

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of §
§
HOUSTON LIGHTING & POWER §
COMPANY § Docket No. 50-466
§
(Allens Creek Nuclear §
Generating Station, Unit §
No. 1) §

Material Facts As To Which There Is No
Genuine Issue To Be Heard

(1) The NRC Staff, in NUREG-0578, has recommended that all reactors have the capability to reach the cold shutdown condition (below 212°F at atmospheric pressure) within 24 hours after the complete loss of safety function. (Affidavit, p. 1).

(2) The maximum decay heat load after reactor shutdown is calculated by the 1971 American Nuclear Society formula as required by 10 CFR Part 50, Appendix K. Based upon this decay heat load, General Electric has calculated that the initial phase of removing decay heat, i.e. dumping steam from the reactor vessel to the main condenser, will take two hours to cool the reactor to 344°F. The reactor is held at this temperature for two hours while the Residual Heat Removal (RHR) system is flushed with reactor grade

8008190189

water. At that time, the RHR system is placed in operation, and General Electric has calculated that the reactor can be brought to cold shutdown (212°F) within a total period of seven hours. (Affidavit, p. 3).

IN THE UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF:)

HOUSTON LIGHTING AND POWER)
COMPANY,)
(ALLENS CREEK NUCLEAR)
GENERATING STATION,)
UNIT NO. 1))

DOCKET NO. 50-466

DEPOSITION OF:
JOHN F. DOHERTY



*International
Business Reporters, Inc.*

216

1
2 C. (By Mr. Biddle) I'd like to start with
3 your contention on cold shutdown in 24 hours. I
4 believe that's your number 3rd.

5 A. Yes. That's right.

6 C. What leads you to the conclusion that
7 the ACWCS reactor cannot be brought to cold
8 shutdown in 24 hours?

9 A. When the contention was raised, no
10 statement was made that it could be.

11 C. Did you have any basis for filing that
12 contention, or did you file it without any
13 knowledge and facts involved?

14 A. I believe I checked the SFR and found no
15 statement that the reactor could be brought to
16 cold shutdown in 24 hours.

17 C. Because there was no statement in the
18 SFR, you filed the contention without any other
19 factual basis?

20 A. With regard to ACWCS directly.

21 C. What is cold shutdown?

22 A. Say again?

23 C. What is cold shutdown?

24 A. General Electric has been urging the
25 definition of it -- I'm not clear what it is at

1 the moment. There is debate as to exactly what
2 it is in terms of a regulatory guide.

3 Q. For purposes of this contention, what
4 are you going to contend it is?

5 A. I'm going to try to find out how they
6 settled that problem.

7 Q. Do you have any thoughts of your own on
8 what the cold shutdown condition should be?

9 A. Not at the moment.

10 Q. To you --

11 A. I will take the definition that the NRC
12 and CE agreed to.

13 Q. All right. What heat load must be
14 dissipated in order to bring the reactor to a
15 cold shutdown condition?

16 A. Quality of heat.

17 Q. Yes.

18 A. I do not know that at this point.

19 Q. What heat load is the RHR sensor for
20 ACMCS capable of rejecting?

21 A. I don't know.

22 Q. If you don't know the heat load
23 necessary to bring the reactor to the condition
24 of cold shutdown, nor the heat load ACMCS systems
25 are capable of rejecting, how do you know that

1 the condition you allege is true if the ACMCS is
2 incapable of being brought to cold shutdown in 24
3 hours?

4 A. I only know that ACMCS has not claimed
5 to be able to do this. I do not know why it has
6 not been claimed.

7 Q. Who has not claimed that it can't --

8 A. It's not stated in the Safety Evaluation
9 Report.

10 Q. Have you read the PSAR sections --

11 A. Some of them.

12 Q. What are the design capabilities of the
13 ACMCS?

14 A. Would you define what you mean by that?

15 Q. I think the pertinent topic under
16 discussion is the ability to reject the certain
17 heat load and bring the reactor from an operating
18 condition to cold shutdown.

19 A. Would you restate your question?

20 Q. Yes. Have you read the PSAR section
21 regarding the RHR and its design capabilities?

22 A. I'm not certain I've read that one.

23 Q. Have you read the PSAR sections having
24 to do in any way in general with the ability to
25 bring ACMCS from the --

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

A. I'm uncertain of that.

Q. You're uncertain whether or not you've read those PSAP section?

A. That's right.

Q. Have you found any evidence in the PSAP relative to your contention?

A. No.

Q. If the PSAP states that one of design objectives and one of the design capabilities of AGNCS is to go from operating conditions to cold shutdown in 24 hours or less, does that resolve your concern in this contention?

A. No. The PSAP wouldn't be sufficient.

Q. What is insufficient about the PSAP?

A. It could contain anything it wanted as far as I know.

Q. And what is the basis of your contention?

A. The basis is what I've stated previously.

Q. Would you repeat it for me?

A. That there is no positive statement that it can be brought down in 24 hours from the literature I've seen.

Q. But you've not read the relevant PSAP sections which stated there it is not sufficient?

A. The PSAP will not be sufficient.

1 Q. Well, we're back to that same question.
2 I still don't understand why it's insufficient.

3 A. It's merely an unreviewed document.

4 Q. What review do you have reference to?

5 A. Well, unless I see in the PSAS that
6 positive statement that it can be brought down to
7 cold shutdown in 24 hours, which is the NRC's
8 agreement, which the NRC agrees with, then I'm
9 not satisfied.

10 Q. If the NRC agrees that ACNCS can be
11 brought to cold shutdown in 24 hours, then that
12 alleviates your contention?

13 A. Yes.

14 Q. But you do not have any independent
15 reason to believe that the RHR system or any
16 other system in the ACNCS is capable of cooling
17 the reactor down in --

18 A. I have no information on that in which
19 to conclude that.

20 Q. Of what relevance is NUREG-0570 to this
21 contention?

22 A. I beg your pardon?

23 Q. Of what relevance is NUREG-0570 to this
24 contention?

25 A. What is NUREG-0570, please?

1 Q. The title is "TMI-2, Lessons Learned
2 Task Force Report," and it is referenced in your
3 contention.

4 A. Thank you, Mr. Riddle. I don't have a
5 copy of that contention with me.

6 Q. Why don't you borrow this copy?

7 A. Thank you. In NUREC-0578, the statement
8 was that they recommended that cold shutdown be
9 achievable in 24 hours without reference to
10 reactor type.

11 Q. All right. I still don't think I
12 understand then what its relevance is in this
13 contention. Is it just a recommendation?

14 A. Whatever force the Three Mile Island
15 investigation has is reported to the NUREC-0578.

16 Q. But does it prove or disprove any fact
17 relevant to whether or not ACMCS can be brought
18 to a cold shutdown condition in 24 hours?

19 A. It makes no statement about ACMCS.

20 Q. Is the answer to my question no?

21 A. Yes. That's correct.

22 Q. Let's go into your contention on control
23 rod ejection. This is your number 20.

24 Q. Could you explain to me what can cause a
25 control rod ejection?