19,778	20,638
Yearly total for Units 1 & 11	62,716	67,664	127,664	149,609	183,689	217,699	246,037	272,027	296,871	324,746	344,466	365,096

→ INCREASE TO TLD DOSE →





TABLE 2 - NUMBER OF PERSONNEL AND MAN HOURS BY WORK AND JOB FUNCTION  
1980 RMP SELF READING DOSIMETER DATA

Report period	1/01/80- 1/31/80	2/01/80- 2/29/80	3/01/80- 3/31/80	4/01/80- 4/30/80	5/01/80- 5/31/80	6/01/80- 6/30/80	7/01/80- 7/31/80	8/01/80- 8/31/80	9/01/80- 9/30/80	10/01/80- 10/31/80	11/01/80- 11/30/80	12/01/80- 12/31/80
Station number	117	118	140	145	165	177	181	186	202	187	160	160
Personnel runs	1,562	1,407	2,866	3,263	3,073	4,051	4,158	6,017	8,879	9,192	9,272	5,013
Utility number	130	126	111	118	120	128	127	97	88	66	36	30
Personnel runs	6,724	6,487	6,439	6,888	6,429	6,601	6,864	6,679	4,892	3,127	1,644	2,190
Contractor number	448	397	368	363	348	345	319	304	272	244	173	146
Personnel runs	29,059	18,399	18,736	19,953	16,844	11,921	11,849	12,189	18,628	8,028	3,487	3,000
Monthly total	696	640	616	626	633	652	607	587	662	607	369	350
Personnel number	37,348	26,293	28,740	30,094	28,346	22,873	22,871	23,885	21,399	18,304	9,203	10,291
Personnel runs												

*Reflects  
data not  
in personal*

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3MASP190 JOB 67 GH601200 SETUP -- R21.PRI -- F R1A1 -- C 6 -- T 6 MN  
COMMENTS CURRENT OCCUPATIONAL EXTERNAL RADIATION EXPOSURE  
PROCESS PERIOD 01/01/79 TO 06/30/79

EXPOSURE PERIOD	DEPT CODE	BIRTH DATE	TERMINATION DATE	WHOLE BODY (REM)	QUARTER TO-DATE (REM)	CURRENT LIFE TIME (REM)	CURRENT PAD (REM)	CURRENT UNUSED (REM)	SKIN (REM)	ENTR (REM)
04/01/79 TO 04/30/79	CN		05/07/79				5.000	5.000		
04/01/79 TO 04/29/79	CN						5.000	5.000		
03/30/79 TO 03/31/79	CN		05/14/79	:030	:030	:030	90.000	89.979	:030	
04/01/79 TO 04/07/79				:105	:135	:135	90.000	89.865	:165	
04/07/79 TO 04/08/79							90.000	89.865		
04/08/79 TO 04/11/79							90.000	89.865		
04/11/79 TO 04/15/79							90.000	89.865		
04/15/79 TO 04/30/79							90.000	89.865		
05/01/79 TO 05/15/79							90.000	89.865		
05/01/79 TO 05/22/79	CN		05/21/79				30.000	30.000		
04/01/79 TO 04/12/79	CN		04/12/79				130.000	130.000		
04/01/79 TO 04/30/79							130.000	130.000		
05/01/79 TO 05/08/79	CN		05/07/79				60.000	60.000		
03/01/79 TO 03/29/79							60.000	60.000		
03/29/79 TO 03/30/79							60.000	60.000		
04/01/79 TO 04/04/79							135.000	135.000		
04/04/79 TO 04/05/79							135.000	135.000		
04/05/79 TO 04/06/79							135.000	135.000		
03/01/79 TO 03/29/79	CN		05/08/79	:075	:530	:075	75.000	74.925	:075	
03/29/79 TO 03/30/79				:455	:530	:530	75.000	74.975	:455	
04/01/79 TO 04/04/79							75.000	74.975		
04/04/79 TO 04/05/79							75.000	74.975		
04/05/79 TO 04/06/79							75.000	74.975		

Information in this record was deleted in accordance with the Freedom of Information Act, exemptions 6  
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