UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

In the Matter of:	)	
	)	Case No. LB-85-214
OFFICE OF INVESTIGATIONS	)	
INVESTIGATIVE INTERVIEW	)	

AFFIDAVIT OF DAVID A. ANIOL

State of Michigan)
County of Monroe) ss:

1. I am a Nuclear Shift Supervisor at the Detroit Edison Fermi 2 Nuclear Power Station in Newport, Michigan. I make this affidavit to supplement the transcript of my interview conducted by the Office of Investigations in the above-referenced case on July 23, 1985 in Glen Ellyn, Illinois. This affidavit will clarify many statements in the transcript that do not accurately reflect my recollection of the events surrounding the reactor operator rod pull error at Fermi 2 on the evening of July 1-2, 1985.

2. One item on the master startup checklist is plant superintendent approval for reactor startup. This step in the startup procedure need not be taken at any particular point in the procedure. Thus, it may be either the first or the last item checked on the master checklist. It need not immediately

4A

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precede or follow any other designated step. It must only be checked prior to the first rod pull. Thus, the plant superintendent must approve reactor startup but need not specifically approve the first rod pull. The shift supervisor may approve the first rod pull upon a determination that every item on the master startup checklist is properly checked. The plant superintendent authorized reactor startup prior to my reporting on shift at 7:00 p.m. on July 1, but I authorized the first rod pull to initiate that startup at approximately 10:30 p.m. that same evening.

3.) was only momentarily present at the 11:20 p.m. full shift turnover meeting on July 1 in the control room conference room. He briefly attended to acknowledge his presence on shift but otherwise promptly assumed his duties at Panel 603 and relieved Lyn Barker.

4. The reactor operator had recognized the rod pull error and had begun to take corrective action before I directed him to reinsert the eleven misaligned rods to their initial position. When I so directed him, he had already reinserted two or three of the misaligned rods.

5. When I initially assessed the reactor operator's rod pull error I scanned the operator's rod pull sheet to roughly estimate the number of misaligned rods. I saw at that time that approximately five to twelve rods had been pulled by the reactor operator out of sequence. However, I did not verify

6, 7C portions

this initial estimate until later in the evening, when, while preparing a Deviation Event Report (DER), I counted on the rod pull sheet the actual number of rods checked by the reactor operator prior to his recognition of the error. Thus, it was not until later in the evening and after my telephone conversation with Eugene Preston that I established the actual number of misaligned rods.

6. I did not actually discuss inadvertent criticality with Edward Duda, the shift operations advisor, or Thomas Dong, the shift technical advisor, on the evening of the July 1-2. However, both Mr. Duda and Mr. Dong were in the immediate vicinity of Panel 603 when I discussed the rod pull error with ( ) and directed ( ) to reinsert the misaligned rods. I assumed that, in view of their immediate proximity to Panel 603, both Mr. Duda and Mr. Dong were familiar with the incident, and that they heard ( ) advise me that the reactor had not gone critical. I further assumed that they would have expressed a different view if they believed that the reactor had gone critical. If they had expressed a different view, I would have discussed it with them prior to directing ( ) to proceed with the reactor startup following his reinsertion of the misaligned rods.

7. I directed ( ) to reinsert the misaligned rods and to proceed with the reactor startup. I so directed ( ) upon my determination, that the reactor had not gone

6, 7C portions

critical. I assumed that Mr. Duda and Mr. Dong agreed with this determination, and that they believed that the reactor had not gone critical. I further assumed that they would have suggested a different response to the error if they had disapproved of my direction to [redacted].

8. My response at page 16 lines 20 and 21 of my testimony transcript is based on an understanding of the question to read: "Did anyone at that time or any time ever tell you that the reactor had gone critical?" This understanding is consistent with Mr. Lang's question at page 16 lines 16 and 17. I did not specifically discuss the rod pull error with the shift operations advisor or the shift technical advisor on the evening of July 1-2. I did not discuss the error with Mr. Duda until July 22. Mr. Duda indicated at that time that he did not believe that the reactor had gone critical inadvertently on the evening of July 1-2.

9. My response at page 17 lines 17 and 18 of my testimony transcript incorrectly indicates that I discussed inadvertent criticality with Mr. Dong on the evening of July 1-2. I did not discuss the rod pull error with Mr. Dong until a later date, at which time he indicated that he did not believe that the reactor had gone critical inadvertently on the evening of July 1-2. On that evening, therefore, it was my understanding that only the shift technical advisor in training, John Dewes, believed that the reactor may have gone critical inadvertently.

6, 7C, portions

10. Following my initial assessment of the reactor operator error and my direction to) to reinsert the misaligned rods, I returned to my office to consult the NRC regulations governing the reportability of non-emergency events. I determined that no notification of the error was required within either a one-hour or a four-hour time frame. However, I knew that I must prepare a DER prior to the next shift.

11. When I initially assessed the rod pull error, I did not count on the reactor operator's rod pull sheet the actual number of rods checked by ( ) prior to his recognition of the error. It was not until after my telephone conversation with Mr. Preston that I reviewed this sheet to determine the actual number of misaligned rods. While speaking to Mr. Preston on the phone, I relied on a rough estimate, offered by Mr. Dewes as he was passing by me, to inform Mr. Preston that approximately six rods had been pulled out of sequence.

12. The significance of the reactor operator error is reflected in my preparation of a DER for review by and discussion with Mr. Preston on the morning of July 2. Thus, there was no need to record in my log either the error or my telephone conversation with Mr. Preston, who routinely reviewed my logs yet who already knew of the error. I had already anticipated a discussion of the error with Mr. Preston on the morning of July 2. Thus, I did not believe on the evening of

6, 7C portions

July 1-2 that an entry in my log to record either the reactor operator error or my telephone conversation with Mr. Preston was necessary. It would have been a superfluous entry.

13. The transcript of my testimony at page 24 line 24 incorrectly reflects my response to Mr. Kalkman's question. I had previously informed Mr. Preston that I believed that the reactor had not gone critical. This corrected response is consistent with Mr. Kalkman's reply to that response at line 25.

14. The GE test engineer, Kip Powel, expressed no view on inadvertent criticality when I briefly spoke to him on the evening of July 1-2. He merely made mention of the error to me at that time.

15. I regarded the reactor operator rod pull error as a significant event requiring documentation in the form of a DER. However, in the hours following the error and the action to correct it, I was occupied with the reactor startup and our efforts to bring the power plant up to 150 pounds of pressure. These efforts occupied other shift personnel as well. We viewed the error as significant, yet we had other matters to address throughout the evening and did not, consequently, discuss the error at great length. Our lack of discussion, I believe, is no indication of the seriousness with which we viewed the error.

16. Since the time of the reactor operator error on the evening of July 1-2, I have received additional training on rod

pull procedure. The training and the dates on which I completed it are set forth in Appendix A to this affidavit, which I hereby adopt and incorporate as part of this affidavit.

17. I have reviewed my interview transcript for textual errors. These errors are set forth in Appendix B to this affidavit, which I hereby adopt and incorporate as part of this affidavit.

18. I am prepared to clarify further any of my statements should the need arise.

David A. Aniol

David A. Aniol

Sworn to before me
on October 23, 1985

Marcia Buck

Notary Public

MARCIA BUCK
Notary Public, Washtenaw County, MI
My Commission Expires Dec. 28, 1987

acting in Monroe County, Mi.

APPENDIX A

Additional Training	Date of Completion
A. Review of Procedures	
1. Reactor Engineering Procedure 51.000.08 "Control Rod Sequence and Movement Control" Rev. 4	8/19/85
2. Operations Procedure 23.608 "Rod Worth Minimizer"	10/15/85
3. Operations Procedure 24.608 "Rod Worth Minimizer Functional Test"	10/15/85
4. Operations Procedure 24.609 "Rod Sequence Control System Functional Test"	10/15/85
5. Operations Administrative Procedure 21.000.01 "Shift Operations and Control Room"	10/15/85
a. Added to the duties of the NSS the responsibility for ensuring that the evaluations of events are properly conducted and documented in the log book	
6. Operations Procedure 23.623 "Reactor Manual Control, CRD, and Rod Sequence Control System"	10/15/85
a. Added requirement for reactor operator to sign and note that the rod pull cover sheet has been read and understood	
b. Revised rod pull sheets	
c. Allows use of laminated rod pull sheets if alarm typer is working	
d. Revised method of performing coupling verification check for rods fully withdrawn	
e. Added new attachment for signoff of satisfactory coupling check as opposed to signing directly on the rod pull sheets	

f. Added three-second wait period after the "Rod Settle" light goes out prior to selecting the next rod for movement

g. Requires verification of alarm typer operability after each page of the rod pull sequence is completed

h. Added section for "Recovery Procedure for RSCS Group Reset" should a rod become mispositioned in the Group Notch Logic Mode

i. Requires single rod notch movement above control rod Group 2

8. "Rod Worth Minimizer Reduced Notch Worth Procedure Interface" Lesson Plan — 8/19/85

9. GE SIL No. 316 (Nov. 1979) "Reduced Notch Worth Procedure" — 8/19/85

B. Miscellaneous Additional Training

1. Reviewed seven-minute video tape on "Mispositioning of Control Rods" in connection with July 2 incident — 8/3/85

2. Attended company presentation to the NRC on "Premature Criticality Event of July 2" in Glen Ellyn, Illinois — 7/23/85

3. Attended presentation of "Premature Criticality Event of July 2" given to all licensed operators by Plant Superintendent R. Lenart — 7/25/85

4. Produced videotape of July 2 incident emphasizing the points raised in the DER evaluation and the corrective actions recommended by the CARB. — 8/12/85

APPENDIX B

Page	Line	Reads	Should Read
3	2	"maintain"	"maintains"
3	5	"make"	"makes"
3	6	"sure the"	"sure that"
3	19	"Well, shift"	"Well, the shift"
5	11	"why he"	"why we"
5	24	"mmaster"	"master"
5	25	"drive-weld"	"dry-weld"
5	25	"procedure procedure"	"procedure"
7	16	"start off"	"start up"
7	18	"after after"	"after"
8	2	"drive-weld"	"dry-weld"
8	4	"grading"	"grating"
8	4	"was below"	"was not below"
8	4	"mechanisms were"	"mechanisms and were"
8	9	"we"	"I"
9	9	"an"	"and"
11	17	"do the the"	"got the"
11	18	"end-up reset"	"inop/reset"
12	17	"I would"	"it would"
13	13	"Reactor engineer"	"The reactor engineer"
13	15	"Reactor engineer	"The reactor engineer"
14	18	"you know, we"	"you know, he"
14	22	"11 rods"	"The 11 rods"
15	25	"entering"	"inserting"
18	12	"he really"	"he realized he"
18	13	"made a--"	"made a mistake and"
18	13	"increase"	"decrease"
18	22	"draft"	"graph"
20	2	"a basic"	"a basic rundown"
20	3	"what happened"	"of what happened"
20	4	"were in critical"	"were critical"
21	16	"STA"	"STA in training"
24	17	"were at"	"are at"
24	24	"it had"	"it had not"
26	7	"thoroughly, would"	"thoroughly, and would"
26	11	"and pulled"	"and he pulled"
26	23	"we made"	"we had"
27	11	"would only have"	"would only have been"
27	14	"that's"	"that"
27	14	"you have the"	"you have to have the"
28	6	"a simulator"	"the simulator"
28	6	"and four"	"and four rods"
29	2	"make"	"making"
29	2	"that's"	"that was"
29	14	"out an"	"out and"

Page	Line	Reads	Should Read
29	23	"11:30, which"	"11:30, in which"
29	25	"staff's"	"status"
31	3	"minimizer came"	"minimizer block came"
31	14	"came in there"	"was aware"
32	11	"He just"	"He may have just"
34	12	"had calculated periods"	"the calculated period"
34	19	"three from"	"three days from"
34	20	"gone the"	"were gone for the"