

TMI DOCUMENTS

DOCUMENT NO: TMI-0219

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METROPOLITAN EDISON COMPANY.

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7906150135

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THREE MILE ISLAND
REACTOR TRIP REPORT # 8

1. Time 0243

Date 9/21/78

2. Cause of trip.

RPS HIGH PRESSURE TRIP CAUSED BY LOW FEED
WATER FLOW. LOW FEED WATER FLOW WAS CAUSED
BY FEED PUMP & FEED REG VALVE PROBLEMS

3. Plant conditions prior to trip

Power Level 19%

Reactor Coolant System Pressure 2175 psig

Tave 585 °F

Reactor Coolant System Flow 100 %

Makeup Tank Level 66" inches

Pressurizer Level 210 inches H₂O

RC Boron 1335 ppm.

FPD .81

Control Rod Positions (withdrawn)

Group 1 100 %

Group 3 100 %

Group 5 100 %

Group 7 73 %

Group 2 100 %

Group 4 100 %

Group 6 73 %

Group 8 28 %

ICS Stations in Hand

① A+B feed pumps

③ A SIV VALVE

② B DIAMOND

④ A TC

4. Evolutions in progress prior to trip.

Increasing power to 20%

5. Corrective actions to prevent reoccurrence.

TUNE ICS STATIONS

6. Time and date next criticality achieved.

9/21/78 0545

W.H. Zew
Shift Supervisor

James R. Fluz
Supervisor of Operations

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02:14:43 DATA 0006 RP AVERAGE LINEAR POWER (PCT) 21.0
02:15:11 DATA 0006 RP AVERAGE LINEAR POWER (PCT) 21.0
GROUP4
03:03:54
09/21/78

SEQUENCE OF EVENTS REVIEW

02:32:37:666	3137	500 KV IN XFMR BKR B2-02	TRIP
02:43:50:666	3177	RP YELLOW CH RC HI PRESS	TRIP HIGH
02:43:50:717	3176	RP GREEN CH RC HI PRESS	TRIP HIGH
02:43:50:762	3175	RP RED CH RC HI PRESS	TRIP HIGH
02:43:50:832	3153	MAIN GENERATOR DIFF	TRIP
02:43:50:841	3113	EHG AUTO STOP TRIPPED	TRIP
02:43:51:176	3133	TURB INTERCEPT VALVE NO 1 CLOSED	CLSD
02:43:51:182	3134	TURB INTERCEPT VALVE NO 2 CLOSED	CLSD
02:43:51:184	3135	TURB INTERCEPT VALVE NO 4 CLOSED	CLSD
02:43:51:183	3132	TURBINE STOP VALVE NO 4 CLOSED	CLSD
02:43:51:196	3135	TURB INTERCEPT VALVE NO 3 CLOSED	CLSD
02:43:51:199	3131	TURBINE STOP VALVE NO 3 CLOSED	CLSD
02:43:51:204	3137	500 KV IN XFMR BKR B2-02	TRIP
02:43:51:209	3138	500 KV IN XFMR BKR B2-2602	TRIP
02:43:51:240	3130	TURBINE STOP VALVE NO 2 CLOSED	CLSD
02:43:51:257	3129	TURBINE STOP VALVE NO 1 CLOSED	CLSD
02:43:55:224	3171	REACTOR MANUAL TRIP	TRIP
02:46:10:516	3172	RC MAKE-UP P4P 1A TRIPPED	TRIP
02:50:54:833	3115	EHG LOSS OF DC POWER	LOST

02:40:49	NORM	0775	CA AUTO GAS ANALYZER O2 (PCT)	7.50
02:40:47	CONT	2789	MS&R 2D RHTR DRAIN LVL LOW	LOW
02:40:49	NORM	0130	8STG A HTR BLEED ST PRESS	- 2.9
02:40:49	BAD	0776	CA AUTO GAS ANALYZER O2 (PCT)	-??.??
02:40:49	LOW	0002	SP STM GEN A S-U RANGE LVL (IN)	23.8
02:40:54	CONT	2800	MS&R 1D RHTR DRAIN LVL HIGH	HIGH
02:41:10	CONT	2800	MS&R 1B RHTR DRAIN LVL HIGH	NORM
02:41:16	CONT	2676	PRESS HTR GROUP 3	NORM
02:41:16	CONT	2677	PRESS HTR GROUP 4	NORM
02:41:16	CONT	2678	PRESS HTR GROUP 5	NORM
02:41:16	CONT	2679	PRESS HTR GROUP 6	NORM
02:41:16	CONT	2680	PRESS HTR GROUP 7	NORM
02:41:16	NORM	0002	SP STM GEN A S-U RANGE LVL (IN)	26.6
02:41:17	CONT	2801	MS&R 1B RHTR DRAIN LVL LOW	LOW
02:41:19	CONT	2795	MS&R 2A RHTR DRAIN LVL LOW	LOW
02:41:27	FLAG	3607	ELP3 ERROR POWER RANGE CH3	YES
02:41:27	FLAG	3608	ELP4 ERROR POWER RANGE CH4	YES
02:41:39	CONT	3007	CRD MANUAL MODE	ON
02:41:39	CONT	3008	CRD AUTOMATIC MODE	OFF
02:41:49	NORM	0776	CA AUTO GAS ANALYZER O2 (PCT)	9.95
02:42:00	CONT	2795	MS&R 2A RHTR DRAIN LVL LOW	NORM
02:42:06	CONT	2795	MS&R 2A RHTR DRAIN LVL LOW	LOW
02:42:16	CONT	2759	14STG FDW HTR A LVL LOW	NORM
02:42:40	CONT	2807	MS&R 1A RHTR DRAIN LVL LOW	NORM
02:42:49	LOW	0136	FEED PUMP 1A OUTLET PRESS	895.
02:42:49	BAD	0776	CA AUTO GAS ANALYZER O2 (PCT)	-??.??
02:42:57	FLAG	3607	ELP3 ERROR POWER RANGE CH3	NO
02:42:57	FLAG	3608	ELP4 ERROR POWER RANGE CH4	NO
02:42:59	LOW	0003	SP STM GEN B S-U RANGE LVL (IN)	23.8
02:43:02	CONT	2807	MS&R 1A RHTR DRAIN LVL LOW	LOW
02:43:02	LOW	1602	PLVL RC PRESSURIZER LVL (IN H2O)	181.8
02:43:04	NORM	0136	FEED PUMP 1A OUTLET PRESS	934.
02:43:07	LOW	0002	SP STM GEN A S-U RANGE LVL (IN)	23.6
02:43:10	CONT	2677	PRESS HTR GROUP 4	TRIP
02:43:10	CONT	2678	PRESS HTR GROUP 5	TRIP
02:43:10	CONT	2679	PRESS HTR GROUP 6	TRIP
02:43:10	CONT	2680	PRESS HTR GROUP 7	TRIP
02:43:11	CONT	2676	PRESS HTR GROUP 3	TRIP
02:43:32	CONT	2759	14STG FDW HTR A LVL LOW	LOW
02:43:37	CONT	2759	14STG FDW HTR A LVL LOW	NORM
02:43:40	CONT	2771	14STG FDW HTR A LVL HIGH	HIGH
02:43:47	NORM	0096	COND H&L LVL (IN H2O)	23.44
02:43:47	CONT	2771	14STG FDW HTR A LVL HIGH	NORM
02:43:50	CONT	2887	RP CH A RC HI PRESS	TRIP

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02:43:50	CONT	2887	RP CH A RC HI PRESS	TRIP
02:43:50	CONT	2888	RP CH B RC HI PRESS	TRIP
02:43:50	CONT	2889	RP CH C RC HI PRESS	TRIP
02:43:50	CONT	2890	RP CH D RC HI PRESS	TRIP
02:43:50	CONT	2911	RP REACTOR PROTECTION CH A	TRIP
02:43:50	CONT	2912	RP REACTOR PROTECTION CH B	TRIP
02:43:50	CONT	2913	RP REACTOR PROTECTION CH C	TRIP
02:43:50	CONT	2914	RP REACTOR PROTECTION CH D	TRIP
02:43:50	CONT	3010	CRD REACTOR TRIP CONFIRM	TRIP
02:43:50	CONT	3013	CRD SAFETY RODS NOT WITHDRAWN	YES
02:43:50	CONT	3016	CRD PROG LAMP FAULT	YES
02:43:51	CONT	3113	EHC AUTO STOP TRIPPED	TRIP
02:43:51	CONT	3126	TURBINE TRIPPED	NORM
02:43:51	CONT	3129	TURBINE STOP VALVE NO 1 CLOSED	CLSD
02:43:51	CONT	3130	TURBINE STOP VALVE NO 2 CLOSED	CLSD
02:43:51	CONT	3131	TURBINE STOP VALVE NO 3 CLOSED	CLSD
02:43:51	CONT	3132	TURBINE STOP VALVE NO 4 CLOSED	CLSD
02:43:51	CONT	3133	TURB INTERCEPT VALVE NO 1 CLOSED	CLSD
02:43:51	CONT	3134	TURB INTERCEPT VALVE NO 2 CLOSED	CLSD
02:43:51	CONT	3135	TURB INTERCEPT VALVE NO 3 CLOSED	CLSD
02:43:51	CONT	3136	TURB INTERCEPT VALVE NO 4 CLOSED	CLSD
02:43:51	CONT	313x	500 KV IN XFMR BKR B2-02	TRIP
02:43:51	CONT	3138	500 KV IN XFMR BKR B2-2602	TRIP
02:43:51	CONT	3153	MAIN GENERATOR DIFF	TRIP
02:43:51	CONT	2879	RP SUR BYPASS (CH N15)	NORM
02:43:51	CONT	2880	RP SUR BYPASS (CH N16)	NORM
02:43:51	CONT	2881	RP SUR BYPASS (CH N17)	NORM
02:43:51	CONT	2882	RP SUR BYPASS (CH N18)	NORM
02:43:56	CONT	3171	REACTOR MANUAL TRIP	TRIP
02:43:57	CONT	3171	REACTOR MANUAL TRIP	NORM
02:44:02	NORM	1682	PLVL RC PRESSURIZER LVL (INH20)	223.6
02:44:04	LOW	0130	FEED PUMP 1A OUTLET PRESS	881.
02:44:04	HIGH	0398	RC LOOP A WIDE RANGE PRESS	2364.
02:44:04	HIGH	0399	RC LOOP A WIDE RANGE PRESS	2354.
02:44:04	HIGH	0400	RC LOOP B WIDE RANGE PRESS	2353.
02:44:08	BAD	01y0	GENERATOR MI OUTPUT GROSS	-???.?
02:44:10	FLAG	3661	BELOW 40% POW INB ALARM BYPASSED	NO
02:44:10	FLAG	3663	POWER LT 15% ALARM PKG BYPASSED	YES
02:44:10	CONT	2759	14STG FOW HTR A LVL LOW	LOW
02:44:23	NORM	0186	GENERATOR MI OUTPUT GROSS	5.
02:44:23	CONT	2807	MS&R 1A RHTR DRAIN LVL LOW	NORM
02:44:49	NORM	0776	CA AUTO GAS ANALYZER O2 (PCT)	8.00
02:44:52	CONT	2806	MS&R 1A RHTR DRAIN LVL HIGH	HIGH
02:45:04	BAD	0130	8STG A HTR RIFED ST PRESS	-???.?

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02:45:04	BAD	0130	8STG A HTR BLEED ST PRESS	-77.7
02:45:04	NORM	0136	FEED PUMP 1A OUTLET PRESS	969.
02:45:19	NORM	0130	8STG A HTR BLEED ST PRESS	- 2.9
02:45:31	CONT	2770	14STG FDM HTR D LVL HIGH	HIGH
02:45:39	CONT	2770	14STG FDM HTR D LVL HIGH	NORM
02:45:40	BAD	0776	CA AUTO GAS ANALYZER O2 (PCT)	-77.77
02:45:57	NORM	0003	SP STM GEN B S-U RANGE LVL (IN)	27.0
02:46:01	CONT	2676	PRESS HTR GROUP 3	NORM
02:46:01	CONT	2677	PRESS HTR GROUP 4	NORM
02:46:01	CONT	2678	PRESS HTR GROUP 5	NORM
02:46:01	CONT	2679	PRESS HTR GROUP 6	NORM
02:46:01	CONT	2680	PRESS HTR GROUP 7	NORM
02:46:02	HIGH	1682	PLVL RC PRESSURIZER LVL (11H20)	267.3
02:46:04	NORM	0398	RC LOOP A WIDE RANGE PRESS	2110.
02:46:04	NORM	0399	RC LOOP A WIDE RANGE PRESS	2100.
02:46:04	NORM	0400	RC LOOP B WIDE RANGE PRESS	2099.
02:46:09	CONT	2919	MUP P1A HTR STATUS	NORM
02:46:10	CONT	3172	RC MAKE-UP PMP 1A TRIPPED	NORM
02:46:11	CONT	2019	MUP P1A HTR STATUS	TRIP
02:46:12	CONT	3172	RC MAKE-UP PMP 1A TRIPPED	TRIP
02:46:19	CONT	2806	MS&R 1A RHTR DRAIN LVL HIGH	NORM
02:46:26	LOW	0003	SP STM GEN B S-U RANGE LVL (IN)	23.6
02:46:32	NORM	1082	PLVL RC PRESSURIZER LVL (11H20)	237.3
02:47:14	CONT	2807	MS&R 1A RHTR DRAIN LVL LOW	LOW
02:47:19	NORM	0776	CA AUTO GAS ANALYZER O2 (PCT)	7.50
02:47:43	NORM	0032	11STGA-13STGA HTR DRN FL(KLD/H)	73.3
02:47:40	LOW	0136	FEED PUMP 1A OUTLET PRESS	891.
02:47:49	BAD	0776	CA AUTO GAS ANALYZER O2 (PCT)	-77.77
02:48:18	CONT	2676	PRESS HTR GROUP 3	TRIP
02:48:19	CONT	2770	14STG FDM HTR B LVL HIGH	HIGH
02:48:23	CONT	2770	14STG FDM HTR B LVL HIGH	NORM
02:48:26	CONT	2677	PRESS HTR GROUP 4	TRIP
02:48:26	CONT	2678	PRESS HTR GROUP 5	TRIP
02:48:26	CONT	2679	PRESS HTR GROUP 6	TRIP
02:48:26	CONT	2680	PRESS HTR GROUP 7	TRIP
02:48:34	NORM	0136	FEED PUMP 1A OUTLET PRESS	947.
02:49:19	NORM	0776	CA AUTO GAS ANALYZER O2 (PCT)	7.50
02:49:24	CONT	2676	PRESS HTR GROUP 3	NORM
02:49:24	CONT	2677	PRESS HTR GROUP 4	NORM
02:49:24	CONT	2678	PRESS HTR GROUP 5	NORM
02:49:24	CONT	2679	PRESS HTR GROUP 6	NORM
02:49:24	CONT	2680	PRESS HTR GROUP 7	NORM
02:49:38	CONT	2807	MS&R 1A RHTR DRAIN LVL LOW	NORM
02:49:40	CONT	2807	MS&R 1A RHTR DRAIN LVL LOW	LOW
02:50:11	NORM	0509	RP SRCE RANGE H11 LVL (LOG CPS)	2.311
02:50:11	NORM	0570	RP SRCE RANGE H12 LVL (LOG CPS)	2.360

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