

ORIGINAL

UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

In the matter of:

COMMONWEALTH EDISON COMPANY

(Byron Nuclear Power Station,
Units 1 & 2)

Docket No. 50-454 OL
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C O N T E N T SWITNESSES:CROSSBOARD

(Resumed)

Louis O. Del George)	By Mr. Cassel	8539	
Richard P. Tuetken)	By Mr. Lewis	8689	
Walter A. Shewski)	By Judge Cole		8697
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EXHIBITS:IDENTIFIEDRECEIVEDREJECTED

(Retained by counsel to
be supplied at later date)

Intervenors'

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P R O C E E D I N G S

1 JUDGE SMITH: Good morning, ladies and gentlemen.

2 One preliminary item. I have been receiving,
3 address to me, at this building, similar anonymous postcards
4 commenting on the case. Although we had announced that we
5 would regard letters as limited appearance statements, I
6 really see no point in burdening the Public Document Room
7 and the record in this case with anonymous messages that
8 really do not comment on the issues. Really all they say
9 is they do not want the nuclear power plant.

10 So, I will circulate them to the other two Board
11 members and anybody that wants to read them. That's fine.
12 But we are not going to put them on the public record.

13 You had deferred a preliminary motion to this
14 morning, Mr. Cassel?

15 MR. CASSEL: I did, Judge. If I may ask your
16 indulgence to defer it a bit further. We had a deposition
17 last night and preparing cross for this morning -- I will
18 have it prepared as promptly as I can, certainly by no later
19 than tomorrow morning.

20 JUDGE SMITH: You do not have to have your motions
21 in writing.

22 MR. CASSEL: I understand that. It's not the
23 mechanics of getting it written up, Judge. It's just
24 thinking it through and focusing it sharply.
25

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1 JUDGE SMITH: All right.

2 Another item of preliminary business. We had
3 received the affidavit of William Forney. It was indeed
4 appropriate to bring forth Mr. Forney's views. Had you not
5 done so we would have inquired.

6 However, we don't really understand the views. It
7 seems, in some way, he is disagreeing with the Staff on the
8 remanded issues but we don't know what the dispute is. We
9 don't know -- his explanation does not shine through very
10 clearly.

11 I don't know what to tell you to do about it.
12 I don't know what the Intervenor's attitude is toward
13 receiving an affidavit prior to testimony or what. But as
14 far as the affidavit itself was concerned, the information
15 isn't accomplishing what I believe you wanted to accomplish.

16 MR. LEWIS: Well, Your Honor, I could attempt to
17 try and elucidate what it means, but I'm not sure that that
18 would be appropriate for me.

19 JUDGE SMITH: Unless there's an objection --
20 maybe somebody else knows. We will do it anyway that --

21 MR. LEWIS: I would simply state that paragraph 8
22 of the affidavit is the paragraph which is intended to set
23 forth that area in which Mr. Forney disagrees with a
24 conclusion stated in the Staff's testimony. And the
25 conclusion is that one of the -- one of the conclusions stated

1 in the Staff testimony is that one can infer -- infer is not
2 the word used, but I will characterize it that way -- the
3 capability of inspectors, including inspectors not subjected
4 to the reinspection program, from the results of the
5 reinspection program.

6 And that is not a conclusion which Mr. Forni
7 believes can be properly inferred from the program. He
8 does agree with all the other conclusions of the testimony
9 and that is the difference which we wish to bring to the
10 Board and parties' attention.

11 JUDGE SMITH: In the regular course of business
12 did the NRC Region III inspectors discuss Mr. Forni's views?

13 MR. LEWIS: Yes.

14 JUDGE SMITH: Perhaps they would be prepared then
15 to explain in a little bit more detail his views, if it was
16 done in the regular course of business.

17 MR. LEWIS: They are familiar with his views
18 and they were discussed.

19 MR. MILLER: Judge Smith?

20 JUDGE SMITH: You have an evidentiary problem,
21 I realize.

22 MR. MIDLER: I sure do. It seems to me the
23 Staff made a decision on who its witnesses would be on the
24 inspection program and Mr. Forni was not one of them. We
25 now have an affidavit from Mr. Forni and I agree with your

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1 characterization of it. It's pretty tough to tell just what
2 Mr. Forni's position is on the subject matters that he
3 purports to address.

4 I would just like to say that I think it is not
5 appropriate to have other individuals from the Staff
6 characterize Mr. Forni's views and have them accepted as
7 evidence.

8 JUDGE SMITH: I agree. That's a problem. That's
9 why I was stressing in the regular course of business, as
10 compared to preparing testimony, but that's a thin reed to
11 make a distinction on.

12 The difficulty is I really don't want to see a
13 big deal made of this because Mr. Forni was not around.
14 His job had changed at the very beginning of the reinspection
15 program and he doesn't have very much to add, as far as I
16 can see, by way of testimony as to the events, because he
17 left -- as I recall -- before the actual reinspection program
18 actually began.

19 Nevertheless, his testimony was important in our
20 initial decision and was cited many times. And here is a
21 concern that is expressed and we don't know what it is.
22 I mean, I understand your explanation and I understand what
23 the sentence means. But I don't understand how the sentence
24 fits into the whole scheme of his position. That's the
25 problem.

1 It may be that we will have to have Mr. Forni
2 here.

3 MR. CASSEL: Judge, may I ask a question here?
4 And I apologize if I'm not as prepared on that as I should
5 be. I have not seen Mr. Forni's affidavit. Was that served
6 at some earlier date?

7 JUDGE SMITH: That certainly is a little problem
8 that you identified, yes. You should see it.

9 MR. LEWIS: It was provided to co-counsel, to your
10 co-counsel.

11 MR. CASSEL: Just when?

12 MR. LEWIS: Tim Wright on Friday, the same time
13 I provided it to Mr. Miller and to the Board.

14 JUDGE SMITH: I have an extra copy.

15 MR. LEWIS: I'll be happy to give him one.

16 MR. CASSEL: I wonder if I could ask to reserve
17 comment on this thing until I've read it at the next break?

18 JUDGE SMITH: Certainly, I just want to finish
19 this one thought and conclude my thought on it.

20 The reason I am not eager to have Mr. Forni come
21 over, to take the time away from his job, and time of the
22 parties and everybody, is that if he is simply going to
23 express a conclusion as to which it is the Board's
24 responsibility to make, then it may not be productive. But
25 if he has a concern which we should focus on, we should be

1 aware of and focus on, then I think it's our responsibility
2 to at least understand it.

3 So I would hope that the parties would recognize
4 that as a factor in which he has little to offer, maybe
5 some easier way could be worked out among you to bring his
6 concerns to the attention of the Board, so that it can be
7 translated into evidence that you will accept.

8 MR. LEWIS: Your Honor, let me just state for the
9 record that this was not supplied because Mr. Forni felt that
10 he had a concern that he had to bring to the Board's
11 attention. Rather, it was provided because it was Staff's
12 view that it might be construed as a differing professional
13 opinion.

14 We're not certain that we view it that way, but
15 we could see how that interpretation could be put upon it
16 and we simply are providing it. We recognize that absent
17 a stipulation of the parties, it doesn't have any evidentiary
18 status. And frankly, it's there for the parties to review.

19 And our next move would depend upon if we received
20 a request.

21 JUDGE SMITH: All right. We'll return to it,
22 having expressed our views on it. We will return to it and
23 the parties can work out an efficient way to resolve our
24 concern.

25 Any other matter --

1 MR. GALLO: Judge Smith, yesterday I explained
2 to the Board and the parties that Applicant was undertaking
3 to retype the testimony of Mr. Branch in order to avoid
4 confusion when he takes the stand. What we have done is
5 to take the first six questions and answers that were filed
6 by Mr. Branch, and these questions and answers are personal
7 to his qualification, and join with those first six questions
8 and answers the remainder of Mr. Leone's testimony that
9 Mr. Branch adopted.

10 We have now consolidated those two pieces into one
11 document called the Testimony of Ernest P. Branch. And I
12 think it would facilitate matters if I served copies to the
13 Board and the parties. And perhaps it would be a good
14 basis to use this document for cross-examination purposes,
15 if that's convenient.

16 JUDGE CALLIHAN: Is this merely a consolidation
17 process?

18 MR. GALLO: Yes.

19 MR. CASSEL: Just to be clear on the record, Joe,
20 is it the case that there is nothing in here that was not
21 previously in the earlier documents, and nothing in the
22 earlier documents which is no longer in this one?

23 MR. GALLO: With one exception that's true.

24 MR. CASSEL: What is the exception?

25 MR. GALLO: Mr. Branch made a clarification to one

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1 of the answers. It was the answer that was clarified during
2 the course of his deposition. The exact answer does not
3 come to mind, the number, but when he takes the stand he'll
4 make that point.

5 I could provide it to counsel. All I have to do
6 is to look at the deposition to look at that.

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mgc 2-1

1 MR. GALLO: That's all. Thank you,
2 Judge Smith.

3 (Document distributed to Board and parties.)

4 MR. MILLER: Judge Smith, while we're on
5 matters of testimony, I fully intended to file the
6 testimony of Mr. Kostal and Mr. Johnson yesterday. It
7 was simply an oversight on my part that I did not.

8 Mr. Gayley is not here at the moment, but we'll
9 have it this morning physically in the courtroom, and I
10 will distribute it at that point in time.

11 I apologize for any inconvenience.

12 JUDGE SMITH: Has Mr. Learner concluded his
13 cross-examination of Mr. Del George?

14 MR. CASSEL: Mr. Learner has, and my intention
15 was, after another couple of preliminary matters, Judge,
16 which I'll raise in a moment, to commence cross-examination
17 of Mr. Tuetken. But we do have a question or two that may
18 come up in the course of Mr. Tuetken's cross that I would
19 want to ask Mr. Del George and also Mr. Shewski about.

20 But basically after the additional preliminary
21 matters which I would like to bring to your attention,
22 I would like to begin with the cross of Mr. Tuetken.

23 JUDGE SMITH: All right.
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1 Whereupon,

2 LOUIS O. DEL GEORGE

3 RICHARD P. TUETKEN

4 WALTER A. SHEWSKI

5 resumed the stand and, having been previously duly sworn,
6 were examined and testified further as follows:

7 MR. CASSEL: The first preliminary matter that
8 I want to raise, and I don't believe that I have enough
9 information on which to suggest that any ruling could be
10 predicated at this point in time, but I just wanted to
11 bring it to the attention of the Board and the parties at
12 the earliest possible date, and this is the earliest possible
13 date, since I only learned about it myself last night,
14 an additional expert witness, who appears to be highly
15 qualified, has on his initiative volunteered his services
16 to Intervenors in this case.

17 I would like to describe briefly who he is
18 and briefly what the unusual circumstances of his coming
19 to our attention were.

20 His name is Dr. Bill Bleuel, B L E U E L
21 (spelling). He is a partner in a consulting firm in
22 Rolling Meadows, Illinois. I have not spoken to him,
23 but my Co-counsel, Ms. Vicki Judson, spoke to him yesterday
24 for the first time. He is a Ph.D. in Industrial Engineering
25 for Texas A&M. He has a master's degree in statistics from

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1 the University of Rochester. His undergraduate degree was
2 in electrical engineering from Carnegie-Mellon. He wrote
3 his Ph.D. thesis on reliability engineering. He served
4 as a reliability engineer for General Dynamics, under
5 contract to the Department of Defense. His consulting work
6 has essentially involved, as I understand it, servicing
7 of sophisticated computer equipment, including quality
8 assurance and quality control of that equipment.

9 He has read the reinspection report, which was
10 provided to him for the first time by an acquaintance
11 of one of my clients a week ago. He read it during the week,
12 and I understand that following hearing radio news stories
13 about this proceeding, he then called my client and said,
14 "I have some opinions on the reinspection program, based
15 on my experience and expertise, which I would like to bring
16 to your attention." That call was made yesterday to my
17 client.

18 Following that, my client called Ms. Judson,
19 my co-counsel in Chicago, who in turn called Mr. Bleuel,
20 had a discussion with him last night in which she
21 ascertained that he did have a number of opinions concerning
22 the methodological validity of the reinspection program,
23 and that he appeared to be a competent, reliable expert
24 witness.

25 He has indicated that he is prepared to testify

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1 and that his testimony could be prepared by August 13th,
2 the date of our prefiled testimony being due, that he would
3 be available to testify during the week of August 20th,
4 that he is available any time prior to either of those
5 dates with a couple of minor scheduling exceptions, to be
6 deposed by Edison. And I wanted to advise the Board and
7 Edison at this point, and Staff, that based on the
8 conference Ms. Judson had with Mr. Bleuel last night, we do
9 intend to call him as an expert on the methodological
10 validity of the program.

11 We will be happy to make him available for
12 deposition beginning immediately. We will also be happy
13 to confer formally or informally with Mr. Miller concerning
14 the nature of the particular objections raised by Mr. Bleuel
15 to the reinspection program.

16 We were able, because of our expert witnesses,
17 Professor Ericksen and Professor Kochhar, to make an
18 assessment substantively of a number of his objections, and
19 we believe they are consistent with and supplement, as well
20 as reinforce, the points made by our other two experts. So
21 it's not as if he's coming in with a series of objections
22 with which we are utterly unfamiliar.

23 I don't believe, as with the witness yesterday,
24 where I wasn't able to state very much on the record,
25 I don't believe that I could state anything more than that

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1 now, and if the Board would want me to prepare a motion
2 setting forth in greater specificity what it is that this
3 witness has to say, so that you could determine whether
4 he will be permitted to testify, I will be happy to do
5 that.

6 In the alternative, if you want us to simply
7 have his testimony prepared, and then you could rule one
8 way or the other as to whether you want to hear the testimony
9 after you've seen what it is, we would be happy to do that,
10 too.

11 Obviously, we had no knowledge of this witness
12 until yesterday. He did approach us. It does seem to us,
13 based on our discussions with him, that the information he
14 has is relevant, credible, probative, and would be useful
15 to this Board.

16 JUDGE SMITH: Do you have a comment, Mr. Miller?

17 MR. MILLER: Yes, sir, I do. The very first
18 thing that Commonwealth Edison did when this matter was
19 remanded for further proceedings to the Licensing Board by
20 the Appeal Board was to file an interrogatory with the
21 Intervenors and asked them to identify their witnesses.
22 It was done in the expectation that at a certain period of
23 time, there would be an end to the identification of
24 witnesses who would be presented as a part of their direct
25 case.

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2 As I'm sure the Board knows, and as I'm sure
3 the other parties know as well, it is customary in
4 federal civil litigation to have a final pretrial order
5 entered some weeks before a trial actually begins in which
6 the witnesses are frozen as of a point in time, and unless
7 there is good cause shown, there are no additional witnesses
8 permitted, particularly with respect to expert witnesses.

9 Mr. Cassel's description of this gentleman's
10 testimony was singularly uninformative. Perhaps he doesn't
11 know himself what this man is going to say. But from what
12 little he did say, it sounds to me as if it is simply
13 cumulative of testimony that is going to be offered by
14 experts that have been identified to us over the past few
15 weeks, including Dr. Ericksen and Professor Kochhar.

16 I strenuously object to having any additional
17 witnesses of whom we had no notice prior to this morning
18 added to the Intervenors' direct case. What we have is
19 a two-week period following the end of these hearings in
20 which to receive the direct testimony of three and possibly
21 four witnesses already identified by the Intervenors,
22 take their depositions, get the transcripts, consult our
23 own experts, and be prepared to conduct an effective
24 cross-examination. I think this is unfair, and I believe
25 that there should be some sort of a preclusion order
entered by the Board, so that we do not have this process

mgc 2-7

1 repeated. I think we have to know what the parameters of
2 this hearing are at some point in time.

3 Furthermore, the identity of the client who
4 distributed this reinspection report was not identified,
5 and I think it might be pertinent to know whether the
6 client to whom Mr. Cassel refers is an Intervenor in this
7 proceeding.

8 MR. CASSEL: The client is an Intervenor in
9 the proceeding, and specifically the individual is
10 Mr. Stanley Campbell.

11 Judge, I think, as I suggested at the outset,
12 I'm not suggesting that without knowing more about what
13 this witness would say, you can possibly rule, or
14 Mr. Miller could possibly determine that it's cumulative,
15 and I think it would probably ill serve everyone for me
16 to attempt a hearsay summary of what I was told by
17 Ms. Judson last night.

18 What I would like to do is prepare in whatever
19 form you would prefer a statement of the substance that
20 this gentleman has to offer, and at that point, we are all
21 in a position to make a decision. But I didn't want to
22 wait until I was ready to do that to bring it to everyone's
23 attention. I just learned of it last night. Ms. Judson
24 just spoke with him for the first time yesterday.

25 MR. LEWIS: Your Honor, I think that Mr. Cassel's

mgc 2-8 1 offer, even at this point, falls somewhat short of what
2 would enable this Board to determine whether or not, in
3 fact, there is good cause for allowing the offer of an
4 additional witness. The fact of the matter is, there have
5 been two other expert witnesses identified and deposed,
6 who, from the general discussion I heard today, would appear
7 to cover the area mentioned by Mr. Cassel. So to simply
8 have an offer as to what this additional witness will
9 testify to, without having that joined with some kind of
10 a statement as to what the other witnesses are already
11 proposed to testify to, would not give you the information
12 you need.

13 JUDGE SMITH: He is seeking guidance. We will
14 discuss it during the morning recess, and if we can give
15 you any guidance we will. Perhaps we can't. In that event,
16 we will tell you, too.

17 MR. CASSEL: Thank you, Judge.

18 JUDGE SMITH: Are you ready for your cross-
19 examination?

20 MR. CASSEL: There is one matter I needed to ask
21 Mr. Miller about before we begin cross.

22 End 2
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1 JUDGE SMITH: While Mr. Cassel is conferring,
2 I'm going to pass these postcards among the parties.

3 (Documents distributed.)

4 (Discussion off the record.)

5 CROSS EXAMINATION (Resumed)

6 BY MR. CASSEL:

7 Q Mr. Tuetken, would you state your name and your
8 position with Commonwealth Edison, please?

9 MR. MILLER: It's in his prepared direct testimony
10 that has been moved into the record.

11 MR. CASSEL: I understand, Mike, but maybe we
12 could lead into this in a logical fashion. Not everyone is
13 aware of all the information in his direct testimony.

14 JUDGE SMITH: I'll tell you, counselor, if you
15 are not fully aware of the information of his prepared
16 direct testimony, you are not going to be permitted to
17 cross-examine.

18 MR. CASSEL: Judge, I'm thoroughly aware. I
19 don't need the information. I thought it would be useful to
20 the next question. But if you would like to just get right
21 to it, we'll get right to it with no preliminaries.

22 BY MR. CASSEL:

23 Q Mr. Tuetken, based on your professional standing
24 as, I believe, a mechanical engineer -- as you testified
25 in your deposition last week -- and on your years of

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1 experience at the Byron site for Commonwealth Edison Company,
2 were you able in your deposition last week to categorize
3 all the inspections and attributes performed by Hunter,
4 Hatfield, and PTL, according to four categories of safety
5 significance, in your judgment?

6 A (Witness Tuetken) I did so.

7 Q And were those categories ranging from most
8 important to safety, second most important, third most
9 important, and least important to safety?

10 A It could be characterized that way.

11 Q I am now going to show you and your counsel a
12 document, which I will ask the court reporter to mark as
13 Intervenor's Tuetken Cross Exhibit R-1.

14 JUDGE SMITH: Do you have a cross-examination
15 plan?

16 MR. CASSEL: Yes, sir. I distributed it last
17 night.

18 (Document distributed.)

19 (The document referred to was
20 marked as Intervenor's
21 Exhibit R-1 for identification.)

22
23 BY MR. CASSEL:

24 Q This document, which I have asked to be marked
25 as Intervenor's Tuetken Cross Exhibit R-1 --

1 JUDGE SMITH: I'm sorry. I wasn't paying
2 attention when you identified this. This will be Intervenor's
3 Exhibit R-1.

4 Also, I was somewhat insensitive to your point
5 in asking Mr. Tuetken his title. I realize now, for the
6 benefit of the public and spectators, who do not have the
7 direct testimony.

8 MR. CASSEL: Thank you, Judge. I just thought
9 there are many people interested in this proceeding who
10 perhaps don't even know what Mr. Tuetken's position with the
11 company is. And it does make it convenient for the public
12 to follow, with at least some minimal preliminary.

13 JUDGE SMITH: So would you briefly just say what
14 you do now and what your job was during the relevant events?

15 WITNESS TUETKEN: My name is Richard P. Tuetken.
16 My present position is startup coordinator for Byron Units
17 1 and 2. During the previous proceedings, I was the
18 Assistant Superintendent for Project Construction Department,
19 directly responsible Senior Construction Manager, directly
20 responsible for implementation of the reinspection program.

21 MR. CASSEL: Thank you, Judge. Thank you,
22 Mr. Tuetken.

23 BY MR. CASSEL:

24 Q Mr. Tuetken, let me first call your attention only
25 to the first three pages of the exhibit and ask you if on

1 the left hand side of the exhibit there appears a complete
2 list of the procedures and inspection types undertaken
3 by the Hatfield Electric Company, which were subject to the
4 reinspection program?

5 A (Witness Tuetken) Could you rephrase the first
6 part of the question?

7 Q Sure. On the left hand side of the first three
8 pages, is that a complete list of the procedures and
9 inspection types performed by the Hatfield Electric Company,
10 which was subject to the reinspection program?

11 A Yes, it is.

12 Q Is this the same list which you reviewed last
13 week, with respect to Hatfield, in your deposition?

14 A Yes, it is.

15 Q And on the right hand side of the page, in the
16 column which we have labeled Tuetken safety category, there
17 appears a series of numbers, one, two, three. And on the
18 second page, one of the categories is labeled least and
19 in the third page one of the categories is labeled least.

20 Are those accurate reflections, to the best
21 of your recollection, of the safety categories? One for
22 most important, two for second, three for third, or least
23 for least important, which you identified at your
24 deposition last week?

25 A To the best of my recollection, they represent the

1 information I provided in the deposition.

2 Q And what was the basis on which you determined,
3 in a general way, whether to put a particular inspection type
4 or procedure in the most important category? That is,
5 category one.

6 A My opinion, using engineering judgment, as to
7 primarily the components which are included in the inspection,
8 installation and inspection activity and the relative
9 importance to safety.

10 Q And was that the same standard by which you
11 determined to place other inspections and procedures in
12 lesser categories of importance?

13 A It is.

14 Q The next two pages, following the three Hatfield
15 pages, which are labeled PTL 3-1 and PTL 3-2, do they
16 represent a complete list of the attribute classifications
17 and inspection types performed by PTL at Byron, which was
18 subject to the reinspection program?

19 A They are.

20 Q Are these the same attribute classifications and
21 inspection types which you reviewed at your deposition last
22 week, with respect to PTL?

23 A To the best of my recollection, the numbers
24 present my opinions and my answers.

25 Q And on the right hand side of the pages labeled

1 PTL 3-1 and 3-2, under the heading Tuetken safety category,
2 again we have indications of numbers for categories one,
3 two, and three, or the word least for the category least
4 important. Are those accurate reflections of the safety
5 categories in which you placed these PTL inspection types
6 at your deposition last week?

7 A To the best of my recollection.

8 Q And following the page labeled PTL 3-2 we have
9 a page labeled Hunter 2-1 which goes to the end of the exhibit,
10 to page Hunter 2-9. Would you take a moment to review that?
11 And after you've had an opportunity to review that, would
12 you indicate whether the left hand side of the page contains
13 a complete list of the attribute classifications and inspection
14 types performed by Hunter at Byron, which was subject to
15 the reinspection program?

16 A They are.

17 Q And is this the same list of attribute classifica-
18 tions and inspection types for Hunter, which you reviewed at
19 your deposition last week?

20 A They are.

21 Q On the right hand column, on each of the pages
22 labeled Hunter, and the column Tuetken safety category, again
23 we have various numbers, one, two, three and least. Do they
24 accurately represent the safety categories in which you placed
25 the Hunter inspections and attributes at your deposition last

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1 week, to the best of your recollection?

2 A To the best of my recollection, they represent
3 my answer.

4 Q Mr. Del'George, at your deposition last week,
5 you indicated I believe that you generally concurred with
6 Mr. Tuetken, with respect to his placement in various
7 safety categories of the attributes and inspections at
8 Byron. Does that continue to be your view? Do you still
9 agree with the safety classification which Mr. Tuetken made?

10 A (Witness Del George) My recollection, I remember having
11 indicated that I generally agreed with Mr. Tuetken. I just want to be
12 sure that when we talk about safety classification that we are
13 not constructing a standard by which things are evaluated,
14 but a judgment was asked of us as to our ranking of individual
15 activities, all of which are safety related and we provided
16 that ranking.

17 I concurred in the ranking, as it was described
18 by Mr. Tuetken.

19 Q And between the two of you, you have many years
20 of joint experience with engineering issues related to Byron
21 on which you based your classifications?

22 A Yes.

23 A (Witness Tuetken) We do.

24 MR. CASSEL: At this time, Intervenors move the
25 admission of Intervenor's Exhibit R-1 into the record, Judge.

31b8

1 JUDGE SMITH: Are there objections?

2 MR. MILLER: Judge Smith, I don't know that
3 there's been any showing of relevance of this categorization
4 of various inspection elements to any issue in this
5 proceeding.

6 MR. CASSEL: Judge, the heart of this proceeding,
7 of course, are these three contractors and the inspections
8 which they performed. In order to assess the safety
9 significance of any shortcomings in the QA procedures, or
10 in the hardware which emerged during the course of these
11 hearings, I think it is helpful to have the judgment of two
12 experienced Commonwealth Edison engineers familiar with Byron
13 on which of the inspections are relatively more important
14 than others.

15 I think its usefulness will become apparent
16 as we get into the testimony over the next few days. If you
17 want me to defer moving its admission until the first
18 occasion for its use, I'd be happy to do that. But I think
19 just as a general background document, it's useful for
20 us all to know.

21 MR. MILLER: Judge Smith, I think it's been
22 established on the record these witness created the
23 classifications in response to questions asked of them at
24 a deposition. They make no use of this categorization in
25 their direct examination and I object to its admission on that

31b9

1 basis.

2 JUDGE SMITH: Not because of relevancy but
3 because it goes beyond their direct examination?

4 MR. MILLER: That is part of certainly, but
5 there has been no showing by Mr. Cassel how this
6 categorization relates to the direct testimony that is before
7 the Board.

8 JUDGE SMITH: The difficulty is you may be
9 literally correct, but I can see how Mr. Cassel, in cross-
10 examining these witness, can elicit almost the same infor-
11 mation. And here it is, it's all neatly tabulated and it's
12 conveniently there. Maybe we should take advantage of his
13 offer to defer offering it until it actually comes up.

14 MR. CASSEL: I have no objection to that.

15 JUDGE SMITH: We will wait to see what the
16 context is and whether you actually wish to depend upon it
17 as a matter of evidence.

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1 MR. MILLER: May I inquire of the court reporter
2 whether or not she's going to mark in her index where
3 exhibits are offered, in terms of page number and then the
4 page number where they're admitted? It's very helpful,
5 in getting through the transcript, if that could be done.

6 BY MR. CASSEL:

7 Q Mr. Shewski -- I'm sorry. Mr. Tuetken, the
8 reinspection program, in the form on which it was implemented,
9 was developed during January and February 1983, is that
10 correct?

11 A (Witness Tuetken) That's correct.

12 Q And it was developed by a small working group
13 with a Commonwealth Edison consisting of approximately eight
14 to ten persons?

15 A To the best of my recollection.

16 Q And among those persons were the three gentlemen
17 seated here at the table, namely yourself, Mr. DelGeorge,
18 and Mr. Shewski?

19 A That is correct.

20 Q Do you recall the names of other Edison personnel
21 involved in that working committee?

22 A Participants included a Mr. Wallace, Mr. Tram, and
23 beyond that I would have to do some research.

24 Q And is it to the best of your recollection, this
25 working committee held from one to perhaps as many of three

41b2

1 meetings in the course of developing the program?

2 A One to three meetings, as it related to the
3 ultimate program, yes.

4 Q And the longest of those meetings, if there was
5 more than one, was approximately one-half day?

6 A That's correct.

7 Q Did anyone outside Commonwealth Edison participate
8 in the design or the redevelopment of the reinspection
9 program?

10 A They did not.

11 Q It was done strictly by this Edison working group?

12 A That's correct.

13 Q You yourself are not an expert in the field
14 of statistics or statistical sampling, are you, Mr. Tuetken?

15 A I am not an expert.

16 Q To your knowledge, no one of the Edison people on
17 the working group are experts in that field?

18 A Not to my knowledge.

19 Q To your knowledge, no outside expert in the field
20 of statistics or sampling was consulted by the working group
21 to develop the program?

22 A Could you restate the question?

23 Q To your knowledge, no outside expert in the field
24 of statistics or statistical sampling was consulted by the
25 working group to help you develop the program?

1 A No outside expert was consulted.

2 Q When did Edison first advise the Byron site
3 contractors of the reinspection program?

4 A In its ultimate form?

5 Q Yes.

6 A February of 1983.

7 Q And approximately when, in February, did that
8 take place?

9 A Mid-month. I don't know the exact date.

10 Q Do you recall testifying, at your deposition last
11 week, that it was in late February?

12 A Somewhere around the 22nd of February, but I'm not
13 specific.

14 Q Why do you say somewhere around the 22nd of
15 February?

16 A Because I can't recall, at the present time, the
17 exact date of the first meeting.

18 Q Was the first meeting at about the time that
19 Edison sent its February 23 letter to the NRC, proposing the
20 outline of the program as a response to the NRC's findings
21 with respect to 8205?

22 A That's correct.

23 Q Do you recall whether the meeting with the
24 contractors was before Edison proposed its response to the
25 NRC on February 23 or after?

1 A It was after we had presented it to them verbally
2 and before we had submitted it to them in written form.

3 Q And prior to that meeting, at about that time,
4 no contractors were involved with Commonwealth Edison in
5 the development of the reinspection program?

6 A Not in the design or the development, no.

7 Q One aspect of the design of the program, was it
8 not, was the system for random selection of the inspectors
9 to be reinspected? Is that correct?

10 A That's correct.

11 Q Let me refer your attention if I may -- and I'll
12 provide you a copy of you need it -- to the reinspection
13 program report. Do you have a copy there?

14 A I do not.

15 Q If not, perhaps I can provide one for you. And
16 let me ask you to take a look specifically at page III-3.
17 That is III-3 of the report.

18 (Document handed to witness.)

19 MR. CASSEL: We will pause a moment. I think
20 we are all set.

21 BY MR. CASSEL:

22 Q On page III-3 of the document entitled Commonwealth
23 Edison report on the Byron inspector reinspection program,
24 Docket Numbers 50-454 and 50-455, February 1984, which as
25 you know was supplemented in June 1984, which document has

41b5

1 not been admitted in evidence nor offered in evidence. On
2 page III-3 of that document, there is a section entitled
3 second element selection of inspectors. In the second
4 paragraph, under that heading, the second sentence states
5 "To ensure a representative selection of inspectors from the
6 total population, Commonwealth Edison compiled rosters of
7 the six contractor's QC inspectors."

8 Is it correct that the purpose of this sampling
9 device was to ensure a representative selection of inspectors?

10 A (Witness Tuetken) Yes.

11 Q The second sentence after that says -- and it's
12 in the middle of the paragraph -- "The first inspector on
13 each roster was selected and every fifth inspector thereafter
14 was included in the program." Is that an accurate representa-
15 tion of the method used for random sampling of inspectors?

16 A Yes.

17 Q So that if, for example, there was a contractor
18 that had 100 inspectors, let's say, who had worked for him
19 at Byron subject to the reinspection program, the sampling
20 method would take the first and then every fifth thereafter?
21 Is that correct?

22 A Based on level of certification, yes.

23 Q And that would mean that the first inspector
24 would be taken, the sixth, the 11th, the 16th, and so forth?

25 A One, five, 10, 15, the first, the fifth, the

1 tenth, the 15th; the 20th, 25th --

2 Q So this did not mean, then, the first and then
3 every fifth thereafter. It would skip only four to the
4 fifth inspector, rather than skipping five to the sixth
5 inspector?

6 A It skipped four in the first selection and then
7 every fifth after that.

8 Q What was the reason for that uneven skip? That
9 is, a short skip on the first jump and an even five after
10 that? Why didn't you just do the first and every fifth,
11 like it says here?

12 A The February 23rd proposal we gave the NRC
13 identified we would select the fifth and every fifth. The
14 NRC, in their acceptance, elected to accept the first. The
15 NRC had the first inspector, the program was called for the
16 fifth, tenth, 15th, and 25th.

17 Q The random selection mechanism used was important
18 to ensure, was it not, that no contractor would be able to
19 have any influence whatever over which inspectors would be
20 subject to reinspection and which would not, is that correct?

21 A That is correct.

22 Q If a contractor had been able to have some
23 influence over which of his inspectors was subject
24 to the reinspection, that might have enabled the contractor
25 to attempt to bias the results in favor of the contractor,

1 wouldn't it?

2 MR. MILLER: I'm going to object, unless there's
3 going to be a foundation laid. There should be some
4 representation by counsel that he intends to show, at some
5 point in this proceeding, that that in fact took place.

6 JUDGE SMITH: Counsel, by a slight variation he
7 can change the question to see if that was their concern.

8 BY MR. CASSEL:

9 Q Was it your concern, Mr. Tuetken, to have the
10 random selection in order to ensure that no contractor would
11 be able to attempt to bias the results in his favor?

12 A (Witness Tuetken) I'm not sure the program
13 development made that consideration. It did not come to my
14 mind.

15 JUDGE SMITH: Have I destroyed your line of
16 testimony?

17 MR. CASSEL: I don't think so, Judge. We'll get
18 there and the truth will out, one way or the other, quite
19 soon.

20 BY MR. CASSEL:

21 Q In your judgment, Mr. Tuetken, in your engineering
22 judgment, which you used in participating in the design of
23 the program, might it have undermined your confidence and
24 the credibility of the program if you knew that any
25 contractor did have any role in determining which of his

1 inspectors was selected and which not?

2 MR. MILLER: I'm going to make the same
3 objection I did before, Judge. I think there ought to be
4 some representation that that, in fact, occurred and that
5 Mr. Cassel is prepared to prove it, either by documents he
6 has, or by a witness who is going to come forward. Because
7 he's otherwise asking Mr. Tuetken to speculate about a state
8 of facts that are never going to be established on this record.

9 MR. CASSEL: The purpose of this line of questioning
10 is to find out what Mr. Tuetken -- not only what his purpose
11 was, but what his judgment of the program design was. This
12 is a question relevant to his judgment on the program
13 design.

14 JUDGE SMITH: Yes, with that limitation, I think
15 that your line of questioning is perfectly agreeable.

16 WITNESS TUETKEN: Could you restate the question?

17 MR. CASSEL: I'll attempt to do so, if I can
18 reconstruct it at this point.

19 BY MR. CASSEL:

20 Q If it had come to your attention that any
21 contractor had any role whatever that might have enabled
22 him to select -- to influence the selection of which of his
23 inspectors was subject to reinspection, would that have
24 undermined your confidence and the credibility of the
25 program results for that contractor?

41b9

1 A (Witness Tuetken) I will try and answer. I did
2 not have any belief that the contractors would have any
3 intent to bias the program. This methodology, in my mind,
4 established a clinical method -- in other words, a more
5 controllable method to establish random sampling.

6 Q But in fact, no contractor involved in the
7 program was able to influence which of his inspectors were
8 reinspected and which not? Is that correct?

9 A Not the way the program was established.

10 Q And one of the reasons that no contractor was
11 able to so influence the selection was because none of the
12 contractors were involved in the design of the program and
13 the random selection design, is that correct?

14 A That's correct.

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mgc 5-1

1 Q So that the Hunter Corporation, for example,
2 played no role whatever in the design of the program
3 criteria for selection of inspectors?

4 A Played no role in design; that's correct.

5 Q And no role in designing the selection basis,
6 having every fifth inspector, beginning with the fifth
7 inspector?

8 A No role in designing; that's correct.

9 Q Mr. Tuetken, I am now going to show your
10 counsel and you a document which I will ask the court
11 reporter to mark as Intervenors' Exhibit R-2 for
12 identification.

13 (The document referred to
14 was marked Intervenors'
15 Exhibit R-2 for identification.)

16 (Document distributed to Board and parties.)

17 BY MR. CASSEL:

18 Q Mr. Tuetken, have you ever seen Intervenors'
19 Exhibit R-2 for identification before?

20 A (Witness Tuetken) I have.

21 Q When did you first see it, if you recall?

22 A When it was created in 1983.

23 Q Would you describe it for the record?

24 A It's the results of the meeting that we had
25 with the contractors, post the February 3rd meeting with

mgr 5-2

1 the NRC, which identified -- wherein we identified our
2 proposal for reinspection to NRC. Subsequent to that
3 meeting, we consulted with the contractors, identifying
4 that an activity was going to be taking place, identifying
5 the concept of the activity, and this only restates the
6 guidance that they received from us.

7 Q Is it correct that the first four pages of
8 the exhibit are a copy of a letter dated February 16, 1983,
9 from Mr. Somsag, the quality assurance supervisor at
10 Hunter, addressed to Commonwealth Edison Company, Attention
11 Mr. R. P. Tuetken.

12 A Correct.

13 Q And is it correct that Attachment 1 to that
14 letter is a copy of the sampling plan which Hunter
15 Corporation had received from Commonwealth Edison prior
16 to the submission of this February 16 letter?

17 A It is.

18 Q Does this letter refresh your recollection as
19 to the time during February of 1983 when Edison first
20 met with any contractors concerning the reinspection program?

21 A It more specifically identifies the first
22 meeting was February 7, identifying the program.

23 Q And at the time that February 7 meeting was
24 held, did you already have written out the letter which
25 was sent to the NRC on February 23 describing the program

mgc 5-3

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design?

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A Not in its ultimate format, no.

3

Q Referring to the fourth page of the February 16

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letter, there is a line entitled "Proposal Accepted,"

5

an initial, and then the word "Tuetken." Is that your

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signature over the word, "R.P. Tuetken," there?

7

A Yes, sir.

8

Q And that's dated June 9, 1983?

9

A Correct.

10

Q And there's a notation, quote, "Previously

11

identified verbally in March, 1983, the acceptability of

12

proposal," end quote?

13

A That's correct.

14

Q And that's accurate?

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A Correct.

16

Q Referring to Attachment 1, do you recall when

17

you gave or when Edison provided Attachment 1 to the

18

contractors?

19

A Exactly, no. Probably February 7th.

20

Q Did you provide it to them in a meeting with

21

them?

22

A Yes.

23

Q Do you recall any meetings other than the

24

February 7th meeting prior to this February 16th letter

25

with the contractors about the reinspection program?

mgc 5-4

1 A Meetings in what context?

2 Q Meetings with the Hunter Corporation concerning
3 the reinspection program prior to February 16th.

4 A If you classify phone calls and singular
5 individual-to-individual meetings in the course of the
6 program concept, I inquired as to our ability to create the
7 data search that was ultimately proposed in the February 23
8 letter.

9 Q And did you make inquiries of that nature to
10 the Hunter Corporation?

11 A And others.

12 Q Do you recall approximately how many
13 communications you had with the contractors about the
14 reinspection program during the time period when you
15 were designing it in January and February of 1983, prior
16 to the February 7 meeting?

17 A More than one. The population I cannot
18 specifically recall.

19 Q Referring your attention to Point 1 of
20 Attachment 1, does that indicate that the sampling plan
21 calls for a selection of every fifth inspector?

22 A That is correct.

23 Q Referring your attention to page 1 of
24 Exhibit R-2, paragraph (1)(b), does that indicate that the
25 method of accomplishing the selection of every fifth

mgc 5-5

1 inspector will be to begin with the fifth inspector
2 certified, and thereafter to take every fifth inspector?

3 A I've lost where you took me to read that.

4 Q Referring to the first page of the exhibit,
5 paragraph (1)(b), the first sentence, does that specify
6 that the method for taking every fifth inspector shall
7 be to begin with the fifth inspector?

8 A Yes.

9 Q Is that the first written indication in any
10 document that you are aware of with respect to the
11 reinspection program that the method would be to begin
12 with the fifth inspector?

13 A Will you restate the first part of your
14 question?

15 MR. MILLER: Which document are you referring
16 to?

17 BY MR. CASSEL:

18 Q Is this sentence here, paragraph (1)(b) in
19 the February 16th letter, which says that the selection
20 will begin with the fifth inspector, is that the first
21 written indication that the program is to begin with the
22 fifth inspector, that you are aware of?

23 A (Witness Tuetken) No, The Attachment 1 which was provided
24 to the contractors, was provided -- was the first indication
25 to select every fifth inspector.

mgc 5-6

1 Q I understand that. But in addition to
2 selecting every fifth inspector, you have to begin somewhere.
3 You could begin with Inspector No. 1, No. 2, No. 3, et
4 cetera.

5 Is this statement on the first page of
6 Exhibit R-2 the first written indication of which you are
7 aware that the specific method for the reinspection program
8 will be to begin with the fifth inspector certified?

9 A I would have to review data of the February 3rd
10 meeting with NRC to make that determination.

11 Q At the moment, you do not specifically recall
12 any documents that set forth that beginning point before
13 this one?

14 A No.

15 Q And at the time this statement was made in
16 the Hunter letter of February 16th, did Hunter know what
17 the chronological listing of its inspectors was by their
18 date of certification?

19 A Did Hunter know? If you want me to answer that,
20 you have to define "know."

21 Q Did they have a roster at the time they sent
22 you this letter?

23 A No.

24 Q They did not?

25 A I do not believe they did.

mgc 5-7

1 Q So that they were not -- at the time they sent
2 this letter, they were not in a position to know what the
3 result of picking every fifth inspector, beginning with the
4 fifth inspector, would be for their inspectors?

5 A I do not believe they did.

6 Q Let me refer your attention to Attachment 2 to
7 this exhibit, and ask you to -- ask you if you have ever
8 seen Attachment 2 before?

9 A Yes.

10 Q And you saw it at the time you received this
11 letter?

12 A Yes.

13 Q What is Attachment 2?

14 A It is a chronologic listing of the roster.

15 Q Does that change your testimony of a moment
16 ago about whether Hunter knew what the results would be,
17 beginning with the fifth inspector, when they sent you the
18 letter of February 16th?

19 A Restate your question again?

20 Q Does this Attachment 2 change the testimony
21 that you provided a moment ago to the effect that you did
22 not believe that Hunter knew, when it sent you the
23 February 16 letter, what the results would be in terms of
24 which inspectors would be included if they started with the
25 fifth inspector?

mgc 5-8

1 A In the February 16th letter, I would agree with
2 that. They would not know at the February 7th meeting, I do
3 not believe.

4 Q In Attachment 2, certain of the names of the
5 inspectors are underlined. Is that an indication of every
6 fifth inspector by date of certification, beginning with
7 the fifth?

8 A Yes, sir.

9 Q So at the time that Hunter sent you the
10 February 16th letter, they knew which inspectors, by name,
11 would be included in the inspection program, if they were
12 to begin with the fifth; is that right?

13 A Yes.

14 Q And were these inspectors whose names are
15 underlined in Attachment 2 to Exhibit R-2, in fact,
16 reinspected in the reinspection program?

17 A Not -- I'd have to do some research. Not
18 necessarily as stated. They could have been selected,
19 found no work recreateable. The program then required to
20 go to the next chronological inspector.

21 Q But except for an inspector who was looked at
22 for the reason you just described, and it was determined
23 that he could not be reinspected, to your knowledge was this
24 listing, the underlined names, the selection of Hunter
25 inspectors that were actually inspected in the reinspection

mqc 5-9 1 program?

2 A I believe it is.

3 JUDGE COLE: Hunter Level 2 inspectors.

4 MR. CASSEL: Hunter Level 2 inspectors.

5 BY MR. CASSEL:

6 Q Is there also, the fourth page of the attachment,
7 the listing of the Level 1 inspectors?

8 A (Witness Tuetken) That's correct.

9 Q And earlier when you testified that the selection
10 method was based on level of inspectors, did you mean that
11 there was one chronological listing for Level 2 and one
12 chronological listing for Level I and every fifth inspector,
13 beginning with the fifth, was taken from each of those
14 listings?

15 A Yes.

16 End 5

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61b1

1 Q Mr. Tuetken, I am now going to show you and your
2 counsel a document which I will ask the court reporter to
3 mark as Intervenor's Exhibit R-3 for identification.

4 (The document referred to was
5 marked as Intervenor's Exhibit
6 R-3 for identification.)

7 (Document distributed.)

8 BY MR. CASSEL:

9 Q I'll ask you to identify, if you can, what this
10 exhibit is.

11 A (Witness Tuetken) This is a typed-out listing of
12 program activities identifying inspectors left to right
13 column. Contractor's specification is equally equivalent
14 to the contractor by name. In the case here, 2739 is Hunter.

15 The second column is a column identifying initial
16 certification dates. The third column is level. It's
17 either level I or level II inspector.

18 The fourth column is name. The fifth column is
19 population, primarily identifying where these initial
20 pick, being fifth, tenth, 15th, et cetera or NRC pick, which
21 the program allowed, or a substituted pick because of the
22 activities of the program. And then the results at one
23 point in time, in this case January.

24 Q And under the column entitled population, are
25 the only inspectors who have an entry in that column,

1 inspectors who were, in fact, reinspected or who were selected
2 for reinspection but for one reason or another had to be
3 passed on to the next inspector?

4 A I think the answer is yes. What did you state,
5 in the middle part of your question?

6 Q Can one identify, from the column entitled popu-
7 lation, which of the Hunter inspectors were, in fact,
8 reinspected?

9 A Yes.

10 Q And one can identify them because those who
11 were reinspected have an entry in the column entitled
12 population?

13 A Yes.

14 Q And those who were not reinspected, or who were
15 never selected for possible reinspection, have no entry in
16 the column entitled population?

17 A Correct.

18 JUDGE SMITH: One inspector is designated as
19 substituted. Does that mean that he was inspected?

20 WITNESS TUETKEN: Yes.

21 JUDGE SMITH: How about one that is designated
22 next?

23 WITNESS TUETKEN: He's in activity because the
24 previously selected inspector had no items recreatable.

25 JUDGE SMITH: So next and substituted is the same?

1 WITNESS TUETKEN: For different purposes.

2 BY MR. CASSEL:

3 Q On the question just asked by the Judge, with
4 respect to inspectors entitled substitute, was there a random
5 method for determining which of the other inspectors would
6 be substituted when a substitution was needed?

7 A (Witness Tuetken) That was identified. We'd do
8 the next chronological inspector certified in the area
9 in question, in the substitution activities because of an
10 inspector who was in this population failing to meet the
11 acceptable rate at the end of his first three months and
12 having no more inspections to validate his performance in
13 the second.

14 Q Who would make that determination?

15 A I don't understand your question.

16 Q Would Hunter make that determination or would
17 Edison make that determination?

18 A Edison made the determination of who to substitute
19 based on our agreement with the NRC.

20 Q So the identification by name of a substitute
21 inspector was made by Edison, rather than by Hunter?

22 A Correct.

23 Q Does a review of Exhibit R-3 for identification
24 enable you now to answer the question whether the inspectors
25 whose names were underlined in Attachment to Hunter's letter

61b4

1 of February 16, 1983 were, in fact, either reinspected
2 or selected for reinspection?

3 A You're asking me, for example, if the fifth
4 individual identified in Attachment 2 -- R-2 -- is the same
5 as an inspector listed on Exhibit R-3?

6 Q That's correct.

7 A I believe they are. I'd have to do a direct
8 correlation. The fifth one is, the tenth one is, the 15th one
9 is, the 20th is, the 25th is, the 30th is, the 35th is,
10 the 40th is, the 45th is, the 50th is, the 55th is, and the
11 60th is, at the Level II categorization.

12 In the Level I inspector categorization, the
13 fifth is, the tenth is. For point of identification, none
14 of his work was recreatable and therefore another individual
15 was selected, which is identified in your Exhibit R-3.
16 The 15th is and the 20th is.

17 Q And that completes the listing of all the
18 inspectors whose names were underlined in the February 16th
19 letter, correct?

20 A Yes, sir.

21 Q So that each and everyone of the inspectors
22 identified in Hunter's February 16th letter was, in fact,
23 either reinspected or selected for reinspection and couldn't
24 be reinspected for one reason or another.

25 A They were reinspected.

61b5

1 Q And was the same method of random selection used
2 for Hatfield as for Hunter?

3 A Define same.

4 Q That is, every fifth inspector beginning with
5 the fifth?

6 A Yes.

7 Q Except that, later on, at the NRC's request, the
8 first inspector was added, in addition to the fifth
9 inspector in every case?

10 A Yes. Plus, the NRC added additional inspectors
11 of their own choice.

12 MR. CASSEL: At this time, Judge, I would move
13 the admission of Intervenor Exhibit R-2 and R-3 for
14 identification into evidence.

15 MR. MILLER: No objection.

16 MR. LEWIS: No objection.

17 JUDGE SMITH: The exhibits are received.

18 (The documents previously
19 marked for identification as
20 Intervenor's Exhibit R-2 and
21 R-3 were received into evidence.)

22 MR. CASSEL: I will now show you a document, which
23 I am showing your counsel -- which I will ask the court
24 reporter to mark as Intervenor's Exhibit R-4 for
25 identification.

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1 (The document referred to was
2 marked as Intervenor's Exhibit
3 R-4 for identification.)

4 BY MR. CASSEL:

5 Q I will represent, for the record, by the way, and
6 get into it at greater length, that these are documents
7 produced by Commonwealth Edison in response to a request
8 from the Interveners for production of memoranda or notes
9 prepared by contractors with respect to the reinspection
10 program.

11 And let me refer your attention, Mr. Tuetken,
12 to the seventh page of the exhibit which, just for purposes
13 of convenience, is the page that is headed Hatfield
14 Electric QA/QC personnel, first certification summary.

15 A (Witness Tuetken) Yes, sir.

16 Q Now that page is the first page of a four page
17 list, is it not, of Hatfield QA/QC personnel?

18 A Yes, sir.

19 Q And at the bottom of the fourth page in that
20 list, there's an indication that two asterisks indicates
21 Level II inspectors to be reinspected and one asterisk
22 indicates Level I inspectors to be reinspected?

23 A My copy does not have -- has one asterisk, but
24 that's the intent, I think.

25 Q That may be a problem with the Xeroxing.

61b7

1 MR. CASSEL: Mr. Miller, will you stipulate at
2 the bottom of page 4 there it indicates, on the original,
3 two asterisks for Level II inspectors and one asterisk for
4 Level I inspectors?

5 JUDGE SMITH: I don't think you're looking at
6 the page that he thinks you are.

7 MR. MILLER: The very last page of this four page
8 list.

9 JUDGE SMITH: Excuse me. All right.

10 MR. MILLER: Judge Smith, I think it's important
11 for the record, and for the examination of the witness,
12 that -- I don't know that these documents, even though they're
13 stabled together as one exhibit, are necessarily all related
14 to one another.

15 There has been no showing of the date of the
16 specific pages that Mr. Cassel is inquiring in. These pieces
17 of paper have been handled by numbers of lawyers,
18 paralegals, and Xerox machine operators.

19 So as long as everybody is clear that this is a
20 document stapled together, as far as I know, by the
21 Intervenor's and called Intervenor's Exhibit P-4 --

22 MR. CASSEL: That's an accurate characterization,
23 except that this is in the form it was given to us by
24 Edison Company. If you would prefer to have these four
25 pages taken out and labeled as a separate exhibit, we'd be

61b8

1 happy to do it that way. And it is correct that various
2 things in here do not necessarily relate to other things.
3 But a number of them will be coming up in the questioning.

4 MR. MILLER: I have no objection, as long as we
5 understand what pages we're looking at. And with the
6 representation that I made about these papers not necessarily
7 constituting one document in their original condition.

8 MR. CASSEL: Fine.

9 BY MR. CASSEL:

10 Q Mr. Tuetken, just to be clear again now, on the
11 fourth page of this four page list -- and do you know what
12 four page list we're referring to?

13 A (Witness Tuetken) I believe you're referring to
14 this page here.

15 (Indicating.)

16 MR. CASSEL: For the record, the witness is
17 indicating the fourth page of the four page list, beginning
18 with the title Hatfield Electric QA/QC personnel first
19 certification summary. And that document is -- begins on
20 the 7th page of Exhibit R-4 for identification.

21 JUDGE SMITH: This is one reason why we
22 requested documents to be serially numbered, for the purpose
23 of this case. In proposed findings, this is going to be
24 almost impossible for me to designate.

25 MR. CASSEL: If it would be helpful, Judge, I

61b9

1 would ask if we could mark, by page number, each of the
2 pages in Exhibit R-4.

3 JUDGE SMITH: That's what I recommend be done from
4 beginning to end. It would help the cross-examination and
5 certainly it's going to help in writing a decision.

6 BY MR. CASSEL:

7 Q Mr. Tuetken, I will mark them on my exhibit. If
8 you would mark them on yours, the record may be clearer.

9 JUDGE SMITH: And it will be your responsibility
10 to mark the three exhibits that are received into evidence.
11 It will be your responsibility to mark those. The reporter
12 will ultimately possess three official copies. It will be
13 your responsibility to mark them.

14 MR. CASSEL: Yes, sir.

end6

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mgc 7-1

1 BY MR. CASSEL:

2 Q Beginning with the first page. Mark that
3 Page 1.

4 A (Witness Tuetken) QA/QC Memorandum No. 736.

5 Q That's right.

6 A We're drawing an assumption that I know that
7 this is in the same format as yours. I will do as you
8 directed, but I will question --

9 Q When you refer to a specific page number as
10 we go through the questions, I will identify the document,
11 and that way we'll make sure that we have the same page.

12 JUDGE CALLIHAN: Mr. Cassel, you said page 1
13 is a copy of a memorandum from Mr. Buchanan to all the
14 inspectors, dated March 12, 1983?

15 MR. CASSEL: Yes, Judge.

16 JUDGE COLE: Some of these pages aren't
17 legible, Mr. Cassel. For example, page 14.

18 MR. CASSEL: I believe that's correct, Judge,
19 and the only pages I believe I will be relying on are
20 the legible pages.

21 JUDGE SMITH: I ended up with 27 pages.

22 MR. CASSEL: As did I. If anybody does not
23 end up with 27 pages, please let us know.

24 BY MR. CASSEL:

25 Q Have you completed numbering your pages,

mgc 7-2

1 Mr. Tuetken?

2 A I have.

3 Q And you have 27 pages?

4 A I do.

5 Q Referring to page 10 of the exhibit, is that
6 where the footnote is, indicating that there are two
7 asterisks which indicated Level 2 inspectors to be
8 reinspected, and one asterisk indicates Level 1 inspectors
9 to be reinspected?

10 A I repeat, my copy has only one asterisk shown.
11 It's next to the comment, "Level 2 inspectors to be
12 reinspected."

13 Q I believe your counsel and I have stipulated
14 that that's a problem with the Xeroxing. In fact, there
15 should be two asterisks next to Level 2 and one next to
16 Level 1.

17 JUDGE SMITH: In executing that stipulation
18 physically, then, if it's agreeable, mark the exhibit
19 consistant with the stipulation. Put the asterisks on
20 the exhibit that is received into evidence.

21 BY MR. CASSEL:

22 Q And on pages 7 through 10 of the exhibit, are
23 there not, next to certain names, two asterisks and next
24 to other names one asterisk?

25 A (Witness Tuetken) Yes.

mgc 7-3

1 Q And on the top of page 7 in the upper righthand
2 corner, there is a notation that appears to read, "Dick,
3 Suggested list."

4 Is that "Dick" yourself?

5 A Myself.

6 Q And there's a set of initials after that. Do
7 you know whose they are?

8 A James Buchanan.

9 Q And you saw this document when it was
10 originally submitted to you by Mr. Buchanan?

11 A Yes.

12 Q Do you recall approximately when that was?

13 A Sometime in February.

14 Q Do you know whether the inspectors who have
15 asterisks next to their names were, in fact, reinspected --
16 were selected for reinspection?

17 A I know that -- I will talk my way down the
18 roadmap. The fifth individual with a Roman numeral II
19 in the column, I know he was reinspected.

20 Q By name, if you could identify him?

21 A D. Hoffman.

22 Q You are now referring to page 7?

23 A Yes.

24 (Pause.)

25 Do you wish that I continue?

mgc 7-4

1 Q Surely. You know that Mr. D. Hoffman was
2 reinspected. Okay.

3 Are you going to give us now each person who
4 you know to be reinspected, or only the ones who have an
5 asterisk next to their name and indicate whether they
6 were, in fact, reinspected?

7 Why don't we start with the ones who have
8 asterisks? So the next one after Mr. Hoffman, if I am
9 correct, would be Mr. E. Dumas.

10 A That is correct. He was reinspected.

11 Q And Mr. J. Elgin is following Mr. Dumas.

12 A I believe he was. I can't recall the name
13 specifically. I have a document which I can reference.

14 Q And after him comes Mr. T. Smitt.

15 A Yes.

16 Q Would it be helpful to show you the document
17 which you said you could reference to determine who was,
18 in fact, reinspected?

19 A I have a copy of it here.

20 Q I think I do, too, and why don't we just have
21 it marked as the next exhibit.

22 JUDGE SMITH: I wonder if we're not using
23 hearing time here for discovery. Certainly it is known
24 between the two of you who was reinspected here.

25 MR. CASSEL: I think it's helpful to clarify

mgc 7-5

1 what I would like to get into the record as the particular
2 sequence of the Hatfield inspectors.

3 JUDGE SMITH: All right.

4 MR. CASSEL: In fact, the next exhibit, I think
5 the witness will identify the next exhibit as the actual
6 listing of the Hatfield inspectors who were reinspected.

7 JUDGE SMITH: While you're searching through
8 your papers, I think this would be a good time to take
9 a midmorning break.

10 (Recess.)

11 JUDGE SMITH: Are we ready to proceed? The
12 Board extended the break, because we discussed at rather
13 great length your statement concerning the witness. We have
14 several observations to make which may be of guidance to
15 you.

16 One is, the fact that your proposed witness
17 came forward and volunteered last night was virtually
18 irrelevant as far as timeliness is concerned. The issue
19 has been known since the date of the remand.

20 If it had been perhaps a fact witness that had
21 information necessary to a decision, that might be another
22 consideration. This one is being offered as an expert
23 witness. The fact that he identified himself yesterday
24 is irrelevant.

25 We do not foreclose you making an effort to

mgc 7-6 1 produce his testimony anyway. That is always your right.
2 But before you expend a great deal of effort at it, it
3 would have to be truly extraordinary information that he
4 has to offer at this late date and the delay that that
5 would cause.

6 Proceed.

7 BY MR. CASSEL:

8 Q Mr. Tuetken, I will now show you a document
9 and your counsel a document which I will ask the court
10 reporter to label as Intervenors' Exhibit R-5 for
11 identification.

12 (The document referred to
13 was marked Intervenors'
14 Exhibit No. P-5 for
15 identification.)

16 (Document distributed to Board, parties and
17 witnesses.)

18 JUDGE SMITH: There is a point that I forgot
19 to make with respect to your witness.

20 MR. CASSEL: Certainly, Judge.

21 JUDGE SMITH: We also recognize that the
22 fact that he came forward late does not foreclose a
23 possibility of him lending his assistance to the
24 Intervenors, if he sees fit. We have no control over that,
25 nor do the other parties have standing to object to anyone

mgc 7-7 1 who offers you assistance.

2 MR. CASSEL: Thank you, Judge.

3 BY MR. CASSEL:

4 Q Mr. Tuetken, is this a list of Hatfield
5 inspectors at Byron in the order of the date of their
6 initial certification which you provided to me through
7 Mr. Miller this morning?

8 A (Witness Tuetken) Yes.

9 MR. CASSEL: I apologize, Judge. I have
10 provided to perhaps one of the Board members, I've given
11 a marked copy with colored numbers in blue or red.

12 WITNESS TUETKEN: I have the red and blue.

13 MR. CASSEL: I'll give you a nice clean one
14 in exchange, although I'm going to ask you to mark down
15 the same numbers and see what happens.

16 BY MR. CASSEL:

17 Q Mr. Tuetken, was the same method for selection
18 of the inspectors used for Hatfield as it was for Hunter?

19 A (Witness Tuetken) Yes, sir.

20 Q Namely every fifth inspector, beginning with
21 the fifth and also the first and doing that separately
22 according to the level of certification.

23 A Yes.

24 Q Referring to the first page of the document
25 that has been marked Exhibit R-5 for identification, --

mgc 7-8

1 JUDGE SMITH: At this point, you have not
2 really identified it very well. It's title and date
3 is identical with your Exhibit 3.

4 BY MR. CASSEL:

5 Q This is the list, is it not, of the inspectors
6 by date of initial certification for the Hatfield Company,
7 as opposed to Exhibit 3, which was the list for the
8 Hunter Corporation; is that correct, Mr. Tuetken?

9 A (Witness Tuetken) That is correct.

10 MR. MILLER: There are different dates on
11 them, Judge Smith, in the upper lefthand --

12 JUDGE SMITH: All right. Excuse me. That's
13 perfectly adequate.

14 BY MR. CASSEL:

15 Q And again, by looking at Exhibit R-5, one
16 can identify which inspectors were reinspected or selected
17 for reinspection, because the ones who were have a notation
18 in the column headed "Population"; is that correct?

19 A (Witness Tuetken) Yes.

20 Q And if one took the column headed "Level," for
21 example, for Level 2 inspectors, and one started with the
22 first and then the fifth, one should find that every fifth
23 thereafter was selected for reinspection; is that correct?

24 A Yes.

25 Q All right. Well, let's start on the first page

mgc 7-9 1 then, and let's deal with Level 2 for starters.

2 The first Level 2 is Mr. D. Rice; is that
3 correct?

4 A Correct.

5 Q And he was, in fact, selected?

6 A Correct.

7 Q The second one is Mr. Donica, correct?

8 A Ms. Donica. I'm sorry.

9 Q I'm sorry. Mr. or Ms. Donica, correct?

10 A Yes. But not reinspected.

11 Q That's right. I'm just identifying them here.
12 The third and fourth, who were not reinspected,
13 were Messrs. Johnson and Wright; is that correct?

14 A Correct.

15 Q The fifth, who was reinspected, was Mrs. Hoffman,
16 correct?

17 A Yes.

18 Q The sixth was Mr. P. Lane, correct?

19 A Yes.

20 Q The seventh was Mr. J. Buchanan, correct?

21 A Yes.

22 Q The eighth, Mr. E. Getzelman, correct?

23 A Yes.

24 Q The ninth, Mr. K.A. Cripps, correct?

25 A Yes.

mac 7-10 1

Q The tent, Mr. or Mrs. E. Dumas, correct?

2 A Yes.

3 Q And Mr. Dumas, he should have or she should
4 have been -- was, in fact, selected for reinspection?

5 A Yes.

6 Q The eleventh was Mr. W. Jackson or Mrs.?

7 A Yes.

8 Q Turning to the next page, the twelfth was
9 Mr. or Mrs. R. Barziloski?

10 A Yes.

11 Q The thirteenth was Mr. or Mrs. R. Mulkey?

12 A Yes.

13 Q The fourteenth was Mr. or Mrs. T. Smith?

14 A Yes.

15 Q The fifteenth was Mr. or Mrs. J. Malunda?

16 A Yes.

17 Q Was Mr. -- do you know whether that's a Mr. or
18 a Mrs. or what?

19 A It's a Mr.

20 Q Was Mr. J. Malunda -- he was the fifteenth
21 Level 2 inspector by date of certification, right?

22 A Yes.

23 Q Was he reinspected?

24 A Based on this list, that's correct.

25 Q Was he reinspected?

mgc 7-11 1

A No, he was not.

2

Q Was he selected for reinspection?

3

A He was not.

4

Q The sixteenth is Mr. G. Cason; is that correct?

5

A Yes.

6

Q The seventeenth Level 2 inspector is Mr. D.

7

Richards?

8

A Yes.

9

Q The eighteenth was Mr. P. Burke?

10

A Yes.

11

Q The nineteenth was Mr. T. Wells?

12

A Yes.

13

Q The twentieth, now on the next page, was

14

Mr. W. Levell?

15

A Yes.

16

Q Was he selected for reinspection?

17

A He was not.

18

Q The twenty-first was Mr. A. Koca?

19

A Yes.

20

Q The twenty-second, Mr. J. Hayes, at the bottom

21

of the page.

22

A Yes.

23

Q On the next page now, the twenty-third, was

24

Mr. S. Wagner?

25

A Yes.

mgc 7-12 1

Q The twenty-fourth was Mr. H. Hanson?

A Yes.

Q Twenty-fifth was Mr. J. Ogsbury?

A Yes.

Q He was not selected for reinspection, was he?

A That's correct.

Q After that, I believe we begin to get into --
by the time we get into the thirtieth, we're down into
dates after the period of the reinspection program; is
that correct?

A Excuse me?

Q I'm sorry. We ended with Mr. J. Ogsbury, who
is the twenty-fifth, and his date of certification was
June 3rd of 1982, correct?

A According to this list, J. Ogsbury is 5/28.

Q I'm sorry. I misread it. It was May 28,
'82, correct?

A Yes.

Q And Mr. Souder was No. 26, is that correct?

A Yes.

Q Mr. Ruefer was No. 27?

A Yes.

Q Mr. J. Spangler was No. 28?

A Yes.

Q Mr. J. Spangler was certified September 24, 1982;

mgc 7-13 1

is that correct?

2 A That's correct.

3 Q Now is he already beyond the date where you
4 have the cutoff?

5 A Yes.

6 Q So any of the ones that came later on were
7 after the reinspection program and wouldn't have been
8 reinspected, correct?

9 A Correct.

10 Q Let's try Level 1.

End 7 11

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81b1

1 A All right.

2 Q Is it correct, back on the first page of the
3 exhibit, that the first Level I inspector was Mr. J.
4 Anderson?

5 A Yes.

6 Q And he, as he should have been, was selected for
7 reinspection, wasn't he?

8 A Yes.

9 Q The second one was Mr. Hardenbrook? The second
10 Level I inspector, chronologically, was Mr. Hardenbrook?

11 A Which list are you referring to?

12 Q I'm referring to the first page of Exhibit R-5.
13 And the category entitled Level.

14 A Yes.

15 Q The second Level I inspector chronologically was
16 Mr. Hardenbrook, correct?

17 A Correct.

18 Q The third was Mr. Getzelman?

19 A Correct.

20 Q The fourth was Mr. Droege?

21 A Correct.

22 Q And the fifth was Mr. J. Elgin, correct?

23 A Correct.

24 Q And he was selected for reinspection, as he
25 should have been, correct?

1 A Yes.

2 Q The next is Mr. T. Maas? Number 6 was T. Maas,
3 correct?

4 A Correct.

5 Q Number 7 was Mr. R. Barziloski?

6 A Yes.

7 Q Turning to the next page, the 8th was Mr. R.
8 Mulkey?

9 A Yes.

10 Q The 9th was Mr. J. Malunda?

11 A Yes.

12 Q And the tenth was Mr. G. Cason, correct?

13 A Yes.

14 Q Was Mr. G. Cason selected for inspection?

15 A He was not.

16 Q The 11th was Mr. H. Holze, correct?

17 A Yes.

18 Q The 12th was Mr. J. Merritt?

19 A Yes.

20 Q The 13th was Mr. J. Konowal?

21 A Yes.

22 Q The 14th was Mr. Dobosh?

23 A Yes.

24 Q The 15th was Mr. A. Blake?

25 A Yes.

81b3

- 1 Q Was Mr. A. Blake selected for reinspection?
- 2 A He was not.
- 3 Q The 16th was Mr. F. Keep?
- 4 A Yes.
- 5 Q The 17th was Mr. J. Fornwall?
- 6 A Yes.
- 7 Q 18th, Mr. J. Wilson?
- 8 A Yes.
- 9 Q 19th, Mr. S. Bindenagel?
- 10 A Yes.
- 11 Q The 20th, Mr. D. McDuffie? Is that correct.
- 12 A Yes.
- 13 Q Was Mr. D. McDuffie selected for reinspection?
- 14 A He was not.
- 15 Q The 21st was Mr. G. Sarver, correct?
- 16 A Yes.
- 17 Q The 22nd, Mr. S. Hubler?
- 18 A Yes.
- 19 Q The 23rd, Mr. D. Nicholson?
- 20 A Yes.
- 21 Q The 24th, Mr. D. Stoner?
- 22 A Yes.
- 23 Q 25th, Mr. L. Kiergaard?
- 24 A Yes.
- 25 Q And was number 25, Mr. Kiergaard selected for

1 reinspection?

2 A No, he was not.

3 Q Number 26 was Mr. R. Ewbank?

4 A Yes.

5 Q Number 27, Mr. R. Riemer?

6 A Yes.

7 Q Number 28, Mr. J. Resick?

8 A Yes.

9 Q Turning to the next page, number 29 was Mr.
10 D. Meyer?

11 A Yes.

12 Q And number 30 was Mr. J. Anderson?

13 A Yes.

14 Q Was Mr. J. Anderson selected for reinspection?

15 A No.

16 Q Number 31, Mr. J. Eggum?

17 A Yes.

18 Q 32, Mr. R. Emerson?

19 A Yes.

20 Q 33, Mr. D. Ahlquist?

21 A Yes.

22 Q 34, Mr. B. Mandurano?

23 A Yes.

24 Q Number 35, Mr. B. Peterson? Is that correct?

25 A Yes.

81b5

1 Q Was Mr. B. Peterson selected for reinspection?
2 A No.
3 Q Number 36 was Mr. D. Dehmlow?
4 A Yes.
5 Q Number 37, D. Hoffman?
6 A Yes.
7 Q 38, D. Opatrny?
8 A Yes.
9 Q 39, D. Perko?
10 A Yes.
11 Q 40, Mr. E. Sarver?
12 A Yes.
13 Q Was Mr. E. Sarver selected for reinspection?
14 A No.
15 Q Number 41, Mr. F. Rickert?
16 A Yes.
17 Q Number 42, Mr. H. Kainz?
18 A. Yes.
19 Q 43, Mr. J. Mandurano?
20 A Yes.
21 Q 44, J. Mulroney?
22 A Yes.
23 Q 45, J. Pathman, is that correct?
24 A Yes.
25 Q Was J. Pathman selected for reinspection?

81b6

1 A No.

2 Q Number 46 was J. Wood?

3 A Yes.

4 Q 47, M. Momaly?

5 A Yes.

6 Q 48, R. Peterson?

7 A Yes.

8 Q 49, S. Webb?

9 A Yes.

10 Q 50, T. Joyce?

11 A Yes.

12 Q Was Mr. T. Joyce selected for reinspection?

13 A No.

14 Q Number 51 was C. Lindberg?

15 A Yes.

16 Q 52 was A. Schutt?

17 A Yes.

18 Q 53 was K. Knoebber?

19 A Yes.

20 Q 54 was S. Wagner?

21 A Yes.

22 Q Next page, 55 was R. Ruefer?

23 A Yes.

24 Q Was Mr. Ruefer selected for reinspection?

25 A No.

81b7

1 Q And 56 is G. Berry?

2 A Yes.

3 Q 57 is S. Karr?

4 A Yes.

5 Q 58 is S. Cullen?

6 A You are outside.

7 Q I'm sorry. Now, when we get to S. Cullen now,
8 we're beyond the period of the reinspection program, is
9 that correct?

10 A Correct.

11 Q To your knowledge, Mr. Tuetken, is this an
12 accurate listing of the Hatfield inspectors, by date of
13 certification?

14 A To my knowledge, it's accurate.

15 MR. CASSEL: I now move the admission of
16 Intervenor's R-5 into the record, Judge.

17 JUDGE SMITH: Any objection?

18 MR. MILLER: I just wonder, is he going to ask
19 Mr. Tuetken to explain the listing or is he going to leave
20 it up to me?

21 JUDGE SMITH: If someone doesn't, you can bet it
22 will come up from here.

23 BY MR. CASSEL:

24 Q Mr. Tuetken, you're going to get asked sooner
25 or later, why were so many of the every fifth inspectors not

1 reinspected for Hatfield?

2 A (Witness Tuetken) You will recognize, as you
3 go through this list that you just reviewed, some
4 inspectors were all certified on the same day. Therefore,
5 when you have multiple inspectors certified on the same
6 day, they were selected alphabetically, being that they were
7 all certified on the same day, and then you go into the
8 next fifth inspector. Therefore you shifted that -- that
9 event shifts the condition, as you see it reported here.

10 For example, on 8-10-81, as shown on page 2,
11 there were four inspectors all selected on the same day.
12 On 6-5 -- oh, on 8-10, you will see Mr. Blake, whose last
13 name begins with B, was selected in lieu of Mr. Keep and
14 Mr. Fornwall.

15 Q He should have been selected, right?

16 A Correct?

17 Q Was he, in fact, selected?

18 A Excuse me, he was not.

19 Q He should have been selected, shouldn't he?

20 A The disconnect of counting occurs at an earlier
21 point in time.

22 (Pause.)

23 Q Have you any further explanation, Mr. Tuetken,
24 as to the fact that every fifth inspector appears not
25 to have been selected?

1 A The disconnect occurs in the area of Mr. Mulkey,
2 who was a Level II inspector in the 13 series. And this
3 working listing records it as a Level I and a Level II.
4 He was inspected as 11-2, so the continuation of this
5 listing breaks at this point, as compared to this listing.

6 MR. MILLER: You've got to identify it by exhibit
7 number.

8 BY MR. CASSEL:

9 Q Let's refer to --

10 JUDGE SMITH: Did you catch Mr. Miller's
11 explanation?

12 MR. MILLER: Mr. Tuetken was identifying
13 Intervenor's Exhibit R-4 and R-5.

14 WITNESS TUETKEN: Yes. On R-4, Mr. Mulkey is
15 a Level II.

16 BY MR. CASSEL:

17 Q On R-4, Mr. Mulkey is identified on page 7 as
18 a Level II inspector, correct?

19 A (Witness Tuetken) Correct.

20 Q But on R-5?

21 A He's listed as a I and a II.

22 Q On the second page, he's listed as a I and a II?

23 A Correct.

24 Q So how does that account for the subsequent
25 every fifth inspector not being reinspected? Can you explain?

1 A On R-4, if you would follow that document through,
2 I think you would find every fifth inspector was inspected
3 for the level he was qualified under.

4 Q But the actual ones who were, in fact, reinspected
5 are listed on R-5. Isn't that correct?

6 A That's correct.

7 Q R-4 was Hatfield's proposal to you, correct?

8 A R-4 was Hatfield's identification of the date
9 of certification of the inspectors.

10 Q Right, but the actual inspectors, who were
11 in fact reinspected, are listed on R-5, are they not?

12 A As a tabulation that's correct.

13 Q And they're listed by date of initial certification,
14 correct?

15 A That is correct.

16 Q And we have a problem here in terms of many of
17 them whom you would think would be every fifth were not
18 reinspected. And you're saying that Mr. Mulkey, for some
19 reason, threw it out of sync, is that correct?

20 Can you explain, with reference to R-5 --

21 JUDGE SMITH: Excuse me. Several times now
22 Mr. Tuetken has accepted the premise of your question and
23 I really wonder if he does.

24 You are saying that -- repeatedly -- that not
25 every fifth inspector was actually reinspected and Mr. Tuetken

81b11

1 has explained, as I understand it, that that necessarily
2 is not the case, that it may be not every fifth, as it is
3 listed on the paper, but since several were hired on the
4 same day you cannot say that one or the other is the fifth.

5 MR. CASSEL: I think we can clear that up, Judge.

6 BY MR. CASSEL:

7 Q Isn't it correct, Mr. Tuetken, that when
8 several inspectors in a particular level were hired on the
9 same day, the procedure was that they were supposed to be
10 listed alphabetically, and thus they would be listed in the
11 order of the last name of -- of their last name in the
12 alphabet? And if you included that listing alphabetically,
13 then you should still have every fifth inspector being
14 reinspected?

15 MR. MILLER: Rather than supposed to be, why
16 don't we look at what was done, which is shown on Exhibit
17 R-4?

18 MR. CASSEL: First let's find out what the
19 procedure was supposed to be. Then we'll see whether R-4
20 complied with the procedure.

21 WITNESS TUETKEN: When I directed the contractor
22 to compile a listing of the inspectors, based on certification
23 date, I did not give them additional guidance to list them
24 alphabetically. I, as I selected the process of the fifth
25 inspectors, used the next subset going alphabetically to

1 select the inspector.

2 BY MR. CASSEL:

3 Q Well, Hunter did that, didn't Hunter?

4 A (Witness Tuetken) Did not --

5 Q In its own listing?

6 A List them alphabetically?

7 Q Right.

8 A Not through any specific guidance.

9 Q But they, in fact, did that?

10 A Possibly. I'd have to look at the list.

11 Q Let's refer back to the Hunter Exhibit, which
12 was number 2 for identification.

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mgc 9-1

1 And if you look at the very last page of
2 Attachment 2 to the Hunter Exhibit, which is R-2, it's
3 a listing of Level I inspectors, correct?

4 A That's correct.

5 Q And all of them between No. 5, Mr. W. Baker,
6 and No. 16, Mr. B. York, have their date listed as
7 April 1, 1981, correct?

8 A That's correct.

9 Q And they're listed in alphabetical order, right?

10 A That's correct.

11 Q And Hunter, in fact, did take every fifth
12 from that alphabetical listing, correct?

13 A That's correct.

14 Q And that's what Hatfield should have done as
15 well, correct?

16 A There was no specific guidance.

17 Q So Hatfield could have done it a different way?

18 A That's correct.

19 Q There was no procedure specifying, then, how
20 to deal with the situation where they were all certified
21 on the same date?

22 A There was not.

23 Q All right. Then let's turn to page 2 of
24 Exhibit 5, which is the exhibit pertaining to Hatfield.

25 Now we were talking about Level I inspectors,

mgc 9-2 1 because you gave on page 2 of Exhibit 5 -- you gave the
2 example of Mr. A. Blake, and you said the problem in getting
3 the numbers out of synch occurred in connection with
4 Mr. R. Mulkey at the top of the page. We agreed earlier
5 that Mr. R. Mulkey was the eighth Level I inspector by date.

6 Now you are saying that something happened in
7 connection with Mr. Mulkey that threw the numbers out of
8 synch. What was it about Mr. Mulkey that means he shouldn't
9 have been counted there as No. 8?

10 A Mr. Mulkey is a visual welding inspector making
11 judgments on visual weld quality. He was treated as a
12 Level II inspector.

13 Q So instead of Mr. Mulky being No. 8 on this
14 exhibit, the eighth Level I inspector, we should just skip
15 him as a Level I inspector and treat Mr. J. Malunda as
16 the eighth Level I inspector; is that correct?

17 A Yes.

18 Q If we do that, then Mr. Malunda becomes No. 8,
19 correct?

20 A Mr. Malunda becomes eighth.

21 Q And Mr. Cason becomes nine?

22 A Yes.

23 Q Mr. Holze becomes 10?

24 A Yes.

25 Q Mr. Merritt becomes 13, correct -- I'm sorry --

mgc 9-3

1 11, correct?

2 A Mr. Merritt becomes 11.

3 Q Mr. Konowal becomes 12?

4 A Mr. Dobosh became 12 in this instance.

5 Q What happened to Mr. Konowal?

6 A On R --

7 Q On R-5, now. I'm referring to the second page

8 of R-5.

9 A Okay. In this listing, he would have become --

10 Q He would have become 12, right?

11 A Mr. Konowal would have become 12 in this

12 listing; that's correct.

13 Q And Mr. Dobosh would be 13?

14 A That's correct.

15 Q And Mr. Blake would be 14?

16 A That's correct.

17 Q And Mr. Keep would be 15?

18 A That's correct.

19 Q And Mr. Keep was, in fact, reinspected.

20 A That's correct.

21 Q So now we're back in synch, right?

22 A Yes.

23 Q All right. Let's keep going down the list,

24 because I think we're going to get out of synch again.

25 Mr. Fornwall would become 16, right?

mgc 19-47

1 A That's correct.

2 Q Mr. Wilson, 17?

3 A Yes.

4 Q Bindenagel, 18?

5 A Yes.

6 Q McDuffie, 19?

7 A Yes.

8 Q Sarver, 20?

9 A Yes.

10 Q He should have been reinspected and, in fact,

11 he was, right?

12 A That's correct.

13 Q Hubler would be 21?

14 A Yes.

15 Q Nicholson, 22?

16 A Yes.

17 Q Stoner, 23?

18 A Yes.

19 Q Kiergaard, 24?

20 A Yes.

21 Q Ewbank, 25?

22 A Yes.

23 Q Mr. Ewbank should have been reinspected, right?

24 A Based on running through a tabulation on this

25 list, that's correct.

mgc 9-5

1 Q And he wasn't reinspected, right?

2 A That's correct.

3 Q Do you have any explanation for that?

4 A Mr. Stoner was selected to be reinspected
5 based on the list we identified in February of 1983.

6 MR. MILLER: Exhibit R-4, right?

7 WITNESS TUETKEN: R-4.

8 JUDGE COLE: Is that a result of an alphabetic
9 listing of those that were certified in 81-10-05?

10 WITNESS TUETKEN: Yes.

11 JUDGE SMITH: The same day as Kiergaard.

12 MR. MILLER: The same day as Kiergaard on
13 Exhibit R-4.

14 WITNESS TUETKEN: The listing had him presented
15 ahead of Kiergaard. We selected the fifth man who happened
16 to be -- who happened to be Stoner, based on the list.

17 BY MR. CASSEL:

18 Q On the next page of the exhibit, which is
19 page 3, --

20 A (Witness Tuetken) Which exhibit?

21 Q R-5, I'm sorry.

22 JUDGE SMITH: May I suggest, Mr. Cassel, now
23 that we understand somewhat better -- we all understand
24 the methodology, that you might want to defer this cross-
25 examination until after lunch, and you can have more time

mgc 9-6

1 to confirm --

2 MR. CASSEL: I think that's a good idea,
3 Judge. I think the witness has explained how the listing
4 developed. But I do want to just ask him a question about
5 the methodology.

6 MR. CASSEL:

7 Q In other words, when you had inspectors who
8 were certified on the same date, there was no uniform
9 methodology, or was there a uniform methodology among your
10 contractors for determining which one to select?

11 A (Witness Tuetken) There was no uniform
12 methodology.

13 Q And so the decision as to which one of those
14 to select was initially suggested by the contractor and
15 agreed to or not agreed to by you?

16 A Let me characterize the events, which may
17 answer your question.

18 The lists were brought to myself. I executed
19 on Hatfield's list the process of selecting the first and
20 the fifth and subsequently every fifth inspector after
21 that. The asterisks you refer to are my notations. The
22 notes on page 10 are my writing.

23 Q So when it says "Dick suggested list on page
24 7," --

25 A That is provided without notation.

mgc 9-7

1 Q That was provided without any indication of
2 who would be reinspected?

3 A That is correct.

4 Q Now when you first met with the contractors,
5 did you provide a timetable for completion of their
6 reinspection work?

7 A Yes.

8 Q Do you recall being asked the same question
9 in your deposition last week and answering no?

10 A Yes.

11 Q Since then, your recollection has been refreshed?

12 A No. Your further questioning in the deposition
13 identified that I had established with them objective dates.
14 When we first met with them, I had not established a
15 timetable.

16 Q When you first met with the contractors, you
17 mean in a meeting with all the contractors present?

18 A Yes.

19 Q You had no timetable?

20 A Not in the first meeting.

21 Q And you testified last week, did you not, that
22 one of the reasons you had no timetable was that it was
23 necessary to gather some intelligence to find out what
24 the volume of work was before you could reasonably set a
25 date for completion?

mac 9-8

1 A That's correct.

2 Q Let me refer you to Exhibit R-4, page 16.

3 A Yes.

4 Q Is that a memorandum from Mr. Buchanan of
5 Hatfield Electric Company, dated February 8, 1983?

6 A Yes.

7 Q Does the last sentence of that memorandum say,
8 "The total reinspection program shall be completed prior
9 to July 1, 1983"?

10 A It does.

11 Q And what was the source of that July 1, 1983
12 date?

13 MR. MILLER: Excuse me. I don't know how the
14 witness can answer this question, unless we establish first
15 that he has seen this memorandum before or anything else.
16 This is from Mr. Buchanan to Mr. Hill and Mr. Koca. I don't
17 believe it's been established on the record that
18 Mr. Tuetken has ever seen it.

19 BY MR. CASSEL:

20 Q Have you ever seen this before, Mr. Tuetken?

21 A (Witness Tuetken) I have.

22 Q Do you know what the source of the last
23 sentence on page 16 was, the date in the last sentence?

24 A Probably general guidance from conversations
25 with myself.

mgc 9-9 1

Q And those conversations would have occurred
on or before February 8, 1983?

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A That's correct.

End 9 4

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mgc 10-1.1

1 Q I am now showing you and your counsel a
2 document which I will ask the reporter to mark for
3 identification as Intervenors' Exhibit R-6.

4 (The document referred to
5 was marked Intervenors'
6 Exhibit No. R-6 for
7 identification.)

8 (Document distributed to Board, parties, and
9 witnesses.)

10 MR. CASSEL: I will represent that that is a
11 document provided by Commonwealth Edison to Intervenors
12 with the representation that it was the notes of
13 Mr. Klingler on the reinspection program meeting with
14 representatives of the contractors, held February 22, 1983.

15 BY MR. CASSEL:

16 Q Have you ever seen these notes before,
17 Mr. Tuetken?

18 A (Witness Tuetken) I have.

19 Q Do you recognize the handwriting?

20 A I do.

21 Q Is it Mr. Klingler's handwriting?

22 A In the lower note portion of the document
23 below the signatures?

24 Q If those are signatures, then below the
25 signatures. Is that Mr. Klingler's handwriting?

mgc 10-2 1

A It is, I believe.

2

Q And does not a third of those notes indicate reinspection plus expansion by 30 June 1983?

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A It does.

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Q Was an instruction provided by you or Mr. Klingler at the February 22 meeting that the reinspectior plus expansion was to be completed by 30 June 1983?

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A Guidance was provided, yes, for that to be the objective.

11

12

Q When did you first -- strike that.

13

14

Is your recollection now refreshed as to your testimony earlier that you did not, in the initial meeting with the contractors, provide any timetable for completion?

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MR. MILLER: I'm going to object to the form of the question. It's mischaracterizing the testimony and evidence of record.

18

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If you are referring to these notes of this meeting of February 22, 1983, the testimony has established that the first meeting was February 7, 1983.

21

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MR. CASSEL: The question stands.

23

24

25

BY MR. CASSEL:

Q Does this refresh your recollection as to whether you provided any timetable in the first meeting with the contractors?

mgc 10-3

1 A (Witness Tuetken) Timetable objective, yes.
2 It refreshes my memory versus what question?

3 Q Based on your recollection plus what you have
4 now reviewed, in your initial meeting with the
5 contractors, did you provide them a timetable for completion
6 of the program?

7 A Yes.

8 Q And did you provide that timetable also in
9 discussions with Mr. Buchanan of Hatfield prior to his
10 February 8 memo, which has been marked as an exhibit?

11 A More than likely, yes.

12 Q And that was before you knew the volume of
13 work to be inspected, which you said last week you needed
14 to know before you could set a deadline.

15 A That's correct.

16 Q In the discussions which the working group had
17 in the design of the program, I believe you testified last
18 week that there was no discussion of the use of an
19 independent firm to come in and do the reinspection program;
20 is that correct?

21 A That's correct.

22 Q And you, yourself, gave no consideration to
23 the use of an independent firm for that purpose?

24 A I don't believe that's the way I recalled my
25 logic or my answer.

1 Q I'm just asking you right now today. Did you
2 yourself consider the use of an independent firm for the
3 reinspection program?

4 A Yes.

5 Q And as you did that consideration, were you
6 aware of any published guidance from the NRC on the use
7 of independent contractors for reviews of the quality of
8 work or design?

9 A I need further clarification of your question.

10 Q Were you aware of any published NRC guidance
11 on the use of independent firms for reviews of reinspections?

12 A Published guidance issued by the NRC?

13 Q That's right.

14 A No.

15 Q Were you aware of any statements by the NRC
16 concerning the criteria to be used for the selection of
17 an independent firm for such reviews?

18 A No.

19 Q Were you aware of any published statements
20 by NRC Chairman Palladino concerning the use of independent
21 firms for independent reviews?

22 A Published statement, NRC originated, or news
23 media?

24 Q Originated by NRC Chairman Palladino.

25 A In what context?

mgc 10-5 1

2 Q Concerning the use of independent outside firms
for reviews.

3 A I'll try and answer your question. What I think
4 I recall, I probably am aware that there were news articles
5 published in the papers about reinspections occurring at
6 other locations and the use of independent inspection
7 sources. That's my only recall of sources of information
8 of that type.

9 Q Mr. Del George, you were also involved in that
10 working group and, in fact, had the final sign-off
11 responsibility from the group before the recommendation
12 went to senior management; is that correct?

13 A (Witness Del George) Yes.

14 Q Were you aware of any published statements by
15 NRC Chairman Palladino concerning the use of independent
16 firms for outside reviews?

17 A I am aware and was aware then of comments that
18 were made by Chairman Palladino as a result of reviews
19 being done relative to the Diablo Canyon plant, and those
20 comments, I believe, refer to design practice reviews.
21 So in that sense, I was aware of comments that had been
22 made by Chairman Palladino.

23 Q And did you consider those at all at the time
24 you were designing or participating in the design of
25 Edison's reinspection program?

mgc 10-6 1

2 A Inasmuch as the questions presented which led
3 to the development of the Byron reinspection program did
4 not have anything to do with design, I did not feel that
5 those comments were applicable to our development process.

6 Q Did you address the issue and answer it for
7 yourself whether there is something different about a design
8 review that would make those comments inapplicable to your
9 reinspection program?

10 A Well, as I indicated in my direct testimony,
11 the reinspection program at Byron was not focused on either
12 design or on product quality demonstration, but rather on
13 a determination of the adequacy of inspections performed
14 by inspectors qualified under the provisions of N-4526,
15 an ANSI standard. I know of no comments made by the NRC
16 which would provide guidance on how to conduct such a
17 review through the use of an independent source.

18 Q Do you see any distinctions between the design
19 review and an inspector qualification review that would
20 suggest any lesser need for independence in the review?

21 A I know of no comments that have been made by
22 the NRC Staff to suggest that every reinspection performed
23 at a nuclear power plant requires the use of an outside
24 consultant in order to assure its adequacy.

25 Q The question that I put was, do you see any
difference between a design review and a review of inspector

mgc 10-7 1

2 qualifications that would call for any lesser degree of
3 independence in the review of the inspector qualifications
4 than in the review of the design?

5 A I guess I have a problem with the question.
6 And the reason that I do is that it assumes the premise
7 that independence is necessary to every review done. And
8 I'm not sure that I can accept that premise.

9 Q I didn't state nor do I assume that premise.
10 I just asked the question, whether you see any reasons why
11 there should be any lesser need for independence in the
12 review of inspector qualifications than in the review of
13 design?

14 A I see a need for independence. I don't
15 see the need for an outside consultant to provide that
16 independence. So it's a question, I think, of how
17 "independence" is defined, and that gets me back to the
18 comment I made earlier, which is that I know of no guidance
19 provided by the NRC Staff to impose restrictive requirements
20 relative to the use of outside consultants to provide
21 independence in the conduct of reinspection programs at
22 nuclear power sites.

23 Q By the way, Mr. Shewski, were you familiar
24 with the published statements of Mr. Palladino, which
25 Mr. Del George just discussed, at the time you were
participating in the design?

mgc 10-8 1

A (Witness Shewski) I was not.

2 JUDGE SMITH: Do you purport to have the
3 Chairman here?

4 MR. CASSEL: No, but I purport to have his
5 written word here, if I can find the right pile, Judge.

6 JUDGE SMITH: I think we are up to Exhibit 7
7 now, right?

8 BY MR. CASSEL:

9 Q Mr. Tuetkin and Mr. Del George -- let's try
10 to focus this -- Mr. Del George, as long as we're
11 discussing it, I am now showing your counsel and you a
12 copy of a document which I will ask the court reporter to
13 mark as Intervenors' Exhibit R-7 for identification,
14 which consists of five pages, the first three of which
15 purport to be a letter from Nunzio J. Palladino, who is
16 the Chairman of the Nuclear Regulatory Commission, to the
17 Honorable John D. Dingell, Chairman, Committee on Energy
18 and Commerce of the United States House of Representatives,
19 dated February 1, 1982, and the last three pages of which
20 purport to be responses to questions in a November 13, 1981
21 letter to Chairman Palladino from Congressman Dingell and
22 Ottinger, which responses were included as an enclosure
23 to the letter.

24 And I ask you if you believe this to be the
25 public statement of Chairman Palladino with regard to

mqc 10-9 1 independent design reviews to which you referred earlier?

2 A (Witness Del George) I can't speak from any
3 personal knowledge. I have looked at the document. I
4 recognize it as one that purports to have been signed by
5 the Chairman and is directed to the individual you named.

6 I said previously that I was familiar with
7 comments made, but I don't recall having see this specific
8 letter, although I may have.

9 (The document referred to
10 was marked Intervenors'
11 Exhibit No. R-7 for
12 identification.)

13 (Document distributed to Board, parties, and
14 witnesses.)

15 BY MR. CASSEL:

16 Q On the third page of the exhibit, Question 1
17 states in part, "Please provide, prior to the issuance
18 of the 50.54(f) letter, the definition of the terms" --
19 and it then lists four terms, one of which is "independent."

20 Are you familiar at all with the definition, --
21 prior to reading this letter, were you familiar with the
22 definition of "independence" set forth in the enclosure
23 to Chairman Palladino's letter?

24 A (Witness Del George) I have a general
25 familiarity, and I'm sure by reading these paragraphs,

mgc 10-10¹

1 the paragraphs noted as response, I could become more
2 familiar.

3 Q At the time you participated in preparing the
4 design of the Edison reinspection program, were you then
5 generally familiar with the definition of "independence"?

6 A As I indicated previously, I was familiar with
7 the position taken relative to Diablo Canyon as to the
8 review performed of design performance relative to the
9 Diablo Canyon plant. And in that context, I was familiar
10 with the way in which an independent review was formulated.

11 Q Referring to the response to Question 1, the
12 second paragraph, the third sentence states -- the third
13 sentence of the second paragraph states, "These individuals
14 or companies should also be independent."

15 The next sentence begins with the words,
16 "Independence means" -- and the next sentence after that
17 begins with the words, "Independence also means...."

18 Would you take a moment to review the
19 sentences there about what "independence" means?

20 (The witness complies.)

21 The second of the two sentences that begin
22 with the words "independence means" states, and I quote:
23 "Independence also means that the design verification
24 program must be conducted by companies or individuals not
25 previously involved with the activities at Diablo Canyon

mgc 10-11'

that they will now be reviewing," end quote.

2 In fact, the companies or individuals
3 reinspecting at Edison were previously involved with the
4 activities that they were reviewing, were they not?

5 A Yes.

6 Q The sentence before that states, quote:
7 "Independence means that the individuals or companies
8 selected must be able to provide an objective, dispassionate
9 technical judgment provided solely on the basis of
10 technical merit," close quote.

11 Do you believe that the contractors and others
12 who did the reinspection program at Byron were able to
13 provide an objective, dispassionate technical judgment
14 provided solely on the basis of technical merit?

15 A To the extent that statement applies to an
16 individual party involved in our program, my answer would
17 be yes. It is not in every case applicable.

18 For example, we're not sure that contractor
19 inspectors reperforming inspections made technical judgments
20 in the context of this statement.

21 Q What about with respect --

22 JUDGE SMITH: Mr. Cassel, there's going to have
23 to be a limit as to how long we're going to permit you
24 to cross-examine on the Chairman's statement. It's not
25 productive. As to the Chairman's views here, it cannot

mgc 10-12 1 help this Board very much; however, I'm not stopping you.
2 I'm just saying, keep it within its relative importance
3 to the hearing.

4 MR. CASSEL: I believe these are not just the
5 personal views of the Chairman, but the official response
6 of the Nuclear Regulatory Commission to an inquiry from
7 the United States Congress.

8 MR. MILLER: I'm not at all certain that that's
9 the case.

10 JUDGE SMITH: To this moment, I don't know how
11 we can use this information on this hearing. But proceed.
12 I just want you to give it its relative importance in the
13 proceeding.

14 BY MR. CASSEL:

15 Q What is your answer with respect to the companies
16 in relation to that sentence, Mr. Del George?

17 MR. MILLER: I object to the form of the
18 question.

19 MR. CASSEL: I'm sorry. If it's not clear, I'll
20 make it clear.

21 BY MR. CASSEL:

22 Q You indicated that the individuals -- you
23 provided, in answer to my question, whether the contractors
24 at Byron were able to provide an objective, dispassionate
25 technical judgment provided solely on the basis of technical

mgcl0-13 1 merit, and you answered with respect to individuals.

2 I am now asking you with respect to the
3 companies, which are also referred to in this definition
4 of "independence."

5 A (Witness Del George) I'm sure at the time this
6 statement was made that it was made in the context of the
7 problem identified relative to Diablo Canyon, applicable
8 to the resolution of that problem.

9 I cannot, from my own personal knowledge,
10 expand the intent of this statement to create an
11 applicability to the Byron situation. And for that reason,
12 I don't believe I can answer your question.

13 Q Let's ask it another way. You made a decision
14 as part of the design team that created the reinspection
15 program to have the contractors reinspect themselves; is
16 that correct?

17 A That's correct.

18 Q And did you have no concern at the time you
19 made that decision that the contractors might be tempted
20 to make themselves look good?

21 A I had no basis for such a concern, and I believe
22 the program was implemented in such a way that we assured
23 that any potential bias would have been identified, and I
24 know of no bias having been identified through the conduct
25 of this program.

mgc 10-141

Q Did you believe at the time you designed the program that the contractor would reasonably expect that if he performed poorly on the reinspection program, that that might adversely affect the contractor?

MR. MILLER: I am going to have to object. That question is so vague, with so many indefinite terms, I don't see how Mr. Del George can respond to it. What does "adversely affect" mean?

MR. CASSEL: In any way.

MR. MILLER: Then it's so general that I object to it on that basis. There's got to be some more specification, Judge.

JUDGE SMITH: Overruled.

End 10

1 MR. CASSEL: I see specification in the Judge's
2 eyes. I'll be more specific.

3 MR. MILLER: I believe the Judge overruled the
4 objection.

5 JUDGE SMITH: I overruled the objection.

6 MR. MILLER: Do you have the question in mind?

7 WITNESS DEL GEORGE: Would you repeat the question
8 or restate the question?

9 BY MR. CASSEL:

10 Q At the time you designed the program, did you
11 consider the contractors might reasonably expect that if
12 they performed poorly in the reinspection program, they would
13 be adversely affected -- let me withdraw that question as
14 stated. I think it's ambiguous.

15 At the time you designed the reinspection program,
16 did you consider that a contractor might reasonably expect
17 that if the results of the reinspection program showed past
18 poor performance by the contractor that that would adversely
19 affect the contractor?

20 MR. MILLER: On that one, I'm sorry, I do have
21 to interpose another objection. Once again it seems there's a
22 foundation lacking with respect to what a contractor might
23 reasonably expect.

24 JUDGE SMITH: It's overruled. I think it's a
25 good question. It's a fundamental question. I just hope

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1 you don't identify this as a faulty question after I
2 have overruled the objection.

3 MR. CASSEL: I'll never attempt to read the
4 Judge's eyes. I obviously misread them.

5 WITNESS DEL GEORGE: I think it's reasonable
6 to assume that if the program results did not meet the
7 program criteria, it would have been reasonable for the
8 contractor to assume that more reinspection would have
9 been required. Beyond that, I can't make an assumption
10 as to what the contractors would have thought.

11 BY MR. CASSEL:

12 Q And you made no assumption beyond that at the
13 time you designed the program?

14 A (Witness DelGeorge) Based on my knowledge of
15 the contractors, it was my belief that they would have
16 performed as best as they could to identify discrepancies
17 within the definition of the program that was outlined for
18 them.

19 Q And your belief at the time was that the worst
20 that a contractor would reasonably foresee, as a result of
21 poor performance being revealed in the reinspection program,
22 is that his company might be subjected to some further
23 reinspection?

24 A I think I've answered that question.

25 Q And your answer is yes?

1 A It is, from my own personal knowledge, I know it
2 is reasonable to assume that he would have expected that, yes.

3 Q And that's the worst that it was reasonable to
4 assume, that he would foreseeably have expected?

5 MR. MILLER: I'm going to have to object to the
6 word worst. I don't know what that means. Maybe Mr. Cassel
7 could describe some of the other consequences that he
8 foresees.

9 JUDGE SMITH: Why don't you go directly to what
10 could happen to a contractor who shows up poorly on a
11 reinspection program, how his interests could be adversely
12 affected. Give us some specifics. I'm surprised you
13 can't think of some ways that contractors may feel threatened
14 by a reinspection program. Could they lose money? Could
15 they lose work? Could they lose contracts? Could they lose
16 reputation? It would cost them money for additional
17 reinspections?

18 All those things could happen, or could they?
19 I don't know.

20 WITNESS DEL GEORGE: It's possible that they
21 could.

22 JUDGE SMITH: But your testimony is that you
23 didn't take that into account?

24 WITNESS DEL GEORGE: Your Honor, I believe I
25 said that I had no basis to believe that that would affect

1 their opinion.

2 JUDGE SMITH: That wasn't his question.

3 BY MR. CASSEL:

4 Q My question was what you had reason to believe
5 they would reasonably expect might result from a poor
6 showing.

7 A (Witness Del George) At the time the program was
8 formulated, which was the point in time you directed my
9 attention to, what I had in my mind was that the contractors
10 would reasonably expect that they would continue to conduct
11 reinspections until we had identified -- fulfilled the
12 program and identified any discrepancies within the program
13 format.

14 I'm not sure that at that point in time that I
15 had considered specifically the ramifications to individual
16 contractors, presuming a result. However, I had no basis
17 to assume that the contractors would not performed with
18 integrity in the conduct of their work, based on my past
19 experience with those contractors.

20 Q Was there any discussion, in the working group,
21 of the kinds of consequences that Judge Smith just
22 illustrated and their being on whether the contractors should
23 be asked to reinspect themselves?

24 A I don't recall any specific discussions of that
25 type because it presumed a result before the results were in.

111b5

1 We didn't discuss what we would do to a contractor if he
2 failed.

3 Q That's not my question. The question is when
4 you decided to have the contractors reinspect themselves,
5 was there any discussion that they might not reinspect
6 themselves as zealously as someone else might reinspect
7 them because of fear of potential economic consequences to
8 them if they did?

9 A We may have discussed the credibility of
10 inspections done by contractors and I think it was our
11 common belief, and the other members of the panel can attest
12 to this individually, it was our common belief that the
13 contractors in question would perform with integrity within
14 the context of the program we had defined.

15 That was our expectation and we had no basis for
16 believing otherwise. And to the extent results are now in
17 and have been evaluated, we see no basis in those results
18 to suggest that that premise was incorrect.

19 Q Just to be clear on your basis for not designing
20 the program in accordance with what you understood to be
21 Chairman Palladino's public statement, was it simply --

22 A I have to object to that characterization --

23 JUDGE SMITH: Sustained.

24 (Laughter.)

25

111b6

1 BY MR. CASSEL:

2 Q I don't mean to characterize it. I thought you
3 testified that you knew that Chairman Palladino had made
4 certain statements about how to -- the need for independent
5 design review at Diablo Canyon and you decided not to have
6 an independent review at Edison, for purposes of the
7 reinspection program.

8 A (Witness Del George) I also indicated that I
9 knew of no position that had been taken by the Chairman or
10 the NRC at that time to suggest that the approach taken at
11 Diablo Canyon, which was taken for specific reasons, was
12 of necessity to be applied to address or to resolve other
13 issues not of the same type, not of the same scope, not
14 of the same plant, in the future.

15 So I did not -- I did not contemplate that
16 discussion specifically relative to Diablo Canyon as
17 applicable to the Byron case.

18 Q I just want to clarify -- I think you may just
19 have done so. The reason you did not attempt to design
20 the reinspection program in accordance with what you had
21 heard to be the public statements of Chairman Palladino,
22 was you regarded those as inapplicable to the type of
23 program that you were designing for Edison?

24 MR. MILLER: Judge, I think that's at least the
25 third time that question, or a varying of it, has been

1 asked of Mr. Del George this morning.

2 JUDGE SMITH: It seems to me that it has, but
3 if this is going to resolve it once and for all, I think
4 it's worth it.

5 BY MR. CASSEL:

6 Q Did you hear the question?

7 A (Witness Del George) I heard it.

8 I would appreciate it, if you could, that you
9 restate it so I'm sure that I -- since this hopefully will
10 be the last time that I will have to do it, I will get it
11 right.

12 Q All right.

13 Was your basis for not attempting to design the
14 Edison reinspection program to comply with what you
15 understood Chairman Palladino's public statements about
16 independence at Diablo Canyon, that you simply regarded those
17 as inapplicable because they related to design instead of to
18 the type of program you were doing?

19 A That played a part in my decision, as well as
20 the fact that I knew of no reason that the intent of the
21 statement was to apply it in a way more broadly than the
22 specific application, which was Diablo Canyon.

23 Q Was there anything you knew about the Region IV
24 requiring independence at Diablo Canyon that you believe to
25 be inapplicable to having an independent review at Edison?

1 A Yes.

2 Q What?

3 A In the case of Diablo Canyon, the designer whose
4 work was in question had been found to have done inadequate
5 work. And for that reason, as I understand the position taken
6 on Diablo Canyon, an outside design authority was brought
7 in to evaluate that inadequate work.

8 In the case of Byron, there was no inadequate
9 work identified. There was raised an uncertainty about the
10 qualification of inspectors. I see that as being two
11 different things.

12 Q Wasn't there an inadequacy found at Byron, in
13 terms of the qualification and certification of inspectors?

14 MR. MILLER: That's what he just said, Judge.
15 That was Mr. Del George's preceding answer. I object to
16 the question. It's been asked and answered.

17 JUDGE SMITH: I share Mr. Miller's view. I
18 thought that he had made that clear.

19 MR. CASSEL: I'll withdraw the question, Judge.

20 BY MR. CASSEL:

21 Q Let's try the parallel a little differently,
22 Mr. DelGeorge. The reason for not having the same design
23 engineer inspect or reinspect his own work at Diablo Canyon
24 was that he had previously been found to have performed
25 defective design work?

1 A (Witness Del George) That was my understanding.

2 Q That was your understanding? Why is it anymore
3 appropriate to have contractors who have previously been
4 found deficient by the NRC Staff in the area of inspector
5 qualification and certification review, through a
6 reinspection program, the qualifications and certification
7 of their own inspectors?

8 MR. MILLER: I object. That mischaracterizes
9 what the reinspectors were going to review. They most
10 assuredly were not going to review the certifications of
11 the first inspectors. That was not the focus of the
12 program.

13 MR. CASSEL: I didn't say that it was.

new bu

14 MR. MILLER: Mr. Cassel is just fishing here,
15 Judge. I think we've been over Diablo Canyon sufficiently for
16 purposes of this hearing.

17 JUDGE SMITH: I would like you to be able to
18 phrase that question accurately enough to get an accurate
19 answer. I mean so far I think your question is wanting.
20 You have not yet captured the situation that this witness
21 prevailed at Byron.

22 Maybe he can ask the question for you?

23 (Laughter.)

24 And that will put an end to it.

25 MR. CASSEL: So long as we don't have to pay his

1 attorney's fees, Judge, I wouldn't object to that. I'll
2 try to rephrase it.

3 BY MR. CASSEL:

4 Q I'm really trying to focus here on Byron?

5 JUDGE SMITH: Do you have anything to add, as
6 to why you think the situation prevailing at Byron is
7 different than the situation addressed by Chairman
8 Palladino at Diablo Canyon?

9 WITNESS DEL GEORGE: The situation at Byron that
10 led to the program was fundamentally a difference of opinion
11 with respect to the way in which the ANSI standard applicable
12 to the certification and qualification of inspectors was
13 applied. Commonwealth and Edison undertook a program to
14 resolve that uncertainty. We didn't accept that the
15 practices were inadequate.

16 We recognized, however, that it was necessary
17 in order to resolve the Staff's concern that changes needed
18 to be made in our program. As a result, actions were taken
19 prospectively to conform to the position that the Staff
20 had expressed, indicating their interpretation of the
21 standard in question.

22 Retrospectively, we undertook a program of
23 reinspection to determine whether the concern expressed
24 by the Staff was valid. The Staff had indicated, at the
25 time of their expression of concern, that they had no reason

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1 to believe -- excuse me. They had identified no hardware
2 deficiencies that could be attributed to a lack of
3 qualifications.

4 JUDGE SMITH: What Mr. Cassel's point is, that
5 however you describe it, the Staff found deficiencies in
6 the certification packages of the inspectors and the remedy
7 of that was left to the same entities who were responsible
8 for the deficiencies in the first instance. Is that the
9 gist of your question?

10 MR. CASSEL: That is exactly it, Judge.

11 JUDGE SMITH: Have we addressed that? Stated
12 that fairly?

13 WITNESS DEL GEORGE: Yes, sir.

14 JUDGE SMITH: All right. Now, with that premise,
15 can you make a distinction between the situation referred to
16 by Chairman Palladino at Diablo Canyon and the situation
17 that you agree is that at Byron?

18 WITNESS DEL GEORGE: In the case of Diablo
19 Canyon, the purpose of the review was to identify design
20 deficiencies, to allow the designer -- who had himself
21 created design deficiencies that had been identified --
22 might compromise the result.

23 In the case at Byron, the question was whether
24 or not inspectors were qualified. The program, which
25 involved using contractor employee's reinspected work, the

1 results of that would allow for us to make a determination
2 as to the qualification of inspectors.

3 So I think there is an interim step that makes
4 it different. The question at Diablo Canyon was are there
5 any other design discrepancies and where the designer had
6 made the initial design discrepancy, his judgment might
7 be inappropriate, relative to whether or not there were more.

8 JUDGE SMITH: So it's a question of judgment.
9 The reinspection program left little to judgment on the
10 part of the contractors?

11 WITNESS DEL GEORGE: Relative to the qualification
12 of the inspector.

13 JUDGE SMITH: Right, but a design reverification
14 involves a tremendous amount of judgment?

15 WITNESS DEL GEORGE: I believe that to be true.

16 JUDGE SMITH: Is that it? All right. I'm
17 satisfied with that answer.

18 MR. CASSEL: At this time, Judge, Intervenor's
19 move for the admission --

20 JUDGE SMITH: I'm not foreclosing further
21 examination, if you object to what has transpired on it.

22 MR. CASSEL: No, I don't have any objection to
23 either the questions -- to any of the questions, Judge.
24 I move the admission of Chairman Palladino's letter, at this
25 time, into the record of this case because I think it is

1 helpful in terms of clarifying the intent of the design of
2 the program. Mr. Del George has testified that he knew
3 about it at the time -- not specifically about this letter,
4 but about the basic public statements by Chairman Palladino
5 in this regard -- and that he consciously chose to view
6 them as inapplicable to this situation, which he was
7 confronted with.

8 MR. MILLER: Excuse me. I don't believe that
9 was Mr. Del George's testimony. In any event, this
10 exhibit is clearly irrelevant to any issue before this
11 licensing board, absent some showing which Mr. Cassel so
12 far has not been able to make that this document applies
13 across the board to reinspection program, including the
14 reinspection program that we're considering here at Byron.

15 Absent such a showing, it really has nothing to
16 do with any of the issues in this case, except as was used
17 in questioning of Mr. Del George to test his views about why
18 an independent third party was not used at Byron.

19 MR. CASSEL: No such showing --

20 MR. MILLER: I should also point out this is
21 purely a hearsay document, as to the Applicant.

22 JUDGE SMITH: I'm not going into the aspect of
23 it. I am troubled by the fact that it does have one of
24 the evils of hearsay, and that is the Chairman isn't here
25 to be questioned on it. But the fact that the statement was

1 made is not in dispute. That it's accurately reported, I
2 don't think is in dispute.

3 MR. LEWIS: Mr. Chairman, however the Staff
4 would also be concerned as to whether admission of this
5 document would be appropriate. As you have said, without
6 the opportunity to actually explore what the author of
7 the letter, what the reach was, it is really impossible
8 to determine whether or not it has any applicability to the
9 Byron reinspection program.

10 And I'm bothered by having it in the record,
11 admitted in the record, and then available to be cited as
12 somehow authoritative on a point where I don't think it
13 has been established to be authoritative.

14 (Board conferring.)

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2 JUDGE SMITH: If the only purpose of the
3 author is to try to establish a standard used by the
4 Chairman in Diablo Canyon, the standard is irrelevant to
5 our considerations. We could not look to this as any
6 standard by which we would make a decision or as a standard
7 by which we would expect Mr. Del George to have made a
8 decision.

9 Every answer that you have received in the
10 cross-examination on this document is that it is irrelevant,
11 and you have not had any testimony of relevancy. You are
12 depending on any relevancy which may appear on the face
13 of the document for its standing to be received. You can't
14 look to any testimony that you have received, and on the
15 face of it, there is no relevancy.

16 MR. CASSEL: I think what I would like to do,
17 Judge, is to defer my motion to admit this until I have
18 direct testimony to support it. I think the face of the
19 document indicates that it is not by terms directly
20 applicable. The reason I'm offering it is because it
21 represents a judgment from the highest level of the
22 Commission as to the appropriate degree of independence
23 that is necessitated in the situation where you are looking
24 over the shoulder --

25 JUDGE SMITH: That's where you're absolutely
wrong, because the standard -- if the Chairman intended to

mgc 12-2 1

2 establish a standard which does not exist in our regulations,
3 he would have sought the regulations. There is one plant,
4 Diablo Canyon, which was the subject of this. There are
5 many, many plant in the United States. That's not the way
6 the NRC does business. This is not useful for any
7 standard at all.

8 MR. CASSEL: I don't mean a legal standard that
9 is applicable, Judge.

10 By the way, it's my understanding that this
11 same set of criteria definition has now been cited in a
12 number of subsequent cases, but I don't have that informa-
13 tion at hand, and I'm not moving for the admission of it
14 now.

15 JUDGE SMITH: I do want to point out, the
16 document is a part of the record. It's in the rejected
17 exhibit file. You've made a motion now, and we'll reject
18 it now. If you have the basis later on to move, well,
19 do it. You're not foreclosed forever. But right now,
20 the way it stands is that your offer is rejected.

21 (The document previously
22 marked Intervenors' Exhibit
23 No. R-7 for identification
24 was rejected.)

25 MR. CASSEL: Just so the record is clear as
to the purpose for which I'm offering it, I'm not offering

mgc 12-3 1

2 it for the purpose of saying that this letter or the
3 standard in it directly controls the situation here. I'm
4 offering it as a situation which is, in some respects,
5 parallel, and it is therefore useful in this Board's
6 exercise of its judgment on an issue which I presume you
7 will need to address in this case, which is, was the
8 inspection, reinspection program here flawed because it was
9 not done independently.

10 JUDGE SMITH: That's exactly why we denied it,
11 because it's not reasonable. There's nothing we can do
12 with that letter in deciding the issues in this case --
13 nothing.

14 I think this is a good breaking time for lunch.

15 MR. MILLER: Judge, before we do, we do have
16 testimony of Mr. Kostal and Mr. Johnson and a brief
17 supplementary testimony on statistical evaluation of
18 system control work done by Mr. Singh, which I would like
19 to hand to the Board and to the parties at this point.

20 JUDGE SMITH: Need we be on the record for this,
21 now that you've indicated that you have it?

22 MR. MILLER: No.

23 JUDGE SMITH: All right. We will adjourn
24 for lunch.

25 (Whereupon, at 12:35 p.m., the hearing was
recessed for luncheon, to resume at 2:00 p.m. this same day.)

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AFTERNOON SESSION

2

(2:05 p.m.)

3

Whereupon,

4

LOUIS O. DEL' GEORGE

5

RICHARD P. TUETKEN

6

WALTER A SHEWSKI

7

resumed the stand and, having been previously duly sworn,

8

were examined and testified further as follows:

9

MR. CASSEL: Judge, I am not certain that we
or that I've made sure to move the admission and obtain
a ruling on all of the exhibits prior to lunch.

10

11

12

JUDGE SMITH: Well, 7 was offered and rejected.
2 is still pending.

13

14

MR. CASSEL: 2 was deferred until the first --
or was that 1, I guess; it was 1 that was deferred.

15

16

At this time, I would move the admission of
the following exhibits: R-2, which was the Hunter
Corporation letter of February 16; R-3, which was the
chronological listing for Hunter; portions of R-4 that
were referred to in the examination, and specifically R-4,
pages 7 through 10, which is the list of Hatfield inspectors
and page 16, which was the February 8, 1983 memo from
Mr. Buchanan; R-5, which was the chronological list for
Hatfield; and R-6, which were some notes on the February 22,
1983 Edison meeting with the contractors, at least the

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1 bottom portion of which Mr. Tuetken believed to be in
2 Mr. Klingler's handwriting.

3 JUDGE SMITH: Are there objections?

4 MR. MILLER: Assuming that Exhibit R-4 is
5 limited to the pages identified by Mr. Cassel, we have
6 no objection to any of those exhibits.

7 MR. LEWIS: No objection.

8 JUDGE SMITH: What shall we do about the
9 other pages of R-4?

10 MR. MILLER: I think they ought to be discarded
11 myself.

12 MR. CASSEL: Judge, I wouldn't object to that
13 at the close of the proceeding, but just to save us some
14 trouble, because there are other witnesses where it could
15 conceivably come up, we might simply defer the physical
16 discarding of the other pages until the close of the
17 evidence in this stage. I'm not moving the admission of
18 those other pages into the record.

19 JUDGE SMITH: I understand. I'm concerned
20 about them popping up in proposed findings.

21 MR. CASSEL: I will certainly not be offering
22 proposed findings, Judge, based on evidence that is not
23 admitted into the record.

24 JUDGE SMITH: Let's admit only the pages you
25 referred to. It will be your responsibility to conform

mgc 12-6 1 the exhibits at the end of the session to the ruling. Those
2 are the official exhibits I'm referring to.

3 MR. LEWIS: Your Honor, he's not submitting
4 them now? Normally, he would be submitting them now to
5 the reporter.

6 JUDGE SMITH: Yes. The thing is, they will
7 be available in the hearing room throughout the session.
8 It would be his responsibility to assure that they conform
9 to the ruling.

10 MR. CASSEL: I will certainly comply with that,
11 Judge. In addition, I owe the reporter two copies of all
12 of the exhibits, in addition to the one which I provided
13 her.

14 Have you then ruled that the exhibits are
15 admitted on the basis --

16 JUDGE SMITH: Intervenors' Exhibits R-2 through
17 R-6 are received.

18 (The documents previously
19 marked Intervenors' Exhibit
20 Nos. R-2, R-3, R-5 and
21 R-6 were received in evidence.)

22 MR. CASSEL: Just to the record will be clear,
23 then, I think that probably the easiest thing to do, Judge,
24 is the copy that remains in the record will consist of
25 pages which will be numbered 7 to 11, then it will skip to

mgc 12-7 1

2 16. It seems to me, since we referred to those pages
3 numbers during the testimony, it is probably easiest to
4 leave it that way.

5 MR. LEWIS: Isn't it 7 through 10?

6 MR. CASSEL: I'm sorry; 7 through 10 and 16.

7 (The document previously
8 marked Intervenors' Exhibit
9 R-4 for identification was
10 received in evidence, in
11 part, as described.)

12 JUDGE SMITH: Are you ready, Mr. Cassel?

13 MR. CASSEL: Yes, I am, Judge.

14 CROSS-EXAMINATION (CONTINUED)

15 BY MR. CASSEL:

16 Q Mr. Tuetken, did Edison provide any written
17 instructions on how to carry out the program directly, to
18 the reinspectors themselves?

19 A (Witness Tuetken) The inspectors themselves?

20 Q That's right.

21 A No.

22 Q You relied on the contractors to provide the
23 instructions to the reinspectors; is that right?

24 A Yes, sir.

25 Q Did you provide any oral instructions directly
to the reinspectors?

mgc 12-8 1

A Not that I can directly recall.

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Q So you trusted the contractors to provide

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appropriate instruction to their employees in accordance

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with the guidance you gave the management level people

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of the contractors?

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A Let me try to answer that with more detail.

7

The lead inspectors involved in the process, who are not

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necessarily the management personnel I think you are

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referring to, I dialogued with and provided guidance to

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many times in response to their questions.

11

Q Now one of the task to be done in the

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reinspection program was to tabulate for each inspector

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the number of inspectors on which there had been no

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discrepance at the passing level -- that is, whether the

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inspector had received 90 percent for subjective or 95

16

percent for objective -- who performed that tabulation in

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the first instance, the contractors or Edison?

18

A The contractors' employees.

19

Q So the contractors' employees knew before

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Edison did whether the initial raw data and tabulations

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indicated that a particular inspector had passed or had

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not passed.

23

A That is correct.

24

Q Now some of the inspectors who failed to achieve

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the minimum scores of 90 percent or 95 percent as applicable,

mgc 12-9 1 were still employed by contractors at Byron at the time
2 discovery was made; is that correct?

3 A That's correct.

4 Q And were any of them removed from their
5 position as inspectors following that discovery?

6 A They were not.

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1 MR. CASSEL: I am now going to show you and
2 your counsel a document which I will ask the court reporter
3 to mark as Intervenor's Exhibit R-8 for identification.

4 (The document referred to was
5 marked as Intervenor's Exhibit
6 R-8 for identification.)

7 (Document distributed.)

8 MR. CASSEL: This consists of one page. I will
9 indicate, for the record, that the marginal notation on
10 the left hand side of the second paragraph of this letter
11 was placed there by one of the legal workers for Intervenor
12 and is not part of the document as it was produced to us by
13 Edison.

14 BY MR. CASSEL

15 Q Mr. Tuetken, disregarding that little notation
16 there in the left hand margin, just looking at the document
17 itself, have you ever seen this letter before?

18 A (Witness Tuetken) To be specific, I have seen
19 the letter, as it is phrased, without the NRC letterhead,
20 beginning with Docket Number 50-454 going down to Diane
21 Chevez. I do not recall seeing this document with the lower
22 notation.

23 Q By the lower notations, you mean those indications
24 that appear below the name of Diane Chevez?

25 A That's correct.

1 Q And this letter is the NRC's March 22, 1983
2 response to Edison's letter of February 23, 1983, proposing
3 the reinspection program?

4 A To be specific, the wording appears to be that
5 which is in the letter that you refer to.

6 Q In other words, this was the NRC's initial
7 written response to your program proposal of February 23, as
8 far as you know?

9 A Yes.

10 Q And you received a copy of this letter, except
11 for the bottom markings, at the time it was received by
12 Edison, in March of 1983?

13 A Yes, sir.

14 Q Now referring your attention to the second
15 paragraph of the letter, which states "regarding visual
16 weld examination being classified as a subjective inspection
17 attribute, we understand this classification will be used
18 only for surface conditions which do not affect the
19 integrity of the weld."

20 Do you know what are "surface conditions which do
21 not affect the integrity of the weld?"

22 A I have opinions, however the way the program is
23 implemented, only an engineer can determine the integrity
24 of the weld.

25 Q Can you give us some examples of surface conditions

131b3

1 which do not affect the integrity of the weld?

2 A In my opinion, the as-welded condition does not
3 affect the integrity of the weld.

4 Q And that is the surface condition?

5 A It is a surface condition. It however, can be
6 cause for rejection by an inspector, due to his judgment
7 that he cannot examine the weld properly.

8 Q So under this statement, in the NRC's letter,
9 an as-welded condition should have been classified as a
10 subjective attribute. Is that correct?

11 A Can you restate that question?

12 Q Yes.

13 Under the statement, from the NRC, an as-welded
14 condition -- to which you just referred -- should have
15 been classified as a subjective attribute and therefore
16 require a 90 percent rate in order to achieve the acceptable
17 level?

18 A I'm not sure of that. I don't know that I can
19 answer that.

20 Q Why not?

21 A Because there are other items of examination for
22 welds which are subjective, which the inspector cannot
23 determine the integrity of the weld by inspection.

24 Q Well, I asked you about one which is subjective
25 namely -- I thought you said that an as-built condition is a

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1 surface condition which is -- is an example of a surface
2 condition which does not affect the integrity of the weld?

3 A In my opinion, that's correct.

4 Q Under this statement from the NRC then, that
5 would have been classified as a subjective attribute?

6 A That is correct.

7 Q So it would have been subjected to a 90 percent
8 passing rate in order to achieve objective?

9 A That is correct.

10 Q Now can you give us an example of an aspect of a
11 weld, which does not fall within the category of a surface
12 condition which does not affect the integrity of the weld?

13 MR. MILLER: Excuse me. Is it subject to the
14 qualification that's in this sentence about visual weld
15 examination or do you mean just generally?

16 MR. CASSEL: That's a good clarification, Mike.
17 Let's take it one at a time.

18 BY MR. CASSEL:

19 Q The first question is going to be if you can give
20 us an example of such a condition? The second question will
21 be whether it can be detected visually. Okay? So the first
22 question is can you give us an example of an aspect of a
23 weld which is not a "surface condition which does not affect
24 the integrity of the weld?"

25 A (Witness Tuetken) Repeat the last portion?

1 Q Sure. A moment ago I asked you if you could give
2 us an example of a surface condition which does not affect
3 the integrity of the weld and you gave us as-welded condition
4 as an example.

5 Now I'm asking you for an example of the other side
6 of that fence. Can you give us an example of an aspect of
7 a weld which does not fit within the category described in
8 this sentence, namely surface conditions which do not
9 affect the integrity of the weld?

10 A The only way I know how to answer it is the
11 integrity of the weld is a judgment made by an engineer and
12 not by an inspector. And so, in responding to you from an
13 inspection standpoint, I don't know how to respond to your
14 question. Either I'm losing it or --

15 JUDGE SMITH: I'm having trouble with the
16 question myself. Let's describe this weld that you're
17 talking about now. What different aspects are there to it?
18 Is it a subjective weld?

19 MR. CASSEL: I'm asking about --

20 JUDGE SMITH: Is it a subjective attribute?

21 MR. CASSEL: Is the weld a subjective attribute?

22 JUDGE SMITH: This weld that you are asking him
23 to identify, if it exists, I want to know all of the modifiers
24 that you have put on it.

25 MR. CASSEL: I haven't put any on it.

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1 JUDGE SMITH: You said it's a non-surface
2 condition which do not affect the integrity of the weld.

3 MR. CASSEL: Oh, the aspect of the weld. In
4 other words -- maybe I should use the term condition. I'm
5 not sure.

6 This statement says "We understand this
7 classification --" and by that they mean subjective "--
8 will be used only for certain conditions.

9 JUDGE SMITH: So it's subjective. You're asking
10 about subjective welds, subjective inspections?

11 MR. CASSEL: No, I'm asking about particular
12 conditions relating to a weld.

13 MR. MILLER: Mr. Chairman, would it be at all
14 helpful if Mr. Tuetken got out one of our demonstrative
15 exhibits and perhaps try to be of assistance in that way?

16 JUDGE SMITH: I guess you'll have to ask Mr. Cassel.

17 MR. CASSEL: I wouldn't object to it, but I'm not
18 sure taking the time to do that. Why don't we try to move
19 along. If anyone thinks that's helpful, I certainly don't
20 have any problem.

21 BY MR. CASSEL:

22 Q Did you understand the statement to suggest that
23 some aspects of a visual weld examination should be treated
24 as subjective, and therefore require a 90 percent passing
25 rate and other aspects regarded as objective and therefore

131b7

1 requiring a 95 percent passing rate?

2 A (Witness Tuetken) I believe that's what the
3 sentence was trying to relay. That is correct. We did not
4 know how to apply that premise.

5 Q Okay. If that's what the sentence was trying
6 to relay, namely that some portions of a visual weld
7 examination were subjective and others were objective, can
8 you give us any examples of portions which pursuant to this
9 would have been objective and subjected to a 95 percent
10 pass rate?

11 A No. Because in our mind visual weld examination
12 is a subjected element or activity through its evaluation.

13 Q Wasn't the dividing line that this sentence
14 attempted to draw between the objective aspects and the
15 subjective aspects the phrase "surface conditions which
16 do not affect the integrity of the weld?"

17 MR. MILLER: Judge, I haven't objected to questions
18 which ask what Mr. Tuetken's understanding of this sentence
19 was and he has, I think, responded as fully as he can. He's
20 now being asked to put himself in the shoes of the author
21 of the letter and interpret it and I don't think that's fair.

22 JUDGE SMITH: That wasn't your intention?

23 MR. CASSEL: That wasn't my intention. Literally,
24 Mr. Miller is correct, but I meant what his understanding was.

25 WITNESS TUETKEN: Could you repeat the question,

1 then?

2 BY MR. CASSEL:

3 Q Yes. We recognize this is trying to divide a
4 visual weld examination to some aspects which are subjective
5 and others which are objective. I'm trying to find out what
6 the dividing line is. Was it your understanding that any
7 aspects of the visual weld inspection which related to
8 surface conditions which do not affect the integrity of
9 the weld were to be treated as subjective, and only those
10 were to be treated as subjective?

11 And other aspects were to be treated as objective?

12 A (Witness Tuetken) That was my understanding of
13 what this sentence was trying to relay, yes.

14 Q Now I think you earlier stated that you could not
15 give me an example of an aspect of a weld that would fit on
16 the objective side of that line. Why can you not do that?

17 A Again, I would repeat which I thought I said before,
18 a visual weld examination, as we see it, is a subjective
19 activity. It is the interpretation of what is required,
20 the comparison of that interpretation to the product form
21 and then a judgment as to its acceptability.

22 JUDGE SMITH: What we need now, I think, and it
23 would be very helpful for the rest of the hearing, would be
24 a definition of what a visual weld examination is.

25 WITNESS TUETKEN: I will try and relay it.

1 JUDGE SMITH: Particularly as compared to the
2 other kind of examination.

3 WITNESS TUETKEN: I would like to use the
4 example exhibits to try to do that.

5 JUDGE SMITH: Okay.

end13

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1 MR. MILLER: Let the record reflect that
2 Mr. Tuetken has the physical exhibit which was admitted
3 into evidence as Demonstrative Exhibit A.

4 JUDGE COLE: Physical Exhibit A.

5 MR. MILLER: Physical Exhibit A, I beg your
6 pardon. Thank you.

7 WITNESS TUETKEN: This is a weld. The question
8 at hand is are there any surface conditions that affect
9 the integrity of the weld. The problem with this is that
10 individually anyone may not affect the integrity of the
11 weld, or it may. Only a designer can make that determination
12 as to its significance to the integrity.

13 A welding examiner knowing, by his training, what
14 the standards apply and require, goes to the actual production
15 joint, visually examines the weld. He will use tools to,
16 as I will call it, calibrate his eyes to judge the size
17 of the weld as meeting its design requirements. He will
18 measure the length of certain defects using a tool and taking
19 all of these processes together. He makes a collective
20 decision as to its acceptability. In that case, we believe
21 it to be subjective.

22 JUDGE SMITH: Subjective?

23 WITNESS TUETKEN: Subjective.

24 JUDGE SMITH: Even though he uses measuring
25 devices?

141b2

1 WITNESS TUETKEN: The application of the devices
2 only are used to calibrate his eye. They do not necessarily
3 go/no go the whole weldment. He uses it to judge the size
4 of the weld as he makes a comparison interpretation.

5 BY MR. CASSEL:

6 Q Is it not correct, Mr. Tuetken, that the use
7 of -- and you'll have to help me with the proper instrument
8 -- I believe a weld gauge, or some sort of measuring device,
9 is a relatively recent practice at Byron and that the visual
10 weld inspections that were the subject of the reinspection
11 program were done without measuring devices, but just
12 eyeballed? Is that correct?

13 A (Witness Tuetken) Repeat your question. I don't
14 agree with parts of it.

15 Q I'm not sure I do either, but I'm trying to find out
16 what the facts are.

17 A Let me state the question and answer.

18 Q Sure.

19 A The question is have weld gauges been used --
20 employed in the examination of welds at Byron since
21 inception? Weld tools and gauges were available to the
22 inspectors. They used them, based on their judgment of
23 the need to examine a weld.

24 The reinspection program applied them more
25 rigorously than what was applied originally. Therefore, there
is no demonstration of uniformity over time.

1 Q Wasn't there a point in time, at a rather
2 recent point in time, when the practice became standard to
3 use weld guages for every visual weld inspection at Byron,
4 or for everyone of a certain kind?

5 A The practice has evolved to the point that many
6 inspectors are using them, primarily because of the continued
7 amount of over-inspections, over-reviews. Inspectors have
8 had a trend, or a tendency, to use guages more than what
9 is necessary, in my mind.

10 Q Do you have any knowledge, based on your experience
11 at Byron, whether it was very common or rather unusual for
12 the inspector, whose inspections were reinspected, to use
13 these guages or merely to have access to them and not use
14 them?

15 A I know they all had access to them. I cannot
16 state how rigorously they have employed them.

17 Q Let's take the example of a crack in the weld
18 or crack that is visible and includes something you can
19 see on the surface. Would that be an example of surface
20 condition which may affect the integrity of the weld?

21 A Yes.

22 Q Would it have been possible to score the
23 inspector's ability to detect cracks in the weld at a
24 95 percent level, rather than at a 90 percent level?

25 A Yes.

1 Q Was that done?

2 A No.

3 Q In fact, all of the visual weld inspections that
4 were a part of the reinspection program were treated in
5 their entirety as subjective inspections, is that correct?

6 A That's correct.

7 Q Was then, this statement from the NRC complied
8 with in the implementation of the program?

9 A In the sense of cracks, no. There were, however,
10 two cracks identified out of 40,000 welds.

11 Q Were there other aspects of the welds which, like
12 cracks, are surface conditions which may affect the
13 integrity of the weld?

14 MR. MILLER: Objection, the question as asked was
15 may affect, either may or may not. I thought that was
16 Mr. Tuetken's point about 20 minutes ago. The question, with
17 respect to cracks, was answered in terms of yes it does
18 affect the integrity of the weld.

19 JUDGE SMITH: Was that his answer?

20 WITNESS TUETKEN: A crack will affect the integrity
21 of the weld, yes, sir.

22 JUDGE SMITH: A crack will always affect the
23 integrity of a weld?

24 WITNESS TUETKEN: Affect it, yes.
25

141b5

1 BY MR. CASSEL:

2 Q Are there any other surface conditions which
3 will always affect the integrity of the weld?

4 A (Witness Tuetken) Any combination or any
5 condition in an extreme can possibly affect the integrity
6 of the weld.

7 JUDGE SMITH: Go down your list of examples, sir,
8 on Physical Exhibit A.

9 WITNESS TUETKEN: Porosity could be to such an
10 extreme that it could affect the integrity of the weld.
11 However, it's location and its populace in that location
12 may not affect the integrity of the weld.

13 JUDGE COLE: You're making a judgment about the
14 level of affect.

15 WITNESS TUETKEN: And an inspector cannot do that.
16 An inspector cannot be an engineer and know the loadings on
17 that weld.

18 JUDGE COLE: But even a small amount of porosity
19 could have some affect on the integrity of the weld. So I
20 just don't know how to interpret your answer when some you say
21 it affects the integrity and others you say it doesn't affect
22 the integrity or it could affect the integrity.

23 I would think any one of these deficiencies could
24 affect the integrity.

25 WITNESS TUETKEN: That's correct.

141b6

1 JUDGE SMITH: Now in the sense that you use
2 the crack, you said every crack will affect the integrity.

3 WITNESS TUETKEN: Correct.

4 JUDGE SMITH: Then you emphasized you said
5 affect, not perhaps destroy the integrity, but affect. Is
6 that what you meant?

7 WITNESS TUETKEN: Yes, sir.

8 JUDGE SMITH: Is not the same consideration true
9 of porosity?

10 WITNESS TUETKEN: That's correct.

11 JUDGE SMITH: So that's the problem. You have
12 to be very careful with your language here. You began
13 to describe porosity, as Dr. Cole pointed out, as may
14 affect.

15 WITNESS TUETKEN: Okay, could.

16 JUDGE COLE: Did you mean to say that a crack
17 is more likely to have a detrimental affect on the structural
18 ability of the weld to resist what it's supposed to resist?

19 WITNESS TUETKEN: Yes.

20 JUDGE COLE: And it would apply less to porosity
21 because you know there's a difference between a crack in a
22 weld and the problems associated with porosity are generally
23 less than those associated with the crack. Is that what
24 you tried to bring across?

25 WITNESS TUETKEN: Yes.

141b7

bus2

1 MR. CASSEL: Judge, I move the admission of
2 Intevenor's Exhibit R-8 for identification into the record.

3 MR. MILLER: No objection.

4 MR. LEWIS: No objection.

5 JUDGE SMITH: Intervenor's Exhibit R-8 is
6 received.

7 (The document previously
8 marked for identification as
9 Intervenor's Exhibit R-8
10 was received into evidence.)

11 BY MR. CASSEL:

12 Q Mr. Tuetken, as I ask you this question, if
13 you need to refer to the reinspection program report, let
14 me know and we'll do that. Otherwise, let's try it without
15 taking the time.

16 Are you familiar with the table in the reinspection
17 report -- I believe it's Table Q9-1 -- which purports to
18 be a summary of the non-reinspectable attributes by the
19 contractors at Byron?

20 A (Witness Tuetken) I'm familiar with the table, yes.

21 Q And that is not a complete listing of the non-
22 reinspectable attributes, is it?

23 A It is not.

24 Q Now in your direct testimony you indicate that
25 you believe approximately 80 percent of Hatfield's inspections

141b8

1 were reinspectable, correct?

2 A Yes.

3 Q What was the basis for that statement?

4 A It was an assessment to the population which
5 exists within any one class to its population as a whole
6 in the plant.

7 Q What was that assessment based on?

8 A Information provided in response to discovery
9 request by yourself, plus additional information which I'm
10 aware of exists in this populace form, as to the plant.

11 Q Did you actually have data which would reveal the
12 80 percent or did you have to make some subjective judgment,
13 sir?

14 A Subjective judgment.

15 Q The answers that you provided to Intervenor's
16 interrogatories provided the number of inspections in
17 categories that were, in fact, reinspected but did not
18 provide any data for the numbers of inspection in the
19 categories that were not reinspected, correct?

20 A Correct.

21 Q Did you actually have data on the number of
22 inspections in each of the categories that were not
23 reinspected?

24 A No, I assessed its population in proportion to
25 others.

141b9

1 Q How did you do that?

2 A Just by my familiarity with my work on the project.

3 Q So that was basically an educated guesstimate and
4 you did not have any specific numbers on which that was based?

5 A No, I used engineering judgment?

6 Q The 70 percent, with respect to Hunter -- that
7 is that 70 percent of the Hunter inspections were
8 reinspected. What was that based?

9 A The same processes I used for Hatfield.

10 Q In other words, you had specific data on the
11 numbers of inspections in the categories that were, in fact,
12 reinspected and you used engineering judgments without
13 specific data in the categories that were not reinspected?

14 A Correct.

15 Q Now I thought at your deposition last week you
16 indicated that you had obtained certain data from some of
17 the contractors after Intervenors had posed interrogatories
18 to you. But then subsequently you had thrown that informa-
19 tion away. Is that correct?

20 A Correct.

21 Q What information was that?

22 A I made phone calls as to population in certain
23 areas and amount of hangers and other components which had
24 been, by design, removed and therefore no longer reinspectable,
25 some assessment of how much rework had been done.

141b10

1 Q So this would have been data relating to a
2 number of inspections in the categories that were not
3 reinspectable?

4 A And some in the areas that were reinspectable.

5 Q But you provided that information to Intervenors
6 in the interrogatories, correct?

7 A That's correct.

8 Q So the only data that has been thrown away and
9 is not presently in either your possession or Intervenor's
10 possession is the data that you had on the number of
11 inspections in certain categories that were not reinspected?

12 A Correct.

13 Q Your testimony also states that less than 50
14 percent of PTL's inspections were reinspectable. Do you know
15 how much less than 50 percent of PTL's inspections were
16 reinspectable?

17 A No, but significantly less.

18 Q What is your basis for saying that?

19 A That PTL's populace of inspections is heavily
20 weighted into concrete and soils-type inspections, mostly
21 concrete. Therefore, the numbers of inspections were
22 large. Those are not recreatable events. Therefore, being
23 that large a population is a significant weight factor.

24 Q That again is a judgment on your part, for which
25 you do not have specific data?

141b11

1 A Correct.

2 MR. CASSEL: No further questions at this time,
3 Judge.

4 JUDGE SMITH: Are you done with this panel?

5 MR. CASSEL: No, I'm not done with Mr. Shewski,
6 I'm sorry. I would just inquire of what would be more
7 convenient for the parties. Do they want to do redirect
8 and cross on Mr. Tuetken and Del George, or do you want
9 me to proceed with Mr. Shewski?

10 I think Mr. Shewski's testimony will be in
11 very different areas than the testimony we have just
12 covered and it might be better to proceed with Mr. -- with
13 the other examination of the witnesses we just heard.

14 MR. MILLER: Judge Smith, we tendered them as
15 a panel. I'd just as soon have all the cross-examination
16 appear in one place in the transcript, and my redirect --

17 JUDGE SMITH: We would prefer to have them as a
18 panel, so go ahead with Mr. Shewski.

19 MR. CASSEL: Fine.

end 14

mgc 15-1 1

BY MR. CASSEL:

2 Q Mr. Shewski, you are Commonwealth Edison's
3 Corporate Manager of Quality Assurance; is that correct?

4 A (Witness Shewski) That is correct.

5 Q And you have been since the inception of the
6 reinspection program?

7 A That is correct.

8 Q And your department conducted three audits of
9 the reinspection program?

10 A There are three in my testimony, plus there
11 is one more.

12 Q What is the one more that is not in your
13 testimony?

14 A A corporate audit that was done in February 1984.
15 That is referred to in my testimony.

16 Q It is referred to in your testimony?

17 A But not an exhibit.

18 Q When was the first of those audits conducted?

19 A In June of 1983.

20 Q And why was the first audit not conducted until
21 June of 1983?

22 A It was deemed that that was about the right
23 time to get a good audit of the activities as to the
24 implementation of the reinspection program.

25 Q Deemed by whom?

mgc 15-2 1

A By Quality Assurance.

2 Q And was that under urging from the NRC Staff
3 to commence an audit of the program?

4 A It was not under urging. It was commenting by
5 the NRC Staff, but it was not -- well, you might say it
6 was urging, but it was planned to be done in June and was
7 programmed at that time, because generally the contractors
8 got underway in a reinspection program rather slowly in
9 April, May, and we thought that the best time to do it was
10 in June.

11 Q Your testimony also indicates at page 29 that
12 you had or your department did 14 audits of Hatfield since
13 August of 1983; is that correct?

14 MR. MILLER: Page 32 is the precise reference.

15 MR. CASSEL: I'm sorry. Yes, it's on page 32.
16 The answer begins on page 29. That point is on page 32.

17 WITNESS SHEWSKI: That is what my testimony
18 says.

19 BY MR. CASSEL:

20 Q Now is that relatively more attention on the
21 part of your department to Hatfield than you provided to
22 the other contractors at Byron in that timeframe?

23 A (Witness Shewski) I don't believe so.

24 Q It's about average?

25 A It's about the same.

mgc 15-3 1

2 Q Your testimony also states that special audit
3 and surveillance -- this is on page 32 immediately following
4 that -- special audit and surveillance attention and
5 emphasis was applied to Hatfield during this period.

6 A Do you mean by that just the same level of
7 special attention that you provided to every other
8 contractor at Byron during that time period?

9 A I mean by that, we are attuned to give Hatfield
10 a close watch as to what they were doing.

11 Q Why did you decide to do that?

12 A Because we wanted to be sure that Hatfield,
13 as well as the other contractors were performing properly
14 and meeting requirements. In fact, all our audit program
15 was increased during that timeframe in order to cover
16 the contractors even more completely, even more often and
17 more comprehensively.

18 Q Have you read the initial decision issued by
19 this Board in January?

20 A Yes.

21 Q And do you recall the statement in the
22 initial decision to the effect that Hatfield had had a
23 number of difficulties over the years with keeping its
24 paperwork in proper form?

25 A That is correct.

 Q Did your audits of the reinspection program and

mgc 15-4 1

2 of Hatfield since August 1983 show that Hatfield continued
3 to have difficulty keeping accurate records of its
4 activities?

5 A We found that Hatfield is doing a reasonably
6 good job. Occasionally we found cases where documentation
7 had omissions that were caught.

8 Q Was Hatfield, during that time period, doing
9 as good a job as the other contractors at Byron in that
10 respect?

11 A As a general statement, they were doing as
12 good as most contractors on site.

13 Q Your testimony on page 32 indicates that you
14 found 17 deficiencies in your various audits and inspections
15 of Hatfield since August 1983; is that correct?

16 A Yes, sir.

17 Q Did some of those 17 deficiencies relate to
18 Hatfield keeping inaccurate or improper records of its
19 activities?

20 A As stated in my testimony here, it involved
21 follow-up and objective evidence omissions, personnel
22 qualification and certification errors, inadequate
23 identification on weld traveller cards, lack of inspection
24 of combination hangers, improper disposition of
25 discrepancy reports, and failure of certain QC inspectors
to perform required read/study activities.

mgc 15-5 1

2 Q Well, at least two of those categories appear
to involve difficulties in maintaining proper paperwork.

3 Would you agree that inadequate identification
4 on weld traveler cards is an example of the historical
5 problem that Hatfield had, which the Board noted in January?

6 JUDGE SMITH: I want to interpose here. You've
7 asked two questions of Mr. Shewski along that line, which
8 require him to agree with the Board's initial decision along
9 that line. I don't know if he intends to answer and accept
10 your premise.

11 MR. CASSEL: I'm not sure the question is
12 relevant. I'll just ask it for the record to be clear.

13 JUDGE SMITH: Your most recent question assumes
14 that this witness agrees with you, that there's been a
15 historical problem on recordkeeping in Hatfield. You had
16 an earlier question of that nature, too. He may or may not
17 agree with your premise.

18 BY MR. CASSEL:

19 Q Do you agree with the Board's finding concerning
20 Hatfield's difficulties in maintaining accurate records of
21 its activities?

22 A (Witness Shewski) I don't believe I do agree
23 with the Board, that we have had serious -- strike that.

24 Q I'm sorry. Could you speak up, please. I'm
25 having difficulty.

mgc 1506 1

A Could I have the question again, please?

2

Q Do you agree with the Board's finding that

3

Hatfield has had historical difficulty in maintaining

4

accurate records of its activities at Byron?

5

A I do not agree that they have had historical

6

difficulty. They've had difficulties, but not historical.

7

Q The Board didn't use the word "historical,"

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and I may be misleading you by using it.

9

The difficulties over the years at Byron?

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MR. MILLER: Judge Smith, I really have to

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object. The Board specifically noted in its initial

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decision that the evidence before it was somewhat random

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in nature with respect to Hatfield. It was sufficient,

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obviously, for the Board to reach certain conclusions,

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and you did so. And unless Mr. Shewski is referring

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specifically to that portion of the initial decision or

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portions of the initial decision, I don't see how he can

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answer the question, because he knows, I think, perhaps

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more than anyone else in this room about the documentation

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issues with respect to Hatfield.

21

JUDGE SMITH: I think your better approach is

22

to ask Mr. Shewski straight factual questions, and don't

23

base them upon other people's opinions -- to wit, ours.

24

Allow him to express his own opinions.

25

MR. CASSEL: Fine.

mgc 15-7 1

2 JUDGE SMITH: I'm not foreclosing it, but
3 I just see that you're headed for difficulty along this
4 line. Right now we have a record which would suggest that
5 Mr. Shewski did agree with the Board's findings, if you
6 take a few questions out of context.

7 MR. CASSEL: Just to make sure the record is
8 clear and bearing in mind Mr. Miller's request that we
9 zero in on the specific reference --

10 (Pause.)

11 BY MR. CASSEL:

12 Q You may recall -- and I don't mean to pursue
13 this too far, so if the Board wants to foreclose this line
14 of inquiry, just let me know, but I do think that we want
15 to have the record --

16 JUDGE SMITH: I don't want to foreclose it.
17 I just want the record to be accurate. I don't think it's
18 inappropriate, but it's inaccurate.

19 BY MR. CASSEL:

20 Q In paragraph D-438 of the initial decision,
21 appearing at page 300, and if you need a copy of it before
22 you, just let me know -- the Board stated, "We are most
23 concerned that Hatfield seems to be perpetually incapable
24 of maintaining reliable records of nonconforming and
25 deviating conditions."

Do you agree with that?

mgc 15-8 1

MR. MILLER: Let me show the witness the
2 statement.

3 (Document handed to witness.)

4 WITNESS SHEWSKI: I do not agree with that.
5 But I would like to explain how the impression may have
6 evolved with regard to Hatfield over time.

7 JUDGE SMITH: Mr. Shewski, I am sure that you
8 will have an opportunity to do that, and if no one gives
9 you that chance, you may raise it yourself, if you wish,
10 but I don't want to interfere with his line of questioning
11 now.

12 So you do not have any basis upon which you
13 can examine Mr. Shewski on the assumption that there has
14 been a continuing problem with the records, as far as he
15 is concerned.

16 BY MR. CASSEL:

17 Q Since August of 1983 when you began the various
18 audits which we have been discussing, the 14 audits, has
19 Hatfield had a problem in maintaining reliable records
20 of nonconforming and deviating conditions at Byron?

21 A (Witness Shewski) Hatfield has had isolated
22 cases of documentation problems, as we stated.

23 Q Can you identify the isolated cases to which
24 you refer?

End 15 25

mgc 16-1 1

A In Audit Finding 6-83-86 --

2 MR. MILLER: Would you refer us to the
3 attachment?

4 MR. SHEWSKI: Which is Attachment H to my
5 testimony, it was found that field problem sheets were being
6 used to track and identify deficiencies, rather than their
7 nonconformance system.

8 BY MR. CASSEL:

9 Q Did you say Attachment H to your testimony?

10 A (Witness Shewski) I'm sorry. G.

11 Q That's the only instance of difficulty of
12 maintaining proper records that Hatfield has had since
13 August of 1983?

14 A The other one that is identified is in
15 Attachment Q, Audit 6-83-124. It deals with the establishing
16 of finding, relative to establishing of weld traveler cards
17 with complete information, which Hatfield was in the process
18 of correcting at the time of the audit.

19 The reason we documented it as a finding, rather
20 than an open item, is to be certain that it was tracked
21 until full completion.

22 Q Any other examples, or are those the only two?

23 MR. MILLER: You mean in connection with the
24 reinspection program, or generally?

25 MR. CASSEL: Since August of 1983.

mgc 16-2 1

2 WITNESS SHEWSKI: Another one was Exhibit R
3 on Audit 6-83-124, where Hatfield had not performed the
4 necessary inspections of work that had been done by the
5 heating, ventilating and air conditioning contractor
6 on attachments to the hangers. This is really not their
7 fault from the point of view that the work was done by
8 others; however, since it was their hangers, that they
9 installed and attachments made to them, they were responsible
10 for the inspection of them. Therefore, the documentation
11 of the inspection had not been done at that time.

12 BY MR. CASSEL:

13 Q Any others?

14 A (Witness Shewski) If there are, I don't recall
15 them. There may be, but I don't recall them.

16 MR. MILLER: Mr. Cassel, I just observed,
17 Mr. Shewski is looking at the reinspection program report --
18 I'm sorry -- the attachments to his testimony, and he may --
19 I don't know whether he believes himself limited in
20 answering the question to the attachments to his testimony.

21 MR. CASSEL: No, I'm not limiting the question
22 to the attachments to your testimony.

23 BY MR. CASSEL:

24 Q Has Hatfield had any difficulties with
25 maintaining reliable records of nonconforming and deviating
conditions at Byron since August 1983, is the question.

mgc 16-3 1

2 You have given us three examples, and I'm asking
3 whether there are any other examples that you know of?

4 A (Witness Shewski) I cannot recall any others.

5 Q On page 33 of your testimony where you refer
6 at the top to inadequate identification on weld traveler
7 cards, is that a reference to Attachment Q?

8 A Yes.

9 Q And that's all it refers to?

10 A Yes.

11 Q And the next category -- the second to next
12 category after that, improper disposition of discrepancy
13 reports, to what does that refer?

14 A I believe that has to do with the field problem
15 sheets that were used.

16 Q That would be Attachment G to your testimony?

17 A Yes.

18 Q And you don't believe that that refers to anything
19 other than Attachment G?

20 A I don't recall it referring to anything else.

21 Q Did you write your testimony, Mr. Shewski?

22 A Yes, I did.

23 Q The category immediately preceding on page
24 32 and 33, that sentence in your testimony immediately
25 preceding the weld travelers, refers to personnel
qualification and certification errors.

mgc 14-4

1 Did that include problems with documentation,
2 or is that something else you are referring to?

3 A That had to do with incomplete documentation
4 that was identified.

5 Q So that would be another example of Hatfield
6 having difficulty maintaining accurate and reliable records.

7 A The documentation was available. It was not
8 in the proper format in the file.

9 Q Does that refer to one of the attachments to
10 your testimony?

11 (Pause.)

12 A It does not, not to my knowledge. I can't find
13 that it refers to anything in my testimony as exhibits.

14 Q And you cannot, other than the examples you've
15 already given, you cannot recall any other instances that
16 Hatfield has had difficulty maintaining reliable or accurate
17 records since August of 1983?

18 A No, I cannot.

19 Q Let me refer you attention to Attachment D to
20 your testimony, page D-2, Attribute No. 3, Termination, and
21 specifically the third sentence, quote: "The tally sheets
22 appear to accurately reflect the data contained in the
23 reinspection reports; however, the final results contained
24 in the detailed inspector results did not accurately
25 reflect the data in the tally sheets," close quote.

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2 Is that another instance of Hatfield, since
3 August of 1983, failing to maintain accurate or reliable
4 records?

5 A This is a case of transferring numbers, and
6 the results upon further checking found some numbers that
7 were not exactly right. This is, from the way we look at
8 this, this is a human error, and it occurs when you deal
9 with numbers and tallying of numbers.

10 Q On page D-3, Attribute No. 8, in the first
11 paragraph under Attribute No. 8, the fourth sentence,
12 I quote: "The reinspections were performed using the
13 supplementary sheets, but the tally sheets accounted for
14 only the six items on the HP-981 checklist," end quote.

15 Is that another instance of Hatfield failing
16 to maintain reliable and accurate records since August of
17 1983?

18 A It is a case where they do not properly tally
19 the results.

20 Q Isn't it a fact, Mr. Shewski, that if we spent
21 a good deal of this Board's time going page by page through
22 the attachments to your testimony, that we would find
23 instance after instance of similar items regarding
24 inaccurate maintenance of records, including records
25 of numbers by Hatfield?

MR. MILLER: I'm going to object. If there is

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2 instance that Mr. Cassel wishes to bring to this Board's
3 attention, he ought to. He ought to do so and not just
4 ask Mr. Shewski to accept his characterization of testimony.

5 JUDGE SMITH: Mr. Shewski can answer. I'm
6 sure he's capable of answering the question, if he agrees
7 with it or not.

8 Is it a fact?

9 WITNESS SHEWSKI: I do not agree with the
10 characterization made in the question.

11 BY MR. CASSEL:

12 Q Do you have an alternative characterization
13 of what we would find concerning Hatfield's recordkeeping
14 if we went through the attachments?

15 MR. MILLER: That one, I think, is clearly
16 objectionable.

17 JUDGE SMITH: Yes, I agree. Sustained.

18 MR. CASSEL: I was just trying to save some
19 time here, Judge.

20 BY MR. CASSEL:

21 Q Let's put it this way: Is it your position
22 that there are in the attachments to your testimony no
23 other instances than those you have already identified, of
24 unreliable or inaccurate recordkeeping by Hatfield?

25 MR. MILLER: Judge, if the request is that

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2 Mr. Shewski review every attachment to his testimony, A
3 through S, and get a tabulation for Mr. Cassel, I suppose
4 that's appropriate examination. But to ask him to remember
5 the details of these attachments, I think, is unfair.

6 JUDGE SMITH: Let's find out what your purpose
7 is. Is it to establish through his testimony your view of
8 the facts, or is it to test his memory?

9 MR. CASSEL: A bit of both, Judge. We have here
10 an issue both relating to Hatfield's ability to maintain
11 accurate records, and I believe there is a good deal of
12 evidence of the continuation of that since 1983, and we
13 also have the Corporate Manager of Quality Assurance for
14 Commonwealth Edison on the issue of Edison's oversight of
15 the contractors, with particular regard, in this case, to
16 the responsibility that they have to assure that Hatfield
17 does maintain accurate records.

18 And if the fact is that there are numerous
19 instances of inaccurate records, and the Manager of Quality
20 Assurance is unable to recall anything more than a handful
21 of them and characterizes them as isolated, I think that
22 says something about Edison's oversight of its
23 contractors.

24 MR. MILLER: It may say something about
25 Mr. Shewski's memory. I don't think anyone would suggest
that the Corporate Manager of Quality Assurance is supposed

mgc 16-8 1

2 to carry in his head every detail of every inspection,
3 which is really what Mr. Cassel has asked him to recite
4 from memory.

5 JUDGE SMITH: With respect to your first
6 purpose, it does not help the record to have to run
7 Mr. Shewski's written testimony, through his oral testimony,
8 and back out again. If you think that the record demonstrates
9 your point, you are free to cite it on your proposed findings
10 or whatever.

11 With respect to his memory, I think you do have
12 a right to test his memory somewhat. I think also
13 Mr. Miller's point will be relevant, and that is, what would
14 this Board expect him to know about his responsibilities?

15 MR. CASSEL: I would agree with that.

16 JUDGE SMITH: He is, after all, the Corporate
17 Manager of Quality Assurance.

18 BY MR. CASSEL:

19 Q Mr. Shewski, as Corporate Manager of Quality
20 Assurance, since August 1983, have you spent your full time
21 on quality assurance matters?

22 A (Witness Shewski) Yes.

23 Q And approximately what proportion of your time
24 since August of 1983 has related directly to matters at
25 Byron?

A A good portion, but not all.

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Q More than half?

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A It would seem so, yes.

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Q And what has been your specific role with respect to the quality assurance activities at Byron in that timeframe?

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A Every day I talk with the site each morning to discuss the activities and concerns, things that come up the day before. I also give the site organization direction of additional things they should be looking into. For example, I often tell them, "Well, that's beginning to show signs of some kind of problem. We ought to do either a surveillance and an audit there right quick." I give them that kind of direction. I'm also available for consultation to determine whether or not the item is of such magnitude that a stop-work should be initiated.

And generally it's a manager's role of giving administrative guidance and establishing accountability for activities of the site organization on site.

Q Are there problems relating to the accurate -- maintenance of accurate and reliable records by Hatfield, which are presently outstanding?

A I am well aware that we have been talking and have had much said about the documentation of Hatfield, and we have taken a lot of extra steps and giving a lot of special attention in order to keep any other possible

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2 problems -- to come forth relative to documentation and
3 the items that we are documenting on these audits and
4 surveillances, because we are so carefully watching almost
5 anything we can out there to assure that there is no
6 slip-up in documentation, or at least catch it early on,
7 so it doesn't cause a serious problem, and that is why you
8 are seeing these items in these reports that I think are
9 minor, at the point at which we caught them, so we can keep
10 everything right out there, and when the job is done,
11 all is well.

NBU

12 Q The question, Mr. Shewski, was whether there
13 are outstanding items at this time with regard to Hatfield's
14 maintenance of accurate and reliable records.

15 A There could be some small items, but the big
16 item, which is the traveler card, weld traveler card,
17 is essentially complete. And that was the one that caused
18 the documentation concern relative to Hatfield.

19 Q Now your oversight of Hatfield consists of a
20 number of audits and surveillances, correct?

21 A Yes. And daily involvement with the day-to-day
22 activities of those contractors by our Quality Assurance
23 inspectors and engineers that are assigned to Byron
24 Station and the Construction Quality Assurance Department.

25 Q And since August of 1983, have your people
reviewed, either through an audit or a surveillance, all of

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1 the documentatation which Hatfield has been required to
2 maintain at Byron?

3 A All -- if you didn't say "all," I could answer
4 the question.

5 Q Okay. What proportion of the documentation
6 do you believe Edison's people have reviewed?

7 A We have undertaken in virtually every audit
8 an examination of documentation as part of the audit.
9 There is generally an audit question that causes us to
10 check documentation. We have done an audit check. We did
11 a very comprehensive authenticity audit check -- excuse me --
12 document check of the records at Byron in June of this year,
13 which was finished at the end of June. It was of Hatfield,
14 Hunter, and Pittsburgh Testing Laboratory. We did our
15 first major check of documentation for authenticity and
16 that there was no fraudulent activity associated with it
17 back in 1982, which was a two-month audit, and we have
18 done -- but we have been very attentive with each of these
19 three contractors, particularly that the documentation is
20 accurately being produced and kept.

21 End 16
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1 Q Maybe the question is one that you can't answer.
2 I don't know. But the question that I asked was what
3 proportion of Hatfield's documents has Edison directly
4 inspected since August of 1983? If you can't answer it,
5 just let us know, but if you can I'd be interested in your
6 answer.

7 A I can't give you numbers.

8 Q Can you give us any indication whatever?

9 A It was a large sample. That's all I can tell
10 you.

11 Q A large sample?

12 A Yes. In the various areas of documentation that
13 are kept in connection with the job.

14 Q And in that large sample you found a number of
15 problems with Hatfield's maintenance of accurate and
16 reliable records, to which you have testified in the last
17 half an hour?

18 A On the contrary, I did not find a lot of problems
19 with the documentation of Hatfield. We found some here
20 and there problems, but not a lot.

21 MR. CASSEL: Could I have a one or two minute
22 break, Judge?

23 JUDGE SMITH: I think it's time to take our
24 afternoon break.

25 MR. MILLER: He's just about finished with Mr.

1 Shewski.

2 MR. CASSEL: The purpose of the one to two
3 minute break was to discuss -- I think we're pretty close
4 to being finished, but I need a couple of minutes to make
5 that decision.

6 JUDGE SMITH: Let's take our ten minute afternoon
7 break. That way you can review your notes and officially
8 conclude the cross-examination and we can begin immediately
9 with the Staff's cross-examination.

10 (Recess.)

11 JUDGE SMITH: You may proceed, Mr. Cassel.

12 BY MR. CASSEL:

13 Q Mr. Shewski, Attachment O to your testimony refers
14 to a situation in which Pittsburgh Testing Laboratory, after
15 the third party inspection or over-inspection was done of
16 its reinspections, then apparently purported to override
17 the third party reinspection and change the results. Is
18 that correct?

19 A (Witness Shewski) The way you state it, there is
20 other factors that led them to get to that point, but in the
21 end result, they did override some of the original inspections.

22 Q And when they overrode the third party inspection
23 results, did they first advise Edison that they were
24 proposing to do that?

25 A No.

1 Q Was there anything in the reinspection program
2 design or the instructions which would have led PTL to
3 think that it was authorized to overrid the third party
4 inspectors?

5 A No.

6 Q Were you personally involved in this particular
7 audit?

8 A Involved in the sense that I was involved in
9 the discussion of it and also that I got it and read it.

10 Q And other than the fact that the criteria for
11 overlap and undercut for visual weld inspections had
12 recently been changed, did PTL have any other explanations
13 for the fact that they had overrode the third party
14 inspector?

15 A Their explanation was that when they went back
16 they deemed that the original inspection of some of the
17 welds that they overrode on were really not called correctly
18 and they improperly went ahead and overrode those original
19 calls.

20 Q And did they claim to have some understanding
21 that they were entitled to do that or did they just admit
22 that they were flat out wrong?

23 A I don't know the answer to either one of those,
24 but it is wrong.

25 Q On page 31 of your testimony, with reference to

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1 PTL, you indicate a number of deficiencies including
2 whiteout being used by one person on sample logs. What
3 kind of sample logs does that refer to?

4 A I'll have to look it up. I'll have to look in
5 here and find it.

6 Q Do you need to look in there to know whether
7 this was just a technical blemish or was it they were
8 whitening out some information that shouldn't have been
9 whited out?

10 A It doesn't matter. Whatever it was, they're not
11 supposed to use whiteout without -- at all. They're supposed
12 to cross it out and initial it and make the change and
13 initial it. And this was an incorrect correction of a
14 document.

15 Q And this whiteout instance would be described
16 in one of the attachments of your testimony? You don't
17 need to find it now. If it's there we can find it later.

18 A I believe it is.

19 Q In Attachment Q, page 4, it indicates that 19
20 percent of the welds -- these are Hatfield welds -- were
21 rejected on initial inspection. On the following page,
22 Q-5, it refers to a 20.7 percent reject rate for certain
23 Hatfield welds. And on the following page, Q-6, it refers
24 to a 19.4 percent reject rate for certain Hatfield welds.

25 Are these reject rates typical of the reject

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1 rates for Hatfield welds at Byron?

2 A These are running numbers of reject rates and
3 what should be looked at the end, but the normal reject
4 rate is in the order of 15 percent.

5 Q Normal reject rate for Hatfield or for all the
6 contractors at Byron?

7 A This kind of work.

8 Q Regardless of who the contractor is?

9 A Generally that's my experience. First in -- in
10 connection with the first inspection, usually this type
11 of work has a reject rate in that area.

12 Q And these are the rates of rejection of the weld
13 on the first inspection?

14 A Yes.

15 MR. MILLER: Why don't you turn to the end of the
16 story on page Q-11?

17 MR. CASSEL: I have no further questions, Judge.

18 JUDGE SMITH: Mr. Lewis.

19 CROSS EXAMINATION

20 BY MR. LEWIS:

21 Q Let me begin with Mr. Tuetken. Mr. Tuetken, if
22 you can look, in your testimony, to question and answer
23 33 which is on page 20 and 21. You refer there to the fact
24 that although normally information provided to reinspectors,
25 to enable them to perform their reinspections, contain the

1 name or the initials of the original inspector that the
2 exception you note in your testimony was for as-built dimen-
3 sion inspections.

4 Your answer then goes on to speak in terms of
5 for these inspections the information provided to the
6 reinspector did not contain the original inspector's initials
7 or name. With respect to reinspections of dimensions -- of
8 as-built dimensions, were you concerned particularly about
9 knowing the name, having the reinspector know the name of
10 the original inspector? Or were you concerned about him
11 having the actual dimension measurement from the original
12 inspection?

13 A (Witness Tuetken) I'll answer that question by
14 referring, also in my testimony, to interpretations and
15 the one specifically the interpretation number one which
16 was Attachment to page A-3. The senior resident and the
17 resident inspector at Byron made comments that they felt
18 that the -- specifically in the area of as-built data taking,
19 that the reinspector would be influenced by the presence
20 of the original data in his activity of performing additional
21 dimensional undertaking.

22 And for that reason, new data base documents are
23 created for the as-built data taking effort. In that
24 activity, the original inspector is not specifically
25 identified. Additionally, because the as-built effort is a

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1 more than one man effort, just a team effort, it was
2 not able to identify the specific inspector who took the
3 dimensions.

4 Q Do you distinguish, in issuing interpretation
5 number one, did you distinguish in some way between inspections
6 of dimensions measurements and other types of inspections?
7 I note that interpretation number one says that for this
8 type of inspection activity, it would be inappropriate to
9 provide the reinspection inspector with the original
10 inspector's data because this may influence the actual data
11 taking.

12 Did you find that to be a problem, with respect
13 to other types of inspections, or only this one?

14 A Well, the condition with other types of
15 inspections -- for example, a weld. A welder was reinspected
16 was already a welder that has been inspected and found
17 acceptable, based on the fact that it existed in the file,
18 in the documents record file.

19 The inspector, without knowing the condition the
20 original inspector saw, knew the original inspector had found
21 it acceptable.

22 The same analogy applies to determinations, et
23 cetera. So he knew the condition was found acceptable.

24 Q Are you stating that for other types of
25 inspections it was not necessary to screen that information

1 from the reinspector, because he would have already known it?

2 A Yes.

3 Q Let me ask, Mr. DelGeorge, if you could look at
4 question and answer 36 of your testimony. That is a lengthy
5 answer but the matter I want to explore with you is that
6 there is a discussion in that answer of 91 fitup gap
7 discrepancies.

8 And I believe this would be on page 44, where you
9 state that none of the fitup gap discrepancies identified
10 were found to have design significance. Are you aware
11 of the testimony I am referring to?

12 A (Witness DelGeorge) Yes, sir.

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end 17

1 Q Are any of the fitup gap discrepancies still
2 under review by Sargent & Lundy?

3 A I'm not s...re. I believe that -- I believe that the
4 issue has been dispositioned completely, but I'm not sure.

5 Q Perhaps I can ask that question of a Sargent
6 & Lundy witness. I don't know whether the Sargent & Lundy
7 witnesses who are being offered would specifically be
8 knowledgable in that area, but I can reserve until again.

9 MR. GALLO: Can I have the question again?

10 MR. LEWIS: The question is as to the 91 fitup
11 gap discrepancies which are stated, in Mr. Del George's
12 testimony, to have been determined to have no design
13 significance. The question is whether Sargent & Lundy still
14 has under review, under evaluation, any of those fitup gap
15 discrepancies.

16 MR. GALLO: Thank you.

17 BY MR. LEWIS:

18 Q You also speak, in that answer, of only 12 --
19 you corrected it to 12 discrepancies, affecting 12 hangers,
20 being considered valid. You then go on to say the remainder,
21 having been shown to be in conformance with current design
22 requirements.

23 Is that -- what is your definition, in that
24 testimony, of the term "valid?" A valid discrepancy?

25 A (Witness Del George) The item which accumulated

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1 to the total of 12 were, in fact, discrepancies with respect
2 to inspections performed, or a lack of information, which
3 suggested that an inspection had perhaps not been adequately
4 performed.

5 And in that sense, because a design requirement on
6 a drawing or specification had not been met, the discrepancy
7 noted was determined to be a valid discrepancy. There
8 was certain other noted or observed discrepancies which
9 were later determined to be not valid because it, in
10 effect, represented the result of the reinspection not having
11 properly interpreted the drawing requirement such that the
12 as-found condition was, in fact, in accordance with the
13 design as it was intended.

14 Q Was it Commonwealth Edison Company or Sargent
15 & Lundy that made a determination as to whether or not a
16 discrepancy was valid?

17 A I believe it was done in concern with Commonwealth
18 Edison and Sargent & Lundy and Mr. Tuetken can speak to that.

19 Q I'd be happy to have him do so, please.

20 A (Witness Tuetken) The primary source for making
21 determinations were led by myself and, as stated, by Mr.
22 Del George. They were reviewed by other individuals, including
23 Sargent & Lundy employees. The 12 valid discrepancies are
24 a function of an item of non-compliance, in fact, which
25 created this inspection its purported basis being that we had

1 made an error in judgment, I guess is my words, in assuming
2 that a connection detail -- without physical verification --
3 could be accepted solely on the basis of another inspection
4 at that connection location -- that being the weld of the
5 connection.

6 Q Were there situations in which you engaged in
7 discussions with the designers? Evaluations with the
8 designers in order to determine whether or not discrepancy
9 would be considered valid or not?

10 A As is characterized in the number 12 here?

11 Q Yes, as it's used here in this answer.

12 A Even the 12 discrepancies are not necessarily --
13 in fact, after further review, the 12 discrepancies are not
14 design significant. They were significant to the item of
15 non-compliance, however, in the fact that they were the
16 results of our error of judgment, of using a substitute
17 inspection as demonstrating an acceptable connection.

18 I guess that's the best way I can characterize it.

19 A (Witness Del George) And if I may add, they are
20 valid in the sense that the condition observed is truly
21 discrepant. It does not meet a design drawing or a design
22 specification requirement. These discrepancies, having
23 been established as valid discrepancies, were also evaluated
24 to assess the design significance, that is the fitness for
25 use of the component found to be discrepant.

1 On the basis of that evaluation, it was also
2 determined that none of the discrepancies in this class of
3 12 had design significance.

4 Q Is that in the nature of an update to your
5 testimony? On page 45 you say that each of the 12
6 discrepant hangers are being evaluated to determine whether
7 remedial action is required. Are you now testifying that
8 that was completed and it was determined that no such action
9 is required?

10 A Yes, I believe I can make that statement, with
11 one exception. There was one discrepant condition which
12 involved damage to a hanger. We have, however, been able
13 to determine that that damage was incurred after the
14 original inspection was performed, in as much as this was
15 a discrepancy identified on a fireproofed support, the
16 inspection would have been performed prior to the fireproo-
17 ing. And the fireproofing, as well as the support, had
18 been damaged.

19 So we don't attribute the damage which causes
20 the rework to the discrepant condition associated with the
21 initial inspection.

22 Q And that item was fixed?

23 A It has been fixed.

24 Q Mr. Del George, in the answer to the following
25 question -- question 37 -- let me first of all start, as I

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1 understand question 37 is asking you to comment on whether
2 or not the facts underlying certain additional NRC
3 inspection reports, in the electrical area, affect your
4 conclusions as to Hatfield's inspector qualification
5 certification program.

6 In the course of your answer you make the
7 statement that -- and I quote -- "The matters addressed
8 in those inspection reports are not significant."

9 The reference, I believe, is to inspection
10 reports for Unit 1 84-09 and 84-27, I believe are the two.
11 In using the term significant there, are you speaking in
12 terms of significance for your conclusion as to the
13 certification qualification program for Hatfield QC
14 inspectors, or are you using it in some other way?

15 A I made an assessment in light of these assessment
16 reports of their impact on the conclusions I reached,
17 relative to inspector certification. And I don't believe
18 these specific non-compliances to be significant in the
19 sense that it would change my conclusions.

20 MR. LEWIS: Thank you. That's all I have for
21 this panel.

22 EXAMINATION BY THE BOARD

23 BY JUDGE COLE:

24 Q Just a couple of questions. Mr. Del George, in
25 your testimony on page 30 and 31, questions 27 and 28, you

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1 referred to statistical significance of the sample. You've
2 been asked several questions about the -- what, if any,
3 statistical basis there was for the reinspection program.
4 And I believe you responded to those that it was engineering
5 judgment, at least in setting up a program. Do you
6 recall your answers to that, sir?

7 A (Witness Del George) Yes, sir.

8 Q Now you refer back to question 11 and you do
9 state, in questions 26 and 27, referring to the concomitant
10 statistical significance of the sample. Have you quantified
11 this in any way, sir? With respect to statistical
12 significance?

13 A No, sir, other than as described in my testimony,
14 which was to make reference to what I believe to be an
15 accepted reference source in the field of statistical
16 quality control, that being Military Standard 105-D, the use
17 of which suggested to me -- as I recorded -- that the
18 sample of inspectors chosen was appropriate.

19 Q All right, sir. And your results of that are
20 summarized on page 15 of your testimony?

21 A Yes, sir.

22 Q Are you familiar with the basis that was used
23 in the development of Military Standard 105-D? Are you
24 familiar with the standard?

25 A I am familiar with the standard and I am cognizant

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1 of the history of its development.

2 Q Do you know what statistical basis was used in
3 the development of the recommendations that are contained
4 in Military Standard 105-D? What sort of reliability
5 was involved? What sort of percentage reliability you might
6 expect from the results there?

7 A The standard itself represents a family of
8 sampling plans, each of which provides different levels of
9 reliability, acceptable quality for a given percentage of
10 -- and a given number of items sampled, as well as defects
11 to be found.

12 So one can't say that the standard has associated
13 with it any particular reliability level. One needs to
14 look at the specific sampling plan contained in the document
15 first.

16 Q All right, sir. Did you do that?

17 A In arriving at these numbers we did review the
18 sampling plans within Mil Standard 105-D to assess what
19 would be -- and I defined the condition in my testimony, at
20 the bottom of page 14 -- what would be the appropriate
21 sample size for a given situation.

22 Q Is that, then, your basis for your statements
23 on pages 30 and 31 of the concomitant statistical significance
24 and sample?

25 A Yes, and I might point out that it was not my

1 intent to suggest that this review had been done at the
2 time the program was developed, but rather at a later point
3 in time, as a basis for confirming the original judgments
4 which were relied upon in developing the program.

5 Q I understand that it was not used as the basis for
6 the program but it is one way that we can look back and say
7 well, how did we do?

8 A Yes, sir. That's correct.

9 Q And that's the way you used it?

10 A Yes, sir.

11 Q You referred to, on page 12, in response to
12 question 11 on line 4, you referred to small populations.
13 What do you mean by a small population, sir, and is that
14 contained -- is reference to that contained in 105-D? Your
15 basis for referring to them as small populations?

16 That's many questions, but I think you understand
17 what I mean.

18 A The Mil Standard does not specifically define what
19 is a small or what is a large population.

20 Q By Mil Standard you mean --

21 A Military Standard 105-D. My reference to small
22 populations comes from my own experience in having
23 participated in the use of that Military Standard for other
24 sampling plans, some of which were discussed yesterday.
25 And it's my belief that for small populations, 100, where the

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1 population being sampled is 100 or less, that was my
2 reference there, the benchmark against which I defined
3 the term small population. 100 items or less in the
4 sampled lot.

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1 Q On page 18 in response to Question 17, in the
2 third sentence of your response, you state: "For example,
3 an inspection is not recreatable if the attribute inspected
4 was reworked at some time after the original inspection."

5 In response to a question earlier today, you
6 were quoting some relative numbers of percent reject on
7 welds, and I wonder how many of the welds would be in the
8 category that would be non-createable because of that?

9 A I'm afraid I can't bring to mind the specific
10 statement I may have made, but Mr. Tuetken may be better
11 able to characterize what percentage of welds would not
12 have been recreatable for this reason.

13 Q Let me tell you what my concern is, and then
14 you can address it in a general way.

15 With respect to welds, for example, if we are
16 only going to include in the reinspection program welds
17 that have not been reworked, is that creating an artificial
18 family of good welds to be reinspected, because the worst
19 welds would have been reworked, and you don't even look at
20 them again? How do you rationalize that, excluding those
21 welds that have been reworked? How do you justify the
22 value of a reinspection program?

23 A First of all, I don't believe that exclusion
24 of these reworked welds has that negative effect. And the
25 reason I believe that to be the case is, as you know, the

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2 sample in this program is chosen on the basis of
3 inspectors, whether that inspector did an original
4 inspection of the original -- of the weld in its original
5 condition or an inspection of a reworked weld. Both
6 cases could have been captured in the program. The case
7 that was not captured is the case represented by the
8 original weld which had been reworked in such a way that
9 the original condition was no longer there, in which case
10 what the original inspector had seen could no longer be
11 seen. But reworked welds inspected by inspectors prior
12 to 19 -- September of 1982 could have been and were
13 captured in the reinspection program as a function of
14 specific inspectors chosen in the sample.

15 Q Okay. So you could have, then, an original
16 inspection of a reworked weld, and that would be included.

17 A Yes, sir.

18 BY JUDGE SMITH:

19 Q I have a question on that very same sentence,
20 that goes in a different direction, and that is, if you
21 have a reworked weld, isn't it like that that weld was
22 reworked because an inspector, in the first instance,
23 caught it, found it defective and ordered it rewelded?

24 A (Witness Del George) That's correct.

25 Q So then by eliminating reworked welds, if there
is a significant number of them, is a conservatism. The

mgc 19-3 1

2 inspector was obviously correct in his call that the weld
3 wa' iginally defective. Otherwise it wouldn't have been
4 reworked.

5 A Yes. We have to assume he was correct. And
6 the result of that was remedial action to rework the weld.

7 Q But you eliminate that from your sample.
8 You've eliminated a certain amount of presumably correct
9 calls.

10 A We did do that, yes.

11 BY JUDGE COLE:

12 Q On page 21 of your testimony, Mr. Del George,
13 in the first full paragraph on that page, the second
14 sentence, you say, "Reinspections were performed to the
15 same, or in some cases, more stringent criteria than had
16 been used in the original inspection."

17 Could you explain to me the basis for that,
18 and if the prime goal of the program was to determine the
19 qualifications of the inspectors, why was it not inspected
20 to the standard that the inspector used?

21 A (Witness Del George) "Probably that the example
22 that might be most useful for discussion is the example
23 of a visual weld examination. We have talked already today
24 about the use of fillet weld gauges as a part of weld
25 examination. The practice in the early years of
construction at Byron was to have such gauges available,

mgc 19-4 1 but their use was not prescribed by procedure or by code.

2 In the reinspection program, fillet weld
3 gauges were used to assess the entire length of a weld for
4 every weld, and in that sense, where gauges were allowed
5 but for which we had no absolute record of their use in
6 the reinspection program, their use was uniform, and that
7 introduced an added level of conservatism, in that the
8 results from the use of the gauge provided more objective
9 bases for assessing the size of the fillet welds.

10 Q But that wasn't necessarily more stringent.
11 You were still using the same standard, weren't you?

12 A I guess it's in the way we define "standard."
13 The standard against which the weld was assessed was, in
14 my view, more conservative where the gauge was used over
15 the full length of the weld, as opposed to perhaps not
16 being used, in which case the visual weld inspector made
17 a judgment about the size of the weld without reference to
18 a gauge or where he may have used the gauge on a point of
19 the weld, as Mr. Tuetken suggested, to calibrate his
20 eyeball, and then made an assessment of the adequacy of
21 the remainder of the weld.

22 In the case of the reinspection, the gauge
23 was used across the full length of the weld.

24 Q Okay. And the gauge would more readily
25 determine the discrepancies than the eyeball?

mgc 19-5

1 A Yes.

2 Q Is that what you mean when you said "more
3 stringent criteria," or were you referring to something
4 else, because with the example of the gauges, I don't think
5 the criteria is any different?

6 A Well, there are other examples. In the case
7 of visual examination, under the ASME Code, the criteria
8 for porosity is not explicitly defined. The criteria
9 associated with surface examination under the Code relative
10 to porosity was applied in assessing the results of the
11 visual weld examination where porosity was identified.
12 So where the Code didn't say how much -- didn't establish
13 a threshold above which the item was rejectable, but
14 rather just said -- well, just required a visual examination,
15 the discrepancy was evaluated against the acceptance
16 criteria for surface examination, which itself is a more
17 objective technique.

18 Q Okay.

19 A (Witness Tuetken) Let me try to add something
20 to what I heard. We're asking inspectors who have been
21 in the '83 timeframe conducting inspections, even though
22 they are directed not to apply today's standards and
23 criteria when they reinspect two-years-ago work, to try
24 and be appropriate to the original inspector's criteria,
25 it is difficult to deprogram new intelligence out of

mgc 19-6 1

inspectors in this timeframe.

2

Q Particularly after you just get them trained, right?

3

4

A So after you have them programmed that way, they will continue to have a tendency to apply it that way, and that creates an over-conservatism to the original inspector's criteria.

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8

Q Okay. I take it; there were no examples where the criteria was less stringent than it was back in '82?

9

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A (Witness Del George) I can't think of any.

11

12

A (Witness Tuetken) Not as applied to the reinspection program.

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14

Q On page 25, about the middle of the page, you talk about the reinspection program being subjected to close outside scrutiny.

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To what are you referring, sir? If you are referring to -- are you referring to the third-party inspector inspections or something else?

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A (Witness Del George) Well, I'm referring to our Project Construction Department's regular oversight of the program, as well as our Quality Assurance Department's regular oversight of the program. The third-party inspections play a part as to the subjective attributes, as well as the NRC's regular involvement through the conduct of the program. It's all of those factors that I combine

mgc 19-7 1

in making this statement.

2 Q With respect to the category, "Indeterminate,"
3 you had, I believe, one Hunter inspector, one Hatfield
4 inspector, and two PTL inspectors in the "indeterminate"
5 category.

6 A Yes, sir.

7 Q Because they were in that category, they were
8 then, in effect, dropped out of the reinspection program,
9 and the next person in line was then selected?

10 A The data -- that is, the inspections of theirs
11 that were reinspected -- were accumulated and are reported
12 and evaluated as part of the program data base. The
13 individual was put aside, but the results of reinspections
14 for his work were retained in the program data base.

15 It is true that having put him aside, a
16 substitution was made of another individual for whom the
17 first three months of work was reinspected.

18 Q All right, sir. Now for those four indeterminate
19 inspectors, those four inspectors who were categorized as
20 indeterminate, what happened to those particular attributes?
21 What was followed up? What did you do with respect to
22 those discrepancies, and what are you planning to do, if
23 you haven't done it already?

24 A Well, one of the reasons they were
25 indeterminate or the reason that they were indeterminate

mgc 19-8

1 was that they had no future or additional work that was
2 subject to reinspection. For that reason, 100 percent
3 of the work performed by that inspector in the attribute
4 for which he was determined or identified as being
5 indeterminage was reinspected. So in that sense, every
6 inspection that was reinspectable for that individual was
7 recorded and subsequently evaluated as a part of the program
8 data base.

9 Q Now I note in your testimony, sir, that the
10 third-party inspection, overview inspection, of all Level III
11 inspectors, I understand, was from both Sargeny & Lundy and
12 Daniels Construction; is that correct?

13 A Yes, sir.

14 Q They looked at all of the discrepancies that
15 were uncovered; is that correct?

16 A That is correct.

17 Q Did they look at the discrepancies of the
18 four indeterminates?

19 A Yes, they did.

20 Q And they were included in their total numbers?

21 A Yes, they are.

22 End 19
23
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1 Q Page 33, question 31, in line 5 of your response
2 you say the program demonstrated the effectiveness of those
3 practices for representative sample of inspectors from which
4 it can be inferred that the same practices were effective
5 as applied to the remaining inspectors. Now I believe you
6 have been asked some questions about that.

7 Did you try to make any calculations to quantify
8 this or to determine some level of confidence for the
9 inference that you're trying to make here, sir? I know we
10 have some testimony on quality of work that addresses some
11 of that, but here we're talking about the inspectors.

12 A I had considered evaluating on the basis of
13 mean and calculation of variance, some statistical way of
14 assessing performance. It's my judgment that that would not
15 necessarily have been a meaningful approach and I did not
16 pursue it further.

17 Because of the nature of this program, where we
18 started a priori with a set of people whose qualifications
19 were not suspect and that they met the existing standard
20 accepted as a basis for certifying individuals. And where
21 the vast majority of the inspectors -- and as we reported
22 the case of Hunter -- all of the inspectors, with the
23 exception of one indeterminate individual. And in the
24 case of Hatfield, all of the inspectors -- with the exception
25 of the one indeterminate inspector. And in the case of PTL,

1 all of the inspectors, with the exception of two indetermi-
2 nates and one failure, passed the program acceptance criteria.

3 I believe that that supports the inference that
4 the program, as a whole, was properly certifying inspectors
5 and it was on the basis of that judgment that I made the
6 inference.

7 Q I guess I wouldn't have been able to resist
8 trying to put some levels of confidence on that.

9 A Well, I know how to do it, but I did not do it.

10 Q Okay. Page 37 and 38, I guess I must have
11 missed something. I don't know the difference between
12 observed and valid discrepancies. Is this the Level III
13 input, for the Level III inspector input?

14 A No, sir.

15 Q What is the difference there?

16 A Observed discrepancies are those discrepancies
17 identified, in the case of objective attributes, by the
18 Level II inspector. All discrepancies identified by him
19 were noted and recorded in the program. The first level of
20 evaluation that was performed, was to determine whether or
21 not that observed discrepancy was valid in the sense that
22 it actually did represent a discrepancy with respect to
23 existing design, drawings, or specifications.

24 To the extent the observed discrepancy did not
25 represent a discrepancy to current design drawings or

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1 specifications, it was judged to be not valid and no further
2 action was required. As you can see, in the case of the
3 objective discrepancies, there were a number of observed
4 discrepancies which, upon evaluation, engineering evaluation,
5 were shown not to be valid.

6 In the case of the subjective discrepancies --

7 Q Who made the engineering evaluation, Sargent &
8 Lundy?

9 A Sargent & Lundy.

10 Q Okay.

11 A In the case of subjective discrepancies a
12 similar process, logic process, was followed. But we need
13 to recall that the third party review by a Level III
14 inspector was introduced. And for that reason, the disparity
15 between the observed discrepancy count and the valid
16 discrepancy count is significantly reduced.

17 And, in fact, those items that were identified
18 as not being valid discrepancies were limited to such things
19 as weld spatter, for example, that wasn't on the surface
20 of a weld, but was limited and on the adjoining parent metal.
21 That was not counted as a discrepancy associated with weld
22 inspection. And there were very few cases of that type after
23 the third party inspection had been performed.

24 Q All right, sir. Thank you. That's helpful.

25 Mr. Tuetken, I just have really one question for

201b4

1 you. It has to do with your appendices, the interpretation
2 summary on page A-4, interpretation 2 and 3. And it's on
3 some other items here.

4 But my question is with respect to a
5 classification as inaccessible. For example, on page A-4,
6 in the letter or the memo, it states "It was my understanding
7 that we will not perform any turn of the nut inspections.
8 They will be shown as inaccessible."

9 And in other filings here, it tells you why that
10 would be less than meaningful, to conduct those kind of
11 inspections. My confusion is why would that be shown as
12 inaccessible and not unrecreatable? It seems to me that it's
13 the latter.

14 A (Witness Tuetken) It is. However, the way we
15 develop the -- I don't have the February 23rd letter to the
16 NRC. I think they only define as inaccessible, usually being
17 one word with a double definition, physically inaccessible
18 or physically not recreatable.

19 Q Okay, that answers my question.

20 That's all I have, thank you.

21 BY JUDGE SMITH:

22 Q I have several questions. I don't really care
23 who answers them, the best qualified should. And I'll pick
24 them up from testimony beginning with Mr. Del George.

25 On page 17 of your testimony, Mr. Del George, you

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1 testified that all reinspections actually performed were
2 included in the program data base, even if that inspector
3 himself was dropped out, because of selecting the next one.
4 Was that initially the case, or was that a consequence of
5 Mr. Laney's observations?

6 A (Witness Del George) No, sir. That was always
7 the case.

8 Q Mr. Laney may not, then, have been well informed
9 on that point.

10 A I believe, sir, our original program reports
11 did not reflect the entirety of the program that we had
12 performed. His comment led us to be more specific in
13 addressing that point.

14 Q Page 25. You state, and I think the point is
15 made in other testimonies, too. And I will read it.
16 "Second, Edison's experience clearly indicated that
17 inspectors are inherently more conservative in their
18 judgments when they are participating in a reinspection
19 program which is subject to close outside scrutiny."

20 That relates to a question that the Board had
21 and was addressed by Mr. Hansel. The other side of the coin
22 is we wanted to know if the fact that a workman and an
23 inspector knew that his work would not be inspected after
24 it became inaccessible and unrecreatable, could that affect
25 the quality of the work in the inspections? And Mr. Hansel

1 says no, not at all. That's not a factor.

2 I think he says that on page 18 of his testimony.
3 He says he never experienced that phenomenon and that
4 inspectors take pride in their work and usually were
5 unconcerned about having anyone check the completed
6 inspections for accuracy.

7 Do you disagree with Mr. Hansel? Is there
8 something I don't understand about it? But it seems to me
9 on the one hand you're saying they do better work when they
10 know that their work is going to be inspected and looked at
11 by outsiders. But Mr. Hansel, your expert, has the viewpoint
12 that the work is pretty steady.

13 A (Witness Del George) I would explain that in the
14 following way. I think Mr. -- I don't mean to speak for
15 Mr. Hansel, but I interpret his remarks to indicate that
16 all inspectors, from his experience, are responsible and
17 do the best job that they can.

18 However, the environment of a reinspection program
19 produces an influence, in my view, on a person conducting
20 a reinspection and to the extent, in the performance of
21 that work, a judgment where a close -- well, I'll call it
22 a close call -- exists where before in the responsible
23 performance of the work the inspector may have said this is
24 a close call but I think it is okay. It's my view that in
25 the reinspection program, that inspector is more likely to say

1 this is a close call. I better call it on the conservative
2 side and reject it.

3 And it is my experience that reinspectors, where
4 there is a close decision to make, will call it on the
5 conservative side as opposed to relying on their judgment
6 and calling the item acceptable.

7 And I think we can point to the results of our
8 program to provide some support for that argument. In that,
9 as I have just discussed with Dr. Cole, there were many
10 discrepancies observed which were later, based on evaluation,
11 determined not to be valid discrepancies. And it's this
12 conservatism and approach on the part of reinspectors which
13 gives added credibility to my prior experience.

14 Q You really are, to use your words in a studied
15 fashion here, you are talking about conservatism in judgment
16 and not more care?

17 A That's correct.

18 Q At the bottom of page 26, the last sentence that
19 begins at the bottom of that page, you state "In addition,
20 the original inspector sampled population for the particular
21 contractor involved was expanded by as much as 50 percent,
22 as much as 50 percent for the attribute in question depending
23 upon the number of inspectors still available for inclusion
24 in the program."

25 Now, I'm sorry, I didn't have time to check the

1 earlier testimony, our earlier decision. So I'm just going
2 by memory, but I don't recall earlier testimony as putting
3 50 percent at the top limit. I thought that the expansion
4 would be indeed 50 percent.

5 A Let me try and explain. In the case of -- for
6 example, in the case of PTL, where there was one failure
7 against the subjective criteria requiring an expansion
8 of a sample, the expansion was in the subjective attribute.
9 There were not, however -- taking the total population of
10 remaining welding inspectors, there were not sufficient
11 remaining welding inspectors to meet what would have been
12 50 percent of the original inspector's sample. And that's
13 the meaning of the sentence.

14 Q And that's because the original sample was
15 larger than the one out of five?

16 A And the original sample took into account both
17 objective and subjective attributes.

18 Q So the standard, however, was that where it was
19 possible it would be 50 percent?

20 A Yes, sir.

21 Q Page 33 -- that was my question about -- oh --
22 Reworking, and a suggest that a conservative might be involved
23 there because it may be reworked because of an inspector
24 finding it faulty. However, I believe the testimony also
25 is that reworking is likely. Or perhaps you can tell us to

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1 be a result of design change?

2 A That's also possible.

3 Q Is my concept that there may be a conservatism
4 there, is that of any significance? What is your judgment?
5 Is that an important conservatism?

6 A I don't see it as an important conservatism.

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2 Q On page 36, the middle paragraph, "All
3 discrepancies that were determined to exceed an ASME
4 Code examination acceptance criteria were repaired,"
5 how about the AWS?

6 A No, sir, they weren't. In the case of the
7 ASME Code, Illinois is what is referred to as a "Code
8 State," and we are required by law to fulfill the
9 examination acceptance criteria of the ASME Code. So
10 to preclude the possibility that an inspection later
11 in time would identify the same discrepancy, all of those
12 ASME discrepancies were reworked, notwithstanding the fact
13 that they were of a nature that they could have been
14 accepted on the basis of our engineering evaluation.

15 In the case of the AWS Code, there is no
16 such restriction, and we could rely, therefore, on the
17 engineering evaluation to disposition the item, "Accept
18 As Is."

19 Q c. Tuetken, I have a few questions for you,
20 too.

21 Mr. Klingler worked with you on the
22 reinspection program. He issued some of the -- what
23 do you call them? -- definitions?

24 A (Witness Tuetken) Interpretations.

25 Q Is he Mr. Stanish's successor?

A No.

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Q Who is Mr. Stanish's successor?

2 A Mr. Hansig, H A N S I G (spelling).

3 Q Mr. Hansig is the Site Quality Assurance
4 Manager?

5 A Superintendent.

6 Q When did that take place, that transfer of
7 responsibility?

8 A Let me try to answer a question I don't think
9 you're asking, but I'll put things in perspective.

10 Mr. Klingler used to work in Quality Assurance
11 as a Quality Assurance Supervisor. He was brought into
12 the construction area in late 1981. I made a position
13 called Quality Control Supervisor. That provides some
14 perspective about Mr. Klingler.

15 Mr. Stanish was superseded -- Mr. Hansig took
16 Mr. Stanish's place, I believe in the timeframe of March
17 of this year, but Walt would know more specifically, I think.

18 A (Witness Shewski) That's about right.

19 Q Was he involved in the reinspection program?

20 A (Witness Tuetken) Yes.

21 A (Witness Shewski) Just a minute. Mr. Hansig
22 became the superintendent in the fall of last year.

23 Q So he was involved at the end of it?

24 A Yes.

25 Q Is he happy with the results, do you know?

mgc 21-3 1

A Yes, sir.

2

Q You've discussed it with him?

3

A Followed it closely, too.

4

Q On page 8, Mr. Tuetken, Answer 17, we note here

5

-- I just realized I want to ask this question in camera, so I'll come back to this under some other circumstances.

7

On page 17, Mr. Tuetken, you are discussing

8

Mr. Wells, the Hatfield inspector. He had a reinspection

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which resulted, as you state, in 99.07 percent acceptance

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rate with the reinspectable visual weld inspections

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performed by Mr. Wells during the 30-day period.

12

We've heard testimony that you have a 90 percent

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acceptance rate for visual welds, because of the highly

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subjective nature of them, the difficulty of repeatability,

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and that a 10 percent disagreement is normal.

16

Is this 99.07 percent -- does that cause you

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any concern about the validity of those results?

18

A (Witness Tuetken) You're asking me why 99 versus

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90?

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Q Here's a man where apparently you had over 99

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percent repeatability of his subjective inspections. And

22

my question is, does that raise any concern in your mind

23

that that was a reliable --

24

A My answer is basically this: The event that

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raised this concern causing 30 days of his work to be

mgc 21-4

1 reinspected occurred in the spring of '83. Therefore, it
2 was close in timeframe to the -- it was reinspected close
3 in the timeframe to when it was actually initially
4 inspected. It was not a wide distribution of inspections
5 over time. So therefore the evolutionary process of the
6 inspectors becoming more critical, which occurred, has --
7 results in such a disjointed disagreement rate, and that's
8 why I believe the 99 percent is appropriate. It's a little
9 surprisingly high, but I'm not concerned.

10 Q Better high than low.

11 A Yes. There were other inspectors in the
12 reinspection program who also performed at relatively
13 high rates in the welding examination. Some inspectors
14 performed 100 percent. I would have to go look at the
15 exact numbers of distribution, but I think Hunter's overall
16 rate was somewhere in the range of 97 percent. So, you
17 know, 97 to 99 doesn't surprise me.

18 Q Does Daniels Construction provide third-party
19 reviewers, Level III inspectors? Is that a special
20 arrangement with them for this purpose?

21 A Yes. They are performing the work at Byron.

22 JUDGE COLE: Except for the reinspection?

23 MR. TUETKEN: Correct.

24 BY JUDGE SMITH:

25 Q Mr. Shewski, you testified this time and the last

mgc 21-5 1 time about a unit concept inspection. I'm confused about
2 whether the unit concept inspection was a method employed
3 in the reinspection program, or as my memory has it, it
4 is something that you initiated independent of the
5 reinspection program?

6 A (Witness Shewski) In September 1982, I
7 initiated the unit concept inspection idea. And what that
8 is, is a selection of some spatial area in the plant or
9 some equipment and conducting a complete inspection of
10 that area to design and manufacturer's design drawings
11 to verify that the plant is built according to design
12 drawings. And we take a new space area in the plant every
13 week, and to date, we must have close to a hundred.

14 And the unit concept that we did in connection
15 with the reinspection program check of the inspectors
16 was a takeoff on that, except it wasn't a week long. It
17 was about -- I guess it was from August 1st to September 19th.

18 Q I've just now focused for the first time on
19 your language here. You call it a "special" unit concept
20 inspection, and you meant by that something other than
21 your earlier unit concept.

22 A Yes.

23 BY JUDGE CALLIHAN:

24 Q I will adress you gentlemen as a panel,
25 although I may make reference to your individual testimony.

mgc 21-6 1 That's purely for identification and introduction, so please
2 feel free to answer as you wish.

3 Mr. Del George, there has been considerable
4 discussion the last couple of days about the selection of
5 contractors whose work was to be subjected or reviewed in
6 the reinspection program.

7 I think on page 10 of your testimony you
8 present some remarks on that subject. I wonder if you
9 would like to review or maybe even amplify what you have
10 there for the record, in order to, in your judgment,
11 I think, substantiate the reasons for the selection of the
12 three or four contractors which were most thoroughly
13 reviewed?

14 A (Witness Del George) As is stated in my
15 testimony, there were 19 contractors performing work at
16 the Byron site at the time the program was developed. The
17 question that led to the development of the program was
18 whether or not inspectors whose qualifications were judged
19 by the ANSI Standard N-4526 had been properly certified --
20 that is, did they have the requisite experience and
21 training to allow for certification?

22 Of the 19 contractors, there were 16 for whom
23 the ANSI standard was applicable for the certification
24 process. The other three contractors had their inspectors
25 certified to a different standard, The Society of

mgc 21-7 1 Nondestructive Testing, SNT-TC-1A.

2 For that reason, there was no uncertainty
3 relative to those three contractors, and they were eliminated
4 from further consideration under the program. In addition,
5 there were three contractors whose work was already
6 undergoing substantial reinspection. Those three
7 contractors were Reliable Sheetmetal, the heating,
8 ventilating and air condition contractor, whose work,
9 I believe, was being almost if not 100 percent reinspected.
10 In addition, Mid-Cities Architectural and Iron Company and
11 the American Bridge Company, who had performed structural
12 work at the site, were being subjected to a quality control
13 structural steel review program -- in other words, a
14 reinspection program of their work.

15 In that case, that was a program that was
16 an outgrowth of our experience at the LaSalle County site
17 where we had undertaken a structural steel review, found
18 certain discrepancies. Although those discrepancies were
19 not judged to be significant, we thought it prudent to
20 undertake a similar program at Byron, and did for those
21 two contractors.

22 As a result, those three contractors whose
23 work was already being reinspected were not included in
24 the Byron reinspection program contractor sample. The
25 remaining five contractors performed work that we knew at

mgc 21=8

1 the outset was either inaccessible for reinspection or
2 could not be created. For example, Reliance Trucking
3 was the rigging contractor for major lifts at the site.
4 Those rigging hold points, which were subjected to
5 inspection, could not be recreated, so there was nothing
6 we could do relative to that contractor.

7 However, we believed that there were separate
8 indicia of the acceptability of that work or other
9 assurances that the other work was conducted adequately,
10 and to the extent discrepancies existed, they were
11 dispositioned because damage to equipment in the rigging
12 process would have been identified most probably as a part
13 of the startup, the preoperational testing program at the
14 site, or other walkdown inspections that are characteristic
15 of the ongoing construction activity.

16 Another of those five contractors was
17 Midway Industrial, the painting contractor, whose
18 inspection points were of the initial surface condition
19 of the features to be painted, and that feature could not
20 be reinspected. So we were not in a position to reinspect
21 the painting contractor's work.

22 The remaining three contractors of that
23 population of five were Delta-Delta Midstates, who
24 installed the rebar at the site -- now it was our view
25 for that contractor that we had done -- we had performed

mgc 21-9 1 very extensive oversight of his work, which provided us
2 with added assurance that his work was done acceptably.

3 In the case of Delta-Delta Midstates, before
4 any concrete pour over rebar, the rebar configuration
5 was evaluated and reviewed by the Commonwealth Edison
6 Project Construction Department, as well as being audited
7 or surveilled by our Quality Assurance Department. So we
8 had a separate indicia of acceptability for that
9 contractor's work.

10 The remaining two contractors, one of whom
11 was Contracting and Materials Services, installed certain
12 underground piping at the plant, all of which was
13 hydrostatically tested, and we believed that that other
14 test form provides a separate basis for concluding that
15 that work was acceptable.

16 The remaining contractor was Ceramic Cooling
17 Tower, which also installed what now is underground piping,
18 and there, too, that piping was subjected to hydrostatic
19 testing which provides additional confidence that the
20 pipe was installed properly.

21 That left us with eight contractors. Two of
22 those contractors had been the subject of special attention
23 by the NRC Staff in their Inspection Report 82-05,
24 specifically their Finding 82-05-19, those two contractors
25 being Johnson Control and Powers-ASCO-Pope.

mgc 21-10¹

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Because of the concern expressed by the Staff, the sample that was chosen for those two contractors was chosen at 100 percent. We agreed initially to review all of the inspectors certified by those contractors prior to September of 1982.

The remaining six contractors, who are the subject of my testimony, were sampled on the basis of the selection of one in five inspectors. And I think we can see by observation of the results, at least for Hatfield, Hunter, and PTL, that we, in fact, captured more inspectors than the original sampling of one in five, in part due to the fact that the NRC Staff added inspectors to the original sample, and that addition presumably was based on special significance that they placed to individuals.

So in that way, to the extent that they believed that certain individual's work should be reinspected for whatever reasons, they were added to the original sample.

So that's the analysis, the evaluation that went into our development of the contractors chosen for reinspection under the Byron reinspection program.

End 21

221b1

1 Q Thank you. I think that's helpful.

2 I have a rather severe hangup on semantics. It
3 hasn't surfaced from other sources, so maybe it is I who is
4 uninformed or incorrect. I will play for you a scenario and
5 ask you to tell me where I am wrong.

6 The reinspection program, as I know it, was
7 basically a reinspection of inspectors. Not their work,
8 per se, but a reinspection of inspectors. It is quite true
9 that obliquely from that consideration came an evaluation of
10 the work which they had done.

11 Now my scenario is this. Inspector A in the
12 -- and let me be more specific in my terminology. A reinspec-
13 tor -- a reinspector is an inspector in the inspection
14 program by my definition.

15 A reinspector is assigned a quota of welds and
16 I say he goes out, with his guage and his flashlight and
17 a piece of paper in his hand, and he looks at that weld.
18 AND he says this weld is okay. He looks at his piece of
19 paper which records the earlier inspection of the most
20 recent inspection and necessary rework, if any, of that
21 particular attribute of that particular object.

22 And the piece of paper says that weld is okay,
23 so everybody is happy. He goes on to his next assignment
24 and he looks at the weld and he says this one is no good.
25 He looks at the piece of paper and finds that the former

new bu

1 inspector said it's deficient. So they both get a gold
2 star and everything is fine.

3 He goes to the third one and looks at the weld
4 and says this weld is acceptable. He looks at his piece of
5 paper and it says that the weld is unacceptable or vice
6 versa. And that, to me, is a discrepancy.

7 A Before you continue, that situation could not
8 have arisen in the reinspection program because the discrepant
9 weld, identified by the original inspector, would have been
10 reworked to eliminate the discrepancy. So the reinspection
11 was classified as not recreatable.

12 Q I thank you, but I protected myself by saying
13 vice versa. Now my vice versa is a discrepancy. And that
14 ends the reinspection program, as originally defined.

15 But we have found is that, in that one instance,
16 the original inspector called the shot incorrectly. In
17 two other instances, he called it correctly. I guess what
18 I'm getting at is the word discrepancy because I think -- and
19 what I'm really asking is the following: in the testimony,
20 both oral and written, it seems to me that the word
21 discrepancy has been used intermixed between the action or
22 the comparison of the actions by at least two inspectors, on
23 the one hand, and has been used to indicate incorrect
24 workmanship. And I say that's a question.

25 Is that true? Have you used the word discrepancy

1 to apply to both of those instances?

2 A Let me try and address that. Your characteriza-
3 tion of the way the program was implemented I believe to
4 be accurate. There was a comparison made between the
5 resultant records produced from an original inspection and
6 a reinspection. And to the extent there was a difference
7 in the recorded results on those records, an observed
8 discrepancy was noted and captured in the program.

9 Whether or not that observed discrepancy was
10 attributable to the first or the second inspector, it was
11 assigned to the original inspector for purposes of assessing
12 his qualification. In effect, we said the first guy made
13 a mistake and we count that as a tick against him when
14 we assess him against the program acceptance criteria.

15 We have also used the word discrepancy, in our
16 discussion, in terms of the evaluations that were done of the
17 work product for purposes of assessing the significance
18 of that discrepancy to the fitness for use of the actual
19 component. So in that sense we have used the word for
20 two purposes.

21 But the item, the discrepancy, is the same one.
22 In terms of the acceptance criteria in the program, all those
23 discrepancies were tabulated and assigned as defects against
24 the first inspector. But then they were evaluated after a
25 judgment on the inspector's qualification was made. They were

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1 further evaluated to establish their design significance.
2 What do they mean in the terms of fitness for use of the
3 component being inspected?

4 Q So the evaluation of those misoperations or
5 poor workmanship, however you characterize it, has
6 served to evaluate the severity of the error that was made
7 in the early inspection because that's where the error was?

8 A That's correct.

9 Q So the 60,000 or 130,000 or however many you
10 tabulate, items are really the -- that you list in your
11 testimony -- are really the number of observations of this
12 and that, welds, undercut, porosity, and so forth, that were
13 looked at?

14 A There were some 40,000 welds that were looked
15 at, a total of over 200,000 different inspections of work
16 were recreated, as part of this program. And in that
17 population were 40,000 welds and different numbers of
18 different other work attributes.

19 Q Now using the word discrepancy to apply to the
20 work, rather than to the action by inspectors, what percent-
21 tage of those discrepancies -- discrepancy in the hardware --
22 what percentage of those discrepancies have been -- let me
23 put it first, how many discrepancies were observed?

24 A Relative to hardware?

25 Q Yes.

1 Well, that's sort of an -- that's sort of an
2 impossible question.

3 A There were over 200,000 items inspected and
4 approximately 7,000 discrepancies noted, accounting in
5 part for documentation discrepancies and hardware
6 discrepancies. So there were fewer than 7,000 hardware
7 discrepancies.

8 If you will recall my testimony relative to which
9 of the discrepancies were valid, the 7,000 is reduced
10 significantly when that first screen -- the first evaluation
11 screen -- is imposed. So that the total number of
12 discrepancies left, that affected hardware, are probably
13 on the order of 2,000 or thereabouts. And all of those
14 were determined to be acceptable in the as-found condition,
15 although some of them were, in fact, reworked to eliminate
16 the discrepant condition.

17 Q My important question really is this. I apologize
18 for asking that nebulous one. You just said, as I understand
19 it, something has been done about all of them?

20 A Something has been done about each of them, yes.

21 Q Either they had been shown to be inconsequential
22 within design limits, or they had been fixed really?

23 A That's correct.

24 Q Just in passing, I would like to have someplace --
25 and this is a good place -- in the record, a rather short,

1 concise, clear distinction between an audit and a
2 surveillance.

3 A (Witness Shewski) An audit is a formal check
4 of activities and it consists initially of a checklist of
5 questions that must be adhered to during the audit. And
6 the audit checklist has to have objective evidence of what
7 they looked at, what they found, so it can be verified at
8 a future date, if necessary. This is a very formal type
9 of an operation or activity.

10 And then that is put into an audit report. An
11 audit report requires an assessment of the organization that
12 you audit, that you identify deficiencies and try to achieve
13 -- at that time -- an agreement of the corrective actions.
14 And then you get a commitment to when they are going to have
15 the correction completed by.

16 A surveillance is often a tour through the
17 plant to look at something, taking a document along or
18 a drawing and looking from the drawing without formal
19 preparation. And they look at it as they walk through the
20 plant. They may watch an activity in process.

21 These are called product surveillances. We do
22 that with audits, too, but that's a checklist. But the
23 surveillance is very informal.

24 And if you identify deficiencies, they are written
25 up and a surveillance report is given to the organization

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1 that the deficiency has identified.

2 Now if it's a very serious deficiency, we
3 convert that surveillance to an audit finding right away.
4 But if it's an item that just needs some modification
5 to correct it, we say this is a deficiency and they have
6 two weeks to correct it. And then if they don't, we follow
7 it up at the end of two weeks. And then if they don't we
8 put it into an audit finding.

9 Q Regardless of whether something is uncovered in
10 an audit or a surveillance, something is done about it?

11 A Yes, sir.

12 Q I would like to look specifically, Mr. Shewski,
13 at one item in your testimony on page 23. I will have to
14 go back to it to get some names. This has to do with the
15 Moehling Tapes. Apparently an evaluation was made of a
16 Mr. Moehling, who was somebody's inspector. It isn't
17 important really. And the numeric determined was 90.8 percent.
18 And that cast some shadow on his qualifications.

19 And I repeat, this is on page 23 of your testimony.
20 Then Sargent & Lundy's third level, third party inspection
21 came along and found that five of the deficiencies were
22 acceptable and this would have raised Mr. Moehling's
23 score to 98 percent. Please stop me when I jump the track
24 in this train here.

25 And then he was reviewed again and was

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1 appropriately certified on those bases.

2 I guess my question goes back to this third
3 level inspection, which found so many of the reinspector's
4 judgment incorrect, if I have read your testimony correctly.

5 A (Witness Shewski) That goes to the comments we
6 made previously about how tight the inspectors, the
7 reinspectors, were calling their inspections during the
8 reinspection program.

9 Q Why was so much weight given to the third level
10 or the third party, rather, third level inspections?

end22

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mgc 23-1

1 Was that inspection perhaps in error?

2 A What we did here was that in the unit concept,
3 we tried to see if we could verify that we could get the
4 same inspection results with the unit concept team as was
5 being done by the inspectors themselves. And in this case,
6 we found that an inspector measured low, too close to the
7 margin near the 90 percent, and we said -- we looked at
8 that to see -- we asked the third party to look at those
9 calls of the unit concept inspector who called those. And
10 as a result, five of them went away. They were called too
11 conservatively, and it really only had one deficiency
12 instead of six.

13 Q Let me go back to my own terminology,
14 Mr. Moehling's inspection in my terminology. There was
15 a resinspector who -- from whom one obtained data which
16 led to the 90.8 percent. Then there was third-party
17 inspector. So there are three individuals concerned.

18 The third party overruled -- the third-party
19 inspector overruled the reinspector on the number of
20 instances, you just stated. By what virtue do you give
21 that third-party inspector such great confidence?

22 A He is the same third-party inspector that
23 we used, the Daniels and Sargent & Lundy third party;
24 that's the same fellow.

25 A (Witness Del George) When we talk about the

mgc 23-2 1

2 third-party inspector, we don't just refer to a separate
3 individual, but an individual whose qualifications in
4 the standard that is applicable are higher, whose training
5 and experience is higher than the person conducting the
6 reinspection.

7 A (Witness Tuetken) I think the key point I
8 would like to make is, many of these inspectors, I would
9 say, who are involved in inspections today across the
10 country are inspectors without experience. They are, say,
11 five to ten years. Therefore, they take the written law
12 as the code and apply it very rigorously. An inspector
13 with more experience applies that same law or that same
14 code in its application more appropriately. In other
15 words, he does not play a role of trying to be very
16 conservative. He plays a proper role in not being overly
17 conservative.

18 Q Did this occurrence cast any shadow, in
19 your judgment, on he who I have identified as a reinspector,
20 because he was called wrong by the third party? Did you
21 then go back and look at this reinspector who was overruled
22 in a number of instances by your third-party inspector?

23 A (Witness Shewski) Mr. Moehling is the
24 reinspector -- no -- Mr. Moehling was the fellow that
25 was inspected by the reinspector.

Q He's the inspector, in my terminology.

mgc 21-3 1

2 A Yes, we went back and verified that people
3 on the unit concept team were trained and certified and
4 qualified to do this inspection work also.

5 Q Is that the reinspector in my sequence? I
6 repeat, Moehling is the inspector. You had your regular
7 reinspection program, and that was the reinspector.

8 A Yes, sir.

9 Q Then you had your third party. Now did you
10 go back and look at the middleman who was overridden
11 by the third party?

12 A The answer is yes, and I believe we said in
13 here that they were qualified under the new rules of
14 N-4526.

15 Q So this did alert you to do some further
16 looking.

17 A Yes.

18 BY JUDGE COLE:

19 Q While you're on that point, you have already
20 alluded to some of the differences between a Level II and
21 Level III inspector, or the difference between a Level III,
22 a Level II, and a Level I inspector.

23 Could you tell me something more about the
24 difference in the qualifications for a Level II as
25 compared to a Level III inspector? Do you know what
the requirements are?

mgc21-4

1 A (Witness Tuetken) II to III, or I, II and II?

2 Q II to III. For the reinspection program we're
3 talking about mostly Level II and Level II inspectors.

4 A The inspectors who are being reinspected,
5 the original inspectors are mostly I's and II's -- in fact,
6 all I's and II's.

7 The Level III's were used to establish true
8 rejectability only in the area of visual weld inspections.
9 A Level III inspector is one who has more experience,
10 taking a certified welding examination established by the
11 AWS, American Welding Society, to establish him as a
12 Level III. In addition, he has additional training,
13 testing requirements established within his own organization
14 which exceed those levels of a Level II. In other words,
15 he has to be a more knowledgeable inspector.

16 Q All right, sir. Can you help me a little bit
17 more in getting a feel for the level of expertise of the
18 II versus a III? Say your typical welding inspector,
19 Level III is a man with, on the average, how many years
20 experience as compared to a Level II?

21 A (Witness Shewski) Depending on education,
22 under N-4526, it could vary between about six years to as
23 high as twelve years before he can become a Level III.

24 Q Six to twelve years of experience as an
25 inspector before he can even qualify for the Level III?

mgc21-5

1 A That's right. Level II has a much lower level
2 of experience plus education, such that he can make Level II
3 easier, much easier than a Level III, and the Level III has
4 to be capable of preparing, improving, and writing
5 procedures.

6 Q At a site similar to Byron, how many Level III's
7 as compared to the Level II's might you have on the site,
8 as compared to the number of Level I inspectors?

9 A For the most part, we try to have mostly
10 Level II's, particularly in Pittsburgh Testing Laboratories.
11 Level I's are generally used as helpers accompanying a
12 Level II, until they know what they're doing. So for the
13 most part, Pittsburgh Testing Laboratory people are
14 Level II's, and there may not even be one Level III on site
15 with Pittsburgh. He may come out of the corporate office.
16 That changes from time to time.

17 Q Any other contractors you want to speak to?

18 A (Witness Tuetken) Each contractor -- Hatfield
19 has a Level III on site.

20 Q One Level III?

21 A One Level III.

22 Q How many II's roughly?

23 A The total work force, inspector population,
24 is on the order of 80, of which 60 to 70 are Level II's,
25 somewhere in that range.

mgc23-5

1 Hunter has a Level III, again with a similar
2 type of ratio, about 70 inspectors. All of their
3 inspectors are II's, except for maybe 15 down the line.

4 JUDGE COLE: That's all. Thank you.

5 BY JUDGE CALLIHAN:

6 Q In your unit concept, what is the
7 qualification, special qualifications, if any, of the
8 inspectors?

9 A (Witness Shewski) The unit concept inspectors
10 are selected on the basis to give a full array of the
11 areas that they are going to inspect -- for example,
12 mechanical, electrical and structural. Those people must
13 receive the training, testing, and have the experience and
14 pass the requirements to become a Level II under ANSI
15 N-4526.

16 Q So at least a Level II.

17 A At least a Level II.

18 Q Just as an aid, I would like to look for a
19 moment at Intervenors' Exhibit R-5.

20 Do you have a copy?

21 A (Witness Tuetken) I have it in front of me,
22 yes.

23 Q Are all of the inspectors named here presently
24 employed at Byron?

25 A No.

mgc23-6

1 Q The earliest certification date is May of '77.
2 When did inspection, as determined by this document --
3 when did inspection begin at Byron?

4 A For this contractor's scope of work, he began
5 his work in 1977, and in 1977 they were doing work which
6 required inspection.

7 Q Had other work already been done at Byron
8 before 1977 that required inspection?

9 A By other contractors, yes.

10 Q Were those earlier works somehow covered in
11 your reinspection program?

12 A Yes. For example --

13 MR. MILLER: Judge Callihan, I was going to
14 say you might look at Exhibit R-3.

15 JUDGE CALLIHAN: That goes back to 1976.
16 Where is 1976 in the construction history of Byron?

17 IWTNESS TUETKEN: We got the construction
18 permit in December of 1976 -- December of 1975; excuse me.
19 We began construction January of '76.

20 BY JUDGE CALLIHAN:

21 Q So in that instance, there is earlier coverage?

22 A (Witness Tuetken) Yes.

23 End 23±
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1 Q And does one gather from that that the
2 electrical Hatfield expertise area first became inspected
3 in '77?

4 A Correct, plus the activities, the time frame of
5 '76. They were constructing the lower portions of the
6 building wherein electrical work, would then go into later.

7 Q This is strictly an inquiry based on curiosity,
8 but there was great discussion this morning, on page 2,
9 about the assignment of the selection of inspectors and
10 some apparent discrepancy was accounted for by Mr. Mulkey
11 and his appearing as both a Level II and a Level I inspector.

12 A Yes, sir.

13 Q However, in the subsequent recounting, we passed
14 over Mr. Malunda and Mr. Cason, who also were listed both
15 as Level II and Level I. I wonder if there was a reason
16 for including them in the selection of the tenth or the
17 15th or whatnot?

18 A The discrepancy is Mr. Mulkey was judged by
19 myself, as I established the certifications of the
20 inspections to be selected, not to have actually been
21 certified as one. His actual activities would have been
22 a Level II. He was not doing data taking. He was
23 actually conducting inspections. Therefore, he was in the
24 area that I disconnected in the second sheet.

25 Mr. Malunda, for his activities, however, in his

1 procedures, was certified only as a Level I to take data,
2 in certain procedures, and in other procedures, to do
3 inspections.

4 JUDGE CALLIHAN: I'll stop with that. Thank you
5 very much.

6 JUDGE SMITH: What's your pleasure?

7 MR. MILLER: I prefer to take a recess now,
8 Judge Smith, and resume tomorrow morning. I think I can
9 be more efficient and perhaps cut down my scope of questions.

10 JUDGE SMITH: All right.

11 (Whereupon, at 5:30 p.m., the hearing was adjourned,
12 to resume at 9:00 on Wednesday, July 25, 1984.)

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CERTIFICATE OF PROCEEDINGS

This is to certify that the attached proceedings before the
NRC COMMISSION

In the matter of: COMMONWEALTH EDISON CO. (Byron Units 1 & 2)

Date of Proceeding: Tuesday, 24 July 1984

Place of Proceeding: Rockford, Illinois

were held as herein appears, and that this is the original
transcript for the file of the Commission.

Mimie Meltzer
Official Reporter - Typed

Mimie Meltzer
Official Reporter - Signature