ORIGINAL

UNITED STATES
NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF:

COMMONWEALTH EDISON COMPANY

(Braidwood Station, Units 1 and 2)

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:	:	
COMMONWEALTH EDISON COMPANY	:	Docket No. 50-456 50-457
(Braidwood Station, Units 1 and 2)	:	

Page: 12,076 -12,336

United States District Court House
Courtroom 1919
Chicago, Illinois 60604

Tuesday, September 9, 1986

The hearing in the above-entitled matter reconvened at 9:00 A. M.

BEFORE:

JUDGE HERBERT GROSSMAN, Chairman
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, D. C.

JUDGE RICHARD F. COLE, Member,
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, D. C.

JUDGE A. DIXON CALLIHAN, Member,
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission

Washington, D. C.

APPEARANCES:

On behalf of the Applicant:

MICHAEL I. MILLER, ESQ.
JOSEPH GALLO, ESQ.
ELENA Z. KEZELIS, ESQ.
Isham, Lincoln & Beale
Three First National Plaza
Chicago, Illinois 60602

On behalf of the Nuclear Regulatory Commission Staff:

ELAINE I. CHAN, ESQ.
GREGORY ALAN BERRY, ESQ.
U. S. Nuclear Regulatory Commission
7335 Old Georgetown Road
Bethesda, Maryland 20014

On behalf of the Intervenor:

ROBERT GUILD, ESQ.

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JUDGE GROSSMAN: The hearing is reconvened. This is the 61st day of hearing.

Are there any preliminary matters before we have the witness called?

MR. GUILD: Mr. Chairman, I understood that we were going to speak this morning about the question of scheduling Applicant's rebuttal case, and I'm prepared to address that subject at this time.

MR. GALLO: In addition, Mr. Chairman, we have a few preliminary matters apart from the discussion.

The Staff will go first. Ours probably is somewhat shorter than the discussion.

JUDGE GROSSMAN: Okay, fine.

Why don't you proceed, then, Mr. Berry.

MR. BERRY: First, Mr. Chairman, viewing the transcript from last Thursday's session, I noticed that where the Board admitted the prefiled testimony of Mr. Weil at Transcript Page 11,948, that inadvertently the prefiled testimony of Mr. Weil was not bound into the transcript, and I would ask the Court Reporter to look into that and take whatever --

JUDGE GROSSMAN: I believe it's in the transcript -- Friday's transcript -- oh, we don't have Friday's. That was Thursday's.

MR. BERRY: I would just ask the Court Reporter to look into that and take what action is appropriate.

JUDGE GROSSMAN: No. I see Mr. Weil's testimony is here at 11,948.

Perhaps it's missing from your copy.

MR. BERRY: That's correct.

JUDGE COLE: It's just not indexed in the front, Mr. Berry.

MR. BERRY: Apparently what happened -- I had a copy of the transcript delivered to me on Friday.

Probably they had an opportunity to enclose it; but the copies we have today do have Mr. Weil's testimony.

JUDGE GROSSMAN: Okay. So that matter is resolved.

MR. BERRY: Yes.

Also, Mr. Chairman, I've had an opportunity, also, to review my comments on Thursday at Transcript Page 11,914, and I want to apologize to the Board if my remarks could be construed as suggesting that the Board was accusing or suggesting that the Staff might be contemplating a retaliatory action against Mr. McGregor.

I didn't intend my remarks to be construed as such, and I was just trying to convey to the Board the Staff's position that we would not tolerate intimidation,

retaliatory actions or harassment against any member of the NRC, and we just didn't want to leave that impression.

JUDGE GROSSMAN: Okay. That's fine, Mr. Berry.

I had thought that you had misheard what I had stated; and that's fine. Your apology is accepted.

MR. BERRY: Also, Mr. Chairman, the Staff has referred the relevant portion of the transcript of last Thursday's session to the Office of Investigations; and as I understand it, the Office of General Counsel is going to be in touch with OIA to determine the status of the investigation to which Mr. McGregor alluded to also Thursday.

We hope to have some more information to be able to report to the Board later this week; but we have inquired -- we have made inquiry to OIA as to the status of that investigation.

Also, you will note, Mr. Chairman, that there is a request made of the Staff at one point by the Intervenor, another point by the Applicant, as to the existence of any tape recordings of certain conversations held with Comstock QC Inspectors by the Resident Inspectors.

We have made inquiry into that at the Region, and

we haven't been able to -- the tapes do not exist in the Region, so I have not been able to identify or produce any such tapes.

But along with our discussions with OIA with respect to the status of the investigations which we have been discussing, we also made a general inquiry to OIA as to whether they may have any such tapes.

As more information is made available to us, we'll keep the Board informed.

JUDGE GROSSMAN: Fine. Thank you.

If you have no further preliminary matters, Mr. Berry, then we will hear from Mr. Guild.

MR. BERRY: Well, there's one further one, Mr. Chairman.

At the deposition of Mr. Martin last Friday, I believe it was, it became apparent that Mr. Martin did not desire confidentiality, and, in fact, there was testimony that he expressed the desire that his identity be made known to his employer.

Consequently, there was a request made by the Intervenor that the Staff reconsider its position and agree to the lifting of all restrictions on the documents relating to Allegation RIII-86-A-0079.

Staff Counsel indicated to the parties that they would consider its position over the weekend and come

back today, you know, with a further statement on that.

We have considered it, and we still believe that, you know, complete lifting of the limited protective order in this case would be inappropriate; and in this connection, we would just note generally that, as we stated before, the protection for these documents was sought for two reasons:

One, to assure some confidentiality to the allegers, but also more primarily, you know, to protect an ongoing Staff investigation.

The investigation is still ongoing, and there is a protection under the Commission's regulations that would shield documents from disclosure pending the completion of an ongoing investigation.

We have not done that. We have not withheld the documents. We have produced them subject to a limited protection. We believe that protection is still appropriate.

We don't believe the parties are prejudiced, you know, by the limited protection that attaches to these documents; and we would still persist in our position that the protective order that attaches to documents relating to Allegation 0079 and 0096 still remain intact.

JUDGE GROSSMAN: I assume, Mr. Berry, that

you would be amenable to considering the lifting of some of the restriction on the basis of a need to know expressed by counsel?

MR. BERRY: That's correct.

JUDGE GROSSMAN: Okay.

We haven't heard any reasons given why there ought to be a blanket removal of the restriction --

MR. GUILD: Mr. Chairman --

JUDGE GROSSMAN: -- and if there is disagreement between the parties with regard to any particular need to know or communicate the documents to any particular person, we'd certainly welcome any appeal to the Board in the event that informal agreement can't be reached.

I don't want to go through a complete reargument of that, Mr. Guild.

If you have a point to make, please be brief about it.

MR. GUILD: All right, sir.

The only point I would make -- and I would refer to the transcript of Mr. Martin's deposition when it becomes available -- but Mr. Martin not only disclaimed confidentiality, he explicitly said that he informed the Staff that his desire was that all of his concerns to the Staff be made public so that his management, in

effect, would not feel like he was going behind their back; that all of his allegations would be on the table so that everyone could pursue them at the same time.

Well, the evil of this unwarranted and overbroad use of the device of protective order to shield information for no good reason is really exemplified by Mr. Martin's frustration that now in August -- in September, that he finds that the representative of the NRC Staff visited him -- this is his deposition testimony -- and told him that they had to do his investigation all over again because they had mistakenly pursued his investigation on the presumption that it was to be confidential.

Now knowing that it's not to be confidential, they have to go back and use his name and identify information, do a more thorough job.

Now, he swore to this, that this was the contact he had with the NRC a week before his deposition.

I do believe Intervenors are hampered.

You've heard my argument on that point, and I don't mean to reargue that point.

I only mean to suggest there is no basis for a protective order here; and I think that Mr. Berry -- I appreciate him reconsidering his position, but I think the Staff has an obligation to make some showing that

there is a basis for protective order.

JUDGE GROSSMAN: Well, Mr. Guild, in view of what you say, it appears that the matters stated by Mr. Martin are not confidential, and that the only confidentiality that exists attaches to documentation that's been turned over to you.

MR. GUILD: Yes.

JUDGE GROSSMAN: So that I would assume that you can operate almost as though there were no protective order.

With the limitation as to the documents, that should not hamper you very much; and I agree that Staff certainly ought to reconsider on the basis stated by the witness -- or by the alleger as you have indicated, and I would guess that the alleger feels that he would probably be better protected by having the matters in the public domain than if they were confidential, and that certainly ought to be taken into account by the NRC.

So we won't go any further now. Everybody knows what the problems are that still exist.

Do we have any further preliminary matters from Staff, Mr. Berry?

MR. BERRY: Not at this time.

JUDGE GROSSMAN: Do we have any short

preliminary matters by Applicant before we get on to the argument?

MR. GALLO: One preliminary matter, Judge Grossman:

That the contract documents that I promised you will be delivered tomorrow.

JUDGE GROSSMAN: Tomorrow. Okay. That's fine.

Mr. Guild, you may proceed now.

MR. GUILD: Thank you, Mr. Chairman.

What's at issue here, Judge, is the question of how to proceed with what Applicant has denominated as its rebuttal case.

We had argument briefly off the record on Thursday; but for the record, let me summarize it.

It's this party's position, in large part, the character of Applicant's prefiled rebuttal case, which is not all of its rebuttal case, but is what has been made available thus far -- that the character of that rebuttal case is really not rebuttal in the traditional sense of the word. It's responsive to the case in chief of the adversary, but it is, indeed, in the nature of a new case in chief by Applicant.

It is, indeed, a case in chief that Applicant could have presented by way of its opening case in chief but

chose not to.

There are two types of rebuttal evidence that we see proffered by Applicant -- at least indicated that they will proffer.

One is in the nature of fact rebuttal and the other I'll characterize as expert rebuttal. Obviously, not a clean distinction between the two, but there are some logical bases for that segregation.

In terms of fact rebuttal, as we said off the record last session, we have no problem with the traditional approach.

If Mr. DeWald and Mr. Simile, even Mr. Kurtz, who is not literally a fact witness but is an expert witness, but whose testimony is clearly within the scope of proper rebuttal -- if they are to take the stand, we're prepared to cross-examine and respond to their rebuttal testimony in short order without the expectation that we would take any time away from hearing to prepare, except the normal time it takes for the witnesses yet to come.

That is fair game, it seems to me, and should proceed under the normal expectation of a rebuttal case followed without delay after the close of adversary's case.

The second category of rebuttal case that we see

being proffered by Applicant is of a far different character, and this rebuttal testimony is that reflected in part by the prefiled testimony filed by Applicant, 13 witnesses, witnesses who address matters that are not within the scope of what is traditional rebuttal testimony; essentially witnesses who address the question of the hardware acceptability and the work performance of the Comstock Quality Control Inspectors who have been the subject of this proceeding.

We have the prefiled testimony of 13 witnesses so far, and we expect more to come. Applicant has identified at least 3 more so-called expert witnesses: Mr. Laney, who I understand is to have prefiled testimony, an industrial psychologist and a training expert, each of whom will present additional expert testimony on evaluating the work performance of the Comstock inspectors.

Now, the evidence that's to be presented reflecting such work performance is of two sorts.

It's founded on, first, the overinspection results by Pittsburgh Testing Laboratories and, second, by an aspect of the Braidwood Construction Assessment Program, BCAP, that's been referred to as the Construction Sampling Reinspection, CSR, as that sampling reinspection happened to cover the scope of the L. K.

Comstock work.

Applicant, during the course of the proceeding, has done extensive data compilation involving new tabulation -- new analyses of data, new tabulations of the data, and then has presented the data to experts for their evaluative perusal, and it is that evaluation that is the core of the rebuttal testimony presented by Mr. DelGeorge with respect to the CSR data, Mr. Marcus with respect to the PTL data, and other evaluators on other testimony performing evaluations as well.

How does the status of the Braidwood Construction Assessment Program prior to Applicant announcing what its rebuttal case was relate to this?

I want to hand out an excerpt first from a June 7, 1985, document, which is Applicant's Response In Opposition to Intervenors' Amended Quality Assurance Contention.

(Indicating.)

Here I want to direct the Board's and parties' attention to an excerpt that appeared at Page 35 of the original, and I have underlined a portion.

This is a response to a specific subpart of the quality assurance contention that, indeed, is no longer in issue. It was part of the contentions -- one of the numbered subparts that was excluded by the Commission

order prior to hearing; but the point I'm making is evident, it seems.

"As Applicant explained in its Answer to the original QA contention, BCAP is an initiative undertaking by the Applicant that is not intended to replace the ordinary QA program as a means of assuring quality construction. Despite Intervenors' reference to it here, Applicant does not read the amended contention as putting BCAP affirmatively in issue. Intervenors are simply attempting to point out deficiencies in it because," and here I emphasize, "they anticipate that Applicant will rely on it as an 'affirmative defense' if Intervenors demonstrate a pervasive breakdown of the QA program."

Well, two points:

First, we're told very directly that BCAP is not to be relied upon as Applicant's case in chief by this pleading; and, second, that its role only arises -- BCAP only has significance if and when, in effect, Intervenors carry the day and demonstrate that there has been a pervasive breakdown in its QA program.

It is, of course, our view that, as we stand here today and close our case, we have made such a showing, so perhaps BCAP then takes on the character that Applicants associated with it in their initial pleading.

Extensive discovery took place prior to trial in this case as to the QA contention generally and as to the Quality Control Inspector harassment and intimidation subcontention in particular, and among the responses in discovery, Applicant addressed again the status of BCAP, the Braidwood Construction Assessment Program, in response to interrogatories by Intervenor. (Indicating.)

This is responsive to Intervenors' second of three sets. It's a November 22, 1985, filing; and I want to draw the Board's attention to two questions in particular, first which appears at the page numbered 1 as responsive to Specific Interrogatory No. 2.

I didn't attach the answers because they are voluminous, but the question is of importance, because it specifically cites to the Quality Control Inspector harassment contention, among other subparts, and asked, among other things, for Applicant to identify any facts which reflect corrective action taken with regard to the existence of other related deficiencies, weaknesses, findings or observations, quote, "Set forth any facts upon which you rely or show that the matter and its root cause have been effectively corrected."

I don't include the answer because it is voluminous, but I'll submit that the answer reflected no

corrective action because Applicant refused to acknowledge that there was any problem or any evidence of harassment or intimidation or production pressure, and made no reference, in their response to this specific Interrogatory No. 2, to BCAP, PTL overview or anything else.

Next I want to direct the Board's attention to Specific Interrogatory No. 7.

Indeed, as Applicant indicated in their initial pleading, the status of BCAP was of interest, because all parties knew it existed, and what degree to which -- the degree to which Applicant intended to rely on BCAP was a continuing question on the part of Intervenors.

In fact, this Board, at a prehearing conference, specifically said to Applicant that it might be shortsighted, in effect, in not relying on BCAP, because the question of the correction of past problems through an overinspection may be critical to Applicant's carrying the day.

That comment was made perhaps -- well, it was made generally about the amended QA contention, and the comment's applicability to the remaining QC harassment contention is unclear, but, nonetheless, we submitted an interrogatory, Specific Interrogatory No. 7.

We asked explicitly about BCAP; and if you look in

the following paragraph in that interrogatory, we asked, among other things, "The extent, if any, to which it is relied upon as evidencing the absence of a significant breakdown in quality assurance or the ability of safety-related parts, components or systems to meet regulatory requirements or perform their intended function and service."

The answer follows, and I want to direct the Board's attention in particular to what appears at numbered page 3 under the heading, "BCAP."

On 3, at the bottom, there is an acknowledgment that BCAP will be offered in one particular, no longer a matter in contest, and that is Subcontention 1B, but there only to the extent that the fact that BCAP was performed and that it was performed subject to quality assurance oversight and not to the results of BCAP.

Page 4, the following page, the first full paragraph says, and I quote, "CECo does not presently intend to rely upon the BCAP results and conclusions as evidencing the ability of safety-related parts, components or systems to meet regulatory requirements or perform their intended safety functions. This intention is based on an understanding of the issues raised in the contention and the ASLB's ruling, described above, limiting the matters in controversy in this case. This

position could, of course, change in whole or in part over time as CECo's affirmative case is developed and CECo may rely on portions of the data accumulated in the BCAP program to demonstrate that safety-related parts, components and systems meet regulatory requirements or perform their intended safety function. Notice of any such change will be provided promptly to the parties and the Board."

There's a further reference to making the Board notification if, in the course of preparation, some fact emerges that is appropriately disclosed pursuant to the Board notification policy, and no such notification was made, to my knowledge.

All right. That brings us up to the current status of the state of the record, because during the course of Applicant's case -- or during the course of the trial of the case of the parties in chief, Applicant, indeed, has disclosed its change of intention, and that is the intention we now face today of relying, in part -- in substantial part -- by way of Applicant's rebuttal case, on the Braidwood Construction Assessment Program.

The short and long of it is, our position is that Applicant could have relied upon BCAP and PTL, could have presented its rebuttal -- its expert rebuttal case -- that is, the 13 witnesses' prefiled testimony

and the expected prefiled -- expected testimony of the 3 other experts -- could have presented that testimony as part of its case in chief. It did not.

It could have told Intervenors early on in this proceeding that it intended to defend Intervenors' harassment and intimidation claims based on BCAP, the PTL data and the expert analysis of that data. It did not; and until the midst of the hearing in this case, it maintained the position that BCAP was not relevant except to the limited extent of being relevant to Subcontention 1B.

After the Commission dismissed that subcontention, BCAP fell from any relevance in this case as far as Intervenors were informed.

So now anticipating the close of Intervenors' case, Staff's case, having closed their own case, we understand that a detailed evaluation of the results of BCAP are to be presented by way of rebuttal.

Intervenors have sought to obtain informal discovery with regard to Applicant's rebuttal case since that case -- since the prefield testimony was filed, I believe it was, August 7th, and, indeed, Applicant has been more than cooperative.

There is no -- I can't fault Applicant, its counsel or employees of any of the relevant organizations

because, when asked, they have been dutiful and helpful in providing answers.

I have no -- there's no basis for faulting Applicant, and I don't.

They, indeed, have said from the outset that they want to try to expedite this proceeding and, therefore, cooperate in informal discovery, and I think they have done probably the most they could.

That does not, however, cure the hardship and prejudice that Intervenors face at this date, anticipating Applicant's position that we should be required to swing into trying their rebuttal case without an opportunity, independent from trial of this case, to prepare without a fair opportunity for, in effect, to be heard on that rebuttal case.

Let me illustrate a couple of points of the difficulty we face.

Aside from the fact that we've been in trial approximately 12 days out of the month that we've had their prefiled testimony, during the time that we've not been engaged in trying this case or in responding to motions in this case, such as the pending 57C motion, we have attempted to undertake informal discovery on Applicant's rebuttal case.

We have attempted to obtain expert assistance on

two fronts.

One front is engineering assistance from persons who are experienced in the nuclear construction field and quality assurance area who can make some judgments and provide some informal guidance to us on the technical and engineering aspects of the PTL and CSR inspection data; and, secondly, statistical and social science experts in terms of reviewing Edison's evaluations of that data, their statistical manipulations of the data, the adequacy of the sampling techniques, the appropriateness of inferences drawn from the data and the adequacy of the data compilation in the first instance.

Among other things, the social science expert is attempting to determine whether the data is reliable -- sufficiently reliable that independent evaluations of that data should be made that would be useful in cross examination of Applicant's experts or in preparation of surrebuttal testimony.

What we found, among other things, is that -- we did a grab sample of three CSR files.

I don't know what the total universe of CSR files is or what the total universe of files applicable to Comstock is. It's a readily discernible figure that I don't have at the tip of my tongue; but we grab sampled

three, and, indeed, responsive to our request, Applicant produced some -- at least some portion of the files behind those CSR observations, and, frankly, what we have determined, I think, after due diligence in trying to understand this data, is that it's incomprehensible. It's even incomprehensible to this counsel, in any event, unaided by further discovery by way of interviews or depositions of persons who can explain it or by way of expert evaluation.

In part, what happens is this:

As I understand it, when the CSR sampling was taken, was done, it was done to a set of acceptance criteria that were not the same acceptance criteria used by the original inspectors, because BCAP's object was not the same object as the original quality control inspection.

BCAP wanted to find out whether they were, quote, "safety significant deficiencies," so they don't look toward anything but safety significant discrepancies, in effect, or they structured their acceptance criteria in a way to highlight what they deemed to be significant.

Well, since, for rebuttal purposes, what was of interest was the quality of the work of the original QC Inspectors, but raw CSR results were of no such interest, Sargent & Lundy had to go back and re-evaluate

the original data and recompile it on an inspection point basis, a basis on which it was not originally compiled, so that it then could be useful in terms of making a statistical analysis.

As the Board probably has already seen, Sargent & Lundy also performed an engineering evaluation for purposes of validity determination of each of the original CSR deficiency findings, and then there is the Level III -- then there is a Level III review, and I think I'm clear that the Level III applied to the CSR. It certainly applied to the PTL overinspection data.

The short and long of it is is there are at least two series of engineering evaluations and data, documentation for each of those, and then there is the raw inspection data and then there is some third-party or Level-III review of that inspection data, and that's all before you get a data point for each of the data points that is the basis for expert evaluation.

We believe that careful and prudent preparation for Applicant's rebuttal case requires us to be able to evaluate, from start to finish, the validity and reliability of the inspection observations and engineering evaluations as well as the expert analysis of that data that underlies Applicant's rebuttal case.

In order to do that simply takes time, and that's

what the point of all of this is.

I'm going to close quickly.

The PTL aspect of the case has not been mentioned at all in earlier discovery.

PTL's name came up, to the best of my ability, over the weekend, only in this context:

When asked about a corrective -- the general corrective action programs at the site, one of those programs was identified as the unit concept inspections. You remember Mr. Shewski made reference to that in his testimony.

It so happens that PTL had a hand in doing those unit concept inspections. That is the only instance in which I can find PTL identified at all.

So the existence of overinspections by PTL of the Comstock Quality Control Inspectors' work came to Intervenors by way of perhaps informal references in depositions and in discovery in this case, and certainly it's come by way of testimony since the hearings have started.

But nowhere has there been any reference to PTL overinspection data of Comstock QC inspections as evidencing the appropriateness or acceptability of the Comstock work until the rebuttal case comes in, so essentially PTL was simply beyond the scope of

Applicant's case in chief and beyond the scope of what was disclosed in discovery.

Here we are. What do we do?

It's Intervenors' position there are two choices:

First, that one can say -- one can brief and argue the question of what is the appropriate scope of rebuttal; and it's our belief that largely the prefiled testimony of the expert character, the 13 witnesses, plus 3 yet to come, is beyond the proper scope of the rebuttal and that it should be excluded.

So one course would be excluding Applicant's proposed rebuttal case on the ground that it is not appropriate rebuttal, it's not responsive to the case in chief of the adversary.

It is in the nature of a new case in chief and should have been offered, because it was known, as part of Applicant's case in chief.

I don't advocate that course, because I think that course, frankly, perhaps runs afoul of what I understand the Commission's authority in the Byron proceeding to be, and that is, you know, if Applicant hadn't made its case, give them a chance to make its case, hear more from them, so I'm not certain what the authority is at the Commission for barring Applicant from offering any evidence as to the acceptability of construction at the

facility.

But even if that is the case, and if we follow this course, I would advocate an opportunity for Intervenors to brief this point in detail.

Certainly no authority at the Commission supports the notion that Applicant can swing into a new case, like this is, without an adequate opportunity for Intervenors to prepare.

What's the alternative?

The alternative, I think, is an adequate opportunity for Intervenors to prepare; and taking fully into account the fact that, indeed, Applicant has made disclosure of their case one month ago, that they have been cooperative in informal discovery, albeit while we're trying this principal case -- but they have been cooperative; and also taking into account the fact that Applicant keeps pressing all of us about the immediacy of their fuel load plans and the completion of construction, nonetheless, it's Intervenors' position that an adequate opportunity to prepare will take us on the order of one month.

Now, I say that with some imprecision, but knowing that generally the Commission's rules don't set a specific time limit for discovery, but that the rules that I'm familiar with in complex federal proceedings,

the minimum say 90 days is the presumptive minimum time available for discovery.

Knowing what I know, which gives me some head start, because Applicants have made informal disclosures, and knowing what I know, because we're not completely in the dark on these matters, given all those other countervailing considerations, it's Intervenors position that if we stop this case at the end of the Staff's case in chief, that it will take Intervenors approximately 30 days to prepare adequately to meet Applicant's case.

The third alternative, which I don't think is one that anybody wants to choose, is the alternative of essentially allowing us to do discovery on the witness stand, and allowing us to do discovery on the witness stand really means a question of learning the things that we would otherwise learn outside of the hearing room through orderly pretrial preparation from witnesses on the stand.

I think that would be legitimate, but I don't think it's an efficient use of this Board's time and the parties' time.

I don't think it's a substitute -- fair substitute for Intervenors being allowed to prepare our case, because we run the risks, of course, of, in the course

of discovering favorable facts, discovering facts that are not favorable to our case. We shouldn't be forced to run that risk.

So I favor very strongly the position -- that is, that Intervenors be given a fair opportunity to prepare for Applicant's rebuttal case, and that is that we be given a period of approximately 30 days from the close of the Staff's case to the beginning of Applicant's case.

JUDGE GROSSMAN: Okay.

Before we hear from Applicant and Staff, I'd like to make some remarks certainly reflecting at least a tentative position.

First of all, it does appear to me that most of what has been labeled the rebuttal case is really part of Applicant's case in chief, and I don't think that there's any question but that if we were not dealing with this case in the context of Byron, that Applicant would have put that case on as part of its case in chief, but with Byron on the books -- and Mr. Gallo has alluded to that in the past -- which indicates that we can never decide against an Applicant finally on merely failure to meet its burden of proof, Applicant has decided to go this route in putting on the BCAP and the PTL overview matters as part of rebuttal, which, really,

is not part of rebuttal.

Now, I don't agree with Mr. Guild that the industrial psychologists, for one, are not properly rebuttal cases. I think they certainly are.

They are responses to the industrial psychologists put on by Staff and -- I'm sorry -- by Intervenors, and whether or not they are even necessary, I won't make any comments much about, at least.

My feeling is that, in general, just because one side puts on experts in an area that does not necessarily involve known disciplines or required expertise, does not really burden the other side with having to put on experts in the same area, but certainly Applicant is not ill-advised to counter expert testimony with its own; but be that as it may, I think it's certainly legitimate rebuttal.

Now, from having heard the three alternatives, first of all, I think it would just be a waste of time to decide, as Mr. Guild has indicated, the case in the first instance, and then if Applicant has not met its burden, to then go on and hear the rebuttal case as part of its supplemental case in chief as Byron would require. I think that would just be a waste of time.

So I really think the requirement is that we go along the second route which Mr. Guild has suggested as

far as allowing the rebuttal case, even though we may feel that it is part of the case in chief, allowing, of course, adequate preparation and eliminating from the outset any question as to whether surrebuttal would be permitted, because, obviously, it's not really surrebuttal, but it is a response to a belated and supplemental case in chief.

The question, I think, is going to come down to just how much time is needed to prepare to examine on that so-called rebuttal case; that is, the one involving the BCAP and PTL overview or whatever other technical cases are offered.

Now, one thing I don't think we want to do is go with the assumption that Mr. Guild is the only competent counsel for Intervenor who must be involved in every aspect of preparation to examine and counter the so-called rebuttal case.

We have to presume, whether or not it's so, that Mr. Guild does have staff and does have assistance, and that while he is necessary for some aspects of preparation for rebuttal -- namely, presenting and reviewing what is the initial response of his staff -- the bulk of the preliminary work we will have to assume will be done by that staff, and so we may not be talking about having a month's time preparation; and, of course,

by the way, we're assuming that informal discovery will proceed as cooperatively as it has in the past month; that is, since the so-called rebuttal case has been initially presented to Mr. Guild.

I just want to put that in context before we hear from Applicant. I don't want to waste time on matters that we're not going to have serious argument on.

So with that in mind, we'll hear from Mr. Gallo and Mr. Miller, and then we'll hear from Mr. Berry; but I do think our efforts ought to be narrowed in the context that counsel can accept what the Board is saying without having to make -- or if they wish to make a pro forma case, they can do it briefly on some of the aspects that maybe we have prejudged.

But proceed, Mr. Miller.

MR. MILLER: Your Honor, I'm afraid it's going to be more than a pro forma or a formal showing by me, because I believe Mr. Guild's characterization of this as a case that should have been presented as part of our case in chief is simply wrong, and it's quite disturbing to me to have the Board simply accept that as a representation or based on its own evaluation of the record.

I'd like, if I may, to address that.

Let me review just a little bit of the chronology

here. Our prefiled direct testimony was due, in accordance with the prehearing conference order, on April 11th of this year, and we met that date, including the testimony with respect to this subcontention, which is the only subcontention that survived the Commission's ruling.

Intervenor and Staff testimony was due on April 18th, and, in fact, I believe the Staff met that date, but by agreement, Mr. Guild's testimony, which by that time dealt only with this harassment and intimidation issue, was not filed -- well, one installment was filed on April 25th and another -- the last two were filed on May 2nd.

That was the earliest point in time at which Applicant could know what position Intervenors would take with respect to the harassment and intimidation issues.

In fact, it was only in that testimony that we first became aware of the position taken by the expert witnesses sponsored by Intervenors that you really can't believe a QC Inspector when he says that the alleged harassment or intimidation didn't affect his work because that's really not something that an inspector will self-identify.

That testimony by the Staff was followed by this

Board's memorandum and order admitting the harassment and intimidation issue. It's dated May 2nd. We received it shortly thereafter on May 4th; and, once again, it was somewhat dismaying to see in that order the Board state that, by way of admitting the Contention and dismissing some of our arguments, the sentence, "Moreover, one can hardly expect an employee to admit that he had been derelict in his duties."

So we had, at that point in time, both the prefiled testimony of Mr. Guild's experts and a preview, by way of ruling of this Board, that the testimony on which we primarily relied -- that is, statements by the QC Inspectors that they had, in fact, not compromised the quality of their inspections because of the events that we've heard at length on the record so far -- was not really to be credited or not given very much weight, and it was at that point in time that our planning for our rebuttal case began to take shape.

JUDGE GROSSMAN: Mr. Miller.

MR. MILLER: Now -- yes, sir.

JUDGE GROSSMAN: Excuse me.

If you are going to make the argument now that you thought your case was absolutely secure without the PTL overview and BCAP and that there's something that the Board told you which indicated that you didn't have a

100-percent case, I think you are just indicating perhaps some incompetence on your part.

I think when you go into the case, you have to assume that there's a chance you might not prevail on what you have, and if you have something else to support your position, an alternate case, that the time to present it is when you are presenting your case in chief.

I don't think there's anything that we said in that order, including that one sentence, that should have changed your preparation for the case, the order in which you are required to present your evidence or any other thing; and, as a matter of fact, that sentence doesn't even say we are not going to accept the testimony of those quality assurance inspectors to the extent that they may say something that indicates that they haven't misinspected or omitted anything or improperly inspected. All it suggests is that it takes more than just the statement to make us conclude that.

A lot depends on their demeanor on the stand and their responses to other questions.

So to take that one sentence out of a Board's order as justification for not presenting an affirmative case, when you should certainly, as responsible counsel, have considered the propriety or appropriateness of putting

on an alternate case in the event that you are not 100-percent secure in the main case that you wish to present, just doesn't take you off the hook and put the Board on the hook for not presenting an affirmative case where an affirmative case should have been presented, and it certainly doesn't convince me that you would have done this in a regular court case, where you didn't have a precedent like Byron around to insure that you are not going to fail to meet your burden of proof ultimately or at least have an opportunity to present it.

Now, to me, that's not a weighty argument. If we are going to waste any more time on it, you can go and waste the time. You are given as much time as you wish to present your position; but I would hope you would make more serious arguments than that.

Now, continue, Mr. Miller.

MR. MILLER: Well, your Honor, the record and my client are the ultimate decision whether I'm incompetent or responsible.

But let me continue, because what I was trying to do was to put into context Mr. Guild's unprecedented claim now that he needs one month.

The discovery of his experts took place on May 16th and on May 23rd. It was at that point in time that we then had a full understanding of just what the position

was on the adequacy of what I would call the anecdotal evidence and the position taken by those experts that the only sure way to know, with respect to the effects of the alleged harassment and intimidation, was to determine what the work of these inspectors really looked like; that is, a reinspection program.

JUDGE GROSSMAN: Excuse me, Mr. Miller.

Did you believe, before then, that Mr. Guild was accepting the position that the Quality Control Inspectors performed their functions properly and inspected properly?

MR. MILLER: Well, your Honor, I didn't know what the nature of Mr. Guild's case was going to be.

I knew that he was calling -- that Mr. Puckett had been identified as a witness for him, and I believed at that point in time that I had a position, with respect to Mr. Puckett's termination, that was convincing, but I did not know, because I was not given anything but these individuals' resumes before May 2nd, which is three weeks or so after our direct case was due, as to what the nature of their testimony would be.

Now, Mr. Guild called your attention to the answers to interrogatories in which we committed to make prompt notification to the parties and the Board once we reached a decision with respect to the possible use of

BCAP; and, in fact, on May 27th on the record, beginning at Transcript Page 1889, there is a discussion with respect to the rebuttal case.

Mr. Guild reports to the Board that there have been some informal conversations with me, and he then states that it is his position, as of that date, that he have an opportunity to prepare for that rebuttal by way of some limited discovery, and he then said that the informal contacts would be adequate.

At Page 1890, you said, "Well, I think we can discuss rebuttal, but I would think that we are going to be reluctant to afford any discovery on rebuttal, unless there is some unusual, exceptional reason for allowing that. It's generally not the case."

Then Mr. Guild went on to say, in his discussions that he had with me, "Applicant is going to anticipate some statistical analysis, perhaps, of data that is not in the record that would require a fairly extensive presentation, perhaps, from their side, and, certainly, therefore, an opportunity for us to examine that evidence and anticipate for surrebuttal purposes ourselves." He goes on to say, "I don't think we will have a difficulty resolving that matter," and so forth.

At that point, at Page 1891, I committed to provide Mr. Guild with the documents, and you inquired as to

whether or not I was anticipating having some experts. I said that I couldn't answer at the time; but I did disclose that there would be a presentation of data that is not in the sense of any further compilation, but the records that are ordinarily maintained at the site that may provide a basis for our rebuttal case.

You then concluded the discussion, your Honor, "While the general rule is that, you know, there is no discovery on rebuttal, we would ordinarily allow sufficient time to analyze matters that are presented for the first time, such as experts' reports with a lot of new data.

"So if you anticipate that there is going to be that need for time in analysis, you might just as well present it informally in advance and not delay the scheduling whether or not it's considered formal discovery or not.

"I am sure the parties will resolve that by themselves."

JUDGE GROSSMAN: By the way, Mr. Miller, I hope in your remarks you are distinguishing between what I indicated I believe to be legitimate rebuttal -- that is, your industrial pyschologists --

MR. MILLER: Right, I understand.

JUDGE GROSSMAN: -- for your BCAP and

Pittsburgh Testing Lab overview and other technical matters like that.

I have agreed with you that the industrial psychologists are definitely rebuttal testimony and that my general remarks do not apply to them.

MR. MILLER: Yes, your Honor.

Well, I understand that; and I believe that my comments, my discussion with Mr. Guild, off the record that day, and the comments that were made on the record on May 27th, were directed, in fact, to the BCAP data which I disclosed to him on that day.

Then the case continued; and, frankly, it became apparent to me, from the questions that the Board posed to our witnesses and to witnesses sponsored by Mr. Guild, that the Board was not crediting the denials of effect on work performance; that there was extremely aggressive questioning by the Board of witnesses who were supportive of our position; and that we may as well cut through it and present, as part of our rebuttal case, the statistical analysis, that I referred to, which has taken shape with respect to the case that we have presented relying on the BCAP and the PTL data.

We make reference to that again on the record on July 25, 1986, which corresponds to the date on which -- I'm sorry -- three days later, my partner, Mr. Steptoe

sent Mr. Guild and Mr. Berry the first installment of the documents that underlie our rebuttal case.

I should point out that we had earlier made available, in the course of normal prehearing discovery in this matter, the BCAP records in connection with the overall QA contention that was then pending.

We went on; and on August 5th Mr. Guild reported to the Board, at Transcript Page 9718, that he had reached agreement with me with respect to informal discovery, which included both document discovery and interviews of knowledgeable people.

The hearing continued for that week, the week in which August 5th took place, and then there was a recess.

If the Board may recall, there was some dispute over whether Mr. Guild's request for a site tour, which he was going to take in that week off, should include a photographer or not.

That was resolved by the Board, and arrangements were made for the week of, I believe, August 18th for informal discovery and the site tour.

We held ourselves in readiness to accomplish both those tasks.

The site tour took place the very next Monday; and at the conclusion of the site tour, there was to be some

additional informal discovery.

The first such informal discovery took place the Friday before. There was a one-hour session with two of the knowledgeable individuals in the College of St. Francis in Joliet.

On Monday, August 18th, Mr. Guild spent approximately six hours at the site. All but five minutes of that was spent on the site tour, taking pictures of the L. K. Comstock fab shop, looking at the upper cable spreading room. Wherever Mr. Guild wanted to go, he was given access.

He then spent approximately five minutes with an individual who had some part in preparing the materials that form the basis for our rebuttal case.

He requested documents, and documents were submitted to him promptly.

After that, there were a number of submittals, including things that he hadn't asked for on August 19th, on August 25th, on August 26th and on September 2nd.

He has asked for computer disks so that he can manipulate the data himself, and those have been provided.

Now, I would like to analogize this situation to the situation which all the parties found themselves in

when this hearing was about to begin.

As I stated previously, on April 18th -- I'm sorry -- April 11th, we were to provide our prefiled testimony, and we met that date.

Despite a discovery cutoff date that the Board had entered, there was informal agreement by the parties and depositions on a variety of subject matters that continued well throughout the remainder of the month of April and into May, not counting the depositions of Intervenors' three expert witnesses to which I refer.

The testimony simply on the harassment contention filed by Applicant at that point in time far exceeded the volume of the rebuttal case which has been filed so far.

Hearings were scheduled to begin, and, in fact, began on May 6th, and Mr. Guild was able to both submit his own testimony, a burden that he does not have at this point in time, and analyze other testimony until the Commission decision, which struck the other parts of the Contention, and prepare for the scope of the hearing, as it ultimately came to pass, limited to the harassment issue.

Mr. Guild said there has been hardship and prejudice to him if he is asked to swing directly into the rebuttal case.

Since August 7th, I believe that we have been in session approximately 12 hearing days, and on some of those days, the major burden has fallen on either the Staff or on Applicant with respect to examination of witnesses.

In any event, the Commission's Policy Statement on the conduct of licensing proceedings dated May 20, 1981, makes it quite clear that the fact that a party may have personal or other obligations or possess fewer resources than others to devote to the proceeding does not relieve that party of its hearing obligations.

Finally, your Honor, I have in the past referred to the fact that the licensing proceedings involving Braidwood are only a part of a larger struggle which is going on, which Mr. Guild's law firm is the principal antagonist of Commonwealth Edison Company.

On July 31st, Mr. Cassel, one of the attorneys who is obviously an experienced nuclear attorney, but who chose to appear here only to deliver new allegations, wrote a letter, and it starts out, "Dear Supporter: We need your help. BPI may be on the eve of an historic victory if we can afford it. At long last we're close to halting Commonwealth Edison's unneeded and costly nuclear power building program. Stopping Commonwealth Edison, the premier U. S. nuclear utility, can put the

final nail in the coffin of current unsafe US nuclear technology. No other utility would likely risk its capital."

MR. GUILD: I ask that he hand up a copy of that letter so you can see the whole letter in context.

If he intends to rely on it as part of his argument, I would appreciate it if he had the courtesy.

JUDGE GROSSMAN: Was that a reference, by the way, to this proceeding?

MR. GUILD: I don't believe it was, sir.

MR. MILLER: There was no reference to this proceeding, your Honor.

JUDGE GROSSMAN: I thought there was quite a lot of puffing in there, as it were.

MR. MILLER: Well, your Honor, it is clear that -- and all one has to do is look at this morning's paper to see that, in fact, BPI's campaign goes forward on many fronts.

Here's a report in today's business section of the Chicago Sun-Times. "Cancel Braidwood 2," the filing asks, and the reason is, of course, that in BPI's views, at least, costs are excessive and the energy is unneeded; and this has made clearer Mr. Cassel's letter, the technology is unsafe.

JUDGE GROSSMAN: Just to set the record

straight, Mr. Miller, both of these references -- both of these articles refer only to the Illinois Commerce Commission and have nothing to do with this hearing.

MR. MILLER: That's correct, your Honor.

But I think it really is simply not correct to suggest that what is going on here does not have an effect on the Illinois Commerce Commission, on public perception and, indeed, on the future of the Braidwood facility.

What is being asked for is essentially a one-month hiatus in this proceeding. What that will be characterized as is further indication that there are delays that are inherent in the building and licensing of nuclear power plants and as additional reasons for not permitting Braidwood to go forward.

Time is money before the Illinois Commerce Commission, and it is something that I think this Board should take cognizance of.

JUDGE GROSSMAN: Well, Mr. Miller, let me say, we don't need that particular proceeding to influence us as far as trying to move this proceeding along. We've tried to do that from the beginning; and whether or not the Illinois Commerce Commission proceedings were pending wouldn't influence us one bit as far as doing that.

We're still trying to move the proceeding, as we have from the first; that is, this proceeding.

MR. MILLER: Your Honor, I appreciate that.

I just want the Board to be clear that it does not become an unwitting helper, if you will, of BPI's stated goal of putting a halt to one unit at the Braidwood site.

Now, I believe that on the merits Mr. Guild simply has not demonstrated any basis for the delay that he seeks; that he has been given more than adequate notice, more than adequate opportunity to discover.

This is not the typical case in which an Intervenor appears before a Licensing Board and it is either a young attorney or appears pro se.

Mr. Guild is an extremely experienced and skillful attorney. There are at least two other attorneys in his law firm who are experienced in nuclear licensing proceedings, and one of them, Mr. Cassel, has, in fact, appeared here from time to time.

It seems to me that certainly no later than May 27th, and certainly by July 25th, that efforts have been made, in accordance with this Board's suggestion on the record on May 27th that informal exchanges of information on our rebuttal case be made, that Intervenors should have prepared themselves to respond

to the rebuttal case and be prepared to examine.

Your Honor, you've questioned my competence and --

JUDGE GROSSMAN: Well, let me put that in context, Mr. Miller.

MR. MILLER: Let me just finish, if I might, your Honor.

JUDGE GROSSMAN: Well, let me just straighten out my remarks on that.

I just don't want it to reflect, considering the Byron decision, that I believe your decision to proceed in the manner that you have proceeded in should be taken as incompetence.

I don't know that, as a matter of trial strategy, with the Byron decision on the books, you might not have taken the best course in throwing up part of your case the way you did and seeing the Board's initial reaction and what was presented by the other parties before you decided to cover all the bases, as you did, by presenting your rebuttal case.

I'm just saying that if this were in the context of a court case or perhaps another agency case or even an NRC case prior to Byron, that you never would have taken the chance like that.

To have done that would have been incompetence, in which you have an alternate case certainly foreseeable

on the horizon, and not presenting it as part of your case in chief and running the risk of failing to meet your burden; but in the posture of Byron, perhaps it was a reasonable decision, and perhaps you even discussed that with your client and came to what may be a reasoned position.

I'm just saying that it, in my view, just does not happen to be a rebuttal case and is a case in chief, and if you considered that you were going to have to rely on its being a rebuttal case, that perhaps that would show less than competent judgment; but that doesn't happen to be the context in which you were operating.

MR. MILLER: Yes, your Honor.

JUDGE GROSSMAN: So you can continue on that, Mr. Miller.

MR. MILLER: Well, I'm not going to belabor my own competence.

Suffice it to say that we relied on the Board's comments on May 27th and we relied on the Commission's statement of policy; and I find it, frankly, incomprehensible as to why, when this testimony has been on file since August 7th and informal discovery took place in mid-August, that it was only last Thursday that we learned for the first time that Intervenors' position is that they need a month to prepare for the rebuttal

case.

We have relied on what the Board has said and we have relied on what the Commission's statement of policy has said.

Frankly, I believe that the Applicant and its counsel are entitled to rely on those statements and to conduct themselves in accordance with that.

We have attempted to do so; and I believe that an extension of time is simply unwarranted and truly unfair to the Applicant given all the circumstances the way that we have conducted ourselves.

JUDGE GROSSMAN: Okay.

Mr. Berry, could you state your position.

MR. BERRY: I'll be very brief, Mr. Chairman.

The Staff is not a party to this so-called larger struggle between BPI and Commonwealth Edison, so I will not address that matter at all.

I have discussed this matter, Mr. Chairman, with senior colleagues in the Office of General Counsel and with our client, the NRC Staff.

The Staff is prepared to go forward without delay.

We have had since August 7th the Applicant's prefiled testimony. Staff has had responsible Staff members reviewing that information, and that's been available to us.

Of course, Staff takes somewhat of a different position than the Applicant or the Intervenor.

There's be Applicant testimony -- Applicant witnesses and testimony that appears to be adverse to the Intervenors and not to the Staff.

Be that as it may, we're still evaluating whether we would present any supplemental testimony.

At this time, we haven't reached a final decision on that; but we are prepared to go forward without delay.

I can understand Intervenors' position, but I would just note Intervenors have had this prefiled testimony as long as the Staff has; and I would note just generally much of this information, although the parties haven't taken a clear or certain position on it -- much of this information has been known to all the parties for a considerable time now, even prior to the dismissal of the other part of the Contention; and I would only note that, in this connection, that it really wasn't foreseeable -- certainly not to the Staff -- that -- I mean, it was foreseeable to the Staff that at some point Applicant's rebuttal case may take the shape that it has, and I suspect that, you know, if it was clear to this party, it's probably clear to the other parties as well, and in light of the other information we've had,

the other depositions that have been taken in connection, you know, with these matters here, that I don't think that it comes as a complete a surprise as Intervenor represents it does; that it comes as that big of a surprise to them.

So the Staff is prepared to go forward, prepared to go forward without delay.

I would just note that -- I want the Board to note, also, our position is somewhat different from the other parties in this case; but in consultation with senior colleagues in the Office of General Counsel, that would be the Staff position.

JUDGE GROSSMAN: Why don't we take 10 minutes now and talk it over?

Is there anything further briefly that the parties wish to state that they haven't already stated?

Mr. Guild.

MR. GUILD: I just want to inquire if the Chair would entertain a showing on the question of my diligence since I've been informed of this rebuttal case. I'd be happy to make a showing.

There are a number of facts I can beg the bone with Mr. Miller on, but I don't think the Board desires to hear that; and, secondly, while we think the policy statement does say, in part, as Mr. Miller quoted it, it

starts out with the premise that the licensing procedure is to be conducted with fairness toward all parties; and while lack of resources does not excuse a party from meeting hearing obligations, we don't seek any such excuse, but we do think that this Board has, as any judge would have, the obligation and the right to consider the diligence of the parties, given their resources, and in that context, we certainly would be prepared to make a showing that we have exercised diligence given the limits of our resources.

I have begged for assistance from my colleagues on a daily basis, and I'm fortunate to have same law students who have been able to help, but it's not for lack of interest or effort that BPI can only devote my time as counsel to trial of this proceeding, and we really don't have any other counsel to rely upon even outside the hearing except on very rare occasions.

I begged the time of one of my colleagues for an hour-and-a-half last night until midnight working on a motion that's due tomorrow, and that really was the extent of my colleagues' time that I have been able to find in the last week; not for lack of interest, but for lack of resources.

But I really have nothing more directly to say, unless the Board would like some response to the points

made by Applicant or the Staff.

JUDGE GROSSMAN: Not right now.

Anything further?

(No response.)

JUDGE GROSSMAN: No

Why don't we take a 10-minute recess.

(WHEREUPON, a recess was had, after which the hearing was resumed as follows:)

JUDGE GROSSMAN: Well, after all that time, we gave birth to a mouse.

We haven't really decided on how much time, if any, we will allow to prepare to meet what Applicant has termed its rebuttal case.

We will decide some time this week, after further discussion by the Board, not with the parties, so we'll just proceed with our case now -- that is, concluding Staff's and Intervenors' cases -- although I believe Intervenors have concluded their case, have they, except for --

MR. GUILD: No, sir.

JUDGE GROSSMAN: -- a pending witness, who is in a hiatus right now?

MR. GUILD: No, sir. We have one witness who's here today that we intend to present.

JUDGE GROSSMAN: Oh, okay.

That's correct, the one whose deposition was taken.

MR. GUILD: Exactly.

And I discussed the matter with Applicant, and also informed them that it's my intention to call the second witness, whose deposition was taken, and that's Mr. Rick Martin, on the subject of his cable pulling allegations that were also the subject of the NRC Staff's disclosure along with Mr. Archambeault.

JUDGE GROSSMAN: I hope we have enough witnesses for the whole week without getting into the rebuttal case.

Is that correct?

MR. GUILD: Well, I trust we do.

We have Mr. Archambeault. I can't imagine he will be finished today, unfortunately. We then have -- it's our desire to call Mr. Martin as expeditiously as possible.

I inquired about the availability of the deposition transcript. I haven't gotten mine yet, but I'm informed by Applicant that it is available, and so I'm prepared to call him as quickly as we can get to him.

JUDGE GROSSMAN: Fine.

Hopefully we'll be moving quicker on these witnesses than we have in the past.

It also occurred to me over the weekend that Mr.

Gallo still has a number of quick witnesses that we could perhaps fit in if we run out of witnesses on that Hunter matter, so that we always have a fill in on that.

Okay. So why don't we -- that's not catching you by surprise, Mr. Gallo?

MR. GALLO: Well, I mean, the Hunter matter does not catch me by surprise.

I'm aware that we have an obligation to put witnesses on on that issue.

JUDGE GROSSMAN: Okay.

But it seemed to me that they were appropriate for fill in because they will only be coming in, at least the QC Inspectors, on one specific matter, which would take a few minutes apiece, and if we need a fill in for a little time, that those are appropriate witnesses, and I don't believe those are witnesses who would be testifying to anything else so that you wouldn't have to put them on twice.

But, again, you are managing your own case.

MR. GALLO: Yes.

I seriously doubt that the witnesses will be a few minutes apiece. I think it will take longer than that.

MR. MILLER: Your Honor, I would like to inquire as to whether the Staff contemplates Mr. Little appearing this week as well.

That's the unfinished business as far as the Staff case is concerned.

MR. BERRY: Certainly the Staff would be happy to respond to that.

As you know, Mr. Chairman, Staff has produced a number of witnesses. Mr. Little is our remaining witness in our case in chief.

At the conclusion of Intervenors' case in chief, which, as I understand it now, is Mr. Archambeault and Mr. Martin, the Staff will make Mr. Little available.

He has returned from his vacation, he's back at his office, and he's just waiting to hear from Staff Counsel.

So he is available upon completion of the two witnesses we have scheduled this week.

As far as the Board's question as to whether we have enough witnesses to go forward, as I see it, we have three witnesses on the table, and I'm just calculating the hearing time we have, which is roughly, I guess, three days, all day tomorrow and all day Thursday, a half-day Friday and what remains of this day.

We have three witnesses to fit in that time. As we go -- if we can quickly, you know, we'll get through the witnesses earlier. If not, we may not.

So there may well be what the Board refers to as a gap towards the end, but --

JUDGE GROSSMAN: Let me point out:

It's not uncommon to hear witnesses in less than a day, though perhaps in this proceeding it would be.

But why don't we call the next witness, then.

MR. BERRY: Before we do that, I would just like to note, Mr. Chairman, that throughout this proceeding, you will note that the Staff has, on a number of occasions, taken the position that the matters relevant for inquiry into this proceeding are the Worley Puckett matter, the John Seeders matter and, you know, the matter of the 24 inspectors who attended a meeting on March 29th with the NRC; and the Board will recall that the Staff's consistently opposed or taken a position that, in our view, matters and incidents outside of that are beyond the scope of this proceeding, and in that connection you will note that we initially resisted disclosure of documents relating to allegations outside of the three items that I just mentioned because, in our view, it was beyond the scope of this Contention and in the substance and the nature of a new contention.

We understand that the parties and the Board have taken a somewhat different view from the Staff on this;

and while we're not objecting to Mr. Archambeault or Mr. Martin, we just want to make it clear on the record that we haven't change our position on that, but we are prepared to go forward.

JUDGE GROSSMAN: Okay.

Mr. Gallo?

MR. GALLO: I won't respond to that.

I have another matter. I have a request for another 10-minute recess that I want to make at the appropriate time.

JUDGE GROSSMAN: Okay.

Do you mean before we get to the witness?

MR. GALLO: Yes, please.

JUDGE GROSSMAN: Oh, okay.

We were just going to say, in line with our usual ruling, we will hear the witness and we'll try to limit the testimony to what we believe to be relevant to the proceeding, so we'll proceed along those lines.

Does anyone else have something to say before we take the 10 minutes?

(No response.)

JUDGE GROSSMAN: I guess we're in recess for 10 minutes, Mr. Gallo.

MR. GALLO: Thank you.

(WHEREUPON, a recess was had, after which

the hearing was resumed as follows:)

JUDGE GROSSMAN: Why don't we proceed, then. Anything to be heard before we call the next witness?

(No response.)

If not, Mr. Guild, please call him.

MR. GUILD: Yes, Mr. Chairman. Thank you. Intervenors at this time would call Gregory Archambeault to the stand, please.

Mr. Archambeault, if you would come around and take that seat where it says "Witness," please.

JUDGE GROSSMAN: Please remain standing. Raise your right hand.

(The witness was thereupon duly sworn.)

JUDGE GROSSMAN: Please be seated.

GREGORY JOSEPH ARCHAMBEAULT

called as a witness by the Intervenors, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. GUILD:

Q Mr. Archambeault, would you state your full name and your work address for the record, please?

A It's Gregory Joseph Archambeault and I work at the Braidwood nuclear station.

Q All right, sir.

In what capacity are you working at Braidwood, sir?

A I'm the Electrical Quality Control Inspector working in the cable pulling area of inspection.

Q All right.

Are you certified to Level II as a QC Inspector?

A Yes, I am.

Q All right.

And are you employed by Multi Craft Inspection Services?

A Yes, I am.

Q And detailed to L. K. Comstock?

A Yes.

MR. GUILD: Okay.

Mr. Chairman, the record should reflect Mr. Archambeault appears by subpoena sought by Intervenors today.

BY MR. GUILD:

Q Mr. Archambeault, your deposition was taken the other day in Chicago -- on September 3, 1986, to be precise -- and you were questioned by me, by counsel for Commonwealth Edison Company, Mr. Gallo, and by a representative of the NRC Staff, Mr. Berry.

Do you recall?

A Yes, I do.

Q All right.

I'm going to show you a number of documents that were shown you at your deposition; and I should explain that although you've testified to many of these facts in that deposition, the Board, the judges before you here, have not heard that evidence, and so I may be covering some ground that you and I have covered already, but keep in mind, if you would, sir, please, this is testimony that the judges are hearing for the first time.

Now, the document I put before you has a label on it, "Group Exhibit 2." It consists of a cover page and three attached typewritten papers.

I'm sorry. Do you have one now?

A Yes, I do.

Q Did you prepare this memorandum, sir?

A Yes, I did.

Q And can you tell me when you prepared it?

A Shortly -- shortly before I went to the NRC on the 4th of June.

MR. GALLO: I'm sorry. I didn't hear that.

JUDGE COLE: He said shortly before he went to the NRC on the 4th of June.

A (Continuing.) The original one I typed up was -- here is in regard to the letter I wrote the NRC.

MR. GUILD: Yes.

One moment, please.

BY MR. GUILD:

Q You presented this document at your deposition on September 3rd; is that correct, sir?

A That's correct.

Q All right.

Now, I notice there are dates in this memorandum that at least include up through August 19, 1986.

Do you see that?

A Yes.

Q All right.

Now, the actual memo, this typewritten memo of three pages with a cover page, when did you prepare that?

A This was -- this was prepared before my deposition.

Q All right.

And for what purpose did you prepare it?

A To let everyone that was involved know the events that happened up until the present time.

Q All right.

This was intended as a summary of the events that transpired in your work at Comstock?

A That's correct.

Q All right, sir.

MR. GUILD: Mr. Chairman, I understand the

witness is going to testify live from the stand, but he presented this document to the parties at his deposition, and for illustrative purposes, I would like to ask that the document be marked and received as the next hearing exhibit.

I do intend to examine the witness, of course, live from the stand about these matters, but it may be useful to the Board and parties to have this document as a guide to that examination.

MR. GALLO: I would object, your Honor, to the witness being provided the document for purposes of eliciting direct testimony on these matters.

It seems to me there has to be a showing first that the witness' recollection is somehow impaired and it's necessary to refresh that recollection by whatever means is appropriate.

I have no objection to the document being before the Board if it would assist in some way.

JUDGE GROSSMAN: Okay.

First of all, it hasn't been marked, has it?

My figures show that we're up to Intervenors' Exhibit 108.

MR. GUILD: Yes, that's correct, it should be marked as Exhibit 108, and I ask it should be marked.

I have no objection to Mr. Gallo's proposal.

JUDGE GROSSMAN: You are not offering it, then, at this time?

MR. GUILD: No, sir.

JUDGE GROSSMAN: Okay. So it's marked, and you can question, but not from the document.

(The document was thereupon marked Intervenors' Exhibit No. 108 for identification as of September 9, 1986.)

BY MR. GUILD:

Q All right, sir.

Now, Mr. Archambeault, when did you begin work at the Braidwood nuclear station?

A January 6, 1986.

Q All right.

And for whom were you initially employed?

A The BESTCO company.

Q All right.

They were the job shop that preceded MCIS?

A Yes.

Q And you were detailed to work for L. K. Comstock at that time?

A Yes.

Q All right.

What positions were you hired for, sir?

A I was hired for cable pull inspection and termination

inspection.

Q All right.

And what was your understanding at the time of your work assignment at Comstock?

A When I talked to Tom Skidmore, who was the site representative for BESTCO, he did not mention to me about working night shift, and he told me that I would be employed and trained in these two disciplines.

Q All right, sir.

Was it your expectation that you be working the normal day shift at some point?

A Yes, it was.

Q All right.

I understand that you have a wife and children; is that correct?

A Yes.

Q All right.

And that your expectation was that you would be working a normal eight-hour day during the daytime?

A That's correct.

Q All right.

Now, in fact, you have worked almost exclusively on the night shift up until very recently?

A Yes.

Q All right.

And you were transferred back to the day shift when, sir?

A Monday.

Q Monday of this week?

A That's correct.

Q All right.

After your deposition of last -- September the 3rd?

A Yes.

Q All right, sir.

Now, I take it that you had previously worked in the areas for which you were hired at Comstock?

A Yes, I did.

Q All right.

As a Level II Inspector?

A Yes.

Q Let me show you a copy of what's been previously marked as Deposition Exhibit 4, a copy of your resume.

(Indicating.)

MR. GUILD: Mr. Chairman, I'd asked this document be marked as Intervenors' Exhibit 109 for identification.

(The document was thereupon marked Intervenors' Exhibit No. 109 for identification as of September 9, 1986.)

BY MR. GUILD:

Q Mr. Archambeault, is this a copy of your resume that was submitted to BESTCO when you were employed at Braidwood?
A Yes, it is.
Q All right.
Now, does this resume reflect that you had been employed at four other nuclear sites prior to Braidwood?
A Yes, it does.
Q All right.
And I believe that you were employed at the Florida Power & Light St. Lucie site?
A Yes.
Q At their Turkey Point site?
A Yes.
Q At the Carolina Power & Light Shearon Harris --
A Yes.
Q -- facility?
And at the Clinton plant?
A Yes.
Q And all of those were before you came to Braidwood?
A Yes, that's correct.
Q All right.
And had you done electrical quality control inspection as a certified Level II Inspector at any of those sites?
A Yes, I did.

Q All right.

At which of those sites?

A All of them.

Q All right.

Had you done cable pulling inspection at any of those previous jobs?

A Two of them.

Q All right.

Which two were those, sir?

A That was St. Lucie and Shearon Harris.

Q All right.

Had you done termination inspections at any of those prior jobs?

A Yes, I did.

Q At which of those, sir?

A At St. Lucie and Shearon Harris.

Q And had you done other inspections in the electrical area, aside from cable pulling and terminations, at any of those prior jobs?

A Yes, I did.

Q And what was the nature of the inspection areas, aside from cable pulling and terminations, that you were certified in in those previous jobs?

A At St. Lucie and working for FP&L, they have across-the-board certification, and I could inspect any

of the areas of electrical, which includes cable pulls, terminations, electrical hangers, welding of them hangers, configuration and equipment --

Q All right, sir.

A -- and raceway inspection.

Q All right.

And did you, in fact, perform inspections in those disciplines prior to coming to Braidwood?

A For -- yes, for FP&L.

Q At St. Lucie?

A That's correct.

Q All right, sir.

It take it your career as a Quality Control Inspector began in 1979?

A That's correct.

Q All right.

And with the certification as a Level I Inspector at the St. Lucie plant?

A Yes.

Q Okay.

Thereafter, you were a certified Level II, and you continued in Level II positions at the other facilities that you have identified?

A Yes, I did.

Q Now, I take it, as I understand the Comstock

qualification and certification program, that you underwent a series of training at Braidwood involving classroom training and on-the-job training; is that correct?

A Yes.

Q And ultimately, you were examined as to your qualifications in the area of cable pull?

A That's right.

Q And I take it you successfully passed whatever examinations were called for and you were certified as a Level II Inspector?

A Yes, I did.

Q Starting on January 6, 1986, when did you attain your first certification?

A I believe it was in February. I'm not sure of the date.

Q Some date in February, 1986?

A I believe so.

Q All right.

And thereafter, have you had occasion to perform Level II quality control inspections in the area of cable pull?

A Yes.

Q All right.

Now, if I can, I'd like to get you to explain generally what a cable pull inspector does.

I take it that you perform inspections to a Comstock inspection procedure; is that correct?

A Yes, it is.

Q And what is the number of that procedure, if you know?

A 4.8.8.

Q 4.8.8?

A Right; and 4 --

Q What revision to that procedure are you currently performing inspections to?

A Rev E.

Q Rev E, as in Edgar?

A Right.

Q And when did Rev E come into effect, sir?

A Approximately a couple weeks ago.

Q Just a couple weeks ago.

Until then, did you work to Rev D of the procedure?

A Yes.

Q All right.

Now, you inspect the cable installation work that is performed by a craftsman; is that right?

A That's correct.

Q And their craft work, the capable pulling work, is performed to another Comstock procedure?

A That's correct.

Q And what procedure is that?

A 4.3.8.
Q All right.
And that is entitled --
A "Cable installation."
"Q -- "Cable installation." Thank you.
And what revision to the installation procedure are you currently working to?
A I believe it's G.
Q All right, sir.
And how long have you worked to G; do you recall?
A The same length of time I've used the other procedure.
Q Is it a recent revision?
A Not -- not to my knowledge.
Q Okay.
So you've worked to G for the same time as you were working to the Rev G inspection procedure?
A That's correct.
Q All right.
Now, I'm going to show you a couple of documents that we discussed at your deposition that are employed in the cable inspection of cable pulls.
(Indicating.)
First, if you would, during the time period when you first were assigned to cable pull inspections after certification, how did you receive work assignments, Mr.

Archambeault?

A We were assigned a foreman, and the foreman would come to the office and tell us if he had a pull upcoming.

Q All right.

And what was your first task as a cable pull inspector with regard to that work assignment?

A I don't understand the question.

Q Well, what was the first thing that you were supposed to do to perform your inspection duties on that cable pull?

A You check the pull card against the cable tabulation.

Q All right, sir.

And I am showing you a document that is a copy of a cable card, is it not?

(Indicating.)

A Yes, it is.

Q And I've also showed you another document that is entitled, "LKC - cable raceway release."

And is that a document that you employ in the performance of cable pull inspections?

A Yes, it is.

MR. GUILD: All right.

Mr. Chairman, I'd ask that the first document -- that is, the cable card -- be marked as Intervenors' Exhibit 110 for identification.

(The document was thereupon marked

Intervenors' Exhibit No. 110 for identification as of September 9, 1986.)

BY MR. GUILD:

Q Now, this is Attachment A1 to -- is it the installation procedure or the inspection procedure, do you recall, sir, the cable card?

A I think it's in both of them.

Q Okay.

A I know it's in the installation procedure.

Q All right, sir.

Now, I'm sorry.

What was the first step that you you say that you did with respect to the cable card?

A You compared a cable card to the CIS4 or we called it cable tabulation.

Q All right, sir.

Now, cable tabulation is a computer print-out reflecting the routing of cable up-to-date, in effect?

A It has all the information on that circuit.

Q All right.

And the information on the cable card is required to match the information in the cable tabulation; is that right?

A That's correct.

Q All right.

And so what information do you verify when you go to the tabulation?

A You should basically verify all the information on the cable pull card.

Q All right.

And what's the pertinent information that you make reference to in the performance of your cable pulling inspection, and if you could, refer to Exhibit 110, the cable card, as you explain it?

A It's to verify the cable circuit number, revision number.

Q Okay.

Now, where does the circuit number appear?

A Where it says "cable," right underneath Commonwealth Edison Company.

Q Okay.

1MC258 in this case?

A No. It would be 1HC258.

Q 1HC. Okay. Thank you.

Rev A?

A Correct.

Q All right, sir.

A You would verify the segregation code.

Q All right.

And what is that?

A That's C2B, which is non-safety.
Q All right.
And what is a segregation code, sir?
A It is the designation of different safety systems.
This here would be a non-safety Channel 2.
Q Okay. One moment. All right.
And what are the purposes of segregation codes, if you know, Mr. Archambeault?
A It's basically the function of each -- each one of the circuits.
Q All right, sir.
For what purpose is the information pertinent to your inspection activities in the segregation area?
A It would tell you which division, which function it -- it performs.
Q All right.
Why is that important, if at all?
A Because you have safety and non-safety, and they are required to maintain separations and other criteria.
Q All right, sir.
So it's important, in performing inspections to one or more of your inspection criteria, to know what the segregation code of cable is?
A That's correct.
Q Now, I have placed before you a document previously

marked as Deposition Exhibit 8 --

(Indicating.)

MR. GUILD: I'd ask that it be marked for identification as Intervenors' Exhibit 111, and --

JUDGE GROSSMAN: Excuse me.

Didn't you wish to have "LKC - cable raceway release" marked as Intervenors' 111?

MR. GUILD: It doesn't matter, Judge, if this suits.

We're going to reach that document in turn; but as long as --

JUDGE GROSSMAN: So you want this one marked as Intervenors -- I thought you had just omitted it.

Okay, fine.

This will be marked as 111; that is, the Division - Color - Segregation Code Cable.

(The document was thereupon marked Intervenors' Exhibit No. 111 for identification as of September 9, 1986.)

BY MR. GUILD:

Q All right, sir.

Is this a copy of the Attachment C1 to the Comstock procedure that provides for the segregation codes you employ in your inspections?

A Yes.

Q All right.

Now, I take you to the point on the cable card, Exhibit 110, that you say you verify the segregation code.

What other information from the card do you verify?

A You verify the number of cables in the pull.

Q And where is that indicated?

A That's just right of the segregation code.

Q Where it says, "Number of cables"?

A Correct.

Q Okay.

One in this case?

A Uh-huh.

Q All right.

A You verify the type of cable where it says, "Type code" --

Q Yes.

A -- and this --

Q For example -- I'm sorry.

A That's right, the cable number.

Q And in this case, it's 07148?

A 6.

Q 46, 146. All right.

And what do those numbers indicate?

A This just indicates what -- how many conductors this

cable has and the AWG size and how many volts it is rated.

Q What is AWG rated, Mr. Archambeault?

A American Water Gauge.

Q Okay.

A So this would be a 7 conductor, No. 14 AWG, 600-volt wire.

Q All right, sir.

And what do the other numbers to the right of that code indicate, if anything?

A That, again, is just spelling out 7 conductor, 14, 600 volts.

Q All right, sir.

What other information from the card do you have to verify in order to begin your cable pull inspection?

A You verify equipment from each end.

Q And where is that indicated?

A Just under where it says "Reference O" on it --

Q All right.

A -- it says, "From equipment number." Then just right of that it says, "To equipment number."

Q All right.

And those are the respective ends of the cable; is that right?

A That's correct. That's the equipment it's running to.

Q From one piece of equipment to another piece of equipment?
A Correct.
Q All right.
And then below those numbers, is there a description of the pieces of equipment from and to?
A That's correct.
Q In that instance, from a 480 volt wastewater treatment building to a motor operated rolling steel door?
A Correct.
Q All right, sir.
What other information do you verify from the cable card?
A The other information on the card you verify, you have drawing numbers and that, but that's more for your own personal use.
Q Okay.
A This drawing -- it's related in the column numbers -- will show you where an equipment is at on the drawing --
Q All right.
A -- and below that you would have the routing.
Q Now, let me stop you there.
The drawing number and the column references, does that help you find physically where the equipment is on the from and to?

A That's correct.
Q All right.
And then below that is the routing?
A Right.
Q And that's expressed in the series of multi-digit numbers; one, two, three, four in this case --
A Yes.
Q -- is that correct?
And what are those numbers, sir?
A Well, you have different -- for -- take an example. The first one is 1R183. The R stands for riser. The next would be cable pan node. This is just a number that's on the side of the tray. This designates the routing of the cable.
Q All right, sir.
Node, N-O-D-E?
A Right.
Q All right.
And those markings appear in bold letters on the side of the cable tray?
A Whatever the segregation code requires.
It may be black on green, which is C1E. That's a segregation designation.
Q All right.
And those are the -- those designations, the node

numbers, are they the numbers that you use in inspecting the routing of the cable pull?

A That's correct.

Q All right, sir.

What does the C indicate at the end of the routing designation here?

A It would designate conduit, and the conduit you would have to look up on the drawing.

Q All right.

A Conduits aren't required to be on the card nor is the junction boxes.

Q All right.

So how does this particular cable end, by way of example, this pull?

A You would find the conduit number, and the last raceway to go through would be the conduit --

Q All right.

A -- into equipment.

Q It leaves the raceway, goes into a conduit and then to the equipment?

A Right.

Q All right, sir.

And would you be responsible, from this card, for inspecting a pull through that conduit?

A Yes, I would.

Q Okay.

I take it that it is the responsibility of a termination inspector to terminate the cable at either end?

A That's correct.

Q All right.

So in this case, you would inspect as far as the pull through the conduit?

A Yes.

Q Now, what action, as a cable pull inspector, would you take after you compare the entries on the cable card to that on the tabulation?

A If all information was correct and you had no affecting documents, you would proceed with prepull walkdown.

Q All right.

Now, I showed you what the Chairman pointed out is the LKC - cable raceway release form previously marked as Deposition Exhibit 6 --

MR. GUILD: And let me ask that this be marked at this time as Intervenors' Exhibit 112 for identification.

(The document was thereupon marked Intervenors' Exhibit No. 112 for identification as of September 9, 1986.)

BY MR. GUILD:

Q When would you check the cable raceway release form in the occurrence of your inspection?
A This you check before you start your prepull walkdown. This is releasing the raceway for the pull.

If there's any affecting documents or any NCR's or hold tags on the raceway, then they have a conditional release on them and they should be on the CRR.

Q All right, sir.

The purpose of the release form, is it to indicate that the cable tray -- the cable raceway has been installed and inspected and released for cable pulling?
A That's correct.
Q With whatever conditional releases might exist for identified non-conformances that were pending?
A That's correct.
Q All right.

And where do you get the cable raceway release form?
A It comes with the pull card.

The foreman has all the information.

Q The foreman provides it to you --
A Right.
Q -- the cable pull foreman?
A That's correct.
Q All right.

And what is your responsibility with respect to the release form, cable raceway release form?

A You just review it; and if it has any of the affecting documents on it, while you are doing your walkdown, you insure that the conditional releases are installed on the hold tags. You also have a CRR number which you have to enter on a checklist --

Q Okay.

A -- and it also has to be signed by a quality control review, which is a QC designee. He will assign the CRR for release.

Q A QC Manager/or designee position?

A Right.

Q And who signs these forms for the QC Manager?

A The peoples' name I've seem on them has been Bob Tuite, John Walters, Harry Revels.

Q And what positions do Messrs. Tuite, Walters and Revels hold?

A They are QC supervisors.

Q All right, sir.

Is the inspector -- in this case, yourself -- called upon to sign this document?

A I have never.

MR. GUILD: All right.

Let me have a moment, Mr. Chairman.

BY MR. GUILD:

Q All right, sir.

You then have reviewed the cable raceway release form after having compared the cable card to the tabulation.

And what action do you then take as a cable pull inspector?

A You could start your prepull walkdown.

Q All right, sir.

And generally would you describe what a prepull walkdown inspection consists of?

A It's where you physically go into the field and inspect the raceway and insure that it's ready for the cable to be pulled in.

Q All right.

Do you physically walk down the length of the raceway through which the cable is supposed to be pulled?

A Yes, you do.

Q All right.

Now, let me set this stage a little more.

The work of cabling pulling is performed by craftsmen, as you testified.

And is it performed by more than one craftsman at a time?

A Yes.
Q And typically how many craftsmen are assigned to pulling a single cable?
A Usually there is eight men -- eight -- six, eight men or a crew.
Q All right.
And do they work under a foreman?
A Yes, they do.
Q And I take it the foreman supervises but doesn't actually engage in the pulling activity himself?
A That's correct.
Q All right.
Now, how long are cables -- cable pulls typically? What are the range of lengths of the cables to be pulled?
A It could be anywhere from 10 foot to 2,000 foot.
Q All right.
And does the length of a pull have any bearing on the number of craftsmen who are assigned to work the pull?
A Yes, it does.
Q And does the length of the pull have any bearing on the number of QC Inspectors who are required in order to inspect the pull?
A Yes, it does.

Q All right.

I take it it follows that fewer craftsmen are required for a shorter pull and fewer QC Inspectors are required, also, for a shorter pull?

A That's right.

Q Conversely, the longer the pull, the more craft you may need to do the pull, the more Inspectors you may need to inspect it?

A That's correct.

Q All right.

Now, I take it these pulls involve pulling through cable tray, and that the cable tray doesn't simply run in a straight line?

A No, it don't.

Q All right.

Cable trays make horizontal turns, do they not, or bends, do they not?

A Yes.

Q And they also rise or drop vertically, do they not?

A That's correct.

Q And do they also go from more than one elevation in the plant to another?

A Yes.

Q All right.

I mean, physically from one room in the plant

through a penetration in a floor to a lower room or a higher room in a penetration through the ceiling?

A Yes.

Q All right.

And does the complexity of the pull, in terms of bends and drops, have a bearing on the number of craft and QC Inspectors who are required to accomplish the pull?

A Yes, it will.

Q If a -- in a typical pull, let's say, take as an example, of six craftsmen and a foreman, where would the craftsmen be assigned in accomplishing the pull?

MR. GALLO: Objection.

I think the witness ought to testify as to what a typical pull is, not Mr. Guild.

MR. GUILD: That would be fine. I have no problem with that.

BY MR. GUILD:

Q Would a typical pull call for six craftsmen, a crew of six craftsmen?

A Yes, a typical.

Q If it calls for a different number, please help me out.

A It all depends on the length and the priority of the cable.

Q All right, sir.

Why the priority of the cable? What influence does that have?

A Some cable are needed for system turnover, and they call them a hot pull, and to complete a system, they need the cable in as quick as possible, and they put two or three crews on it.

Q All right.

If it's a priority or a hot pull, they may assign more men to it than otherwise; is that right?

A That's correct.

Q All right.

Well, why don't you tell me:

What is a typical length of cable?

Let's start from that perspective.

A Typical length would be 300, 400 foot.

Q All right. Let's say 300 feet.

Typically, how many craftsmen would be assigned to perform a 300 foot cable pull?

A It depends on the size of the crew.

Usually, as I stated, there is six to eight men.

If there's six men, there will be only six men. If there's eight, there will be eight men.

Q So it depends on the size of the crew available, not the length of pull so much?

A That's correct.

Q Let's say, then, we have 6 men available and we have a 300-foot pull.

How, typically, would the craftsmen be assigned on the pull?

A You have to have a craftsman at the coil. That's the bulk of the cable. He will feed it up to a man in the tray. You will have each -- a man at each turn or drop in the tray --

Q All right.

A -- you will have to have a man at each elevation or where the raceway may go through a wall.

So, you know, it depends on how -- if you have got a straight run, they might space out 20 or 30 foot apart --

Q All right.

A -- but it all depends on how many turns and bends you have that limit the -- how far you go.

Q What function do the craftsmen play in stationing at the bends or drops?

A It's to insure there's no undue tension put on the cable.

Q All right, all right.

So now you said that the cable -- one craftman is stationed at the coil.

How are the cables -- what's a coil; would you say

that?
A May have -- a coil generally is in a Figure 8, where they just take the wire and Figure 8 it, and depending on the size.
Q Is that for ease in pulling off the coil, use of the Figure 8?
A That's so they don't have to ship reels around.
Q All right.
A Depending on the bend race of the cabling, it will depend on the size of the coil; and then the coil is just took out to wherever.

It's convenient -- more convenient to use a Figure 8 than it is a reel, because reels are bulky.
Q All right, sir.

So it comes off of a Figure 8 typically now?
A Right.
Q And is the cable to be pulled typically precut?
A Usually, yes.
Q All right.

And so the cable has been measured to -- measured consistent with the specifications on the pull card and coiled in this Figure 8 fashion ready to be pulled?
A They usually add a little more than what the figure on the pull card shows so they don't come up short.
Q All right, sir.

Now, when you first started cable pull inspection, were you pulling from reels?

A No.

Q All right, sir.

Since you've been doing this work, they've been precut cables?

A No. Let me correct that.

I have pulled from reels, yes --

Q All right.

A -- but they are not -- you know, it depends on the cable.

Q All right.

But typically is the --

A Typically, it's a Figure 8.

Q And it's precut?

A Right.

Q All right, sir.

MR. GUILD: Mr. Chairman, it's the noon hour, and I'd suggest this is an appropriate time for luncheon recess.

JUDGE GROSSMAN: Okay. Why don't we recess until 1:15.

(WHEREUPON, the hearing was continued to the hour of 1:15 o'clock P. M.)

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:	
COMMONWEALTH EDISON COMPANY	Docket No. 50-456 OL 50-457 OL
(Braidwood Station, Units 1 and 2)	

Met pursuant to recess.

Tuesday, September 9, 1986.
1:15 P. M.

JUDGE GROSSMAN: We're back in session.

Mr. Guild, please continue.

MR. GUILD: Thank you, Mr. Chairman.

BY MR. GUILD:

Q Mr. Archambeault, after you performed your review of the cable card against the printout, the tabulation, and you reviewed the cable raceway release form, you indicate the acceptability of the readiness of the pull on an inspection checklist; is that right?

A That's correct.

Q And let me show you a copy of that checklist. I believe this is a QC cable pull checklist provided for the

inspection procedure --

A Yes, it is.

Q -- correct?

Do you have a copy before you?

A Yes.

Q A Form 37.

And the first pre-pull inspection criterion is set out on the top of the list, and that is "cable raceway released for pull, CRR number."

That's where you enter the CRR number?

A That's correct.

Q All right, sir.

Now, you then undertake the pre-pull walkdown that you referred to earlier; correct?

A That's right.

Q All right.

And the criteria that you inspect are indicated in the remainder of the inspection criteria set forth on the first page of your checklist; correct?

A That's correct.

MR. GUILD: All right.

Mr. Chairman, I'd ask that this document be marked as Intervenors' Exhibit 113 for identification.

(The document was thereupon marked Intervenors' Exhibit No. 113 for

identification as of September 9, 1986.)

MR. GUILD: Mr. Chairman, before I go any further, to make some sense of the record, let me offer in evidence what has been previously identified as Intervenors' Exhibits 109, 110, 111 and 112. I'm not offering 108 at this time.

JUDGE GROSSMAN: And 113?

MR. GUILD: Yes, sir, and 113.

JUDGE GROSSMAN: Any objection to those, Mr. Gallo?

MR. GALLO: No objection.

MR. BERRY: 109 through 113?

MR. GUILD: Yes.

MR. BERRY: No objection.

JUDGE GROSSMAN: Received.

(The documents were thereupon received into evidence as Intervenors' Exhibits Nos. 109 through 113.)

BY MR. GUILD:

Q Now, I'm looking at the remainder of the pre-pull items on the checklist. Let me get you to explain, if you can, a little bit about these.

The second item, 3.2.2, states "raceway free of debris."

Now, the actual inspection criterion in the

procedure is stated as "raceway free of visible debris"; is that correct?

A That's right.

Q All right.

Now, "visible debris" -- is that understood to mean debris that you can see with the unaided eye?

A Yes.

Q All right.

Is there any written work procedure or written interpretation of what the term "visible debris" in the inspection procedure is understood to mean?

A There's no definition for it. It would be an inspector's own interpretation of it.

Q All right, sir.

And is there indeed some variation in an inspector's interpretation of the debris criterion in your inspection procedure?

A For the most part, I think all the inspectors would basically have one type of definition for it.

Q All right.

And what is the generally understood and employed interpretation of that standard?

A "Debris" would be any foreign objects, such as concrete, weld slag, paper, trash, boards.

We don't consider dust debris because dust is not

detrimental to the cable. It's an ongoing thing in the construction activities, and you'd spend 95 percent of your time cleaning trays out for dust.

That's one -- you know, one thing that was brought up when -- an inspector had a problem and he was making them clean dust out of trays, and it was brought to his attention that dust was not detrimental to the cables.

Q All right.

The inspector you have in mind is Mr. Martin; is that correct?

A That's correct.

Q Dust and dirt can consist -- or do consist, as you see them in cable trays, of things such as concrete chips; correct?

A That would be -- that would be debris.

Q All right.

Well, I guess smaller concrete chips are dust and larger concrete chips are debris?

A Any concrete that would be in a tray would be removed.

Q But I mean isn't there at times masonry work that goes on that creates concrete dust, and sometimes there's not only finer concrete which may be dust but there's also larger pieces of concrete that you interpret as debris?

A That would be up to the -- to the individual inspector.

Q All right, sir.

And at times do you find such things as shavings from -- metal shavings from grinding in cable trays?

A Yes.

Q And do you interpret those as visible debris under the provisions of your inspection --

A Yes, I would.

Q -- criteria?

A Yes, I would.

Q Those would have to be cleaned up --

A That's correct.

Q -- before you could pull?

A Yes.

Q And at times you find -- I'm not sure of the trade name, but it's insulation material of a rock-like quality that falls in the tray at times?

A That would be Pyrocrete.

Q Pyrocrete?

A Right.

Q And do you find that occasionally as debris in the tray?

A Yes, because that's an ongoing thing where a hanger may be added and they might have to chip some away and it would have to be removed.

Q And in your opinion, is Pyrocrete, this insulation material, rejectable visible debris?

A Yes.

Q Sometimes weld slag?
A That would be rejectable, too.
Q All right, sir.
I take it generally, though, in the absence of a written guidance on how you interpret the term "visible debris," it's up to the judgment of the individual QC Inspector to interpret that standard; is that true?
A That's correct.
Q You perform your pre-pull walkdown, and it's at that time that you identify the existence of visible debris; correct?
A That's right.
Q Now, sometimes do you, in effect, do a pre-pre-pull walkdown with the craft to give them the opportunity to clean up readily removable debris from a tray?
A The way the work procedure is wrote, they're supposed to do a pre-pull walkdown before they inform QC of a pull.
Q "They," the craft?
A That's right.
Q All right.
A It's really up to the discretion of the inspector.
Some inspectors go out with their crew; and if there's any debris in the tray, they remove it as they do their pre-pull walkdown.
Q They have the craft remove it?

A That's right.
Q All right.
It's at the discretion of the inspector whether, at the point when you walk down the tray, you reject the pull per 3.2.2 of your inspection procedure or, on the other hand, whether you allow the craft to clean up the readily removable debris?
A That's up to the inspector, too.
I would -- in past situations I have walked the whole rundown with my crew. Anywhere there was debris in the tray, it was noted. They made a note of it on the card in pencil. They went back. I allowed them so much time to go back and correct the situation.
I went out again and checked all the areas that had debris in them. If it wasn't corrected then, I'd reject the item on my checklist.
Q So even though the craft were supposed to have walked the cable tray down before you were called to do the pre-pull inspection, at times you would essentially give them another chance to clean it up before rejecting the tray -- rejecting the pull?
A I would, yes.
Q Again, that's at the discretion and judgment of the individual QC Inspector?
A That's correct.

Q All right.

Now, when you say you made a pencil notation on a card, are you speaking of a cable card?

A Cable pull card.

Q Okay, Intervenors' Exhibit 110. All right, sir.

3.2.3, the next item on the checklist, "raceway free of sharp edges/edge softeners installed."

I take it that at times the edges of the tray may be sharp, have sharp metal edges; is that correct?

A There shouldn't be any sharp edges as far as in the raceway.

The main thing that's for is when a cable that's in a lead raceway goes over the edge of the tray, you'd want to put softener on it.

Q And that's a piece of rubber that you install over the edge of the tray?

A That's correct.

You also ensure that there was no damage to the tray that might cause, you know, a sharp edge.

Q All right.

What sort of damage might cause a sharp edge, if you know?

A Somebody grinding -- say, you had to repair a weld on the bottom of the tray. They could have ground through, thus leaving a sharp edge.

Q 3.2.4, the next item, "raceway free of damage."

Do you occasionally encounter construction-related damage to cable trays?

A I haven't. I've encountered reworks, but not damage.

Q All right.

What sort of damage do you look for pursuant to this criterion?

A Any kind of damage that could happen from construction activity.

Q All right.

A There are a number of things.

Q What sorts of things, just for example?

A Well, someone could drop a heavy load on a tray. They could drop a pipe through it and put a hole through it. They could bend a tray of that nature.

Q 3.2.5, "authorized scaffolding."

That's to establish, if there is scaffolding, that the scaffolding was authorized?

A That's right. It has to be approved.

Q That's to ensure the scaffolding doesn't damage the tray if it's not authorized?

A That and that it won't affect the integrity of the cables going under it.

Q All right, sir.

"Raceway corresponds to routing shown on pull

card."

You confirm that the routing in the field matches the pull card by noting the node numbers on the tray as you walk it down?

A That's correct.

Q All right.

At that point you simply accept the configuration of the tray as verified by some other previous inspector and simply confirm that the numbers match up between the card and the physical markings in the field?

A That's right. If all the nodes are correct per the pull card and CIS4 and the equipment matches, then we'll proceed with the pull.

Q Okay.

"Raceway corresponds to routing shown on pull card," 3.2.7.

Again, that is confirming that the configuration is as you -- as you see it specified on the card?

A That's correct.

Q I skipped one: 3.2.6, "segregation codes correspond."

Again, these are markings on the cable tray sides that show the segregation codes?

A That's correct.

Q All right.

And they need to match the segregation code on the

pull card?

A That's right.

Q All right.

3.2.9 -- I'm sorry. 3.2.8, "cable pull card latest revision."

You check that against the tabulation?

A Yes.

Q 3.2.9, "embedded conduits swabbed."

This has to do with conduits going through concrete?

A That's right.

Q You run a rag through the conduit to see if it's free from debris --

A Yes.

Q -- before running a cable?

A That's right.

Q 3.2.10, "pull calculation cards available for use."

Now, under what circumstances do you use a calculation card, Mr. Archambeault?

A Usually anytime you use a mechanical device, but also for pulling conduit. Anytime a cable is going to be under tension, you have to use this.

Q All right.

Is it true that generally the cables are pulled by hand through the cable raceway?

A That's correct, because there's no tension on them.
Q There's necessarily no mechanical tension to pull a cable through a raceway?
A No, there is not.
Q Exceptions might include a very heavy cable?
A I have never pulled one myself, but I, you know -- if it was a big heavy power cable, it might be power-assisted through the tray.
Q All right.

In that case you would use a calculation card?

A Yeah.
Q All right.

Generally, though, the calculation cards are applicable if you're going to pull the cable through a conduit; is that right?

A Generally, yes.
Q And a conduit is a metal tube or a pipe?
A That's correct.
Q And there you have to use some mechanical means to pull the cable through the conduit?
A Well, it's -- it's more for monitoring the tension.

Each cable has a pulling tension specified in your drawings. The engineer will figure out the pull tension on it, and you have to use pull links.

Q These are breakable links that will break if you exceed

the specified tension; is that right?
A Yes.
Q Why do you understand there are tension limits specified by the designer for pulling cable?
A I don't know the reasons they put them on it. I mean, it's -- I imagine it's something to do with the manufacturer covering the cable; you know, a warranty or whatever.
Q You understand there's some specified tension limits specified by the manufacturer, but you're not certain why they have those limits?
A There's a reason behind it. That's why I abide by the drawings and the procedure.

JUDGE GROSSMAN: Excuse me.

What are we dealing with?

I thought all this was through conduit.

Are we dealing with armor cable now or Romex?

THE WITNESS: Okonite. That's the main cable that I pulled out there.

JUDGE GROSSMAN: Okay.

These are not through conduit. These are primarily free; they're just put between cable tray and cable tray?

THE WITNESS: They'll either be -- usually the ones lately have been through tray part of the way

and then through conduit part of the way, you know.

It depends on the run. Some of them are totally in conduit.

JUDGE GROSSMAN: But there are some bare places that are not covered either by armor or by conduit?

THE WITNESS: That's correct.

BY MR. GUILD:

Q These are the cables that are laying in open trays?

A That's the ones that -- yes. In the trays -- some of the trays are getting tray covers, but I don't know which trays are to be covered. I think that's decided by Engineering.

Q All right.

Generally speaking, the trays are in open condition now?

A Yes.

Q All right.

And at times the cable leaves the tray to go, let's say, through a penetration and into a piece of equipment.

There the cable, the Okonite-insulated cable, travels in free air?

A If it's going -- if it drops out of a tray directly into equipment, it will be in free air.

Q Say, for example, in the upper cable spreading room, as we'll get to in a moment, cables leave tray, go to a grip and then drop vertically through a penetration into the control room; correct?
A Correct. That's a riser.
Q And those cables themselves are not in conduit; they are in free air?
A They're in free air, yes.
Q All right, sir.
But in any event, the use of calculation cards is applicable when you're going to use mechanical means for cable pulling?
A Anytime the cable is under tension.
Q Most often or most commonly, when you're pulling through conduit?
A Yes.
Q All right.
3.2.11, "cable pulling temperature acceptable."
During the winter months when it's cold, there are temperature limits for cable pulling; is that correct?
A That's correct.
Q Those are specified by your procedure?
A Yes.
Q 3.2.12, "cables removed from reel, ends sealed, properly coiled, not damaged."

Now, you inspect the cable that's in the cart in the coiled -- what was the --

A Let me explain.

Q Yes.

A Just recently they started a different program, where they precut the cables at a cable reel yard. This is where the cables are took directly off the reel, and an inspector precuts them.

Then they ship them out to a cable storage area. Then we pick them up from there.

Q All right.

A But prior to this here, we had precut cables, and they had them inside the turbine building. We would go down, precut the cable and witness it.

Q All right.

So at the present time, the cable pulling crew goes and picks up the precut cable --

A Right.

Q -- that's been stored in a location?

A Right. It's already been precut.

Q How is that precut cable stored when they pick it up?

A Right now it's being stored on a flat wagon.

Q All right.

One wagon -- one cable per wagon?

A No. They're piled on top of each other.

Q All right.

And at times do you find that in the course of storing the cable on these wagons in stacks, on occasion the cable gets damaged before it's ready for pulling?

A Yes. That's due to construction activity.

Q All right.

And at times craft are searching through the stack of cable for the cable that is to be pulled and might bend and distort the coiling of the cables that are also in the stack.

Does that happen?

A That may -- may be.

When you get there, like -- I found a cable that was in violation, but I can't say that someone, you know -- that the craft did it.

Q You don't know how it happened?

A Right.

Q In violation of what, sir?

A Of bend radius.

Q And there are bend radius requirements that are applicable to the cables that you pull; correct?

A Yes, there is.

Q And what is the minimum bend radius requirement?

A There again, it's a manufacturer's specification. It's put in the drawings.

We go to the drawings of the particular cable, and it will give it in decimal form what that cable is allowed to bend. If it goes beyond that, you've exceeded the bend radius and it's a violation.

Q Do I understand that to mean if you bend the cable too much, too sharply? Is that the notion?

A That's correct.

Q So when there's a minimum bend radius requirement, the bend should not exceed that minimum radius?

A That's correct.

Q All right.

And that minimum radius is expressed in inches?

A Decimal points.

JUDGE GROSSMAN: I think it's the other way around: that the bend should not be less than the minimum radius.

MR. GUILD: Exactly, exactly.

THE WITNESS: Right.

BY MR. GUILD:

Q Not too tight a bend?

A Right.

Q And it's expressed as a minimum bend radius?

A Correct.

Q And how does one measure this minimum bend radius?

A The way I've been told to do it was to use two rulers,

which is hard to do, but that's -- the way we've done it at other plants was we used templates, which were usually cut out of plastic by using a compass. You get an accurate measurement.

Here they tell us not to do that, so we have to use two rulers.

Q All right.

And what measurements do you take with the two rulers?

A You convert it to inches, and you measure down --

Q Let me stop you.

Convert what to inches?

A The decimal point.

Q Give me an example.

A Say, 1.5 would be one and a half.

Q 1.5 would be the specified minimum bend radius?

A That's right.

Q You convert that to one and a half inches?

A Right.

Q How do you measure the actual radius that you observe?

A If you had a -- say, in a loop situation, you'd measure from the center of the cable down one and a half, and then you'd measure across. Whatever -- you'd double it. It would be like -- it would be three inches --

Q All right.

A -- total.
Q Now, let me see if I'm clear about this.
You've got a loop. Essentially the cable makes a -- not a 90-degree but a 180-degree turn, all right?
A Okay.
Q Is that a loop?
A Yeah.
Q Okay.
It doubles back on itself?
A Right.
Q Now, how would one go about measuring the bend radius of a cable that was in that configuration?
A Just as I said, you'd use a tape and measure down and measure across.
Q When you measure from the center, it's the center of what; the center of the loop?
A The center -- from center to center of the cable.
Q From center to center of the cable across the loop?
A Yes.
Q Then what do you do?
A If you exceed it, you write it up.
Q If that measurement is -- you compare that measurement to the bend radius?
A That's right.
Q All right.

Let's take your example. The bend radius specified is 1.5. You convert that to one and a half inches.

What measurement do you take and what would exceed the --

A You would have to double it because you're in a 180.

Q All right.

That would be three?

A That would be three inches.

Q Then you make the measurement.

What measurement would be consistent with that -- would comply with that bend radius requirement?

A It would have to be three or greater.

Q So if it was less than three, that would reflect a violation of the minimum bend radius requirement?

A That's right.

Q All right.

Now, with that explanation, looking again at the 3.2.12 inspection criterion on your pre-pull checklist, you'd look and find that the cables that are ready to be pulled have a bend that violates that minimum bend radius requirement.

What do you do then?

A You have to write it up.

Q And how would you write it up?

A On an NCR.

Q Okay.

And how would you indicate it on your checklist here, if at all?

A You'd have to reject it.

Q You'd check the reject box for cables removed from reel; correct?

A Yes.

Q Which one of the A, B or C would you use?

A I would say C.

Q "Not damaged"?

A Right.

Q You'd reject it for damaged --

A That's correct.

Q -- and write a nonconformance report?

A Yes.

Q Did you do that in the instance that you testified to when you found damage to a cable?

A The one I found?

Q Yes.

A No, because Engineering came out and made an evaluation and decided to scrap the cable.

Q So the cable was never used?

A That's right.

Q Would you use an ICR in those cases?

A No. You'd write a nonconformance.

Q Why would you use a nonconformance, as opposed to an ICR?
A That's the way I was told to do it.
Q What's your understanding of the reason for specifying minimum bend radius requirements?
A It's a manufacturer requirement.
Q Do you have any understanding of what deleterious effect, if any, violating the minimum bend radius requirement has on the cable?
A Not from an engineer's point of view.
Q What's your understanding from a Quality Control Inspector's point of view?
A There must be a reason behind it.
Q Do you understand that it may distort the conductor?

MR. GALLO: Objection.

A What I see --

JUDGE GROSSMAN: Yes. That's leading. I suppose you can ask him from a layman's point of view and have him give his own answer.

MR. GUILD: I asked these very questions on deposition, and I understand that it's with the caveat that the witness is not an engineer, but he did express his understanding in deposition. I am leading him because he has given his testimony already.

I agree, of course, that he doesn't purport to be

an engineer, but he does have an understanding, I submit, of why these requirements are in place. I think it's useful testimony to have him explain what that understanding is.

MR. GALLO: I have no objection if he has an understanding, but he's avoided -- strike that, not "avoided." He's not answered the question twice and --

JUDGE GROSSMAN: He's avoided it because he really hasn't been -- he's not in a position officially to know what the reason is, however obvious it might be.

So I think we can just ask him: What's your understanding, not from a QC point of view or from an engineering point of view, but what's your understanding of why there is a minimum radius requirement?

THE WITNESS: I can tell you what I've seen, what happens to the cable when it's exceeded. It distorts the conductors inside the cable.

Also, on a power cable, from my understanding from talking to an engineer, if a power cable -- if it, being a high voltage -- if it's bent too sharp, the voltage can bust right out of the cable.

JUDGE GROSSMAN: Okay.

In other words, the insulation might be damaged?

THE WITNESS: That's correct.

JUDGE GROSSMAN: That's in the latter

instance.

In the earlier instance, some of the cable might break not all the way through, but enough so that it distorts the thickness of the cable for letting the current through it; is that it?

THE WITNESS: That's correct.

BY MR. GUILD:

Q All right, sir.

3.2.13, again moving on your pre-pull checklist, "cable correct size and type."

Can you verify that by looking at the cable itself?

A Yes. The manufacturer stamps on the cable in a kind of a white print what plant it came from, manufacturer's name, size and type, voltage rating, and sometimes they even have the temperature rating on them.

Q All right, sir.

3.2.14, "cable pull rigged correctly."

I take it that applies when you're going to pull a cable by mechanical means or through a conduit?

A Yes.

Q Or using sheaves?

A Yes.

Q All right.

Sometimes you use sheaves as a pulley to provide assistance in pulling a cable around corners or where

it's a heavy cable?
A That's correct.
Q 3.2.15, "foreman initial and dated pull card."
Now, does the foreman's signature on the pull card indicate that he has performed the walkdown of the cable raceway?
A Yes. On the back card, they have a stamp on the exhibit.
Q Exhibit 110.
A It's the bottom of the illustration on the card. It says "raceway preparation and complete."
Q Okay.
A And he should sign it and date it there, showing that he performed the walkdown.
Q Okay.
3.2.16, "pre-pull inspection complete, cable released for pull."
That summarizes your conclusion that the cable is ready to be pulled?
A That's correct.
Q And that reflects the QC Inspector's authorization for the craft to proceed with the pull?
A That's right.
Q Now, is it also true that you inspect to determine whether or not the cable is sequentially marked?

A Yes, we do.
Q All right.
Now, what is the sequential marking on cable?
A They have a footage mark, and it's in two-foot increments. This is for traceability of the cable.
Q All right.
2, 4, 6, 8, 10, et cetera?
A Right.
Q And is that marking, that footage marking, imprinted on the cable jacket by the manufacturer?
A Yes, it is.
Q And as you see -- as you observe the cable either before pulling or during the course of the pull, you inspect to determine whether the sequential marking is placed on the cable jacket properly?
A During the precut, you have to.
If you have -- say, you're pulling four cables the same -- off the same reel. In order to check your ID's on the cable, you've got to put an ID at each side of the wall, where it goes through the floor, each end of the cable. You have to have footage marks to determine which cable is which.
Q All right.
To distinguish one cable from another lying in the same raceway, for example?

A That's right.
Q The markers you're talking about are plastic tags that are on the cable with a cable number and letter designation?
A They're like a Mylar wrapper.
Q They have a unique number for the cable?
A That's correct.
Q Have you on occasion -- have you had the occasion to identify deficiencies with the sequential marking of the cables you inspect?
A I was going to identify it, but I was told that we don't work to their work procedure, which is 4.3.8.
Q Who told you that?
A The LKC supervisor, Bob Tuite.
Q All right.

You identified an instance where the sequential marking was not -- where the marking was not sequential?

A That's right.
Q And what was the marking that you observed?
A It was repetitive; say, 2, 4, 6, 8. The two-foot would be repetitive for 10 feet.
Q 2, 2, 2, 2, et cetera?
A Right. It would change; 4, 4, 4, 4, for another 10 feet. It did this for another 50 feet and then finally straightened out.

Q Did you bring this error or deficiency in sequential marking to anyone's attention?

A It was the first time I ran into it at this particular site; and when I -- Bob Tuite was in the area, so I asked him, "Shouldn't we notify Engineering and stop the pull," as the procedure states you're supposed to stop pulling from the reel and notify Engineering until the situation has been addressed.

But he told me that, "We don't work to the work procedure," and he told me to proceed cutting from the reel, which I did.

Q All right.

By "work procedure," did you understand him to be referring to 4.3.8?

A That's correct.

Q That's the cable installation procedure?

A Yes.

Q And that cable installation procedure, which is used by craft in installing cable, explicitly states that failure -- that nonsequential marking is a condition that has to be reported as discrepant to Engineering, does it not?

MR. GALLO: Objection; leading.

A It has to be reported to Engineering.

MR. GALLO: I objected to the question.

MR. GUILD: I'm just trying to save time.

JUDGE GROSSMAN: It is leading, but it is going to save time.

Is there any reason to believe the answer would be different if he didn't lead?

MR. GALLO: I don't know. I think it's an issue of controversy as to what that means.

MR. GUILD: He gave the answer in deposition. I'll show him the deposition. That's the point. I'm trying to expedite it.

May I proceed?

JUDGE GROSSMAN: Yes.

BY MR. GUILD:

Q I show you Procedure 4.3.8 at 3.5, "documentation of cable removal." I want to draw your attention to 3.5.1.1.

(Indicating.)

Is that the provision of the work procedure that specifies the action to be taken when nonsequential numbering is observed?

A That's the paragraph that I was referring to when I talked to Bob about it.

Q What does that provision of the work procedure state that's pertinent to the condition that you observed?

A Do you want me to read it?

Q Read the pertinent part, if you would, to the Board.
A It says, "If any deficiencies are noted which may affect cable accountability -- nonconsecutive footage markers, records missing or lost, incomplete entries on attached records, conflicting entries on attached records -- the LKC Cable Engineering Department is to be contacted immediately" -- that is underlined -- "and pulling from the defective reel suspended until the discrepancy is documented by the Engineering Department and so noted on the card."

MR. GUILD: All right, sir.

MR. GALLO: Can I have the answer read back insofar as the first few words of the quotation?

(The answer was thereupon read by the Reporter.)

MR. GUILD: For the record, the procedure reads, "If any discrepancies are noted which may affect cable accountability," paren, "(e. g., nonconsecutive footage markers, records missing or lost, incomplete entries on attached records, conflicting entries on attached records, et cetera)," end paren, "the LKC Cable Engineering Department is to be contacted immediately," emphasis in the procedure, "and pulling from the affected reel suspended until the discrepancy is documented by the Engineering Department and so noted on

the card."

I hand the procedure up to the Board.

(Indicating.)

BY MR. GUILD:

Q Now, you brought this condition to the attention of Mr. Tuite, the supervisor of cable pulling inspectors?

A Yes, I did.

Q And Mr. Tuite stated in substance that you don't work to the work procedure?

A That's what he told me.

Q All right.

And did Mr. Tuite direct that Engineering be immediately notified of the nonsequential marking of the cable you observed?

A No, he didn't.

Q What action, if any, did Mr. Tuite take?

A He just told me to keep cutting from the reel.

Q From the very reel that had the nonsequential numbering?

A Yes.

Q Was the craft aware of the nonsequential numbering of the cable?

A Yes, they were.

Q Did they take any action?

A They asked me what to do. That's why I told him. I read what the procedure said, so they violated their own

procedure.

Q Did they notify Engineering?

A No, they didn't.

Q Did they stop pulling from the reel immediately?

A No.

Q Did the condition get documented at all?

A Not to my knowledge.

Q Now, you've completed your pre-pull walkdown, and you've completed the checklist -- strike that.

You've completed your pre-pull walkdown.

At that time, Mr. Archambeault, are you able to determine whether or not you require assistance from other Quality Control Inspectors in performing your inspection?

A Yes. If you done the pre-pull walkdown, you should have an idea how long the cable is going to be, whether you need -- and depending if they put more crews on that particular pull, you might have to have three or four guys.

Q All right.

So, then, you complete your checklist.

Is that the point at which the pull can begin?

A If everything -- if everything is acceptable up to that point.

Q All right.

And that's the point where you would authorize the crew to begin pulling the cable?

A Yes, right.

Q And then is it required that you perform the inspection activities that are shown on the second page of your checklist?

A Yes.

Q All right. Let's turn to the second page, if you would, 3.4.1, "correct pull compound used."

I take it some kind of lubricant is used in pulling cable through a conduit?

A Yes, it is.

Q All right.

And at times is some lubricant used in pulling a cable through a tray?

A That again would be -- we haven't used it, but there is a talc powder that is specified for use in trays.

Q And whose judgment is it to use or not use such a lubricant?

A It's up to the craft.

Q All right.

So I take it that by your last answer, were you not using the talc, it's not specified or required that you use the talc in a cable tray?

A No.

Q So you wouldn't reject the cable for failure to use talc in a tray?
A No.
Q 3.4.2, "correct tension link used."
I take it that is when you're going to use mechanical means or put force on the cable?
A That's right.
Q 3.4.3, "maximum pulling tension during pull."
How do you determine that?
Again, that's using a mechanical pull, isn't it?
A If -- if you're going through the conduit and you're going to put tension on the cable and, say, you have to use a pull link, which is a 64 -- has a 65-pound break rating, as long as you pull that cable through that conduit and you don't break that one link at 65, you would accept the pulling tension.
Q And at times does the installation procedure call for using dynamometers to more directly measure the pull tension?
A That's correct.
Q That's when you're going to use a winch or other mechanical means for pulling the cable?
A Usually.
Q And in those conditions would you note the reading on the dynamometer in inspecting to this criterion?

A Yes, you would.
Q Okay.
3.4.4 specifies the recording of that reading if you were using the tension reader or dynamometer?
A That's correct.
Q All right.
3.4.5, "cable bend radii maintained."
This is where you would note if, during the course of the pull, the minimum bend radius specification were violated?
A Yes. You have two. You have pulling radii, and you have training radii.
Q What is a training radii?
A That's when the cable is in its final resting place, if you will.
Q All right.
A And the pulling would be the cable under tension.
Q All right.
Are there different specified minimum bend radii for each of those conditions?
A There's usually a difference between the figure on the bend radius.
Q All right.
And is it usually greater or less than the training radius?

A I think the pulling is usually greater.
Q Let me be clear about this.
Is it a more stringent requirement for pulling or for the ultimate training radii?
A It would be more stringent for pulling.
Q And the criterion 3.4.5 for cable bend radii you would determine at Braidwood using the measurement method that you described earlier --
A That's correct.
Q -- in the absence of a template, which is what you had used at other sites?
A That's correct.
Q Did anybody explain to you why using a template should not be -- it was not the method to be employed at Braidwood?
A I don't know. I don't know why.
Q Who spoke to you, if anyone, about using or not using a template?
A My supervisor, Harry Revels.
Q You asked Mr. Revels about using a template?
A Yes, I did.
Q What was his response?
A He said not to use it.
Q With no explanation?
A That's right.

Q 3.4.6, "raceway properly equipped with rollouts/softeners bushings."

The softener is the edge strip made out of rubber; correct?

A That's right.

Q I take it a rollout -- what is a rollout?

A Out here -- let's say a cable tray comes to an end, and your cable is going to dump out the end. They install curve-shaped pieces of metal in there which will kind of roll out and let, you know -- let the cable roll out instead of laying against the sharp edge.

Q Fine.

And a bushing is used for conduit?

A That's right.

Q It's a device to soften the edge of the conduit?

A That's correct.

Q All right.

3.4.7, "cable free of damage."

Do you inspect the cable for damage during the course of the pull?

A That's correct.

Q What sort of damage do you inspect to under this criterion?

A Any cuts or anything detrimental that would happen to the cable while you're pulling.

Q Let's talk about cuts for a second.

On occasion do you observe cuts or marks on the cable jacket or insulation?

A I've found a couple.

Q Pardon me?

A I've found a couple.

Q All right.

And what is the criterion for accepting or rejecting a cut or a mark on the --

A There's an attachment -- I'm not sure which procedure -- but it specifically states what is acceptable and not.

It's 50 percent of the thickness of the jacket.

Q All right.

And how do you determine whether the cut or gouge in the jacket is rejectable per that criterion?

A The only way you can do that is you have to look at the end of the cable and make a judgment call.

Q All right.

Are you provided any measuring tools to make that determination?

A No.

Q So you, in essence, have to eyeball it to determine whether it's 50 percent of the thickness of the jacket?

A Yes.

Q 3.5.1, "cables correctly identified."

Is that the marking on the cable?

A That's correct.

Q The Mylar tagging?

A Yes.

Q And as you testified, those Mylar tags are placed -- required to be placed at various points along the length of the cable?

A That's correct.

Q And those points are where it enters a penetration?

A Anywhere it changes floor elevations, goes through walls, changes trays, goes into a conduit, goes out of the tray, you have to put an ID where it exits.

Q All right, sir.

"Cable ends sealed." That's the next criterion.

Some cables the manufacturer specification requires sealing the ends?

A That's correct.

Q Others it doesn't?

A That's correct.

Q All right.

3.5.3, "cables are properly supported, grips installed."

What does that criterion mean, sir?

A You have -- if a cable is running vertically, you have a 35-foot -- the cable has to be supported every 35 feet.

Q All right.

And what's it supported with?

A A Kellum grip.

Q I want to hand you a document that's been marked as Deposition Exhibit 7. It's Attachment JI to the installation procedure.

(Indicating.)

Does that depict a Kellum grip?

A Yes, it does.

Q The cable in this illustration can be taken to be coming out of a tray, running horizontally out of the tray over to the point where it's to make a vertical descent, say, into a penetration, and it's at that point where the Kellum grip would be installed; correct?

A That's correct.

Q All right.

And I take it that that wire mesh grip, sized for the particular cable in question --

A Yes.

Q -- is designed to provide a mechanical means of gripping or hanging that cable?

A Yes.

Q All right.

And such a grip would be installed at specified points along the vertical drop of the cable?

A Wherever you had finger assemblies, which is to hang the grip on.

You usually use them at the vertical runs and where you're going, say -- like the riser rim, where you're dropping out of the tray, going through the floor of the riser.

Q All right.

At the point where the cables -- let's take an example in the upper cable spreading room.

Are Kellum grips employed there?

A Yes, they are.

Q And are they employed to suspend the cables as they come off the cable trays and drop through a penetration into the control room?

A They're for support, yes.

Q That's where they have Kellum grips?

A Yes.

Q Now, the inspection criterion calls for inspecting to determine whether or not the cables are properly supported, grips installed.

What do you look for when you inspect to that criterion?

A You make sure that there's support every 35 feet. You ensure that the cable grip is the right size and that it does support the cable.

Q All right.

And do you use the size specifications of Attachment JI to inspect to?

A That and Spec L-2790.

MR. GUILD: Mr. Chairman, I ask that this last document previously marked Deposition Exhibit 7 be marked as Intervenors' Exhibit 114 and that it and Intervenors' 113, the cable pull checklist, be received in evidence.

(The document was thereupon marked Intervenors' Exhibit No. 114 for identification as of September 9, 1986.)

JUDGE GROSSMAN: 113 is already in evidence.

MR. GUILD: All right. I ask that 114 be received.

JUDGE GROSSMAN: Any objection to 114?

MR. GALLO: No objection.

MR. BERRY: None, Mr. Chairman.

JUDGE GROSSMAN: Received.

(The document was thereupon received into evidence as Intervenors' Exhibit No. 114.)

BY MR. GUILD:

Q All right, sir. 3.5.4 -- strike that.

Have you at times identified Kellum grips that were

not properly supporting cable; improperly-installed Kellum grips, for one?

A Yes, I have.

Q What kind of conditions have you observed in that regard?

A This was in the upper spreading room. It was wrote on an NCR.

Q All right.

Did you observe conditions there where the Kellum grips were digging into the --

MR. GALLO: Objection. At this point I believe leading of the witness should stop and more neutral questions be asked.

MR. GUILD: Well, this is foundation, Mr. Chairman. I'd be happy to do that, but I'm going to return to the subject of what the witness has already testified he identified in the upper cable spreading room in more detail in a moment.

But just to complete the checklist subjects, I believe there's no dispute that he identified and documented cases where Kellum grips dug into the cable jackets.

I don't mean to pursue that point in detail now or to have this stand as his testimony on the subject, but just for purposes of illustration, to point out that he

has made findings with respect to this particular inspection criterion and what the character of those findings have been.

MR. GALLO: On this particular matter, I think the witness should make his own characterization of this matter.

MR. GUILD: That's fine. I'll rephrase the question.

JUDGE GROSSMAN: Please.

BY MR. GUILD:

Q Mr. Archambeault, what was the nature of the deficiencies, if any, which you identified in the support of cables in the upper cable spreading room?

A One of them was cable grips digging into insulation of cable.

Q Any other problems with the support of cables?

A There was bend radius violations and separation violations, and the cables were falling out of the tray.

Q In the upper cable spreading room?

A Yes.

Q Now, you subsequently documented those deficiencies in a memorandum and later in a Nonconformance Report?

A Yes.

Q I'll return to those subjects momentarily.

Have you also identified situations where the

Kellum grips were loose?

A I don't understand the question.

Q Where the Kellum grips were loose, they were not properly sealed on the cable?

A Not to my knowledge.

Q Okay.

The Kellum grip is sealed by way of a metal rod that seals the grip on the cable; is that right?

A Oh, you're saying rods missing?

Q Yes, rods missing.

A Yes, I've seen that.

Q All right.

In those cases the support for the cable would be deficient, and you'd mark that on this part of the checklist?

(Indicating.)

A Yes.

Q Sometimes people take the rods out of the Kellum grips and, therefore, the grips are no longer holding the cable?

A I've only seen that one time.

Q 3.5.4, moving down your checklist here, "cable separation acceptable or identified." Then there's a blank for a CSCR number.

Now, what is the nature of this inspection

attribute?

A You have to maintain separation between different segregation codes. You have a 12-inch free air, you have a one-inch between cables in free air and cables in tray, and you have six inches inside equipment.

Q All right.

And you identify the cables by the segregation code that's on the cable?

A That's right.

Q And you make reference to your -- to Exhibit 111, the Attachment CI specification of segregation codes, to determine what are the segregation requirements between the prospective cables; is that correct?

A This, and there's another attachment you have to use.

Q The other attachment specifies explicitly what the distance separation is to be between the various segregation codes?

A That's correct.

Q And applying those sources, you make a visual measurement of the separation, physical separation, between the cables to determine whether separation requirements are met?

A If it was in question, you measure with a ruler.

Q And if you find that all the separation is acceptable, you mark the acceptance box on your checklist under

Criterion 3.5.4?

A Yes.

Q And what do you do if you identify circumstances where you determine that separation is not acceptable?

A You would get a -- you'd get all the cables that are in violation with that safety cable that you're involved with. You'd list all the nonsafety or whatever cables that were in violation. Then you'd write up a CSCR report.

Q Is that a Cable Separation Conflict Report?

A Correct.

It also depends on -- there's an S & L document you have to check, plus we have a logbook in the QC Department that you would normally check to see if the situation hasn't already been addressed.

Q All right, sir.

A Usually if it's been addressed, there will be a tag on it.

Q Okay.

A tag in the field on the cable?

A Well, a CSCR tag.

Q That will indicate that someone has previously identified a separation deficiency --

A That's correct.

Q -- or conflict?

A Right.
Q You identify a conflict in the field, and there is no tag.

Do you go to your Comstock log to determine whether that cable has been previously identified as involved in a separation conflict?

A From my understanding, the way it was explained to me, generic problems that stem from Byron may be addressed here, too, and this S & L document would have it listed.
Q If it were a Byron generic problem --
A Right.
Q -- there would be no document?
A No. It would be addressed already.
Q I see.

But would there be a listing in the log?

A There should be in the S & L log.

I've never seen it. I don't even know what it looks like.

Q I'm starting first with your Comstock log.

Do you have a log of separation problems?

A If it was addressed by our inspector, it would be addressed in that log.
Q Let me see if I understand the process correctly.

You find what you identify as a separation conflict in the field with reference to your procedure.

Do you then first go to the Comstock log to determine whether it has been previously identified?

A Right.

Q All right.

It's not listed in that log, say.

Then what do you do?

A I would go and check the S & L interface.

Q All right.

And what does that document consist of?

A I haven't seen it, but from my understanding, it would list any generic separation problems from its sister plant.

Q Let's say that there is no listing in either the Comstock log or the S & L document.

A Then you would write up a CSCR report and log it.

Q Then you write the CSCR, listing the cables affected?

A That's right.

Q You enter the number of the CSCR in this box on your checklist?

A Correct. You put a tag on the cable.

Q All right.

And have you, in the course of your inspection activities, identified any separation problems?

A Yes, I have, but there's been a new development. There's been an error in that. There's a --

Q I'll let you explain that in some detail, Mr. Archambeault, but let's not get ahead of ourselves.

You have indeed identified separation problems?

A Yes, I have.

Q Have you gone through the process we've just described, determined that there was no prior documentation of these problems and caused Cable Separation Conflict Reports to be originated?

A That's correct.

Q Okay.

Now, the circumstance you're talking about involved a number of Cable Separation Conflict Reports?

A 42.

Q 42 in number, all right.

I'm going to return to that subject as well, and I want to give you an opportunity to explain any developments that have occurred on that question. But for now if we can hold that and complete going through the checklist, I'd like to do that at this time.

If the cable separation problem had been previously identified and you determined that by reference to the log or the S & L document, what do you show at 3.5.4 of your checklist?

A If it's already been previously addressed, you would put the CSCR number in there and you'd accept the item

because it's already been addressed.

Q Fine.

How about if it's on the S & L document?

I know you haven't looked at that document, but let's say it's been previously addressed but on the S & L document.

A That I'm not sure of. I would think that you would enter the S & L document number and accept it.

Q You haven't done that?

A I haven't run into that situation.

Q 3.5.5, "overfill identified, ICR number," blank.

What's an overfill?

A It's an area in the tray that is -- like it says, it's overfilled. You have too many cables, and it's above the plane of that tray. Because there will be a possibility of covers being installed in that area, if the cables are over and above the plane of the tray, you won't be able to install the covers.

Q What happens if you identify that condition, overfill?

A You would write an ICR.

First you have to check to make sure -- we have a list that's out in the field of all overfill, you know, problems.

Q All right.

A If it's not on this list, you would go ahead and write

up an ICR.

Q If it is on the list, what do you do then?

A You enter the ICR that addresses that problem.

Q All right, sir.

And accept the pull?

A Right.

Q All right.

3.5.6, "flex fitting tightness."

I take it this is a flexible conduit?

A That's correct.

Q And there's a mechanical thread connection on that conduit?

A Yes.

Q You check that if you're using it.

3.5.7, "pull card filled out correctly."

What is called for there?

A The foreman -- all the information should be correct on it, and the foreman should sign it as being completed. Then you would sign it.

Q After the pull is done?

A That's correct.

Q All right.

"Cable routed per pull card."

That is your -- reflects your acceptance of the final pull; is that right?

A Right. That should be correct.
Q Okay.
Now, what do you put in the bottom of the checklist under "pull parameters" there?
A You would put from where you pulled the cable to where you ended up at; and if it's a complete pull, you'd put the equipment number from equipment to equipment.
Q Okay.
A If it's a partial, you'd put where you pulled it from and to. Any notes that might affect the pull you'd put in the "remarks."
Also, right here it says "type of pull per Paragraph 3.3.2." That would either be a partial, complete, pull-out, whatever the situation would be.
Q All right.
Is 3.3.2 a paragraph in your inspection procedure?
A Yes.
Q What is a partial pull, as you understand it, under that procedure?
A It's just a pull where you didn't complete. You might have pulled it halfway to either end's destination, and you would coil the cable.
Say, you ran out of time during the night. You would coil the cable. That would be a partial pull. You'd complete this checklist that night as a partial

pull, sign the checklist, make a notation on the pull card and then turn the checklist in.

So if you didn't get back to that pull, the next man who did it -- all the information would be filled out. You wouldn't have any -- any errors on the paperwork.

Q All right.

Have you ever been involved in a circumstance where because of a lack of QC personnel or craft personnel, pulls had been accomplished in partial pulls sequentially along the length of the pull route?

A I'm not sure what you're saying.

Q Well, you'd pull coil, stop, pull coil and stop and have the crew of craft and QC follow the pull; instead of one continuous pull, a series of partial pulls.

A All in the same night?

Q Yes.

A No.

Q All right.

The partial pull you're referring to is when the craft would get done with a shift --

MR. GALLO: Objection -- I'm sorry. You didn't finish the question.

He's leading the witness. I might as well start over now.

MR. GUILD: I beg your pardon?

JUDGE GROSSMAN: Well, continue on this. I think this is just going to save time.

MR. GALLO: Well, we really won't know until after Mr. Guild is through leading and we have the witness' answer.

I submit, your Honor, that the state of the evidence is such that it ought to be unfolded to the Board for its understanding on a neutral basis.

Whether or not it will save time is a matter of debate.

JUDGE GROSSMAN: Well, could you indicate under what circumstances there would be partial pulls?

THE WITNESS: As I stated before, if you were -- if you started a pull towards the end of the night and you got maybe 50 feet in and you couldn't complete the rest, you would coil the cable and complete your paperwork and show that it was partial pulled.

MR. GUILD: All right, sir.

BY MR. GUILD:

Q Under those circumstances, does an inspector verify the adequacy of the coil of that cable --

A Yes, sir.

Q -- in the partial pull?

A Yes, it would. There's an outline for hanging the

cable, too, storing it.

Q In the installation procedure?

A Yes.

Q All right.

Among other things, the coil has to observe the minimum bend radii requirements?

A That's correct. It has to be in a coil of 24 inches across.

Q The coil itself has to be properly supported?

A That's correct.

Q And there are specifications for wrapping the cable or for the number of turns of rope that would be used?

A You would use a half-inch rope with three wraps. For 30 feet or under, you'd use just one. If it was over 60 feet, you'd use two.

Q The coil has to be supported; it's not to be on the floor where it could be stepped on or damaged by construction activity?

A If it's an extremely big coil, they'll rope off an area with red flagging, which is more or less a restricted area; you can't go in it. They'll cover the cable up.

Q All right, sir.

Now let's turn to your actual inspection activities. You were certified a Level II Inspector sometime in February, 1986.

At that point did you undertake performing pull inspections?

A Yes.

Q You did so on the second shift; is that correct?

A Yes.

Q Now, for whom did you work at that time? Who was your immediate supervision?

A Harry -- Harry Revels was the LKC second shift supervisor, and Don Fray was the Lead.

Q And I take it you worked directly for Mr. Fray and, in turn, Mr. Fray for Mr. Revels?

A Right.

Q How large a crew of cable pull inspectors worked with you at that time?

A I'm not sure. I'd say around 15 in the office I was in.

Q All right.

I'm sorry; about 15 at that time?

A 15, I think.

Q Can you identify any of the inspectors that worked with you at that time?

A Some of them.

Q Try. Give me some names, please.

A Jeff Dominique, Norm Kimball, John Thomas and Chuck Nobel.

Q How about Rick Martin?

A Yes, Rick Martin, too.
Q And I take it there were others as well?
A Yes.
Q Okay.
Was Mr. Fray the sole Lead on second shift?
A In cable pulling.
Q In cable pulling. That's what I meant to say.
Now, at the time did you work for any specific craft foreman at the time you began cable pull inspections?
A Not at first, but shortly after I started.
Q Okay.
And for whom did you work in particular? What foreman did you work for in particular shortly thereafter?
A Bill Rasmussen.
Q And after you were working with Mr. Rasmussen's crew, did you typically get assigned to inspect his pulls?
A Yeah. I checked with him each night.
Q And when you were working for Mr. Rasmussen's crew -- or with Mr. Rasmussen's crew, did you work exclusively for that crew or did you have occasion to work for others?
A If there was times that he was working a nonsafety pull -- which we don't inspect -- and someone else needed a hand on their pull, you'd go and help them.

Q All right, sir.

Now, did you shortly thereafter, after you began inspecting, have occasion to perform a cable pull inspection through the upper cable spreading room?

A Yes.

Q All right.

And who, aside from yourself, was involved in that pull?

A I had a trainee. His first name is Jim, and I still don't remember his last name.

Q All right, sir.

Now, was Mr. Rick Martin performing cable pulling inspections in the upper cable spreading room at that time?

A He may have. I don't -- I don't recall him in that particular instance.

Q All right, sir.

And you and the trainee were performing a pull inspection.

What was the nature of the inspection that you were doing?

A Our cable exited the tray at the area that I found deficiencies and went down into a relay cabinet.

Q I'm sorry. You were pulling in the same tray where you later identified deficiencies?

A That's correct.
Q Okay.
What did you note in the course of performing your cable pull inspection on that occasion?
A The trainee noticed it first, gross violations, and brought it to my attention.
As soon as we finished my pull, we both started looking at the situation, noting the different violations and how many cables were involved. Then I notified my Lead and my supervisor.
Q Mr. Fray and Mr. Revels?
A That's correct.
Q All right.
What were the nature of the violations that you and the trainee identified?
A Bend radius, separation, cable damage and cables not trained in the cable tray.
Q All right, sir.
Now, I have put before you a document that's a Read and Reply Memo previously marked as Deposition Exhibit No. 13. It appears to be from you to Mr. Harry Revels.
(Indicating.)
Did you write this memo?
A Yes, I did.
Q Does it document the gross deficiencies that you just

testified to?

A It identifies all the -- the conditions.

Q All right, sir.

The third page of this document is a diagram.

Is this a diagram that you prepared?

A That's right.

Q Does it reflect the deficiencies that you identified?

A Yes, it does.

MR. GUILD: Mr. Chairman, I'd like to have this document marked as Intervenors' Exhibit 115 for identification.

(The document was thereupon marked Intervenors' Exhibit No. 115 for identification as of September 9, 1986.)

BY MR. GUILD:

Q Now, you identified these problems. I'm going to have you describe the problems.

You brought them to the attention of your Lead and your supervisor.

What response did you get from those gentlemen?

A They agreed with the conditions that existed.

Q They agreed with your identification of deficiencies?

A Yes, they did.

Q All right.

A Harry told me to write a memo.

Q Harry Revels?
A Yes.
Why it was handled that way I don't know, because the deficiencies were there as far as --
Q Were these nonconforming conditions?
A Yes, they were.
Q When you say "why it was handled that way I don't know," what other way do you believe it should have been handled?
A I should have wrote a Nonconformance right then.
Q An NCR?
A Yes.
Q Did you make that position known to Mr. Revels?
A Yes, I did.
Q What was his response when you said that?
A To write the memo.
Q Is this the memo that you wrote in response to Mr. Revels' direction?
A Yes, it is.
Q All right, sir.
Now, the text of the memo identifies the conditions as follows: "Condition includes bend radius violations," paren, "(some of which have been identified on NCR's)."
Now, how did you know some of them had been

identified on NCR's?
A Because there was NCR hold tags attached to cables in the area.
Q Was this a generic NCR with a number of hold tags or individual NCR's?
A I believe that most of them were individual.
Q How could you tell one way or the other?
A They had different descriptions, different NCR numbers on them.
Q So individual cables were tagged, and they were tagged with individual hold tags reflecting separate NCR's --
A Yes.
Q -- by NCR number and description?
A Yes.
Q All right.

And some of those involved minimum bend radius violations?

A Yes.
Q Did you identify any cables where there were minimum bend radius violations for which there was no hold tag?
A No, I didn't. I just -- I didn't -- I wasn't told to identify individual cables.
Q What I mean to say is: Did you observe any cables --
A Yes, I seen cables that, as far as looking, you know, with the naked eye, were in question.

Q All right.

And did those all have NCR hold tags on them?

A No.

Q All right.

So you identified or you observed the cables that appeared to have violated minimum bend radius requirements, for which there were no hold tags?

A Yes.

Q "Separation violations" -- I'm reading from your memo -- "cable damage," paren, "(kinks, Kellum grips digging into insulation) and cables not properly trained in the cable trays."

Now, with respect to the cable damage, what is a kink?

A It's a -- the attachment that's in the procedure states that that's one condition it won't -- the cable won't be in; that it's a nonconforming condition right there.

Q That's a kink?

A If it's a kink, it's already violated -- more than likely violated the bend radius.

Q That's how you get a kink in a cable?

A I would say, yes.

Q So you may not observe the cable in a condition where the minimum bend radius is violated, but you take the kink as a rejectable condition per the procedure; is

that right?

A Yes. When you see a kink in a cable, there's apparent damage to it.

Q All right.

And to you is the kink indicative of it having violated the minimum bend radius at some time?

A You would note it, and the engineer would have to evaluate.

Q How do you get a kink in a cable -- that's what I'm asking you -- in your experience?

A As I said, it would -- in my experience, I would say that it exceeded the bend radius.

Q Now, I've had the occasion of trying to uncoil a hose, a water hose, and I get the water hose kink out and the water starts flowing.

Now, is that condition that I'm describing as a lay person -- does that reflect a condition that occurs to cables, in your experience?

A If a craft --

MR. GALLO: Objection.

Point of clarification: Is the thrust that the physical condition is identical?

If that's so, I have no objection.

MR. GUILD: That's all I'm trying to say, yes. I'm trying to illustrate what a kink is.

A (Continuing.) If the craftsman isn't careful and he's pulling on the cable and the cable has a loop in it and he continues to pull and he's not watching it, he'll pull it right into a tight kink. It will exceed the bend radius and leave a kink in the cable.

JUDGE GROSSMAN: What you've demonstrated is what a kink isn't, Mr. Guild. Working with a hose, the kink would straighten out by itself.

What you're talking about is where it doesn't straighten out, you see a mark on the cable where it --

THE WITNESS: That's correct.

MR. GUILD: All right, fine.

BY MR. GUILD:

Q And the last point, "cables not properly trained in the cable trays (cables are falling out of the tray)" -- I take it that is self-explanatory: The cables were not where they belonged in the cable tray; they were in the air?

A That's right. They were just falling out of the tray.

Q All right.

Now -- I'm sorry. I skipped over one of the cable damage examples, "grips digging into insulation."

What was the condition that you observed that is noted in that regard?

A From my observation, the only way they could have dug in

like that was somebody putting weight on them.
Q Putting weight on the cable?
A Right, or just the weight from the cable falling out of the tray being transferred to the grip.
Q All right.
Now, I'm looking at Intervenors' Exhibit 114, and that's the illustration of the Kellum grip.
(Indicating.)
With reference to that exhibit, can you describe where you observed grips digging into the cable?
A The cable would be bent more right at the top of where the mesh starts.
(Indicating.)
Q Yes?
A And then the weight right there -- also you'd see bend radius where the cable is pulled down.
Q Bend radius violations?
A Right, plus -- then that would have a tendency to work that grip into the cable. It's usually --
Q So the --
A Excuse me.
It's usually more detrimental on the smaller grips because the wire is finer.
Q All right.
So the top edge of the basket, if you will, in the

Kellum grip digs into the cable where the cable bends on it?

A That's correct.

Q All right, sir.

Now let's turn to Page 3 of what's been marked as Intervenors' Exhibit 115.

JUDGE GROSSMAN: Excuse me.

Before we get to Page 3, were NCR's written for these violations that you saw, other than the bend radius violations? Had they been written?

THE WITNESS: Are you talking about the hold tags that I seen?

JUDGE GROSSMAN: Yes.

I notice that in this exhibit, you say "bend radius violations (some of which have been identified on NCR's)," and then you go on and you list other violations.

Were these other violations also noted on NCR's?

THE WITNESS: No, they weren't.

JUDGE GROSSMAN: Okay.

BY MR. GUILD:

Q On Page 3 of Exhibit 115, your memo to Mr. Revels of March 4, 1986, does that illustrate the conditions you observed in the upper cable spreading room on that occasion?

(Indicating.)

A Basically, yes.

Q Now, I take it that the top portion of this -- if I lay the page lengthwise and I'm reading the writing here, the upper portion of the page, the upper half of the page, is a top view of the installation; is that right?

A Yes.

Q Now, I take it that the boxes that appear about halfway down the page in pairs from left to right are penetrations that drop from the upper cable spreading room into the control room?

A They're called riser openings.

Q And those were the cables passed from the upper cable spreading room into the control room?

A Well, this would be into the relay room.

Q This is directly above the relay room?

A Right.

Q The relay room is adjacent to the control room?

A Right.

Q Okay.

And above the boxes, the array of pairs of boxes, there's a heavy black line with sort of boxes on the line.

Is that the support from which the Kellum grip -- to which the Kellum grips are attached?

A Yes, it is.
Q What's that called? Is there a name for that?
A It's just called a support.
Q A support, all right.
Working up towards the top of the page, there is a space across which you show these lines.
I take it the little pen marks are cables?
A Yes.
Q And then there's a horizontal line.
Do I take it that that horizontal line reflects the near edge of a cable tray?
A Yes.
Q All right.
So the cables are arrayed down the tray, leave the tray to make the -- cross the gap between the edge of the tray to the Kellum grip.
It is between the Kellum grip and the edge of the tray where you identified the minimum bend radius violations, the separation violations and where the Kellum grips were damaging the cable?
A This is where -- yes. This is where the problem starts.
Q All right.
Now, let's look at the second -- the bottom half of the page.
Is this a side view of the installation?

A Yes, it is.
Q All right.
Again, the horizontal lines here, the heavy black ones, are cable supports, cable tray supports?
A Yes.
Q All right.
And the lighter horizontal lines with the numbered markings are cable trays?
A Yes.
Q And those are the sides of the cable trays with the node markings on them?
A Yes.
Q All right.
The bottom two horizontal lines indicate the cement floor, I take it --
A Yes, that's correct.
Q -- with the penetrations going through the floor?
A Yes.
Q Okay.
Now, I take it that the diagram that you made here is not intended to indicate the specific cables that you found in a damaged or deficient condition?
A No.
Q It's merely illustrative of the general condition that you observed?

A It was -- when I was told to write the NCR, I was told to write a generic NCR on that whole room.
Q All right, sir. We'll get to that in a moment.
But at the time Mr. Revels -- at the time you brought the matter to Mr. Revels' attention, you discussed with him whether to write an NCR, and he said, "No. Write me a memo"; correct?
A Yes.
Q And you wrote him this memo of March 4, 1986?
A That's correct.
Q All right.
And did you discuss with Mr. Revels taking any other action at that time regarding the problems you identified?
A I felt that we should have went ahead and wrote an NCR and we should address the cables.
Q And did you communicate that to Mr. Revels?
A Yes.
Q And again -- or what was his response to that?
A He wanted to check with S & L to see if this problem wasn't already addressed.
Q All right.
The separation problem?
A All the conditions that existed, to see if they were aware of the problem.

Q All right, sir.

Well, I understand that where you identified cable separation problems or what appeared to be cable separation problems, the procedures called for checking to determine whether those problems had been previously identified.

A That's correct.

Q But is there any procedural requirement that you check to see whether or not minimum bend radius problems had been previously identified?

A If they were, there should be a hold tag on it.

Q All right.

Are you aware of any procedure that says that before you write a Nonconformance Report for a minimum bend radius deficiency, you have to go and find out whether or not Sargent & Lundy has previously been aware of the problem?

A No.

Q How about the damage to the cables, the kinks and the damage from the Kellum grips?

Are there any procedures that call for not initiating a Nonconformance Report while you wait to determine whether Sargent & Lundy has previously identified those problems?

A Not to my knowledge.

Q All right.

Now, did you communicate to Mr. Revels that -- did you ask Mr. Revels about identifying the individual cables that had been damaged that you observed damaged?

A Yes, I did.

Q And what was his response to that?

A The way he conveyed it to me was that it wasn't in the scope of Comstock to spend the man-hours to do it, and at the time I didn't know how the NCR would be dispositioned.

The way it's dispositioned now, I'm happy with it.

Q All right.

At the time, you brought to Mr. Revels' attention the fact that the individual cables had not been identified?

A Yes.

Q And his response was as you just stated.

Did he explain at all what he meant that listing the individual cables was not within Comstock's scope or that there was --

A That's -- that's the way I took it.

Q All right.

What explanation did he give?

A He didn't.

Q Did Revels say -- make any reference to the cables

already having been turned over?

A He said something about the cables being turned over to CECo.

Q To Commonwealth Edison Company?

A Right.

Q Did you take that to mean that they had already been finally inspected by Comstock?

MR. GALLO: Objection.

JUDGE GROSSMAN: What did you take it to mean?

THE WITNESS: When he told me the cables were turned over to Edison, which meant there were no -- the way he explained it to me, they were no longer within our scope of inspection.

BY MR. GUILD:

Q That it wasn't your responsibility?

A That's right.

Q All right.

Now, before we get to the NCR, my question really has to do with the point where Revels said, "Don't write an NCR. Write me a memo instead."

At that point did you suggest that the cables that were damaged should be individually identified?

A That's the way I felt at the time.

Q Is that when Mr. Revels made the explanation that you've

just testified to?
A Yeah.
Q Okay.
Did Mr. Revels make any further reference to the issuance of a Nonconformance Report on this subject, aside from having you write the memo?
A No, he didn't.
Q Did he give you any indication of what action was to be taken by Comstock or others on these deficiencies?
A He told me that Irv DeWald, Tony Simile and some other personnel wanted to look at the problem.
Q Wanted to look at the problem?
A That's right.
Q All right.
And did he -- when did he tell you that? When did Mr. Revels tell you that?
A Shortly after I wrote the memo.
Q You wrote the memo on March 4, 1986.
Did you continue to perform cable pulling inspection activities?
A Yes, I did.
Q All right.
And did Mr. Revels get back to you promptly as a result of your identifying this problem?
A No.

MR. GALLO: Objection; form of the question. I don't know -- the question is vague because the word "promptly" is not defined.

MR. GUILD: Let's be clear.

BY MR. GUILD:

Q Did he get back to you the next day after you identified the problem?

A No, he didn't.

Q How about the day after that?

A No. I kept going to him.

Q What did he say to you when you went to him?

A They didn't have the time to look at it today.

Q DeWald and Simile and others?

A That's right.

Q All right.

He didn't get back to you in one day, two days, three days, four days.

How many days did it take for him to get back to you?

A Not until the 19th.

Q It took several weeks for him to get back to you?

A Right.

Q Then what happened?

A One night I went back to him, and he said that Tony Simile, Jim Purrazzo --

Q Purrazzo?
A -- Purrazzo and Rod Peterson would be going with me to look at the problem.
Q Now, who is Mr. Purrazzo?
A He's a Commonwealth Edison -- I think he's a cable engineer.
Q All right.
And who is the other gentleman, aside from Mr. Simile?
A Rod Peterson, from my understanding, is LKC's cable engineer or over in cables.
Q All right.
And did, in fact, those gentlemen acompany you to the upper cable spreading room?
A Yes, they did.
Q And what happened then when they examined the -- when they observed the condition?
A They each just was looking at the problems, and Tony agreed with me that, you know, there were different problems.
Q Tony Simile?
A Yes.
Q So he observed the deficient conditions you pointed out to him --
A Yes.

Q -- and agreed that those were deficiencies?
A Right.
Q How about Mr. Purrazzo and the other gentleman?
A They had -- they had their own opinions.
Q Did they state those opinions to you?
A Mr. Purrazzo didn't think it was too bad, and Mr. Peterson felt basically the way me and Tony Simile did.
Q Mr. Peterson, the Comstock person, agreed with you and Mr. Simile, and Mr. Purrazzo was not -- didn't think the problem was serious; is that right?
A I didn't know how to take him. He --
Q What did he say, in substance, Mr. Purrazzo?
A I don't know. It's just -- it's just the way he acted. He -- he just didn't act like it was that serious.
Q His manner communicated that conclusion to you, that impression?
A To me it did.
Q All right, sir.

Then after Simile and the others -- Mr. Simile and the others observed the condition, did you discuss further action with them, what action was going to be taken?

A Tony told me how he wanted the NCR wrote up, and --
Q I take it you discussed writing an NCR?
A Yeah -- well, he told me how he wanted it wrote up:

that he wanted a generic NCR on the conditions that existed.

I asked him, "Should we write up the individual cables that are damaged?" He said no.

Q Did he give you an explanation why he was instructing you not to write up the individual cables?

A No, he didn't.

Q Did you ask for an explanation?

A I don't believe I asked him, no.

Q All right.

And was indeed an NCR -- did you prepare a generic NCR?

A Yes, I did.

Q All right.

Let me show you a copy of what bears the number of Nonconformance Report 4987, dated March 19, 1986.

It's a multi-page document.

MR. GUILD: Mr. Chairman, I ask that this document be marked for identification as Intervenors' 116.

(The document was thereupon marked Intervenors' Exhibit No. 116 for identification as of September 9, 1986.)

BY MR. GUILD:

Q Mr. Archambeault, is this a copy of the Nonconformance

Report that you originated?

A Yes, it is.

Q Let me be clear about what portion of the report you authored and what was authored by others.

Are you the author of the description block that appears at the top of the first page --

A Yes.

Q -- above your signature as "originator"?

A Yes.

Q All right.

I take it -- are you also the author of Sheet 2 of 3, "description of nonconformance"?

A Yes.

Q And Sheet 3 of 3, the diagram?

A Yes.

Q All right.

Now, let's look at the rest of the NCR. There's a reportability determination in the middle of Page 1.

I take it that is not your signature?

A No, it's not.

Q Do you recognize the signature?

A No, I don't.

Q All right.

The bottom half of the page, the disposition section, is signed by a field engineer whose name

appears to be H. J. K-A-T-A-Y-A-N-A-G-I.

I take it that's not you, either?

A No.

Q You're not responsible, then, for the disposition portion of the NCR?

A No, I'm not.

Q That appears to be -- if I look at Sheet 4 that follows your diagram, that is not your work, is it --

A No, it's not.

Q -- "corrective action/justification"?

Sheet 6, a continuation, Sheet 7, a continuation -- those additional sheets have the initials "H. J. K., 4/7/86."

MR. GALLO: Excuse me. I'm sorry to interrupt.

Did you say there was a Sheet 7?

MR. GUILD: No; Sheet 6.

MR. GALLO: I'm sorry. Thank you.

BY MR. GUILD:

Q After you wrote the description of the nonconformance and the portions that we've identified as your work, Mr. Archambeault, when next did you see this document?

A I went to Harry Revels and talked to him about it, the disposition to come back, because I still had heartburn over the cables not being wrote up, the individual

cables that were damaged.
Q All right.
A I don't remember what I wrote -- what disposition I seen when he showed me the NCR, but I don't remember anything saying anything about the cables being reinspected.
Q He said nothing about reinspecting the cables?
A No. I don't remember reading it on the disposition.
Q All right.
Now, did you read the disposition that appears on the NCR in the form that I've presented it to you today before? Have you ever seen that before?
A At the disposition.
Q At the deposition?
A At the deposition.
Q Last week; correct?
A Yes.
Q Before the deposition, had you seen this disposition of your NCR?
A No, I didn't.
Q All right. Let me show you another document.
Did you, in fact, subsequently identify the specific cables that you observed to be damaged or in a deficient condition?
A Yes, I did.
Q And on what occasion did you do that?

A When I had some free time, when I didn't have any pulls or I was not helping anybody.

Q And how long after the origination of your NCR after March 19, 1986, did you come to perform a list -- compile a list of the damaged cable?

A It was within two weeks after I wrote the NCR.

Q Within two weeks after the NCR.

(Indicating.)

Now, the document that I've handed you -- is that a copy of a list that you prepared of the damaged cable?

A Yes.

Q Now, was this list asked for by Comstock or Commonwealth Edison?

A No, it wasn't.

Q And did you bring this -- did you make available this list to the parties at your deposition last week?

A Yes, I did.

Q All right.

And prior to that time, that list had not been asked for nor provided, I take it?

A No.

MR. GUILD: Mr. Chairman, let's mark this document, if we may, as Intervenors' Exhibit 117.

(The document was thereupon marked Intervenors' Exhibit No. 117 for

identification as of September 9, 1986.)

BY MR. GUILD:

Q Now, could you explain the format for this listing, Mr. Archambeault?

A It's basically self-explanatory if you read the top sheet, No. 1.

Q All right.

You have a series of codes for the problem; is that right?

A Right, that's correct.

Q By each of the -- is that vertical list on the left-hand column -- is that the cable identification numbers?

A Yes.

Q All right.

For each you list a code of the problems you observed; is that right?

A Right.

Q Now, can you explain what the right-hand column means?

A The training radius?

Q Yes.

A All the ones that I had doubts about training radius, I went ahead and measured them.

I didn't have my drawings with me at the time, so I wrote down the measurement I had, took it back after I got them all measured and all the cables checked that I

looked at, compared them to my drawing, put in the measurement that it was supposed to be and put either an "OK," meaning it was all right, or an X, showing that it was a violation.

Q All right.

Now, what are the figures that appear on that -- what are the figures that appear under the "problem" column; say, for example, where it shows two inches on the second entry for Cable 2CC006?

A That's the measurement I got in the field.

Q All right.

And what is the three-inch figure that appears in the extreme right-hand column?

A That's the measurement I should have had per the drawing.

Q All right.

So the minimum radius requirement for that particular example was one and a half inches?

A Right.

Q And you found that instead it was one inch?

A Right.

Q Is that what "two inches" means?

A Well, two inches.

Q But one inch is the radius, and two inches is the diameter?

A Right.
Q You deemed that to reflect a violation of the minimum bend radius requirement?
A Yes.
Q That's what the X means?
A Right.

JUDGE GROSSMAN: Excuse me.

On this measurement for which you use rulers, doesn't the arc vary from the midpoint to the edges?

THE WITNESS: Yes, it does.

JUDGE GROSSMAN: If you wanted to move your ruler all the way down to where the curve starts, wouldn't you get a more acceptable reading than if you put it up at the top, assuming that the curve is on the top?

THE WITNESS: Right.

I did -- I did it the way it was explained to do it. I measured down from the loop and then across. That's what I came up with.

JUDGE GROSSMAN: But couldn't someone then go over it and measure further down and say that the --

THE WITNESS: Yes.

JUDGE GROSSMAN: -- radius is acceptable?

THE WITNESS: That's right.

That's why I think templates are a good idea and

rulers aren't, because with a template you can't do that. You have to measure it correctly.

JUDGE GROSSMAN: Now, assuming they didn't have any templates available, weren't there conduit benders that at least would supply the appropriate arc for measurement there or couldn't you use those?

THE WITNESS: I've never seen any.

JUDGE GROSSMAN: Oh, okay.

BY MR. GUILD:

Q Mr. Archambeault, how long did it take you to compile the information that appears on Intervenors' Exhibit 117, your list of damaged cables?

A Between the time I -- I would stop and go back to the office and make sure I didn't have any pulls going and then I'd go back up, I'd say three or four hours.

Q Okay.

I take it from your previous testimony that this took place during a time when you were not called for for other inspection duties?

A That's correct.

Q All right.

And did you inform your supervision that you were going to perform this work?

A No. I told them I was going out in the field, but I didn't tell them what I was going to do.

MR. GUILD: Mr. Chairman, I would ask that Intervenors' Exhibits 116 and 117 be admitted. I'm not sure whether I offered 115.

JUDGE GROSSMAN: No, you did not.

MR. GUILD: Then all three of those, please.

JUDGE GROSSMAN: Any objection, Mr. Gallo?

MR. GALLO: No objection.

MR. BERRY: No objection, Mr. Chairman.

JUDGE GROSSMAN: Received, 115 through 117.

(The documents were thereupon received into evidence as Intervenors' Exhibits Nos. 115 through 117.)

MR. GUILD: Mr. Chairman, may I suggest a recess?

JUDGE GROSSMAN: Yes. Why don't we take a 10-minute break now.

(WHEREUPON, a recess was had, after which the proceedings were resumed as follows:)

JUDGE GROSSMAN: Let's resume.

Mr. Guild, please continue.

BY MR. GUILD:

Q Mr. Archambeault, let's look at Intervenors' Exhibit 116, the Nonconformance Report which you originated.

Now, in the "description of nonconformance," Page 2 of 3, you state at the second paragraph, "The above

conditions are generic, both safety and nonsafety in the entire cable spreading area located at," and then you state an elevation.

You also state a column location, "between Columns 23 and 25 and Columns M and" -- is that "Q"?

A Yes.

Q Now, did you look at -- did you inspect other locations in the upper cable spreading room to determine whether or not similar generic conditions existed elsewhere, aside from those particular column locations?

A There were conditions like this on nonsafety cables, and that was -- as you walk in the spread room, you could see these conditions.

But then again, we're not, should I say, authorized to inspect nonsafety. It's not our --

Q All right.

Do you know whether there are any similar generic conditions affecting other safety-related cables in other parts of the upper cable spreading room?

A Not to my knowledge.

Q Did you perform a complete inspection of all of the cables in the upper cable spreading room?

A No; just for that one particular area.

Q And that was because you happened to be pulling a cable through that tray?

A That's correct.
Q And you observed these particular problems?
A That's right.
Q Do you know whether there has been a complete reinspection of the upper cable spreading room for similar generic problems with cables of the sort that you identified in this NCR?
MR. GALLO: Irrelevant; objection.
JUDGE GROSSMAN: Overruled.
A Not to my knowledge.
BY MR. GUILD:
Q All right.
Now, you note in your -- in your description of the nonconformance, again Page -- Sheet 2 of 3 of the NCR, that such conditions are, quote, "due to a lack of support between the cable tray and floor penetration riser."
Now, with reference to the following page, Page -- Sheet 3 of 3, can you identify on those diagrams where, in your opinion, there was a lack of support between the cable tray and floor penetration risers?
A In between the riser support and the tray itself.
Q Okay.
Now, I'm looking at the -- there are two diagrams that appear on that page, that sheet, and there's the

upper diagram.

A Uh-huh.

Q On the upper diagram, I see a vertical support to which the Kellum grips are attached, and to the right of it I see a vertical support to which the cable trays are attached.

Is it between those two verticals that there is an absence of sufficient support?

A Yes, there is.

Q That's where the cables loop lowest --

A Yes.

Q -- is that correct?

JUDGE COLE: Excuse me.

While we're on that page, Sheet 3 of 3, there's some words missing at the very top.

Are you the author of this document, sir?

THE WITNESS: Yes, I am.

JUDGE COLE: What the words that are missing there; "Kellum grip" something?

THE WITNESS: "Training radius problems."

JUDGE COLE: "Training radius problems"?

THE WITNESS: Yes.

JUDGE COLE: Thank you.

BY MR. GUILD:

Q Again, training radius has to do with the final location

of the cable, the radius at that point?
A Yes.
Q All right.
A May I also say something?
Q Please.
A As far as my opinion of there not being sufficient support, the reason I -- it's an obvious condition. That's when the cable is falling out of the tray.

Plus in other parts of the plant, they installed a short section of tray between the riser support and the cable tray, and they don't have that problem at these other areas.
Q All right.
A Why they didn't do it here is, you know, beyond me.
Q All right.

Now, when you say "a short section of tray," do you mean a T off of the main cable tray?
A Just a small section of tray which would be installed from the tray where the cables exit to where it goes down into the relay room.

(Indicating.)
Q All right, sir. Let me see if I can follow where you're indicating on the diagram.

If you would point out for me --
A They put a section of tray right here.

(Indicating.)

Q So, in fact, it would be a T off of the exiting tray?

A Right.

Q The T would run from the point where the cables left the existing raceway to the Kellum grips?

A Right.

Q And that tray would be -- would that tray be supported by -- well, would there be a riser or a cable tray support supporting that tray from the floor?

A I don't know how they did it. I would imagine so.

Q All right. Now let's look at the disposition of this nonconformance, the corrective action taken.

Again, this is corrective action that you weren't informed of until you saw this NCR at your deposition; correct?

A That's correct.

Q All right.

The root cause -- I'm paraphrasing -- is the lack of adequate intermediate support, cable support, from the cable tray exit point to the riser.

That's the same cause you identified, is it not?

A That's right.

Q Second paragraph: "It is recommended that generic intermediate supports, designed by S & L to meet load requirements, be installed by field personnel to meet

field conditions," and then it goes on to specify the character of those supports.

Do you find that -- what's your opinion about that resolution of the nonconformance?

Is that acceptable, in your opinion, what I've read so far?

A Yes.

Q All right.

Now, if you look at sheet 5 of the NCR, I want to direct your attention to the bottom -- the last paragraph. It reads, "Minor surface cable jacket damage to Okonite cable caused by Kellum grips are to be repaired per Okonite Drawing D-5721."

So that calls for repairing one of the instances of cable damage you identified, and that was the Kellum grip damage.

Are you familiar with the process that's referred to for repair of the Okonite cable?

A No, I'm not.

Q It continues: "The separation problem, kinks, drooping cables, tangled cables and violation of MTR" -- I take that to mean minimum training radius; correct?

A Yes.

Q -- "could be resolved by the installation of intermediate supports, as recommended above."

Then it goes on, "Justification: The foregoing recommendations would provide corrective action which would be cost-effective, practical and viable. CECo and S & L to evaluate and advise."

Do you see any disposition in this NCR that explicitly in words calls for a reinspection of the damage caused to the cables from kinks in violation of minimum bend and training radii?

A No, I don't.

Q Do you see any explicit disposition of this NCR that even calls for inspection of the damage to the cable caused by the Kellum grips?

A If they -- if they have to make a repair, it will have to be witnessed by QC.

Q All right, sir.

A The other things -- right here, the last part where it says, "The separation problem, kinks, drooping cables, tangled cables and violation of the MTR could be resolved" -- well, kinks are not even acceptable. I don't see how they could resolve it by putting riser sections in. They just can't get rid of them.

Also, minimum training radius violation -- I don't know how they could install the riser section and say the problem is -- because that's not the way it's supposed to be handled. It's supposed to be

dispositioned.

Q Do you see any provision in this NCR in the form that it is before you for even identifying, let alone correcting, those instances of damage to cable?

By that I mean the minimum training and bend radii violations and the kinks.

A Not from what I've read.

MR. GUILD: Mr. Chairman, at the deposition of Mr. Archambeault, I made inquiry of Applicant as to whether there was any further disposition of this Nonconformance Report.

Its latest notations appear to be dated April 7, 1986; and as far as I'm informed, this is a completed disposition. I've received no information to the contrary.

If, of course, Applicant has a more updated version of this NCR that reflects any further processing of these deficiencies, I would appreciate it and would ask that they provide that document.

MR. GALLO: Well, your Honor, the NCR, Exhibit 116, is clear on its face that it is not a complete disposition.

It is clear on its face that it is an incomplete disposition because the author with the initials H. J. K. made it clear that CECo and S & L had yet to evaluate

and advise with respect to the -- at least with respect to his recommendation.

We are still undertaking to determine just what the status is with respect to this particular NCR in terms of the progress on further disposition.

Now, I have nothing new, over what I told Mr. Guild at the deposition, to add at this time. I will try to be timely with respect to news on this matter.

JUDGE GROSSMAN: Can you tell us who H. J. K. is?

MR. GALLO: Yes. It's the individual on the first sheet of the NCR, the field engineer, the individual whose name is spelled K-A-T-A-Y-A-N-A-J-I or G-I.

JUDGE GROSSMAN: I see. I wasn't trying to get you in a position of trying to pronounce that, Mr. Gallo.

(Laughter.)

I just didn't see it.

JUDGE CALLIHAN: By whom is he employed, Mr. Gallo?

MR. GALLO: He's employed by L. K. Comstock, as I understand, Judge.

BY MR. GUILD:

Q All right.

Mr. Archambeault, did you have occasion, after you identified this nonconforming condition, after you wrote the NCR, to speak with a Mark Diedrich about the matter?

A Yes, I did.

Q Who is Mr. Diedrich?

A He works for PTL. He is a QA overinspector.

Q Is he responsible, as you understand it, for supervising -- or for performing PTL overinspections of your cable pulling inspection activity?

A Yes.

Q All right.

And does that include overinspecting in the upper cable spreading room, to your knowledge?

A Yes.

Q All right.

And what did you say to Mr. Diedrich?

A When Harry Revels told me -- this is before the NCR was wrote -- that the cables were turned over to Edison, if it so being, Mark represented to the QA Department that he should have been able to write up the cables. That's why I notified him.

Q All right.

In effect, he represented Commonwealth Edison Company; correct?

A Yeah.

Q And if the cable has been turned over to Edison, you thought it might be appropriate to notify him?
A That's correct.
Q All right.
And what response -- did you notify him of problems you found?
A Yes.
Q All right.
Did you, in substance, identify them as you have today?
A Yeah.
Q What did Mr. Dietrick say in response?
A He said that he would get back to me; but that's all I heard from him.
Q Did he ever get back to you?
A No.
Q Okay. All right.
Now, during this period of time that your NCR was originated, I take it you continued to work on second shift in the cable pull inspection area?
A Yes, I did.
Q All right.
Did you have occasion to question your continued assignment to second shift, then, in effect, request a transfer to first shift?

A I was interested in getting a transfer to first shift.
Q All right.
Did you make that interest known to your supervision?
A Yes, I did.
Q All right.
I am going to show you a document that bears the date of June 2, 1986.
Do you have that before you?
A Yes, I do.
Q All right.
Did you write this document?
A Yes, I did.
Q To whom?
MR. GALLO: I don't have a copy yet.
Can we wait until I have it?
MR. GUILD: This is Deposition Exhibit 3, and I appear to be short a few.
MR. GALLO: Did you say No. 3?
MR. GUILD: Yes.
(Indicating.)
MR. GALLO: I have it. Let me find it.
MR. GUILD: All right.
This one?
(Indicating.)

MR. GUILD: Yes, that's the one.

BY MR. GUILD:

Q All right.

Now, to whom was this document addressed, Mr. Archambeault?

A To my stewart.

Q Who was that?

A George Nemeth.

MR. GUILD: Mr. Chairman, let's mark this document as Intervenors' Exhibit 118 for identification.

(The document was thereupon marked Intervenors' Exhibit No. 118 for identification as of the 9th day of September, 1986.)

BY MR. GUILD:

Q Now, what role, if any, did Mr. Nemeth have, as you understood it, in processing assignments?

A My understanding, if we wanted any -- any cross-training or shift changes, that we were to go through the -- the Local 306 stewart.

Q Okay.

A And we don't go directly to the supervisor.

Q That is Mr. Nemeth, the steward?

A Yes, he is.

Q And you gave this then to Mr. Nemeth.

Did you give it to him on or about June 2, 1986?

A Yes.

Q Okay. What response, if any, did you get to your request?

A I didn't get any.

MR. GUILD: Mr. Chairman, I ask that Intervenors' 118 be received in evidence.

MR. GALLO: Can I conduct some voir dire?

JUDGE GROSSMAN: Yes, certainly.

VOIR DIRE EXAMINATION

BY MR. GALLO:

Q Mr. Guild asked you whether or not, I believe, that this Intervenors' 118 was addressed to Mr. Nemeth. I believe you answered yes.

The copy I have has no addressee on it.

Can you explain that?

A Yes. I talked to George and he -- this is how he told me to write it. He told me to write it just on the piece of paper, and, basically, state what the way I felt about not being told that I was hired on for second shift and that I wanted to go day.

Q Well, is your testimony that Mr. Nemeth asked you to write up your feelings with respect to transferring from second shift and then requested that you provide him that writeup; is that your testimony?

A That's correct.
Q This is what you provided him?
A That's what he told me, how he told me to write it.
Q He told you to write it this way; and what did you do after you finished writing it?
A I gave it to him.
Q Now, do you know what Mr. Nemeth did with it?
A No, I don't.
Q Do you know whether or not he gave it to Mr. Bossong?
A I don't know.
Q Do you know whether or not he gave it to Mr. Skidmore of BESTCO, who was the supervisor at that time?
A I have no way of knowing.
Q You don't know whether or not he gave to Mr. Skidmore.

Do you know whether or not he gave it to Mr. Simile or Mr. DeWald or any other member of LK Comstock?

A No.

MR. GALLO: I have no objection to the admission of this document, if it's limited to a request or a writeup that was written by this witness and provided to Mr. Nemeth.

MR. GUILD: Well, that's all he's obviously competent to testify to, and he can't make a statement any more beyond that. It's understood.

JUDGE GROSSMAN: Objection, Mr. Berry?

MR. BERRY: No, Mr. Chairman.

JUDGE GROSSMAN: It's admitted, subject to whatever limitation that statement included, Mr. Gallo.

(The document marked as Intervenors' Exhibit No. 118 for identification was thereupon received in evidence as Intervenors' Exhibit No. 118 in evidence.)

MR. GUILD: All right, sir.

DIRECT EXAMINATION

BY MR. GUILD:

(Continuing.)

Q Sir, during the time -- at the time you made this request for transfer, were there any -- were there any transfers of QC inspection personnel between second and first shift?

A Yes, there was.

Q And how many such transfers were you aware of?

A There was one between this letter -- are you talking around --

Q First of all, before you wrote the letter, were you aware of anybody transferred off second shift to first shift?

A No, not yet, no.

Q You made your request.

And did any such transfers come to your attention thereafter?

A Thereafter, one man, the first -- after -- after this letter was wrote.

Q Okay.

A There was a man transferred to days from second shift.

Q All right.

And at his request, do you know?

A No, he didn't. I don't believe he wanted to go.

Q As far as you know, he didn't request such a transfer?

A No, he didn't.

Q Do you know who that was?

A Dennis Loos.

MR. GALLO: I'm sorry?

A (Continuing.) Dennis Loos.

BY MR. GUILD:

Q L-O-O-S?

A L-O-O-S.

Q Okay. And do you know approximately when Mr. Loos receive his transfer?

A I can't remember the date.

Q But it was after you made your first request?

A Yes.

Q Okay. Now, I am going to get to this in a moment.

Did you make subsequently requests for transfer,

did you not?
A Verbal.
Q And to whom did you make those requests?
A I talked to not only my steward, I talked to Larry -- or Harry Revels.
Q Your supervisor?
A That's correct.
Q And what did Mr. -- Mr. Nemeth is your stewart; right?
A Yes.
Q And after you made the written request of June 2nd, and thereafter talked to Mr. Nemeth, what response did you get from him?
A I didn't get any.
Q All right.
What did he say?
A He said, "Put in another request."
Q Okay.
A And that's when I put the next memo in.
Q You put in a second written request?
A Yes, I did.
Q We will get to that in a minute.
Did you have any oral requests then to Mr. Revels after you wrote your June 2nd letter?
A There were several inspectors unhappy about that transfer, and I believe that Mr. Loos didn't even want

to go to days, but he went to the RTO turnover, I believe, and there were other people who felt that they should have went.

Q All right.

Were you among them?

A Yes.

Q And had you made that opinion known to your supervision?

A Yes.

Q Mr. Revels?

A Yes.

Q What, if anything, did Mr. Revels say about your desire to be transferred to first shift?

A He said he had nothing to do with the decision.

Q All right.

Now, did you continue performing cable pulling inspection activities on the second shift?

A Yes, I did.

Q And did you have occasion to -- to perform an inspection where you identified cable separation problems?

A Yes.

Q All right.

Where did you -- where were you inspecting at that time?

A This was down 3A3 elevation. It was above the remote shutdown control panel unit 1.

Q Was this a cable spreading room?
A No, it wasn't.
Q Let me show you -- well. what were the nature of the separation problems that you identified there?
A I felt they were violation of 12 inches; but, as I stated earlier, it was a misinterpretation of the procedures.
Q Let me get to that in a moment.
But you were performing cable pull inspection at that location?
A Yes, I pulled some cable through the area.
Q What condition did you observe in the course of pulling the cable?
A I felt there were other cables in violation of separation.
Q All right.
Describe physically what you observed and then we will talk about the conclusion.
But what were the physical conditions you observed?
A There were non-safety cables, which were a different segregation code, hanging over an open cable tray with safety cables.
Q All right.
Now, the cable trays are in a vertical array, stacked one on top of the other?

A That's correct.
Q Where were the non-safety cables coming from?
A There was a tray. The non-safety tray was above the safety tray approximately three foot.
Q All right.
A And the non-safety cables dropped out of the safety tray and they went down into the remote shutdown panel.
Q A vertical drop?
A Yes.
Q All right.
A At this point they drooped over the safety tray and went down the side of it.
Q All right.
Now, the non-safety cables, did they go to a Kellum grip?
A No, they don't. They didn't have any Kellum grips.
Q Did they go directly through a penetration?
A No, this was an open area.
Q Okay. It's an open area?
A Right.
Q So they dropped in free air down to the remote shutdown panel?
A That's correct.
Q Okay. And did you observe the -- were the non-safety cables in a perfectly plumb vertical drop?

A No.
Q What condition were they dropping in?
A Over safety tray.
Q Okay. They dropped -- if you draw a line from the edge of the upper tray where the non-safety cables were running, to the edge of the lower tray where the safety cables were running, did the non-safety cables curve in past that line?
A I believe some of them did.
Q All right.

And what was the distance then between the nearest point at which the non-safety cables were separated from the safety cables in the tray below?

A It was less than 12 inches.
Q All right.

And was that the separation condition that you identified?

A Yes, it was.
Q How many instances did you identify of cables where that separation condition existed, less than 12 inches, because the non-safety vertical run came within less than 12 inches of the horizontal run of safety cables?
A 42 safety cables I identified.
Q What actions did you take when you identified those conditions?

A I was to write a CSCR report.
Q All right.
Well, we already talked this morning about the process of performing a cable pull inspection; and as I understand it, when you identify an apparent conflict, there are several preliminary steps that you take before you initiate a Cable Separation Conflict Report.
Did you take these steps?
A Yes, I did.
Q All right.
What was the first thing you did when you identified this apparent separation problem?
A I checked the log, and I talked to my supervisor, Harry Revels, and he checked the S & L document.
Q Did he communicate back to you on his findings after checking the S & L document?
A Yes. He told me that none of the cables were identified in that.
Q All right.
Did Mr. Revels observe the field condition?
A He didn't -- no, he didn't go out in the field, but I explained what I had found.
Q Did you explain in substance what you have described a few moments ago?
A Yes.

Q Did you tell him that the cables didn't drop vertically but swung in over the open tray?
A Yes.
Q All right.
And that at their closest point, they were less than 12 inches from the horizontal safety cables?
A Yes.
Q All right.
And given that description, what instruction did Mr. Revels give to you?
A Well, during this time, I was pulled off and put on a hot pull, and I had a little bit of heartburn about that, too.
Q So you identified the problem, and by -- in the course of doing your cable pull inspection, and before or after you spoke to Mr. Revels, were you reassigned to this hot pull?
A Yes, before I completed.
Q Before you completed the inspection?
A Yes.
Q Was it before or after you spoke to Mr. Revels, that you were pulled off and re-assigned?
A It was after I had told him I found the problem.
Q So you told Mr. Revels you found this problem, and had Mr. Revels check the S & L document by that point?

A Yes, he did.
Q All right.
And you checked the log already?
A Yes.
Q And to complete your inspection of the separation problem, you had yet to complete the Cable Separation Conflict Reports?
A Yes.
Q All right.
And was there -- did Mr. Revels instruct you that was what you were to do to complete those reports?
A After -- well, like I said, this other pull came up.
Q So that you -- the step that you understood you were yet to perform was completing the reports on the separation problem?
A Yes.
Q All right.
But before you could do that you were reassigned; is that your testimony?
A Yes.
Q And how did you get the reassignment?
A All right.
As I stated, I was pulling two cables in that area. I found a separation problem. I identified it to Harry, talked to him. This hot pull came up, and my Lead came

to me and he said -- called me up in the field office -- and said he needed me to go out on a hot pull.

Q Who this is now?

A Don Schirmer was the Lead.

Q Don Schirmer, all right.

A I told him I wasn't happy with it and I felt I should go ahead and complete my other pull; and I believe that stated somewhere I was supposed complete each pole before we go on to the next one.

Q Okay. You understood the procedure called for that?

A That's right.

And this was when I felt that production was overshadowing quality.

Q All right.

And did you tell Mr. Schirmer in substance that you had this incomplete documentation of separation problems?

A He was aware of it, because he told me I would be able to finish it after the hot pull.

Q All right.

And did you express your opinion to Mr. Schirmer about the inappropriateness of pulling you off the completion of this paperwork?

A Yes.

Q What was his response to that?

A They needed it done. They had no other inspectors available.

Q They needed the hot pull done?

A Yes.

Q And did you, in fact, stop your inspection documentation from the separation problems and turn to the inspection of the hot pull?

A Yes, I did.

Q How long did the hot pull take to work?

A Approximately two, three hours.

Q All right.

And when did you then -- if you did -- when did you return to completing your inspection of the separation problems, if any?

A I believe it was the next day.

Q Now, what action then did you take the next day with regard to the separation problems?

A I was given a couple -- I believe they were in training, trainees. They went with me and helped me write the cables up.

MR. GUILD: All right, sir.

I am going to show you a document and ask if this is reflective of documentation that you performed, this is Deposition Exhibit 9, previously marked as Deposition Exhibit 9.

Mr. Chairman, I ask that this document be marked as Intervenors' Exhibit 119 for identification.

(The document was thereupon marked Intervenors' Exhibit No. 119 for identification as of the 9th day of September, 1986.)

BY MR. GUILD:

Q There were 42 instances, you have said, where there were identified problems with the separation of the cables.

Do I understand correctly that that called for initiating 42 Cable Separation Conflict Reports?

A Yes.

Q And did you do so?

A Yes, I did.

Q All right.

Now, what I have shown you is only one.

It's for a report -- it's Report No. 0511, and that's the second page, Cable Separation Conflict Report; and is that, indeed, one of the reports that you initiated?

A Yes, it is.

Q And what's the attachment that's the following page?

Is that something you also initiated?

A Yes.

Q It appears in your handwriting, I believe?

A Yes. It's the list of non-safety cables.
Q These are the non-safety cables that vertically came within 12 inches of the safety cable that is identified on the first page or the second page of this document, and that is 2MS 569?
A Yes.
Q Now, I take it that the attachment is called for because there are too many non-safety cables to fully list in the box on the first page?
A Yes.
Q So it's a continuation sheet?
A Yes, it is.
Q All right.

Now, the first -- the first page of the document is a transmittal form.

Have you ever seen that before?

A No, I haven't.
Q I showed it to you at your deposition.

That's not something you completed?

A No.

MR. GUILD: Mr. Chairman, this was made available in discovery in the package of documents from Applicant, and I take this to represent an authentic document. It appears to be a transmittal of the Cable Separation Conflict Report to someone for evaluation.

And I would offer Intervenors' Exhibit 119 at this time.

JUDGE GROSSMAN: Any objection, Mr. Gallo?

MR. GALLO: No objection.

MR. BERRY: No objection. Mr. Chairman.

JUDGE GROSSMAN: Received.

(The document marked as Intervenors' Exhibit No. 119 for identification was thereupon received in evidence as Intervenors' Exhibit No. 119 in evidence.)

MR. GUILD: If I could have a moment, Mr. Chairman.

BY MR. GUILD:

Q Now, at any time during the -- during your processing of this Cable Separation Conflict Report, or these 42 Cable Separation Conflict Reports, did anyone on your supervision question your interpretation of the applicable Comstock procedures with respect to the separation criteria involved?

A No, they didn't.

Q Did you bring your interpretation to the attention of anyone other than Mr. Revels, as you just described?

A Not that I remember.

Q Mr. Revels was aware of your description of the

condition?

A Yes.

Q All right.

And the Comstock separation -- the Comstock procedures with respect to separation requirements call for a separation of 12 inches between safety and non-safety cables in free air; is that correct?

A Free air, yes.

Q All right.

But they call for a separation of one inch between non-safety cables and safety cables where the safety cables are running horizontally in a cable raceway and are separated from the non-safety cables by the edge of the raceway?

A Yes.

Q That's correct?

A Yes. It says free air and cables running in the raceway.

Q And separated by the edge of the raceway?

A No. My interpretation is that only has to maintain one inch.

Q All right.

Well, in your deposition, Mr. Gallo brought to your attention that interpretation, did he not?

A That's right.

The next night at work I read it. I asked fellow Inspectors how they interpreted it. They interpreted it the way I used to interpret it.

The only question I -- the thing that I couldn't understand, and I believe other -- the reason why other inspectors interpreted 12-inch free area because we had cable drooping over the open raceway.

Q All right.

A And I can't -- you know, what's the difference between, as they described, two free airs, two sets of cables maintaining 12 inches.

Q All right.

A But, as I stated, they interpreted it the same way I did.

Q And that was that the requirement that was applicable in the --

MR. GALLO: Objection.

I think the question should be not leading, but should be control.

MR. GUILD: The record already reflects the witness' testimony.

MR. GALLO: All right.

BY MR. GUILD:

Q Now, let me show you a document -- strike that.

When you say that they interpreted it the same way

you did, before your deposition, and Mr. Gallo brought his interpretation to you, and you then consulted with your fellow Inspectors, what way were they interpreting it, they, the other Inspectors?

A I believe one inch from the edge of the tray.

Q All right.

A That's the way that I was interpreting it.

Q All right.

But 12 inches in air?

A In free air.

Q All right.

Now, let me -- I am going to show you a Sargent & Lundy document with respect to this specific --

(There followed a discussion outside the record.)

BY MR. GUILD:

Q Let me show you an August 7, 1986, letter, on Sargent & Lundy stationery, from a Mr. Regan, R-E-G-A-N, to Mr. D. Elias, Project Engineer, Commonwealth Edison Company.

Now, I take it you have not seen this document before?

A No, I haven't.

MR. GUILD: All right.

Now, from the testimony, Mr. Chairman, again this is a document provided by Edison in discovery, and I

apologize for not having copies of it and I will make copies.

BY MR. GUILD:

Q Cable Separation Report No. 62, now, do you see in this document a reference to Cable Separation Conflict Report 511, the document that's been previously marked, that was one of 42 you identified?

A Right.

Q All right.

Each of these CSCR report -- reading now, "Each of the CSCR reported instances of less than the 12 inch required separation between safety-related and non-safety-related cables in free air.

"This separation requirement is dictated by the electrical contractor's installation procedures.

"Now we have reviewed each of these CSCR's and have determined that the violations of separation requirement described do not degrade Class I-E circuit below an acceptable level for CSCR's listed below.

"Sincerely yours."

Do you see anything in that letter from Sargent & Lundy, the engineers, that disputes your interpretation of the separation deficiencies that you identify?

A No.

MR. GUILD: Mr. Chairman, I would ask that

this document be mark as Intervenors' --

JUDGE COLE: 120.

MR. GUILD: -- 120, and I will hand a copy up to the Board and make copies for the record.

(The document was thereupon marked Intervenors' Exhibit No. 120 for identification as of the 9th day of September, 1986.)

MR. GUILD: Mr. Chairman, I would ask that Intervenors' Exhibits 119 and 120 be received in evidence.

JUDGE GROSSMAN: 119 has already been admitted.

MR. GUILD: All right, sir.

JUDGE GROSSMAN: Any objection to 120?

MR. GALLO: I am trying to get a copy, your Honor, so I can get a chance -- I really need a chance to look at it very carefully.

JUDGE GROSSMAN: So we will -- you are reserving objection on that, are you, Mr. Gallo?

MR. GALLO: It will only take me a moment.

JUDGE GROSSMAN: Okay.

MR. BERRY: The Staff has no objection.

MR. GALLO: No objection.

JUDGE GROSSMAN: Fine.

Received.

(The document marked as Intervenors' Exhibit No. 120 for identification was thereupon received in evidence as Intervenors' Exhibit No. 120 in evidence.)

JUDGE GROSSMAN: And I note that these refer not only to CSCR No. 511, but a number of others. I thought you had indicated only 511.

MR. GUILD: 511 I used merely as an example of one of the 42, Mr. Chairman, and then I have the Sargent & Lundy evaluation that includes 511 among others. I believe they are similar Sargent & Lundy evaluations, probably the exact same text covering each of the 42. I don't mean to -- I don't mean to burden the record with all of them, but they all were made available in discovery.

JUDGE GROSSMAN: Well, they refer to all of the ones listed on Page 1 of Intervenors' Exhibit 119?

MR. GUILD: Yes.

JUDGE GROSSMAN: That is 511 through 520?

MR. GUILD: Yes.

JUDGE GROSSMAN: Okay. I just wanted to note that for the record.

This is received.

MR. GUILD: Thank you.

I will submit copies to the parties and Board later.

BY MR. GUILD:

Q After Mr. Gallo brought his interpretation of applicable separation criteria to your attention at deposition, Mr. Archambeault, as you indicated, you considered the matter, re-read the procedure, and discussed it with your fellow Inspectors?

A Yes, I did.

Q And did you also discuss it with any of your supervision?

A Yes, I did.

Q And with whom did you discuss the question?

A With John Walters, who was acting LKC supervisor. Harry Revels was on vacation the last week.

Q Yes?

A And Tony Simile.

Q And what opinion did those gentlemen express to you?

A I told them that we need to get clarification on this, because everybody is confused, everybody is interpreting it different ways.

Q Everybody had been interpreting it --

A The way I had.

Q -- as you understood it?

A The way -- interpreting the way I had.
Q All right.
And now you were understanding that that was not a proper interpretation and there ought to be another interpretation; is that true?
A Yes.
Q And what did -- what did Mr. Walters and Mr. Simile have to say to that?
A First Mr. Walters agreed with me, because I talked to him first, and he understood my concern about the cables looping or coming close over a tray.
Q Right.
A He understood how I made my evaluation of 12 inches.
Q And did he agree with that?
A That's the way I feel about it.
Q What did Walter say -- is the answer to my question yes?
A He agreed with me.
Q All right.
A So we went to Tony Simile and he -- we opened the procedure up and he said he also understood the one inch, what it said about the one inch, and said that somewhere along the line we were getting a misinterpretation.
Also, there is two -- well, actually about four different places separation is mentioned in each of the

procedures, and the way it's stated, also could be misleading.

There is a statement in 4.3.8 about tray covers, the bottom of tray and side tray, which can be misleading.

Q All right.

Did you state that to Mr. Simile and Mr. Walter?

A Yes, we talked about it.

Q What did Mr. Simile have to say about it?

A I -- I told him that, you know, I felt it should be cleared up, and he said that he would take care of it, and that's the last I heard of it.

Q All right.

JUDGE GROSSMAN: Excuse me.

Let me get an understanding of the configuration that we are talking about.

After the non-safety cable drops down somewhat vertically, does it then go horizontally over the safety cable?

THE WITNESS: Well, okay.

What it is -- you have a safety tray here, you have a non-safety here. The cables come out of the non-safety tray and go down into the equipment, because the equipment is below that safety tray.

The only thing that the safety tray is doing in

that room is coming into a room allowing cables to go into conduits, and these non-safety cables are going down into the equipment itself, and that's where they go over that safety tray.

(Indicating.)

So they are dropping vertically, but in doing so, they have got to get to go around that safety tray.

JUDGE COLE: And pass close to it?

THE WITNESS: That's right.

They are actually touching the side of the tray and kind of looping over that safety tray.

MR. GUILD: Mr. Chairman, could I ask the witness to draw a diagram of the condition that he observed?

JUDGE GROSSMAN: Yes, I think that would be appropriate.

MR. GUILD: A sketch of a diagram.

I am giving you a sheet of paper; and if you will draw me an end view of the condition you observed, our looking at the end of the cable tray in question.

THE WITNESS: (Indicating.)

MR. GUILD: I am going to stop you and ask you to do it on a piece of white paper so that we can be reproduced more easily.

MR. GALLO: Are we in recess?

MR. GUILD: We could stand down for a moment while the witness does it.

JUDGE GROSSMAN: Okay.

Why don't we take a recess for five minutes.

(Whereupon a recess was had, after which the hearing resumed as follows:)

JUDGE GROSSMAN: Okay. We are back on the record, Mr. Guild.

Continue.

MR. GUILD: Thank you, Mr. Chairman.

BY MR. GUILD:

Q Over the recess, Mr. Archambeault, have you made a sketch of the condition you observed?

A Yes, I did.

MR. GUILD: All right.

And, Mr. Chairman, I would ask that this drawing be marked as Intervenors' 121 for identification as -- wait.

BY MR. GUILD:

Q You know, there appears to be two trays, one above the other, and one -- the one above is a non-safety tray and the one below you have indicated is a safety tray; correct?

A Correct.

Q All right.

Now, the non-safety cables emerge from out of the tray above; and is that -- there is an opening in the above tray?

A Yes. It's like a ladder tray.

Q It's called a ladder tray, which has an opening for cable to make a drop from?

A That's correct.

Q And it does -- it drops below and then drops and bends to the outside of the safety tray below?

A That's correct.

MR. GALLO: Your Honor, I am sorry to interrupt counsel, but I just think that we could make a Xerox of one page of this thing very quickly and it might facilitate if everyone had a copy.

JUDGE GROSSMAN: Okay.

MR. GALLO: With everybody's permission, I would undertake to do that.

JUDGE GROSSMAN: Okay. That's fine.

MR. GUILD: Let me proceed on a related subject, and we will return to the diagram.

BY MR. GUILD:

Q Now, let's talk a minute about this murky question of the interpretation of your separation criteria for the specific circumstances that you identified.

Now, I am looking at Rev. D, 4.8.8, and that is

your cable installation inspection procedure

And I am looking at Section 3.5.4.1, and I will read, "Cables which travel in free air and continue to equipment under support by electrical raceway shall maintain the following separation criteria: 12 inch or 1 inch, in free air, and 6 inch inside equipment. If the separation criteria is in conflict, the inspector shall initiate a Cable Separation Conflict Report."

Now, is that the relavent provision of your inspection criteria?

A That, and there is also some attachments.

Q All right.

There, indeed, is attachment to the procedure, Attachment E-1, entitled, "Required separation by segregation code for cables in free air and equipment."

Is that your reference?

A Yes, it is.

Q Okay. And there is a note, a legend, and the legend reads, "You must maintain separation of 12 inches between cables in free air, one inch between cable in free air and cable in open raceway, 6 inch between cable inside electrical equipment."

Now, is the second of those requirements, that is, one inch between cable in free air and cable in open raceway, the pertinent portion of that requirement that

caused you to reconsider your interpretation of the requirements?

A Yes.

Q Let me draw your attention to Comstock procedure 4.3.8, Rev. G, and that is the installation procedure.

In there, I want to show you a part of that installation procedure, and it is at Page 15 of 18, under the title, "3.13, Cable Separation."

And there is a provision in there that says, "Cables not in raceways shall maintain", and there is a table of separation requirements, is there not?

A Yes.

Q And there is an asterisk, and a note which reads as follows:

"It is acceptable for the cable in free air to touch the raceway side, bottom or cover, as long as it is separated from the cables in the raceway by the solid steel raceway barrier."

A That's right.

Q All right.

A Now, in the instances that you observed and that you have depicted on the diagram that's been marked as Intervenors' 121, there was only air between the closest point of the non-safety cables and the safety cable lying below them in the tray; correct?

A Yes.
Q There was not a steel barrier -- steel side or cover separating those two cables, was there?
A No.
Q Doesn't it appear that these two portions of the Comstock procedures are either in conflict with respect to the separation requirements or at least are unclear as to what the separation requires?
A Yes, yes; and --

MR. GALLO: Objection. Objection.

It seems to me this witness' opinion on this point should be developed without leading him on that question.

JUDGE GROSSMAN: It should be developed? I'm sorry.

MR. GALLO: Without leading him on.

JUDGE GROSSMAN: Oh, without leading him.

Well, that's right.

Mr. Guild, why don't you just --

MR. GUILD: Mr. Chairman, excuse me, if I may be heard.

It seems to me, frankly, that this witness comes in and now says that he agrees with Mr. Gallo; so his testimony on this point is not wholly consistent with this party's interest, and I believe I am entitled to

lead him.

I see what appears to me to be a conflict.

JUDGE GROSSMAN: Well, Mr. Guild, that doesn't mean that you couldn't have asked him, "Do those two criteria seem consistent?" and then let him go on from there, instead of phrasing it the way you did.

MR. GUILD: All right, sir.

I just believe I am entitled to lead on this point, because Mr. Gallo should be happy with this testimony, and I am entitled, since it's adverse to my position, to lead him on this question; but I will be happy to accede to the Chair's direction on this point.

JUDGE GROSSMAN: Well, we are directing you to phrase your questions more neutrally, and it doesn't really help when you do it the second time on that question after you have already done it the first time by leading; but, in any event, I am not sure -- I think we did get the answer on the record, and all we were talking about was your future questions being phrased a little more neutrally.

MR. GUILD: All right, sir.

MR. BERRY: I am not sure the witness finished his answer.

MR. GUILD: Let me rephrase the question.

MR. BERRY: I don't think he completed the

answer.

BY MR. GUILD:

Q Let me ask a further question.

At the Chair's suggestion, let me ask directly:

Do those provisions I just read for you appear consistent, Mr. Archambeault?

A No, this is -- I stated earlier that I brought it up to Tony Simile and said that somewhere we were misinterpreting this, because something is not clear; and that's what I meant. There was the consistency of them statements that was confusing the Inspectors.

Q All right.

The two portions of the procedures that I have directed your attention to?

A That's correct.

Q All right.

And did Mr. Simile make any suggestion that a training class on the subject might be appropriate?

A He didn't actually say that to me, but he said that he would take care of it.

MR. GUILD: All right.

Mr. Chairman, I am handing out copies of Intervenors' 121, that Applicant has been courteous enough to copy.

(Indicating.)

(The document was thereupon marked Intervenors' Exhibit No. 121 for identification as of the 9th day of September, 1986.)

BY MR. GUILD:

Q Now, Mr. Archambeault, I interrupted you at the point where you were describing the condition that you observed with reference to the diagram that you have drawn, Intervenors' 121.

Non-safety cables drop through a ladder opening in the upper tray over the safety tray below, and bend to the side where they rest against the edge of the lower safety tray; is that correct?

A Yes, it is.

Q And that's the condition you observed?

A Yes.

Q And do I take it that the distance between the lower safety cables and the upper non-safety cables, as they looped over the safety cables, was less than 12 inches as you measured it?

A Yes.

MR. GUILD: Mr. Chairman, I would ask that 121 be received in evidence.

JUDGE GROSSMAN: Well, just to clarify something in the record.

The diagram, of course, is not drawn to scale, and I just want to make sure it isn't misleading, because the distance shown between the safety cables and the non-safety cables appears to be -- in free air, both in free air -- appears to be less than the distance between the safety cables in the tray and the non-safety cables in the air, and apparently you didn't not intend that to be that way, because in no place did the safety cables in the air come closer than 12 inches to the non-safety cables; is that correct?

THE WITNESS: That's correct.

JUDGE GROSSMAN: Okay. With that clarifying -- those clarify questions and answers, is there any objection to th diagram going in or do you have any further voir dire that you wish, Mr. Gallo?

MR. GALLO: I have no objection to the admission of this document.

MR. BERRY: Staff has has no objection, Mr. Chairman.

JUDGE GROSSMAN: Received.

(The document marked as Intervenors' Exhibit No. 121 for identification was thereupon received in evidence as Intervenors' Exhibit No. 121 in evidence.)

BY MR. GUILD:

Q All right.

Now, the Cable Separation Conflict Reports for these 42 cables were written up after you completed the hot pull inspection that interrupted your completion of the inspection during which you had identified these separation problems?

A Yes.

Q All right.

Did you shortly thereafter have occasion to make contact with the Nuclear Regulatory Commission Staff?

A Yes, I did.

Q When did you make your contact with the NRC?

A June 4th, I believe.

Q All right, sir.

And on that day, the 4th of June, whom did you contact?

A Mr. Charles Weil, Region III NRC.

Q All right.

Did you relate to Mr. Weil the number of your concerns?

A Yes, I did.

Q And what -- what, in substance, did you relate to Mr. Weil?

A My concern with the spreading room, the condition of the

cables, the separation problem, not as much as the separation problem itself, but the feeling that the production was overshadowing quality.

There are several others I can't remember, unless I seen the letter.

MR. GUILD: All right.

Excuse me, Mr. Chairman.

BY MR. GUILD:

Q Mr. Archambeault, I want to show you a document that is an in camera exhibit to your deposition. It's been marked as In Camera Exhibit No. 1. It's a June 6, 1984, memo from Mr. Weil to Mr. Norelius, and it appears to document the conversation you had with him on June 4, 1986.

Do you recall me showing you that document at your deposition?

A Yes.

Q And do you recall reading the document at that time?

A Yes.

Q And do you recall stating whether that document accurately reflected the information that you gave to Mr. Weil?

A Yes.

Q And does it accurately reflect that information?

A Yes, it does.

Q All right.

Now, I want you, if you would take a moment and review the document and see if it refreshes your recollection as to the concerns that you expressed to the NRC on that occasion, aside from the two concerns you have justified, those were as to the upper cable spreading room and the manner of handling the separation problems.

A All right.

Q Have you had an opportunity to review the letter?

A Yes.

Q Did you -- do you recall stating to Mr. Weil, in substance, that the majority of the BESTCO quality control inspectors are frustrated because of the general attitude that quality problems are ignored by Comstock?

A Yes.

Q And you gave him then examples of the two instances that you testified to today, about the upper cable spreading room and the -- and your being reassigned to the hot pull after you identified the cable separation problems?

A Yes.

Q Do you recall stating to Mr. Weil that you had heard other Inspectors make comments on this subject, quoting those other Inspectors as follows; quote, "It gets to the point where all you want to do is pull the wire and

that's that."

A Yes.

Q Quote, "All of those" -- "All of these things never get taken care of."

A Yes.

Q Quote, "No one cares."

A Yes.

Q And finally, quote, "I am just here for the money. As long as I get paid, I will sign the papers."

A Yes.

Q And had you heard inspectors make those comments?

A Yeah.

Q Do you recall stating to Mr. Weil, "All the real good inspectors are around to do their job, but they have become demoralized because of the emphasis on production"?

A Yes, that's true.

Q All right.

And do you -- you hold that opinion?

A Yes, I do.

May I say something else?

Q Yes, please.

A A lot of statements in there are -- they sound rather harsh. It's simply because of frustrations that I felt and other Inspectors feel.

At the end of the day, like the conversation I had with him, I was just so frustrated that, you know, that's the way I put things. That's exactly the way I felt and exactly the way other Inspectors feel.

Q All right.

And that's what you communicated to Mr. Weil at that time?

A Yes.

Q All right.

What immediately precipitated you calling the NRC?

What caused you to call them when you did?

A Basically what that says, you have a feeling that, you know, what can you do, because nobody wants to recognize the problem, you know? They say there are no problems, or if you do, you feel that you would be blacklisted or you would be looked down upon or you would be moved around, and that's the general consensus.

Q Among QC Inspectors?

A Yes.

Q Do you recall commenting to Mr. Weil, by way of example, to the effect Rick Martin was a good inspector, who went by the book and identified many problems?

A Yes.

Q "However, Martin has been reduced to a reviewer from a field inspector because he did his job too well"?

A That's the way I felt.
Q Were you aware at the time that Mr. Martin had indeed been pulled off of his cable pulling inspection duties and assigned to work for Mr. Seese as a document reviewer?
A Yes.
Q Were you aware that was because Mr. Martin had expressed concerns about cable pulling activity?
A That's the way I felt.
Q Did you relate a -- do you recall relating an instance with -- to Mr. Weil involving a Mr. Norm Kimble on May 31st, with a 1,700 foot pull?
A Yes, I do.
Q And what were those circumstances?
A I was -- it was one of them situations where I was -- I wasn't involved in any of inspecting activities with my own foremen, I was -- he needed other Inspectors to help him on the pull, because it was so long.

From what I got from him, he was -- he was still doing a pre-pull walkdown while the pull was being performed, which is a violation of procedures, because there is -- we were supposed to be allowed to do the pre-pull inspection before we pull the cable, and it just so happens, when I -- the part of the pull I helped them on, they ran into a problem they should have found

on the pre-pull but wasn't, because it hadn't been done yet, where the conduit numbers were switched around; so they had conduits going in the wrong conduit because --

Q Cables going in the wrong conduit?

A Right.

Q Okay.

A And that took about an hour-and-a-half to take care of the problem, but it was took care of.

Q Do you recall stating to Mr. Weil that, "In that circumstance, Mr. Kimble had run ahead and had to have a helper open the pull"?

A Yes.

Q And that, indeed, Mr. Kimble was not able to complete his pre-pull inspection before they began pulling the cable?

A Yes.

Q Do you recall making -- expressing a concern to Mr. Weil that, "Nonconformance Reports are written but are never closed in a timely fashion"?

A I don't remember saying it, but I might have.

Q Okay. Do you recall giving examples of cable tray overfill conditions?

A No, I don't.

Q "Kellum grips left in place in the upper" -- "in the cable spreading room"?

Let me show you a document, it's the last paragraph on Page 2.

(Indicating.)

A Okay. I think that has to do with my non-conformance I wrote on all the violations.

Q Referring to the upper cable spreading room problems.

A Yes.

Q All right, sir.

And you communicate your -- in substance -- your dissatisfaction with the way that item was handled?

A Yes.

Q All right, sir.

Do you recall bringing to Mr. Weil's attention the circumstances involving the failure to sequentially mark the cable that you observed, the erroneous cable markings?

A (No Response.)

Q "Inspector cited an example of a problem with craft workers violating the procedures and nothing has been done to correct the problem. According to the inspector, where ever problems with cable reel footage markings are encountered, the procedure specifying the cable rule will be discarded and the cable will not be pulled. This has not been the case, according to the inspector. Commonwealth Edison QA was notified but has

done nothing."

You brought that matter to Mr. Weil's attention?

A Yes.

Q Do you recall giving Mr. Weil examples of instances that you consider reflecting poor practices and the emphasis on production over quality, including, as of May, 1986, the status report of work completed was no longer done?

A Right, yes.

Q Could you explain what you meant by that?

A They switched Leads and supervisors for a month, and they had us filling out status reports; and as far as my concern on that was, several of us had asked Comstock what the status book was for, and we never got an answer; so I brought up to the NRC hoping to get an answer, which we did.

Q What the status report was for?

A That's correct.

Q And how did you get an answer?

A That it wasn't for monitoring production of Inspectors, that was just to keep the status.

Q All right.

Had inspectors questioned whether such a document was used for monitoring production?

A A lot of inspectors believed it was.

Q All right.

Had you been previously told by management what the status report was used for?

A I hadn't. I had no idea what it was for.

Q All right.

Quote, "Inspectors have been instructed not to worry about damaged non-safety cable will get on walkdown."

A That's what I was told.

Q "Excessive use of use as-is dispositions from Nonconformance Reports."

You observed use of such dispositions?

A That's the general consensus, again.

Q "Disposition that no corrective action should be taken."

A The inspector writes an NCR and later sees it, "Use as is," and it seems like it was a repetitive thing, "use as is."

Q All right.

"Craft workers don't care. They walk all over safety cables."

A We had a lot of trouble at that time with several instances where there were confrontations between craft personnel and Inspectors, and I don't know if anybody was aware of it. I think the NRC was aware of it. We already had a confrontation with a Commonwealth Edison employee who walked on cables and said he didn't care.

Q When did that happen?
A Around the same time. I don't know the date.
Q Were you an observer of that circumstance?
A I was in the area, but I didn't see it happen, I just heard all the aftermath of it.
Q All right.

What did you understand occurred?

A The inspector involved chased the person down, went to the -- I think the shift supervisor of Edison, and supposedly they had a talk with the personnel about it.
Q Do you know who the Edison person was involved?
A I don't know any of the details as far as names.
Q All right.

Quoting from the memo, "The caller stated that he had compiled a two-page listing of problems with the L.K. Comstock Company's Quality Control Program. Caller agreed to mail a copy of that list to Region III"; and did you subsequently mail that list to the Region?

A Yes, I did.
Q Let me show you a copy of a document I believe is that list.

(Indicating.)

Mr. Archambeault, the document that I have placed before you:

Is that a copy of a list or memorandum that you

made and sent to the NRC?

A Yes, it is.

Q All right.

Now, it bears a June 4, 1986, date at the top.

Does that date reflect the date that you made your call to the NRC?

A Yes, it is.

Q When did you actually write the list or the document that's before you?

A I had the letter already wrote out. I didn't send it until I heard that the NRC was going to do an investigation at the site.

Q All right.

And then you sent it over to NRC?

A That's correct.

MR. GUILD: All right.

Mr. Chairman, I would ask that this document be marked as Intervenors' Exhibit 122, and be received in evidence.

JUDGE GROSSMAN: Mr. Gallo?

MR. GALLO: Could you ask a question on voir dire?

JUDGE GROSSMAN: Certainly.

VOIR DIRE EXAMINATION

BY MR. GALLO:

Q If I understand your testimony, Mr. Archambeault, that you had written the letter prior to the time you talked to Mr. Weil or at about just prior to calling him; is that correct?
A Uh-huh, yes, it is.
Q And then you, at his request, subsequently sent him a copy of the letter?
A Yes.
Q Do you remember what interval passed before you sent him the letter?
A I didn't send the letter until I heard that the NRC would be onsite interviewing Inspectors.
Q Well, do you know when that was? Can you tell me when that was?
A I don't remember the date.
Q Was it some --
A It was --
Q Go ahead.
A It was -- I would say two to three weeks, approximately.
Q After June 4th?
A Yes.

MR. GALLO: I have no objection to the admission of this document.

I do have a question, however, with respect to the questioning that Mr. Guild conducted with respect to the

in camera exhibit.

I have no objection to his questioning, but is the transcript to be considered in camera from that point, since he read excerpts from the letter, or is the in camera protection no longer needed?

JUDGE GROSSMAN: Did you wish to have those matters you discussed kept confidential, what you just testified to?

THE WITNESS: No.

JUDGE GROSSMAN: I would assume that the letter is still confidential?

MR. GUILD: Yes, I assume so, too, judge.

I don't think it should be, but I only intended my discussion to be on the public record, given the Board's previous position about the protection of the order.

I don't believe the witness desires confidentiality as to the matters, but you have already heard from me on that score, and I don't mean to offer the letter in any way.

JUDGE GROSSMAN: Well, all we are ruling on now is whether any of the transcript here has to be confidential; and what we are saying is, apparently not, unless we have some objection and a weighty argument from Mr. Berry.

MR. BERRY: I have listened carefully to Mr.

Guild's examination precisely with respect to this subject.

Staff is persuaded that, since we didn't have a verbatim reading of the letter, Staff is not going to object; but I would like -- I would ask to voir dire the witness.

JUDGE GROSSMAN: Oh, certainly.

MR. BERRY: Mr. Archambeault --

MR. GALLO: Do you mean, is the voir dire going to be on a subject different than the matters we are discussing, because I would like to observe that what has happened in this proceeding during the course of Mr. Guild's questioning, that we have declassified significant portions of the letter that is supposed to be held in camera, during the course of the questioning.

It seems to me, therefore, that the letter itself is also now declassified and ought not be held in camera as well.

JUDGE GROSSMAN: Well, Mr. Gallo, we are running into a bureaucratic problem in this case, and I don't mean it in any derogatory sense; but there are certain procedures that Staff is following, and it requires some activity on the part of other than trial counsel in order to remove the confidentiality.

Even though for, perhaps, all practical purposes,

nothing of the substance is still confidential, and it's just not worth the trouble to force the issue any more than we have.

As far as the substance goes, the parties apparently have a free hand, and so you may add your voice to the request that Staff people, in a sense, declassify the information -- the material, but there isn't any practical significance to it, and so we will just operate the easiest way we can, since none of the parties are put in a detrimental position.

Does that seem --

MR. BERRY: That's fine, yes.

JUDGE GROSSMAN: -- appropriate, sir?

MR. BERRY: I couldn't have said it better.

JUDGE GROSSMAN: Why don't we just do it that way?

MR. BERRY: I couldn't have said it better myself, Mr. Chairman.

VOIR DIRE EXAMINATION

BY MR. BERRY:

Q Mr. Archambeault, with respect to Intervenors' Exhibit 122, did you make available a copy of this document to anyone else?

A No, I didn't.

I let two other Inspectors read it, and I believe I

discussed it with Harry Revels.

Q You didn't provide a copy of this to -- or let anyone affiliated with the Applicant make a copy of this document?

A No, I didn't.

MR. BERRY: Well, Staff has no objection.

JUDGE GROSSMAN: If there is no objection, we will admit Intervenors' 122.

(The document marked as Intervenors' Exhibit No. 122 for identification was thereupon received in evidence as Intervenors' Exhibit No. 122 in evidence.)

BY MR. GUILD:

Q Mr. Archambeault, after --

JUDGE GROSSMAN: Excuse me.

There is a problem with a date in the document.

MR. GUILD: Yes, sir?

JUDGE GROSSMAN: That apparently is subsequent to June 4th, and I think that discrepancy ought to --

MR. GUILD: Yes, I believe the witness has testified, Mr. Chairman, that June 4th simply indicates the day he made his first contact with the NRC.

JUDGE GROSSMAN: Okay. And since the letter

was sent two or three weeks later, and I guess the testimony was that it was drafted somewhat later?

MR. GUILD: Yes, sir, I believe that's the testimony.

JUDGE GROSSMAN: Okay. Then there really is no discrepancy.

DIRECT EXAMINATION

BY MR. GUILD:

(Continuing.)

Q Mr. Archambeault, did you, subsequent to June 4th, contact the NRC, again make a written request for a transfer back to the first shift?

A Yes, I did.

Q I am showing you a document that bears a date of July 10, 1986, addressed to Messrs. Cartelli and Nemeth; and is this a second request in writing for a shift transfer?

A Yes, it is.

Q And did you, in fact, transmit this to the men who are named in the address?

A Yes, I did.

Q What response, if any, did you get to this request for a transfer?

A I didn't receive any.

MR. GUILD: Mr. Chairman, I would ask that

this document be marked and received in evidence as Intervenors' Exhibit 123.

(The document was thereupon marked Intervenors's Exhibit No. 123 for identification as of the 9th day of September, 1986.)

JUDGE GROSSMAN: Any objection?

MR. GALLO: I would like to conduct a voir dire.

JUDGE GROSSMAN: Certainly.

MR. GALLO: Well, maybe I need not.

I take it that the document is only being introduced for the proposition that Mr. Archambeault requested a shift transfer of Mr. Nemeth and Mr. Cartelli.

JUDGE GROSSMAN: Is that what it's used for, Mr. Guild, or --

MR. GUILD: Well. we can do the same foundation that we did before; that is, that the witness' understanding that he's to contact the union representative. the steward, Mr. Nemeth and Mr. Cartelli, who the record, I believe. reflects is the Multicraft Inspection Services Manager, that they are, indeed, the appropriate people that he's supposed to have contacted for a shift transfer, and that he had

contacted them.

JUDGE GROSSMAN: Excuse me, Mr. Gallo.

Is there any problem with the content of the document that concerns you about admitting the document at this point?

You will certainly be entitled to cross examine on it.

MR. GALLO: No.

If I understand Mr. Guild's comment, he's going with my characterization of its purpose, and I have no objection for that purpose.

MR. BERRY: No objection.

JUDGE GROSSMAN: We will admit it, then.

(The document marked as Intervenors' Exhibit No. 123 for identification was thereupon received in evidence as Intervenors' Exhibit No. 123 in evidence.)

BY MR. GUILD:

Q And I take it, Mr. Archambeault, did you continue then to work on second shift performing cable pull inspections?

A Yes, I did.

Q Did you understand that thereafter, after July 10, 1986, the NRC undertook to conduct inspection activities of

your concerns?
A Yes.
Q All right.
Now, did you -- how did you learn that fact?
A From a gentleman on the day shift.
Q And who was that gentlemen?
A Ron Nelson.
Q Okay. Mr. Nelson is an inspector acquaintance of yours?
A He was transferred from second to first.
Q What, if anything, did Mr. Nelson pass on to you about the NRC and their inquiry on your concerns?
A He told me that the -- that the NRC Inspector had asked him about me.
Q All right.
And who did you understand that NRC Inspector to be?
A He didn't say.
Q Did you have any other information on the subject of the NRC conducting inspection activity on your concern?
A I don't think it was until the next day or day after that I was told that I would be interviewed by the NRC on-site.
Q Who told you that?
A My Lead, Don Schirmer.
Q All right.

And were you, in fact, thereafter interviewed by the NRC?

A Yes, I was.

Q And who interviewed you?

A I can't remember his name.

Q Westberg?

A Yes, that was him.

Q Where did Mr. Westberg interview you?

A At NRC office on-site.

Q All right.

The Resident's office?

A That's correct.

Q And Schirmer, your lead, told you that you should go to the NRC Resident's office for this interview?

A Yes. I was interviewed right after he was.

Q After who, Mr. Schirmer was?

A Yes.

Q Did Mr. Schirmer recount to you that he had just been interviewed by NRC?

A Yes.

Q Did it come to your attention that any other persons were interviewed by the NRC?

A Yes, I heard some names.

Q All right.

What names did you hear and where did you hear the

names from?

A I heard Bob Tuite, Mike Lechner, Don Schirmer, John Thomas, myself, and that was it.

Q All right.

A The other guys I don't remember them particularly stood out.

Q Well, Mr. Tuite was a supervisor; correct? Mr. Lechner was supervisory, he was a Lead?

A He's a Lead.

Q All right.

As was Mr. Schirmer?

A Yes.

Q What was the substance of the questions Mr. Westberg asked you in the interview?

A Basically, allegations I had brought up.

Q All right.

Did he provide you copies of any documents that he had reviewed in inspecting your allegations?

A No.

Q Did you review Comstock procedures with him?

A Not that I remember.

Q Did your discuss, for example, interpretation of the separation criteria contained in Comstock procedures that we have discussed this afternoon?

A No.

Q Did you discuss with him the Comstock procedures for originating Nonconformance Reports?
A No.
Q Did he discuss with you the nature of the cable damage and separation problems that are depicted in your diagram to the Nonconformance Reports, the upper cable spreading room?
A No, we just talked about the NCR.
Q Did he ask you to draw a diagram of any of the cable damage or separation problems you identified?
A No, he didn't.
Q How long did the interview take with Mr. Westberg?
A Approximately 15.
Q 15 or 50?
A 15.
Q All right. 15 minutes.

Did you thereafter make a subsequent written request for a transfer, another written request for a transfer?

A Later on I did.

JUDGE GROSSMAN: Mr. Guild if you are on a topic, I won't interrupt, but whenever it's appropriate, I think we ought to recess.

MR. GUILD: If I could just ask the witness to identify this document, I believe it would be an

appropriate time for a recess.

BY MR. GUILD:

Q Let he show you what has been marked as Deposition Exhibit 3. This bares a date of 8/7/86.

Now, the top portion of that document reflects a written -- a third written request for a transfer that you made?

A Yes.

Q All right.

It appears to me -- my copy is poor, and I apoligize to the Board -- and it appears to adress Messrs Cartelli and Nemeth?

A Yes, it is.

Q And that Mr. Nemeth -- below his, is your writing?

A Yes.

Q And did Mr. Nemeth show you that portion of his writing?

A Yes, he did.

Q And in it he supports your request for a transfer?

A Yes, he does.

Q Now, whose writing is the bottom portion of the document?

A Tony Simile.

Q All right.

And when did you first see Mr. Simile's response to your August 7, 1986, transfer request?

A After a meeting that was held between me, Commonwealth Edison, LKC and the NRC.

Q All right.

At which Mr. Simile was present?

A Yes.

Q All right.

Mr. Simile's response to your transfer request, in substance, denies your request at this time?

A Yes.

Q And it's dated August 27, 1986; and is that -- was it thereafter that you got a copy of the Simile response?

A Yes.

MR. GUILD: Mr. Chairman, I would ask that this document be marked as Intervenors' Exhibit 126, and be received in evidence.

MR. GALLO: 124.

JUDGE COLE: 124.

JUDGE GROSSMAN: 124.

MR. GUILD: And be received in evidence.

MR. GALLO: No objection.

MR. BERRY: No objection.

(The document was thereupon marked Applicant's Exhibit No. 124 for identification as of the 9th day of September, 1986.)

(The document marked as Intervenors' Exhibit No. 124 for identification was thereupon received in evidence as Intervenors' Exhibit No. 124 in evidence.)

JUDGE GROSSMAN: Received.

MR. GUILD: We can --

JUDGE GROSSMAN: All right.

We will return until tomorrow at 9:00 o'clock.

(WHEREUPON, at 5:10 o'clock P.M., the hearing was thereupon recessed to Wednesday, September 10, 1986, at the hour of 9:00 o'clock A.M.)

CERTIFICATE OF OFFICIAL REPORTER

This is to certify that the attached proceedings before the UNITED STATES NUCLEAR REGULATORY COMMISSION in the matter of:

NAME OF PROCEEDING: COMMONWEALTH EDISON COMPANY
(Braidwood Station,
Units 1 and 2)

DOCKET NO.: 50-456 OL; 50-457 OL

PLACE: CHICAGO, ILLINOIS

DATE: TUESDAY, SEPTEMBER 9, 1986

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission.

(sigt) Glen L. Sonntag

(TYPED)
GLEN L. SONNTAG

Official Reporter
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