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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

In the Matter of:

50-445/446

DISCUSSION ON MOTIONS FOR SUMMARY DISPOSITION FILED BY APPLICANT

COMANCHE PEAK

Location: Bethesda, Maryland

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DISCUSSION ON MOTIONS FOR SUMMARY
DISPOSITION FILED BY APPLICANT

Conference Call
7735 Old Georgetown Rd.
Bethesda, MD
Room 10117

August 6, 1984

Meeting in the above-entitled matter convened at 8:00 p.m.

APPEARANCES:

On behalf of the Applicants:

DR. ROBERT IOTTI
JOHN FINNERAN
DAVID WADE
WILLIAM A. HORIN, ESQ.

On behalf of the NRC Regulatory Staff:

GEARY S. MIZUNO, ESQ.
SPOT BURWELL
HANK FLECK
DAVID TERAO
JOHN BRAMMER

On behalf of the Intervenor Citizens Association for Sound Energy:

JUANITA ELLIS, President
1426 South Polk Street
Dallas, Texas 75224

Mark Walsh

BH
NRC-105
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P R O C E E D I N G S

MR. BURWELL: My name is Spot Burwell, I'm the Comanche Peak Project Manager for the NRC. I have with me here tonight, David Terao, and the court reporter. I would recommend that we go through and introduce ourselves one more time to give the court reporter one more opportunity to hear your voice.

MR. MIZUNO: This is Ceary Mizuno, counsel to the NRC staff.

MS. ELLIS: Juanita Ellis for the Intervener CASE. With me is Mark Walsh. Mark, do you want to say something for the reporter. Woops, I will go see if I can find him.

MR. HORIN: Who are the consultants for the NRC staff one more time?

MR. FLECK: Yes. This is Hank Fleck. I am with E-Tech, consultant for the NRC.

MR. BRAMMER: John Brammer with E-Tech, consultant for the NRC.

MR. HORIN: John, how do you spell your name?

MR. BRAMMER: Brammer.

MS. ELLIS: Okay. Mark is on now. Do you want to say something, so the reporter can hear your voice.

MR. WALSH: This is Mark Walsh.

MR. HORIN: This is Bill Horin, counsel for

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Texas Utilities. We have three other individuals on the line also, which I will go around in alphabetical order.

MR. IOTTI: This is Bob Iotti.

MS. ELLIS: You just faded completely.

MR. IOTTI: I am a consultant to Telco.

MR. WADE: This is David Wade with Texas Utilities, also.

MR. BURWELL: Okay. Let's go ahead and try it. As I understand it, the purpose of this meeting is to allow CASE to ask the Texas Utilities questions concerning the, some of the motions for summary disposition that have been filed by Texas Utilities. Before we go into that, I would like to find out what the agenda is this evening. In particular, I would like to establish early on that we are going to talk about the items in which by consultants at E-Tech participate, and if so, to take that up early in the agenda. If not, to drop them off.

MS. ELLIS: Right. I think that is a good way. After talking with you earlier today Spot, as we discussed, I haven't discussed with the applicants yet, I think that we can save a lot of time. Bill Horin had asked that we try to limit this to a couple of hours. I think that we can probably do that by doing a few

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things to begin with. I think the quality assurance for design questions don't need necessarily to have everybody, all of the technical people on the line. What I propose to do, and what we discussed was to try to do something in writing on that, and get that off if not tonight, tomorrow for sure, so that the applicants can have it right away, and everyone can have it. Then, get back with another, and informally try to take care of those things. That will save us some time tonight.

Also, Mark has indicated, I don't believe we really will have any questions on the upper lateral restraint. We just would like to be sure that we get the same information that was given the staff on it. Another thing, I know you had mentioned, Spot, that some of your people might be interested in is about the differential displacement. We don't have any questions on that. So, any of them that are involved with the staff, they don't really need to stay on the line.

Other than that, the ones that we do want to get into tonight are, first, cinched up U-bolts, axial restraints, richman inserts, and stability. Knowing the way things go, we figure that will probably take the rest of the time that we have allotted. We are going to try and go through just as quickly as possible.

MR. BURWELL: Excuse me, Ms. Ellis. What was

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the third one? You had cinched up U-Bolts, actual restraints, Richman inserts.

MS. ELLIS: Richman inserts.

MR. BURWELL: I believe there are two of those on Richman inserts.

MS. ELLIS: Not that we have gotten.

MR. BURWELL: Okay.

UNIDENTIFIED SPEAKER: Spot, there is just one.

MR. BURWELL: Just one, alright.

MS. ELLIS: Stability was the fourth one. Does that fit in with your people okay Spot? We could rearrange it if we need to.

MR. FLECK: Spot, this is Hank Fleck. If you could do the U-bolt cinching actual restraint, I would appreciate it. We are not on, well, we haven't gone out to dinner yet. If we could get that out, that would help us here.

MS. ELLIS: Excuse me, I can't hear whoever is talking at all. I can tell there is talking, but I can't understand it at all. You will have to translate whatever they say.

MR. BURWELL: Okay. That was Hank Fleck. Mr. Fleck requested that we take up the cinch U-bolt first. That difficulty is that they have to pull together some

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things and look over some personal business before they get on the plane early tomorrow morning to arrive here to be at the meeting on Wednesday.

MS. ELLIS: Right. Are there any others that we need to arrange?

MR. BRAMMER: Are you going to ask any questions on local stress and displacement?

MS. ELLIS: I couldn't hear that, Spot.

MR. BURWELL: Mr. Brammer, I believe, asked if you were going to ask anything on local displacements and stresses.

MS. ELLIS: I believe that, is that the differential displacement?

UNIDENTIFIED SPEAKER: No. We will not.

MR. BRAMMER: Thanks.

MR. HORIN: This is Bill.

MS. ELLIS: I can barely hear you, Bill.

MR. HORIN: Before we start, I want to clarify a couple of things. The first thing, to determine whether or not there are, whether you plan to ask any additional questions in this exercise with respect to anything other than the cinch U-bolts, the actual restraits, the Richman stability, and the design QA? Is it my understanding that those last five you have questions on?

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MS. ELLIS: I believe that is right, isn't it Mark?

MR. WALSH: Yes.

MR. HORIN: As we discussed this morning, I'm sure, Mark that Juanita passed it along to you. We would anticipate that you would be able now, after having these for a month to have focused questions. I asked her to pursue those things that you really believe are important in material. We want to provide the information that is necessary to respond, but we don't want to exercise in dealing with the new shift. It is not important, and I'm sure you will be able to disern what is important and what isn't. I think it will save everybody a lot of time.

MS. ELLIS: I think that's true. I think that we can probably do it with a little less discussion than we did before. Though the discussion was interesting, I think it did take up quite a bit of time back and forth.

MR. HORIN: What I would propose to do is that we start, as we did before with a particular motion. Mark, I don't know how you organized it, but if you have it organized again by the statement of material, perhaps I should just start going into it right now.

MR. BURWELL: Mark, would you speak up loud so

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my people in California have some chance of hearing you.

MR. WALSH: Now, the first one would be the ascension of U-bolts. In the first guide, I'm shown there, would like the documentation that the stress relaxation stops after you reach a certain level. For A36 steel, that it is approximately 1/2 of the yield stress.

MR. IOTTI: This is Bob Iotti. Can you hear me Mark?

MR. WALSH: Barely, but I can.

MR. IOTTI: I don't know the documentation you would like to have, but some of the documentation is already provided as part of the test results. You can see what happens to the screen in the U-bolt as the streses in the U-bolt exceed a certain level in where the strain relaxation stops. In addition, I could refer you to that reference, I believe it was quoted. Now, I have to go back to the affidavit.

MS. ELLIS: Okay, Bob. Just a moment, before you continue. Look through the documents that you have provided, so if it is in there, and that is all that you can provide on it, you don't really need to go into the detail of that. Just tell us what is provided is it.

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MR. IOTTI: What is provided is already in the document.

MR. HORIN: There is also a reference in the document, Bob, that Mark should look at?

MR. IOTTI: The results that are most illustrative are in the test results of...give me one second.

MS. ELLIS: I think you just faded out.

MR. IOTTI: I'm sorry.

MS. ELLIS: I think you just faded out.

MR. IOTTI: I'm sorry, Mrs. Ellis. I will try to speak louder, but I am already at the top of my lungs.

MS. ELLIS: I know.

MR. IOTTI: If you go to attachment one, you will see a lot of the results already in attachment 1.

MR. WALSH: So, what you are saying is that your whole conclusion is pretty much based on that conclusion. and pretty much based on that tasking that you have performed?

MR. IOTTI: No, that and that additional ASTM document that I referenced in the affidavit. I am trying to find the precise page where that is different. Look at page 25 of the affidavit, reference 11. The title is Calculation of Stress and Relaxation

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Engineering Alloys, ASP & Data Service Publications GS-60.

MR. WALSH: Can we get a copy of that?

MR. IOTTI: The whole document is really irrelevant. I can send you a copy of (inaudible).

MR. WALSH: Can you repeat that last part?

MR. IOTTI: It is a thick document, most of which is totally irrelevant, because it refers to alloys which have nothing to do with carbon, maganese, silicon steel, such as A36. I can send you the section of the documents which are relevant.

MR. FINNERAN: This is Jack Finneran, Mark. Did you hear that? If not, I will translate.

MR. WALSH: Not that well.

MR. FINNERAN: He said that that document would no be of any use to you becuase it concerns a lot of other type materials than the ones that the U-bolts were made out of. He will send you copies of the pages that are pertinent to the U-bolts in question.

MR. WALSH: Alright.

MS. ELLIS: Was there anything else Bob, that you need to say on this?

MR. IOTTI: No, Mrs. Ellis.

MS. ELLIS: Okay.

MR. WALSH: Okay. Number three.

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MR. IOTTI: Just a moment, Mr. Walsh. Let me make a note of what I need to send you.

MS. ELLIS: I didn't understand that.

UNIDENTIFIED SPEAKER: Mr. Iotti said that he wanted to make a not on what to send you.

MR. IOTTI: Go ahead.

MR. WALSH: The next item is number three.

UNIDENTIFIED SPEAKER: This is the statement effect?

MS. ELLIS: Yes. All of these will be, unless we tell you otherwise.

MR. WALSH: Okay. It is about a sample that you looked at. We would like to know what criteria was used to select the particular supports, how many of these supports have the U-bolts cinch down after the ground and root procedure before this cinching of U-bolts came into effect, were in that sample. How the random sample was selected, and how that random sample is representative with the bolts, all the U-bolts in the plant.

MR. IOTTI: This is Bob Iotti again. John, you may have to help me out on that.

MR. FINNERAN: Mark, could you hear Bob?

MR. WALSH: Yeah. Bob, just keep speaking up.

MR. IOTTI: First of all, you have correctly

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stated the sample was random in the sense that we did not choose any particular type of U-bolt. We chose reasonably, with a criterion that said we should C-bolt, not U-bolt in different sizes, in random areas of the plant. In the affidavit, cable tubes, you will have total number of U-bolts. It is broken down in the number of U-bolts, and these bolts identified by size. That is Table 2.

MR. WALSH: How many of these have been inspected by QC for the torque values?

MR. IOTTI: John.

MR. FINNERAN: Bob, can you hear me?

MR. IOTTI: Yes.

MR. FINNERAN: Bob Iotti, can you hear me?

MR. IOTTI: Yes.

MR. FINNERAN: Okay. I'm at a little bit of a loss here, because I can't find my statement of material facts. So, tell me which sample we are talking about.

MR. IOTTI: We are talking about sample of the torque that are present in the cinched narrow U-bolt, which were taken randomly in the...

MR. FINNERAN: In the field?

MR. IOTTI: February. His question is how many of those U-bolts have been inspected through the

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Brownley Rhodes Procedure?

MR. FINNERAN: To the best of my knowledge, all the U-bolts have been inspected.

UNIDENTIFIED SPEAKER: Mark, would you repeat your question again for John?

MR. WALSH: My question was how many of the U-bolts have been inspected for the torques that came out in the brown root procedure, and were inspected by QC?

MR. FINNERAN: Mark.

MR. WALSH: Yes.

MR. FINNERAN: This is John Finneran again.

MR. WALSH: Okay.

MR. FINNERAN: As I said before, to the best of my knowledge, all of U-bolts that these samples were taken on had been completed in construction, had been bought off by QC.

MR. WALSH: Of the sample that you look at, was there any type of reliability analysis performed that one could extract the confidence level that the supports would be stable with the ascension down values, the torque values and cinching them down?

MR. IOTTI: Bob Iotti. I am not sure I understand your question.

MR. BURWELL: Bob, Dr. Iotti. Spot Burwell

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here. May I make a suggestion. Would you talk very carefully into your phone. It sounds like you are turning your head away from the speaker very often.

MR. IOTTI: Well, unless you want me to take the speaker out of my mouth...

MR. BURWELL: Thank you for your patience.

MR. IOTTI: Okay. I'm getting a sore throat very quickly. Mark, let me see if I can answer your question, because I am not sure I totally understand. I think what you are driving at is have we established every one of the supports that we sample. Is there a sufficient torque applied to assure stablility?

MR. WALSH: In a numerical sense.

MR. IOTTI: In a numerical sense?

MR. WALSH: Yes. You didn't test every one of them. You only tested a sample.

MR. IOTTI: I understand. As a matter of fact, we are telling you in the report that there may be some the lowest range of torque of which may be below the value in which stability in the sense that the support won't move.

MR. WALSH: Okay.

MR. IOTTI: Might not be assured. That doesn't mean in our minds the support is unstable in the sense that it performs its functions. But, if you interpret

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stability as being support, it will not move. There already are some in the range we have sampled which will be below that level. That is why we have committed to go back and inspect all of the stationery U-bolts to make sure that the minimum value of torque exists. When I say all, I mean all the stationery U-bolts.

MR. WALSH: Okay.

MR. IOTTI: That is in the affidavit.

MR. WALSH: Right. I remember. Now, the next one is item number four.

MR. IOTTI: Does that answer your question?

MS. ELLIS: What?

MR. IOTTI: I was just wondering if my answer satisfies Mr. Walsh on his question on three?

MR. WALSH: Yes.

MR. FINNERAN: Let's make it clear too, that there is nothing that the applicant is to provide in addition to what we just discussed. Is that correct? We owe you no documents?

MR. WALSH: That's correct. Alright. The next item is number four. This is relating sort of, to what Dr. Iotti was just talking about. The second sentence is therefore unlikely. How will one know from a reinspection, that there has been an overtorqued condition, and how does one come up to a percentile

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that saying, well, maybe only one percent will be overtorqued.

MR. IOTTI: Okay, Mr. Walsh, if you will look at table 2 on the affidavit, you will note that none, zero, of the supports that were sampled were, in fact, overtorqued. That is, whether they might have been overtorqued to begin with or not, we don't think they were. At the space when they were inspected, none of them showed overtorquing. Now, I don't remember how many total U-bolts we inspected, do you remember John?

MR. FINNERAN: No. I don't remember off hand, Bob.

MR. IOTTI: I think, if I can find table 2. I would say, roughly, 150 supports. Now, when you find none of them overtorqued out of 150, you already have a certain confidence that you have a high probability that none of the others will be overtorqued.

MS. ELLIS: You just faded again.

MR. WALSH: I got it Juanita.

MS. ELLIS: I think that we understood your answer, though.

MR. WALSH: Yeah.

MR. IOTTI: Is that sufficient, Mark?

MR. WALSH: Yeah. That is sufficient. The next item will be number 5, item B. That is on Page 3, and

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it is in regards to the friction test.

MR. IOTTI: Yes.

MR. WALSH: Did this friction test include cyclic thermal results. If not, I would like to see the effects of cyclinc thermal results.

MR. IOTTI: The friction test did use the electric load. The cyclic results, because one of these specimens.

MS. ELLIS: I'm sorry. I can't hear you.

MR. BURWELL: This is Spot Burwell again. Bob, may I suggest that I contact my operator again, and see if, we can try to get a clear circuit on you.

MR. IOTTI: Let me relay my answer to John Finneran, who also knows the answer. Maybe he can make himself understood better.

MS. ELLIS: If you could do it in phrases, sort of, that would probably work.

MR. FINNERAN: Well, that is going to take twice as much time. Spot, if you can just to and use another phone and call, and we will keep going.

MR. BURWELL: Let me see what I can work out here.

MS. ELLIS: Spot. It seems like sometimes we are hearing him alright and sometimes it fades.

MR. BURWELL: Yes. I am having the same

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trouble.

MR. IOTTI: Let me try again. Can you hear me now?

MS. ELLIS: Sounds good now.

MR. IOTTI: We'll take advantage of the proper airwave. There were on the ten inch scheduled for the stainless steel pipe. Two tests were run. In one instance, the friction test was the same U-bolt, the same type. Eventually, the U-bolt is led by the difference to cycling test, because the friction test was repeated.

To compare the results of cycling effects on friction, versus what we are going to expect the friction to be on verging the pipe material and the U-bolt material in different U-bolts placed on a different section of that pipe or fuse. In fact, we did see some difference in the friction.

MR. WALSH: Well, my statement, or my request is to see documentaticn of a U-bolt on the friction test that has exhibited, or excuse me, has experienced the cyclic thermal action that a pipe support will see at Comanche Peak, a direct correlation.

MR. IOTTI: Well, there is no.

MR. BURWELL: Dr. Iotti. This is Spot Burwell. I have talked with my operator. If you will hang up,

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she will try ringing you back.

MR. IOTTI: Alright. Will do.

MR. BURWELL: Would you try that please.

(Brief recess.)

MR. IOTTI: Let me rephrase these questions. We would like to have the test results for direct correlation that shows friction between the U-bolt and I formally cyclic thermal tests on the U-bolts. That tests were not right. However, that chance was then (inaudible) by a combination of tests that were conducted on friction varying as the difference about the free load posed on the U-bolt. The thermal driving test shows how much free load is posed on the U-bolt after it has been cycled. The last effect is to show how much variability there is in friction due to pollinate the effect. The population of those three tests is what would enable us to determine, for instance, in the final analysis, how much stress is developed between the pipe and the U-bolt when the torque is applied to the free load.

MR. WALSH: Why was it decided not to do a test with friction and thermal cycling of loads?

MR. IOTTI: Simply, time consideration. You have selected the number of tests that would encompass a maximum contination of all of the parameters that you

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wanted to take in a reasonable time.

MS. ELLIS: Anything further on that one, Mark?

MR. WALSH: No. Item B on page 4.

MR. IOTTI: Go ahead.

MR. WALSH: Item B on page 4 is the next item.

MR. IOTTI: I got it, go ahead.

MR. WALSH: In the last sentence of the second paragraph he says the decision to retain an adequate clamping for it. What is meant by sufficient? And, how do you know that it is sufficient?

MR. IOTTI: The results of the finite element analysis and both the results of the tests where we ran the seismic tests as well as the long term vibration test with the minimum clamp supports.

MR. WALSH: But, that didn't include the thermal tests, correct?

MR. IOTTI: What difference does that make. We ran it at the minimum value of the clamping force.

MR. WALSH: Well, if the piping expanded, and the clamps were relaxed, would there still be sufficient clamping force?

MR. IOTTI: That has been determined. The minimum clamping force that I am talking about, Mark, after the pipe has done all of that it would be the

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clamping force that you are talking about. We determined that from the kind of element analysis.

MR. WALSH: On page 6.

MR. FINNERAN: Does that mean you don't have any more questions on that, Mark?

MR. WALSH: Correct. On page 6, item 6, it references a manstran program. Is this the same program that Dr. Bjorkman (phonetic) was talking about in the last hearing?

MR. IOTTI: Quite possibly, Mark. There are many versions of the program, and they are all called manstran. This happens to be a particular version that has certain capabilities. Now, as I recall, Dr. Bjorkamn had not utilized a manstran for his analogies either. He utilized (inaudible).

MR. WALSH: The is not the same analysis that Dr. Bjorkamn was discussing then, correct.

MR. IOTTI: This was not the same analysis. We are discussing here, afforded in attachment 3 is the totally independent analysis that CYGNA had done.

MR. WALSH: Alright. On page 7.

MR. FINNERAN: So, we are all clear on that one, Mark?

MR. WALSH: On page seven, item two.

MR. IOTTI: I don't have an item...oh, sorry,

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go ahead.

MR. WALSH: It states maximum stress in the U-bolts are the results of the worst case load combination evaluated compared favorably with test results demonstrated that stress in the U-bolts will not cause any adverse impact. Did these stresses exceed code allowables?

MR. IOTTI: I have to go back now and turn to the affidavit. Give me a second. The stresses calculated in the U-bolt are given on page 48 of the affidavit, Table C. I don't have them, John, what is the code allowable for those U-bolts. Do you remember?

MR. FINNERAN: No, Bob. Not off the top of my head I don't.

MR. IOTTI: That's my problem right now. I don't remember right off the bat whether we could have at least the instance of the floor range 160 has exceeded the code allowables. You understand, of course, that is with a maximum free load that we don't expect to have. It is a maximum that we chose to analyze with.

MR. FINNERAN: Isn't that something that Mark could check on as easy as us, now that he knows where the particular stress level.

MR. IOTTI: I think he could check it himself.

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MR. WALSH: Okay. Alright, my next questions was the stresses within the pipe, which is item 3. How does one know that that won't have an adverse impact on the piping system?

MR. IOTTI: We have analyzed the stresses in the pipe. We have looked at two different manners in assessing whether the stresses could cause the problem. In either case, we will review that the stresses were acceptable, or are acceptable at maximum free load level. You understand the tool gives you no direct guidance of this.

MR. WALSH: Wouldn't these stresses be added to the pipe stresses?

MR. IOTTI: They were added. The stresses already present in the pipe were added to the stresses produced by the clamping action on the U-bolt.

MR. WALSH: In all cases?

MR. IOTTI: In all of the four cases examined.

MR. WALSH: No, I'm discussing the piping systems at Comanche Peak that are in place.

MR. IOTTI: We added the largest values of the stresses whether they occur at the same point of U-bolt or not. We were conservative for, of course the pipe sizes, that were available.

MR. WALSH: And, they will be using these

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values, these additional stresses when they perform the stress analysis?

MR. IOTTI: The values were added absolutely. So, you can calculate it independently. Previous analysis of piping systems were examined to determine what were, what could be the maximum value of the stresses, regardless of where they occur, though they had to occur in the piping because that is where we have U-bolts. Now, you take the maximum value for the particular pipe size, and then added that value to whatever stresses were being calcualted by, and I shouldn't talk in stressing densities here, not stresses. They were added to the stresses calculated by the finite element analysis.

MR. WALSH: Okay. Will these stresses be added when Gibbs and Hill do their stress analysis evaluation?

MR. IOTTI: No. They have been added now. Gibbs and Hill have already done their analysis. We have no intention to go back and add these stresses on top of Gibbs and Hill. What we did was added Gibbs and Hill on top of these. The two results are the same.

MR. FINNERAN: I think to make it clear, the purpose of the analysis and testing that we did was to demonstrate the adequacy of what had been done. There

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is no intention to backfit all the stress analysis to add stresses in that we don't ever agree that was required to be considered. It was clearly to demonstrate the acceptability that we had.

MR. IOTTI: Dave. Bob Iotti. Even if we were to do it the other way, as Mark suggests, for us to take the stresses and give them to Gibbs and Hill for them to add, they would come to the same conclusions. They would add it just as we did, and then they would be faced with the task of determing what the code allows. They would go through the same type of exercise. So, we just went the other way. We took Gibbs and Hill stresses and added them to ours, and made the same determination.

MR. WALSH: Okay. I think that clarifies it.

MS. ELLIS: Okay, anything further on that one?

MR. FINNERAN: No.

MR. WALSH: Alright. On page 9, item 13, the first sentence. We would like to see some documentation for the criteria that why these original support designs were intentionally cynched down, the U-bolts.

MR. IOTTI: John Finneran.

MR. FINNERAN: Yes.

MR. IOTTI: Can you provide that?

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MR. FINNERAN: Tell me what the first sentence says, someone.

MR. WALSH: A significant number of U-bolt supports at CPSES were ultimately contended to be cynched down.

MR. FINNERAN: Well, the documentation for that Mark, would be all the drawings when they were initially released showing zero clearance between the U-bolts and the pipe.

MR. WALSH: I would like to see calculations showing that this needed to be performed in the original design calculations.

MR. FINNERAN: These U-bolts were always intended to act as clamps. They were assumed to be the same as pipe clamps attaching to the pipe. You won't find any calculations in a support documentation about these clamping for pipe supports, either.

MR. IOTTI: Well, let's not be too hasty. You will probably find the criteria or...

MS. ELLIS: I'm sorry. We can't hear you at all now.

MR. WALSH: I'm sorry. We are losing that completely now.

MR. IOTTI: I would just like to expand on John Finneran's answer. John, wouldn't you find on

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those supports which were always intended to be cynched down, the (inaudible) in the old calculations would assume that there is no free expansion actually in that direction, or sufficient thermal expansion to be given in any other direction.

MS. ELLIS: John, if you can hear him can you tell us what he said. We couldn't hear it.

MR. FINNERAN: I will have to apologize, because I lost it too, Bob. Try one more time.

MR. IOTTI: John. Where you have the cynched down U-bolts, always intended to be cynched down, wouldn't you expect no axial thermal movement?

MR. FINNERAN: Okay. Bob said that where I had these, where we had these U-bolts always cynched down, would we expect no axial thermal movement.

Bob, can you hear me?

MR. IOTTI: Yes.

MR. FINNERAN: These particular U-bolts, Bob, are used on single strutts and snubbers.

MR. IOTTI: Okay. You can't exceed more than the movements of...that the snuffer or the strutt permits you, right?

MR. FINNERAN: That's correct.

MR. IOTTI: Forget my question.

MR. FINNERAN: I guess I am having trouble

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connecting that up with Mark's question, Bob.

MR. IOTTI: Well, he was asking what criterion would you use to select when you would cynch them down from A-1 versus, you know, not cynching them down.

MR. FINNERAN: Yes. I think he asked me if there were any calculations in the original design of these reports related to the cynching down of these U-bolts. Is that correct, Mark?

MR. WALSH: Yes. There is none, correct?

MR. FINNERAN: I would say that there is none. These were to be assumed to be pipe support clamps, and there would be none for clamps either.

MS. ELLIS: Anything further on that?

MR. WALSH: Yeah. There is an end of item number 13, there is a reference to go back to the affidavit at 5. And, at page 5, the last paragraph, table 1 is a partial list of supports. We would like to have the complete list.

MR. HORIN: What is this a list of?

MR. WALSH: It is a listing of the reports that are cynched down at CPSES.

MR. HORIN: Mark, to get back to my point earlier, is a list of particular material to anything that needs to be responded to. Is there some technical information that can be drawn from a list that would be

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helpful in responding? Okay, just a moment Darrel.

MR. WALSH: We would like to have the ones that were excluded for the larger pipe sizes, which have less intense sub supports. In other words, what I am asking for is those ten.

MR. IOTTI: Well, this list was compiled as follows. John.

MR. FINNERAN: I'm listening.

MR. IOTTI: Okay. If there were more than 10 supports for that piping size, 10 supports. Then, we listed the ten most heavily loaded.

MR. FINNERAN: That's correct.

MR. IOTTI: Okay. Where you do not see 10, there aren't ten. What you see is what you have.

MR. HORIN: Okay. John, repeat that for Mark. Could you hear that, Mark?

MR. WALSH: Very little.

MR. FINNERAN: What Bob said is the list you have for a particular pipe size is a listing of the highest loaded supports for that size. If there are less than 10, then that is all that there is on that pipe size.

MS. ELLIS: Oh. Are you saying that even though that there is less than 10, that those 9 or however many there are are still listed?

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In other words, they are included in the table? Is that correct?

MR. FINNERAN: What we are saying is that for each pipe size, this list was to list the 10 highest loaded supports for each pipe size. If on this list there are less than 10 supports listed, then that is all the supports of that size for cynched U-bolts.

MS. ELLIS: Right. The way this was worded, it sounded as though these larger pipe sizes which have less than 10 were excluded in some way. That is not what you are saying?

MR. FINNERAN: No.

MS. ELLIS: They are still on the list, there is just not ten of them, right?

MR. FINNERAN: Yeah. For instance, 514. There are only two. We didn't delete any. There are only two on 14 inch piping.

MS. ELLIS: Okay. That is what...that is alright.

MR. FINNERAN: Adequate for you, Mark?

MR. WALSH: That finishes up cynched up U-bolts.

MS. ELLIS: Okay, next will be the axial restraints.

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MR. WALSH: Item one. I would like in item one.

MR. IOTTI: Hold it. I have got to get my file.

MS. ELLIS: We will take a second for everybody to get their documents together.

MR. IOTTI: Can I take one minute for a drink?

MR. WALSH: Good idea. The material facts of the actual restraints, we request documentation on the applicants procedure on modeling trunyans (phonetic).

MR. IOTTI: You were right, John.

MR. FINNERAN: I'm sorry. I just got back in the room.

MR. IOTTI: Mark is asking for documentation of the procedures that here utilizes the model, the trunyan. It is on item one of the material facts.

MR. FINNERAN: Alright, let me look at it. We'll just have to look into it.

MR. IOTTI: Mr. Walsh, I guess we will have to provide it to you in narrative form, or the procedure, if an actual procedure in an actual environment.

MR. WALSH: Item number four, page two.

MR. FINNERAN: Let me clarify that last one. Are ou looking for a copy of the procedure, is that correct?

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MR. WALSH: Yeah. In which describes how they are modeling the trunyans.

MR. FINNERAN: This is the Gibbs and Hill procedre?

MR. WALSH: Gibbs and Hill and Westinghouse. Both of them. If they are the same, it is either one.

MR. IOTTI: Okay. We will get back to you on that.

MR. WALSH: Item four. We would like to see the drawing which demonstrates the largest difference when one considers the rotational effects on the support compared to when there is no rotation effects considered.

MR. IOTTI: Now, here you say drawings?

MR. WALSH: Pardon?

MR. IOTTI: Did I hear you say drawings?

MR. WALSH: Yes, drawing and calculations.

MR. IOTTI: I guess what I am a little confused about is what do you mean by the largest.

MR. WALSH: Well, in the last sentence it says that these loads did not exceed applicable allowables.

MR. IOTTI: Okay.

MR. WALSH: Therefore, a comparison had to be made on all the supports.

MR. IOTTI: That is correct.

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MR. WALSH: We would like to see where the largest comparison occured. We would like to see that drawing and the calculation.

MR. IOTTI: Okay. It will take us just a while to go through and identify the particular ones that had the largest change, and select that particular support and provide you with a drawing. Is there any problem with that, John?

MR. FINNERAN: None, except that we are flying out tomorrow for a meeting with the NRC. So, we will try and get to it as quickly as possible.

MR. IOTTI: When I say quickly, Mr. Walsh. It is assumed that you will understand that it will probably be no earlier than Monday of next week, because we will be in Washington the remainder of this week.

MR. WALSH: Right. Well, try to do the best you can.

MR. FINNERAN: We'll try and get something moving on it tomorrow.

MS. ELLIS: Okay.

MR. WALSH: Okay. Item Number 5. We would like to see the calculations to support CT-1-013-023.

MS. ELLIS: Slow down, do that again, slowly.

MR. WALSH: We would like to see the

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calculations on CT-1-013-023-S42K.

MR. FINNERAN: Let me play it back to you, Mark. CT-1-013-023-S42K.

MR. WALSH: Yeah.

MS. ELLIS: Do you want the calculation of drawings?

MR. WALSH: Yes, showing that they have taken into account the double trunyan effect.

MR. IOTTI: Okay.

MR. WALSH: And, if it is shown on the drawing.

MR. FINNERAN: That what is shown on the drawing?

MR. WALSH: The load due to the double trunyan effect.

MR. IOTTI: The answer is no. It will not be shown on the drawing.

MR. FINNERAN: Did you hear that, Mark?

MR. WALSH: No sir.

MR. FINNERAN: The load on the drawing will not be the load that reflects the double trunyan effect.

MR. WALSH: Why is that?

MR. IOTTI: Because we don't believe that is the best way of modeling the double trunyan. We have

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told you how both Gibbs and Hill and Westinghouse have modeled the double trunyan. What we have then done with the affidavit is attempt to prove to you even had we modeled this, the way that you would like us to, the load has been computed for each leg of the trunyan would still be within the scope.

MR. WADE: I think this again is the case where we have provided additional information to back up the judgements engineering has done previously. We feel that it is justified and we have no intention of updating all of the record calculations and drawings in the field. We did this entire effort simply because the assurance of what we had done was a good judgement in engineering practice.

MR. WALSH: Okay. Alright. I'll leave it at that.

MR. WADE: Do we still agree to supply those calcs?

MR. WALSH: Yes. I would still like to see those calculations for that particular support.

MR. FINNERAN: You understand that this was only a special calculation for this particular case.

MR. WALSH: Yeah.

MR. FINNERAN: It's not the calculation of record for this support.

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MR. WADE: Nor, will it be.

MR. FINNERAN: Nor will it be.

MR. IOTTI: We will label it as such.

MR. FINNERAN: Do you understand that, Mark?

MR. WALSH: Alright. We would like the latest, as well as the ones, the effects when it was modeled as a double trunyan.

MR. FINNERAN: I didn't understand that.

MR. WALSH: Well, didn't Gibbs and Hill reanalyze this, let's say the CG line. Has this support been a double trunyan?

MR. WADE: Mark. We have given you a special analysis that we did especially for this effort. It is not the calculation of record, nor do we intend for it to be. We are simply doing this to demonstrate that what our initial engineering practice was, was justified. This is a special calculation done only for purposes of these discussions.

MR. WALSH: Well, did Gibbs and Hill reanalyze that line as a double trunyan?

MR. IOTTI: The answer, Mr. Walsh, either one or two.

MR. WALSH: Speak up, please.

MR. IOTTI: I don't remember that specific support in that particular line. It may be that that

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support is a support on one of the lines that Gibbs and Hill reanalyze as part of the substantial reanalysis for the purpose of this affidavit. Or, the support was reanalyzed by itself by using a manual method to compute the increase in load through trunyon effect in a conservative manner. So, in either case in analysis or reanalysis of the report was perfected. I just don't remember which one of the two this particular support would fall into. But, in either case, we can provide the special calculation.

MR. FINNERAN: Did you understand that, Mark.

MR. WALSH: I believe so, I have another question. So, the applicants did not reevaluate the supports using pipe stress analysis loads, but another method, correct?

MR. FINNERAN: Some supports were evaluated in this special study using the output of analyses that did have these modeled in as double trunyans. Some, conservative loads were generated manually to analyze them. They were not the result of any additional piping analysis that was done.

MR. IOTTI: Bear in mind that the manual method is guaranteed to produce conservative results.

MS. ELLIS: Okay. Did you want anything about the drawings and calculations on this particular

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support, still, Mark?

MR. WALSH: Yeah. Please.

MR. HORIN: Mark, let me repeat what I understand you are asking for here. That is, simply whatever recalculation might have been done for our affidavit, with respect to the support, whether it might have been a reanalysis as part of the piping stress, or whether it was a manual method that Dr. Iotti is describing.

MS. ELLIS: And you will indicate which, alright?

MR. HORIN: It would be obvious.

MR. WALSH: Alright. Let's move on to item number seven. We would like to see some documentation showing that the applicants are in compliance with the ASME code when it comes to these logs and the stresses that it induces into the piping system. This is the localized stresses if they are wstill within the allowables.

MR. IOTTI: I thought the documentation had been provided as part of the examples of finite element analysis that we had given you as attachment one to the affidavits.

MR. WALSH: Okay. That is sufficient. That is all I have on the axial restraints.

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MR. FLECK: Spot, this is Hank Fleck here.

MR. BURWELL: Yes.

MR. FLECK: It sounds like the two items that I am involved in have been covered, so I am going to hang up here.

MR. BURWELL: Okay, fine. I take it John Brammer dropped off earlier.

MR. BRAMMER: No. I'm still here, but I'm dropping off now.

MR. BURWELL: Good night, gentlemen. We will see you Wednesday.

MR. FLECK: Right. Bye.

MR. BRAMMER: Thank you.

MR. IOTTI: As a point of information, Spot.

MR. BURWELL: Yes.

MR. IOTTI: What time is the meeting on Wednesday?

MR. BURWELL Nine o'clock.

MR. IOTTI: I also ask where?

MR. BURWELL: Oh, certainly, I think it is in room 1713 Maryland National Bank Building.

MR. IOTTI: Okay. Thank you.

MR. FINNERAN: Okay. Do we take up Richmond inserts next?

MR. WALSH: Yeah.

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MR. IOTTI: Let's hear it, I've got to get the Richmond insert document. Don't fire yet...Fire away.

MR. WALSH: Okay. This relates to items 4 and 5 on page 2 of the material facts. We would like to see documentation showing that Richmond Screw Anchor company has a quality assurance program, that the inserts used in EPSCS are a reflection of the tests that were performed in 1957.

MR. IOTTI: Excuse me, Mr. Walsh. I don't seem to be able to find this material.

MS. ELLIS: Can't hear at all.

MR. FINNERAN: Dr. Iotti is saying he cannot find his material facts, and I can't either. Bob Iotti.

MR. IOTTI: Yes.

MR. FINNERAN: I believe in my stack, it was the very last document, even after all of the attachments.

MR. WADE: Motion affidavit even after the statement of fact.

MR. IOTTI: Mine doesn't have it so, John. Do you have it?

MR. FINNERAN: I believe so.

MR. IOTTI: Well, would you fall along, and I will try and come in as best as I can.

MR. FINNERAN: Okay.

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MR. WALSH: Should I restate the question?

MR. FINNERAN: Yes.

MR. WALSH: We would like to see documentation showing the Richmond Screw Anchor Company has a quality assurance program, such that the inserts used at CPSES are a reflection of the tests performed back in 1957.

MR. FINNERAN: Let me write that down.

MR. WADE: John, is that something that we have or something that we have to obtain?

MR. FINNERAN: That would probably be something we have to obtain. The only connection that I can see in the current documentation that we have, the facts, the same type of insert is referenced, the EC type.

MR. WADE: Are we making a material statement here that this is a fact?

MR. FINNERAN: No.

MR. HORIN: What do 4 and 5 of the statement of material facts say?

MR. FINNERAN: It doesn't say anything about that. It says, really, it is a listing of the allegations of CASE, that they raised allegations related to number one, the factor of safety use for Richmond inserts, number two the testing of Richmond inserts, Number 3, the ability of Richmond inserts to

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resist actual torsion. Number 4, the methods used to analyze connections.

MS. ELLIS: We are talking about items 4 and 5 on page two.

MR. FINNERAN: Oh. I'm sorry. I thought you were talking about items 4 and 5, and Item 1.

MS. ELLIS: Okay.

MR. FINNERAN: Alright. Well, the documentation there would be the recommended allowable loads in the Richmond Screw Anchor catalog for the type of inserts we are talking about.

MR. WALSH: Yeah. But, we are requesting documentation showing that the Rich, that the anchors that they are producing now, is still a reflection of the test back in 1957.

MR. HORIN: John. Does the additional testing that ew performed demonstrate that the anchors were at least as strong if not stronger.

MS. ELLIS: You lost me on the last part there.

MR. FINNERAN: I think Bill Horin is saying that the additional testing we have done shows that the anchors are at least as strong or stronger than the previou 1957 test.

MR. HORIN: So, my question is how is the

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request you are making, Mark, really material to the ultimate issue?

MR. WADE: Well I think that that is the thing, Bill. But, it is also true that Richmond represents in their most recent catalog the same data. That, in itself states it there behind the test data produced in 1957.

MR. WALSH: So, Richmond does not test these anchors when it makes them. It just sends them out and just assumes that they are as good as some time ago.

MR. WADE: We didn't say that they didn't have a destructive test periodically. That is something that would have to be confirmed. But we know from our test data that the numbers good.

MR. HORIN: My point is Mark, that irrespective of what Richmond does, the purpose of our affidavit was to demonstrate the capacities of the Richmond in various loading combinations, and we did our own independent tests. That is really what we are relying on in our affidavit.

MR. WALSH: Alright.

MR. HORIN: Bob, correct me if I am wrong.

MR. IOTTI: I think you are right.

MS. ELLIS: Really in effect, you are saying that what you are saying in items 4 and 5, you are not

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relying on?

MR. HORIN: Well, I'm not saying that either. I am saying whether I am questioning Mark's request is really important to the ultimate question given what our tests have shown.

MS. ELLIS: I think is only important as far as the fact that you have put it in your affidavit here, and in your material facts. It is something that we have to address. If you are relying on it fine. If you are not relying on it, we will forget it.

MR. IOTTI: Bill or John, would you read me statement 4 and 5 of material facts?

MR. FINNERAN: Okay, Bob. Statement 4 says the current allowable recommended load for the inserts by the Richman Screw Anchor Company are based on tests conducted at the Polytechnic Institute in Brooklyn in 1957.

MR. IOTTI: That is correct.

MR. HORIN: Yes, Mark. Your question has no bearing as to whether that statement is true or correct. We stand on that statement irrespective of your question. Number 5, John.

MR. FINNERAN: Number five says, data from the manufacturer's test reflect a failure in all sheer tests and the 1-1/2 inch tension test of card due to

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failure of the anchor stud bolts, not failure of the inserts. Failure in the 1" tension test occurred due to the failure of the inserts by concrete cone pullout.

MR. IOTTI: That is correct. That statement that shows that can be made available.

MS. ELLIS: I couldn't hear the last part of what he said.

MR. FINNERAN: He said that that statement of material fact is correct, and has added to substantiate that can be given to you. I think you may already have it. It is in the record.

MS. ELLIS: If it as the same that is attached to 142, do you have 142?

MR. FINNERAN: Part of it. I am not sure if 142 has the 1-1/2 inch and the 1". Part of it does. Part of it is in 142.

MR. WALSH: Okay. Let's go on.

MR. HORIN: You don't need anything else then, Mark.

MR. WALSH: No. Item 7 on page 3. We would like to see documentation showing the applicants, structure designers and/or engineers to check the capacity of the threaded rod. Also, verification of threaded rod capacity as judged, for example, in support number MS-1-02-003-C72S from NPSI. We would

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like to see the original calculations with the original drawings that would verify that the AGE seven bolts is checked or the bolt that is utilized there is checked. We would like to see an example from the PSG group original design prior to 1982, or June of 1982.

One ITT Grinnel original calculation as it was sent out showing that they checked the bolt capacity as well as the moment limiting restraints that was discussed in the hearing. The calculation is performed by Gibbs and Hill. We would like to see the original calculations showing that the Richmond inserts that were utilized that review was checked.

MR. HORIN: John.

MR. FINNERAN: I'm trying to write all of this down.

MS. ELLIS: Do you need for us to go through it a little slower?

MR. IOTTI: I think what he is really saying is please do the calculations and indicate what consideration was given to the allowables.

MR. WADE: Dr. Bob, we can't hear you at all.

MR. IOTTI: Did I hear you say no?

MR. FINNERAN: Yeah. Now we can hear you.

MR. WADE: We couldn't hear you at all.

MR. IOTTI: I said that I think that what he

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is asking is in an abbreviated way for us to produce calculations for each of the designers, VSE, ITT, and NTSI, that shows that they have considered the minimum of either the insert or the bolt, whichever is left in terms of designing the support.

MR. WALSH: In the original designs prior to 1982.

MR. FINNERAN: Okay.

MR. WADE: John, we are agreeing to provide that?

MR. FINNERAN: Well, I don't. I think we already have in the record the allowables from SS30. I assume he asking for some kind of backup calculation on those.

MR. WADE: Looking for examples from each organization, Gibbs and Hill, ITT, VSE and MPSI that they in fact did check the accuracy of the threaded rods in the original design counts. Is that correct, Mark?

MR. WALSH: As well as pipe support labeled MS-1-02-003-C72S. I believe that is an NTSI support, but I am not sure. And, the calculations on limiting restraint that is done by Gibbs and Hill that was used in these hearings.

MR. WADE: I'm not sure which specific moment

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restraint we are referring to. I know we have discussed moment restraints in the hearings. Do you have one particular one in mind that you can identify?

MR. WALSH: I believe we only looked at one in the hearing.

MR. FINNERAN: Can you give us some additional guidance as to what context it was, something to identify.

MR. WALSH: It utilized also, Richmond inserts.

MR. WADE: I recall one such case where we discussed it. I believe there were numerous cases that were brought up at the same time. Do you have a drawing number or anything?

MR. WALSH: It is incorporated in Jack Doyle's exhibit, or CASE's exhibit tract oil drawings.

MS. ELLIS: Okay. Why don't we try to find that drawing number and let him know what it is.

MR. WALSH: Okay.

MR. FINNERAN: I think I know which one it is.

MS. ELLIS: You know which one it is, John?

MR. FINNERAN: Yes.

MS. ELLIS: Okay.

MR. WALSH: That will finish the Richman.

MS. ELLIS: Next will be stability, I guess.

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MR. FINNERAN: Do you have your file, Bob?

MR. IOTTI: Just a second, I am reasonably organized.

MR. FINNERAN: I say more than reasonably organized.

MR. IOTTI: I sure would like to know what happened to the material package to Richmond. Bring an extra copy, will you?

MR. WADE: John's unstapled the mat.

MR. BURWELL: Gentlemen?

MR. FINNERAN: Yes.

MR. BURWELL: I believe we have identified that moment restraint you were talking about a minute ago.

MS. ELLIS: Okay.

MR. BURWELL: It is 699B Doyle deposition, 9Q.

MS. ELLIS: 9Q?

MR. BURWELL: 9Q. It continues on 9R.

MR. MIZUNO: It was more than one page.

MR. BURWELL: It is bound in the transcript of May 17, 1983. I believe it is bound in following page 6224.

MR. WADE: That will help.

MR. WALSH: Okay. Alright, on stability, I'm going to material facts again. Item number 3. We would

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request documentation to an explanation for the reason there were unstable supports to begin with.

MR. FINNERAN: We haven't said there were any unstable supports.

MR. WALSH: In item 4, it states a hold was placed on a further design to this type of support.

MR. FINNERAN: Potential instability.

MR. WALSH: To accept whether or not they were. So, we would like an explanation, then why would a support designer issue a support that was potentially unstable in the first place.

MR. FINNERAN: I think we explained here that these potentially unstable back frame supports were not designed by the original designer. They were field modifications made by the field engineers.

MR. HORIN: We provided the documentation with the motion and affidavit placing the hold on further designs of that type by the field engineer, following through on the assessment of whether they made...

MR. WALSH: Alright. I will go right on to item number 4.

Were there any classes or sessions or instructions provided to the engineers to show them what an unstable support was? The field engineers.

MR. FINNERAN: The field engineers, is that

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what you said?

MR. WALSH: Yes.

MR. WALSH: John.

MR. FINNERAN: Just a second. I don't know of any formal classes or instructions that were given to the field engineers as a result of identification of these box frames. The potential problems with these box frames were communicated verbally amongst the field engineers.

MR. WALSH: So, what is meant by a hold was placed on approval? What is meant by a hold. Is that a CNC NCR?

MR. FINNERAN: A hold means that none of the supports would be approved by the original designer until the potential has to build the issue has to be resolved.

MR. WALSH: How does one know that the support was stable or not. How did Comanche Peak put a hold on the supports. Did they already know which ones were and which ones weren't and they immediately put a hold on every one of them?

MR. FINNERAN: I think Mr. Abeley's (phonetic) letter says that supports of this type, of the box frame type, as he indicated in his memo would be put on hold.

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MS. ELLIS: What their hold tag applied?

MR. HORIN: No. Juanita, this is simply a hold in the approval process. The memorandum that we provided with the motion shows the written direction that this hold be placed on the approval, on this particular type of support. There is no need to do anything in the field. It is in the approval process back in the office. This memorandum gets in that direction, and all parties that were required to be aware of that were made aware of that. The determination as to whether these supports may, in fact be unstable was then conducted separately.

MR. WALSH: Was this hold method, or method of holding a method of trending?

MR. WADE: I think we are getting a feel for the subject here, aren't we Bill.

MR. FINNERAN: No. We simply listen to the ITT engineers until the issues were involved with these supports. None of these supports were to be approved.

MR. WALSH: Did TSE have any of these problems?

MR. FINNERAN: All of the supports were ITT supports.

MS. ELLIS: I'm not sure I understand you. Did you say that all of the supports were ITT?

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MR. HORIN: They were all on ITT design, John believes.

MR. WALSH: NTSI had no unstable supports? Is that correct, John? Is that what you are saying?

MR. FINNERAN: We haven't said that anybody had any unstable supports there, Mark.

MR. WALSH: Well. We are talking about this hold. Now, did this hold apply to, also to the NTSI supports?

MR. FINNERAN: This hold that we are talking about here is a hold that was placed on by Gus Aveley of ITT. It was a hold against the box frame pipe supports. All of those were on ITT design.

MR. WALSH: Did that include NTSI supports?

MR. FINNERAN: No. That hold was not on any design by NTSI. Mr. Aveley was with ITT.

MR. WADE: I think what John said is that there were no NTSI supports that fell in that category, nor was there any TSE supports that fell in that category.

MS. ELLIS: That's what we were asking him.

MR. WALSH: So, the only documentation to this is this letter? Is this letter attached to the motion?

MS. ELLIS: For the affidavit.

MR. HORIN: I believe there were two

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memorandums with the affidavit.

MR. WALSH: Which one is that?

MR. FINNERAN: Attachment A-1 to the affidavit.

MS. ELLIS: To the affidavit.

MR. WALSH: Just a moment. I can't find that. A-1?

MR. FINNERAN: Second page.

MR. WALSH: This is the bi-weekly report?

MR. IOTTI: Yes.

MR. FINNERAN: That's it. Number CG36.

MS. ELLIS: Okay.

MR. WALSH: This is the item where he orders his pens and pencils, right.

MR. FINNERAN: I don't know what you are talking about. The statement that we are talking about is page 2, item 6, the last sentence.

MR. WALSH: And it is dated May 22?

MR. FINNERAN: No. Yes, dated May 22. Right, 1981...

MR. WALSH: Now, dated, on attachment 3, and it is dated 4-2-82.

MR. FINNERAN: Right.

MR. WALSH: How would this letter reflect that hold?

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MR. FINNERAN: Attachment A, that's one. It saysthat technical services of all supports using box structures as attachments until written procedure or approval from provident is received.

MR. WALSH: Yeah.

MR. FINNERAN: In attachment A-2 reiterates to the ITT home office that they are requesting assessment to the situation of ITT home office, assessment A-3 is a request from ITT home office for more information to allow them to proceed with that assessment.

MR. WALSH: Who is Ron Wiesinski (phonetic)?

MR. FINNERAN: He was in the home office.

MR. WALSH: So, this was from the home office to us.

MR. FINNERAN: Attachment A3, correct.

MR. WALSH: Alright. This came from the home office to the site. The home office, item 2, it is saying to the site people define stability? I would like to know how the Attachment A3 solved the problem?

MR. FINNERAN: We didn't say that attachment A3 solved the problem?

MS. ELLIS: Was there an answer to Attachment A3?

MR. FINNERAN: I don't recall.

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MR. IOTTI: John.

MR. FINNERAN: Yeah, Bob.

MR. IOTTI: My recollection is that eventually TSE got so fed up with the inability of ITT to resolve these issues, that...

MS. ELLIS: I'm sorry. I can't hear him at all.

MR. FINNERAN: Well, all you have to do is to go to our affidavit to see what occurred here. Eventually, as we said in our affidavit, and I want to find you the place.

Okay, it is on page 11 of the affidavit. We say, the very last sentence on the page, when question had not been resolved by ITT by September of 1982. He directed that the support be modified to improve stability.

MS. ELLIS: Okay. I think that what we would like to have is any answer that was made, any backup notes, any handwritten notes having anything to do with this particular matter in answer to attachment A3, and any subsequent information that went back and forth regarding this matter.

MR. HORIN: Juanita.

MS. ELLIS: Yes.

MR. HORIN: How is that, I don't even know if

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there is any material that would fall into the scope of that request. How is that material to the disposition of this issue. We have already established in or affidavit how it was ultimately resolved. We stated that it had not been resolved.

MS. ELLIS: You are fading there at the last. How what?

MR. HORIN: We stated in the affidavit that it had not been resolved by September 1982. They usually took it upon themself to be directly resolved. I simply don't see how additional documentation along those lines that you are requesting is material to the position of the issue. I think given the lateness of the hour and this exercise, I think that one falls on the side of matters that are not really important to this issue.

MR. WALSH: I object to that one. The method the applicants utilized in addressing this topic. It would appear that they knew it in 1981, and didn't make a modification until late of 1982.

MR. HORIN: Those are the facts, and we set out the facts. Alright. We have given you the communication that went back and forth, and we have given you the matter in which was ultimately resolved.

MS. ELLIS: I think, Bill, if you look at

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material facts number four, that answers your question. I think it totally ties in to that.

MR. HORIN: Read it to me. I don't have a copy of it.

MS. ELLIS: Applicants promptly identified and acted to correct potential instabilities of piping supports at Comanche Peak over the course of the design process.

MR. HORIN: We did promptly identify them, and proceeded to resolve the issue.

MS. ELLIS: And acted to correct. We want to know what you did, in fact, to correct it, including the documents that we have asked for.

MR. HORIN: We have given you the complete list of what we did.

MS. ELLIS: I think we made pretty clear the documents that we would like to have.

MR. HORIN: I realize you made that clear, but what I am saying is that we have provided the information which sets out the steps that were taken in this exercise. When it was initially identified, the additional communication transpired how it was ultimately resolved. I think the material facts that have been presented and the documentation that has been presented for material facts has been provided.

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MS. ELLIS: Okay. Are you saying that there was no answer ir writing to attachment A3 or any subsequent inforamtion in writing either informally or in the form of phone calls with, perhaps, documented discussions, and so forth.

MR. HORIN: I am not aware of whether there was or whether there was not. All I am saying is that given the memorandum, the three memcranda which we have provided to you, I believe John, what is A3 dated? Is that in April of 1982?

MS. ELLIS: Yes. It is April 2, 1982.

MR. HORIN: Okay. As we stated, it was still being kicked about with ITT and whether or not ITT was doing something internally, we are not sure. But, when it came to September of 1982, we decided that we were going to take it upon ourself to do something. I don't see how it is material whether ITT is doing more internally or not. There has not been a final resolution as of September 1982. That is the material fact.

MS. ELLIS: Okay. I think in this particular instance, we will probably be following up with the board on this. I think it is within the realm of what should be provided. I think it is very relevant to item 4. I think you understand our position.

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MR. HORIN: I understand your position. I say that you should sit back and look at it and step back a step, and see what is really material.

MR. WALSH: Okay. Something you just said, Bill.

We would like to see some documentation that indicates two chiefs knew there was a problem. They acted on it, prior to July of 1982.

MR. HORIN: John, correct me if I am wrong, but I think we were just generally aware of the question. I don't know if there is any separate documentation on it.

MR. FINNERAN: That is correct.

MR. WALSH: How were you aware?

MR. HORIN: John.

MR. FINNERAN: How were we aware?

MR. WALSH: Yes.

MR. FINNERAN: As I said, there was verbal communication concerning these box frames on the job site, and the fact that there were these questions of potential stability that just Aveley raise.

MR. WALSH: Was information that got the belly raised, sent to Texas Utilities?

MR. FINNERAN: I don't think they got the copy of Texas Utilities on this particular memo that he

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sent. But, he was in the field group at the time. He certainly had discussions with other field engineers. He obviously passed this information along to the service engineers. All of those people have contact with TUSI (phonetic)

MR. HORIN: Technical Services Engineers are not organizations in specific, are they John?

MR. FINNERAN: I didn't hear that.

MR. HORIN: I said the Technical Services Engineers are not specific to any one design organization?

MR. FINNERAN: Well, they are representatives of, at this time they were representatives of ITT and NSSI in the technical services group.

MR. HORIN: But, they were all working together.

MR. FINNERAN: That's correct.

MR. WALSH: So, there is no documenation. What documentation does TUSI have to avoid a reoccurance of this problem from the field engineers.

MR. WADE: Again, we have never said it is a problem.

MR. WALSH: So, you did not recognize it as a potential problem, is that correct?

MR. FINNERAN: No. That is not correct. We

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obviously recognize it as a potential problem, and that is why we wrote the memo.

MR. WALSH: Which memo is this?

MR. FINNERAN: Dr. Aveley's memo.

MR. WALSH: But, that is not TUSI. I said TUSI, not ITT Grinnell.

MR. WADE: ITT is the one that is ultimately responsible for the design, not Texas Utilities. This is an oversite function. When we did identify or understand what the issue was, we did take an action. When we saw that the issue didn't get resolved in a prompt manner, if we would have expected it took our only week to get it resolved.

MR. WALSH: Yeah, but I believe Mr., I don't believe...John just stated that it wasn't on that list to see that letter. So, how would he know about this?

MR. WADE: Because it was discussed openly on the site, and was well known by the people on the site.

MR. WALSH: So, it was a commonly known problem that the supports were unstable?

MR. WADE: It was a commonly known problem that the supports were unstable. We don't agree that they are unstable. We agreed it was understood that the issue had been raised and was being discussed, and that action was being taken. We knew that action was being

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taken on the part of ITT Grinnell. So, we gave them what we felt was an appropriate amount of time to respond. When it was not resolved, we took our own action to resolve it.

MR. WALSH: Is modifications that occurred after the 1981 memo still ended up on the stable supports.

MR. WADE: We don't agree with that.

MR. WALSH: Well, then there is no other unstable supports created by the field engineers after May of 1981?

MR. FINNERAN: We will take issue with your characterization of them as unstable supports.

MR. WALSH: Yeah. Other than that, that letter from Grinnell, or Gus Able from his home office, was it correct, the unstable supports being generated by the field?

MR. FINNERAN: His letter doesn't have anything to do with what the field engineers might do. His letter is saying that technical services the ITT review engineers are not to approve any of these supports until the issue gets involved. Those fellows do not write the C&C's, the ITT engineers.

MR. WALSH: Mr. Able, or Abeley. Is he part of Tech Services or field engineering?

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MR. FINNERAN: At this point and time he was a member of field engineering. He was also the lead ITT engieer on site. That is why he was the one writing the memo back to the home office. So, he was representing Tech Services in this regard...

MS. ELLIS: Has it now been lifted?

MR. FINNERAN: I think that we state that since that he directed the supports, all of these bi-frame supports, be modified to improve their stability. If you want to assume that is a lifting of the hold. The supports were approved by ITT, but only after modifications to the facility then.

MR. WALSH: Alright. Just, I think, a couple of more items here. I think John jsut stated that a hold was put on for Tech Services to approve those type of supports. What was done to stop the field engineers from creating those type of supports?

MR. FINNERAN: That was by word of mouth by Mr. Aveley, because he was a member of the field engineers at that time.

MR. WALSH: And this word of mouth is the only documentation that we have had?

MR. FINNERAN: That's correct.

MS. ELLIS: Just to be sure, there was no NCR's? or IR's, no BMC, no DCA or anything like that

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written up, correct?

MR. FINNERAN: No.

MS. ELLIS: Thank you.

MR. HORIN: John.

MR. FINNERAN: Yeah.

MR. HORIN: Were any of this type of support created by the field engineers following, you know, a short period of time after the 1981 memo?

MR. FINNERAN: Bill, I don't know that. We didn't look into that.

MR. WADE: John, weren't there some specific C&C's issue that were issued with the specific intent of improving this facility?

MS. ELLIS: I'm sorry, I can't hear you David.

MR. WADE: I said, wasn't there some C&C's that were issued specifically, including that they were being issued to improve the stability.

MR. FINNERAN: That's correct.

MR. WADE: Would that be in relationship to this memo?

MR. FINNERAN: It could have been, David. It could have been in reaction or relation to the verbal discussion of these supports in the field at that time.

MR. WALSH: Could we have a copy of that C&C then?

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MS. ELLIS: Or of all of them, if there is more than one?

MR. FINNERAN: Which C&C?

MR. WALSH: The one that you just said that may have been issued to improve its stability.

MR. HORIN: I think that has already been provided months and months and months ago in the hearing.

MR. WALSH: That would be the one that you are referencing right now?

MR. HORIN: That is the one that I was referring to and it was discussed in the hearings.

MS. ELLIS: Okay. Just the one, I understood you to say that there was Sub C&C's. Was I wrong about that?

MR. FINNERAN: I was just remembering myself, the one that we talked about in the hearing.

MR. HORIN: Whatever is in the hearing record is the only thing we are referring to. That is the only thing that I have any knowledge of.

MS. ELLIS: Okay.

MR. WALSH: Alright, on page 4, item 8 of the material fact. We would like to see the 15 supports as they were and as they are now. We would like to see the calculations that made them stable, I guess it is.

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MS. ELLIS: Okay. You want to see the drawings and calculations as they were then and as they are now?

MR. WALSH: Yes, and one other item.

MS. ELLIS: Wait just a second. Let me write that down.

MR. IOTTI: Which category is this?

MR. FINNERAN: You don't have a statement of material facts?

MR. IOTTI: No.

MR. FINNERAN: This is when we talk about, let me go back just a second.

MR. IOTTI: We are talking, basically, about a main steam report.

MR. FINNERAN: We are talking about the main steam support, and item number 8 in the material facts refers to page 18 of the affidavit. Okay, we are talking about 15 supports, 13 of which remain steam supports. These were supports which in the original design main steam supports had the eighth inch gap in the design. I believe CASE already has some of these drawings and has entered them into the hearing.

MR. WALSH: We want to make sure we are talking about...

MR. FINNERAN: Most of the other drawings will essentially be the same. They will show that there is

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no value to the eigth in gap.

MR. WALSH: We want to make sure tat we are talking about the same 15. I don't think we have ever seen all 15 and correlated them.

MR. HORIN: I'm having trouble seeing why we have to go into all 15 of them.

MS. ELLIS: I don't think that 15 is an unreasonable number for this particular one. The (inaudible) is one of the important things that, I think we are interested in.

MR. FINNERAN: I don't see what this is going to show you beyond what you already have. We have some drawings which show an eigth inch gap between the U-bolt mechanism, the U-bolt plant mechanism and the pipe. What is a drawing showing the same thing going to give you?

MS. ELLIS: The problem is that we don't have them identified in the affidavit or in the material facts. If you could tell us which ones they are and point them to us, that would be fine if we got them. If we don't have them, we would like to have it.

MR. WADE: John. I think on page 15 of the affidavit we talk about these potentially unstable supports. We talk about U-bolting strutts and solid gap. For example, we say it is exhibit 669B4Q. So, all

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of them will essentially look like this. They will hae an eigth inch gap in them.

MR. WALSH: Well, John, I think it would be just best if you were to give us the 15 support drawings and the calculations before and after, so that when we run across it, we won't say, well, this is a support that was not noticed already or something like that. For example, during the CYGNA hearings, we found another unstable support that was modified. We don't know if that was part of 15. So, if we were to give you those (inaudible), if we should add to it, or if...

MR. HORIN: Mark. We have already identified the type of support. We can just give a list.

MR. FINNERAN: Yeah. I will give you a list of the main steam supports. That will allow you to identify them.

MR. WALSH: Well, we would also like to see which organization originally designed them, and which organization is responsible for the final design, ECD.

MR. FINNERAN: The main steam supports, ITT was responsible for all the designs.

MR. WALSH: And, the other oens?

MR. FINNERAN: Which other ones?

MR. WALSH: Well, there is 15, and there is only 13 main steam supports.

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MR. FINNERAN: I think the other two are ITT also. I can confirm that.

MR. WALSH: Alright. So, one of them is the residual heat system.

MR. WADE: That was definitely ITT.

MR. WALSH: I don't know what the other one was.

MR. WADE: We can discuss that against a list of all (inaudible).

MR. WALSH: Alright. If you provide us with the numbers, and who was doing the other two while a list of the organizations that would be sufficient.

MS. ELLIS: Okay. We may want to ask, are you going to answer some more, maybe some of the calculations when we see them, Mark? Are you going to want those later?

MR. WALSH: Yeah. I would like to see the final, the before and after drawings.

MR. FINNERAN: The other container, ITT also designed.

MR. WALSH: Okay.

MS. ELLIS: So, all of them are ITT?

MR. FINNERAN: That's correct.

MR. WALSH: We would like to see the original drawing that was issued, the drawing that was made

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stable, and the drawing as it is to let it, that it was made stable by.

MR. HORIN: Aren't these all the same condition, John?

MR. FINNERAN: Couldn't hear you Bill.

MR. HORIN: Aren't these all under the same condition. All the drawings simply show the same thing.

MR. FINNERAN: It is the same condition every time.

MR. WALSH: So, they were originally designed that way, on every one of them?

MR. FINNERAN: On the two, off the main steam, let me check that, just a second.

Okay, on the two non mainsteam supports, I don't believe the additional designs show a gap, but they were modified in the field. The field modifications that were made actually wound up with a gap and this was identified and corrected.

MR. WALSH: When was this identified?...in the drawing. We would like the specifics.

MR. FINNERAN: I don't know when they were identified, as we stated in our affidavit on page 18, the two non mainsteam supports were modified in October and December of 1982 to address the gap.

MR. WALSH: Well, we would like to see when

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this thing became unstable. When the steel modification came about.

MR. FINNERAN: When the modification was made that had a gap in the U-bolt?

MR. WALSH: And the calculations to back the support up.

MR. HORIN: Mark, on the calculations that is a separate question. I think that when we are talking about stability, we are not talking about separate calculations that relate to stable or unstable conditions itself. You are not going to have separate calcs to determine what is stable or unstable. That is something that the designer simply looks at the loads and assesses whether or not the support is stable in those directions. It is not some calculation that he does to see if it is unstable.

MR. WALSH: Okay. Well, we would like to see the field modification, the date of it, and the calculation if he did calculate for it.

MR. HORIN: Can we get the date of when the modification might have been?

MR. WALSH: We would like to see the drawings and the support numbers, you know, like in a little package. Yes, all 15 of these. This would be a lot easier, instead of doing one at a time.

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MS. ELLIS: I think the problem Bill, that I have got with not getting a list and getting them and coming back and saying that we want this one and this one. It is going to be lengthy.

MR. HORIN: But Juanita, what I was saying was not that there was going to be any delay. I was just saying that for the purpose that Mark said he wanted these for, there was no need to provide drawings.

MR. WALSH: Yes. I believe it is very important for the drawings. That is one of the most important parts.

MR. FINNERAN: How does it relate to the material facts? We don't see that.

MR. WALSH: Well, first I can see if the thing is stable or not. Then, I can look at it and I can determine if the thing is now stable, or is it unstable. I haven't seen this stuff. Maybe the thing is still unstable. It went by before by a lot of people's desks, and the thing went out and was constructed and it was unstable. I don't know if it is stable or not.

MS. ELLIS: I think this all goes back to item 8 on page 4. I think that it is very clear, the wording there.

MR. HORIN: What does item 8 say?

MS. ELLIS: Item 8 states, applicants

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identified 15 of these types of supports in Unit 1 and common areas. Thirteen of these supports are main steam supports. Three of the main steam supports were actually modified for the initial installation in such a way that initial instability was removed. These modifications occurred prior to September, 1982. The remaining 10 mainsteam supporters were modified between January 1983, and June 1983. The two non-maintenance steam supports were modified in October and December 1982. The modifications consisted of cutting the U-bolts or adding supplementary structural steel that would present the rotation of the U-bolt clamp offender. It refers back to the affidavit on page 8.

MR. FINNERAN: Okay. All you are going to see here is that the majority of those drawings that the U-bolts have been snugged out.

MR. WALSH: Alright. Well, we would like to see that.

MS. ELLIS: Okay. Can we take a break for just a moment.,

MR. WALSH: Yeah. Fine with me.

MS. ELLIS: I want to talk about this for a second. Maybe we can cut it down some.

MR. BURWELL: Off the record.

(Off the record discussion.)

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MR. FINNERAN: We can't see the connection between the material facts and what CASE has asked for here. So, we don't see the need for them to have these drawings. We have shown you exactly what we have got, and the drawings will show you that we have done that.

MR. WALSH: We would like to see what the applicants identify, because that is stated right there in the beginning.

MR. FINNERAN: Yeah. You already have a drawing that shows that in your own case exhibits.

MR. WALSH: We want to see all of them that the applicants identified, not what CASE identified.

MS. ELLIS: CASE isn't asking for an operating licence.

MR. WALSH: But, it states applicants identified, not CASE. We want to see the 15 that the applicants identified.

MR. HORIN: Do you just want those drawings?

MS. ELLIS: Okay. I think what we would like to have is a listing of all 15. We want the two that were not mainsteam supports. We want the complete packages on those, the parts. When I say complete packages, what we want is...run through that once again, Mark.

MR. WALSH: The orginal drawing as it was

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issued, revision zero. We want the drawing that was made, that was made unstable, that shows a support being potentially unstable.

MR. FINNERAN: Well, maybe that is the original drawing, Mark.

MR. WALSH: Well, if that is the case, that is what we want to see. And, the third item is the drawing that made it stable.

MR. FINNERAN: Okay.

MS. ELLIS: And any calculations to go with that.

MR. WALSH: And any C&C's on those supports that were issued by the field that when the field engineer generated the C&C, he made it not stable, if that exists.

MR. WADE: Are you talking about the two non mainsteam?

MR. WALSH: Whatever supports. We don't know. We haven't seen them. As soon as we see the drawings, we can tell you.

MS. ELLIS: Okay. So far we have asked for a list. We have asked for packages on the two that are not main steam point. Okay, from the list, we want to come back and ask for, say three, packages on the mainsteam support.

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MR. WADE: When you are saying packages, are you saying the same thing that you mean by packages with respect to two.

MS. ELLIS: Right.

MR. WALSH: The packages would be the original design or the original drawings, the drawing that made it unstable, and then the drawing that made it stable.

MR. WADE: Mark, I think you may be oversimplifying what you are looking for. There were design changes in that system, just as the normal design progressed, which there may be no comparison to the original supports and the support that was out there now for many other reasons other than the one that you are pursuing.

MR. WALSH: Okay. But, if any of those design changes created an unstable condition, we would like to now those also.

MS. ELLIS: We are trying not to ask for the whole package for the whole thing, okay.

MR. WADE: That is what you are asking for, though. What you are going to get is a ton of paperwork that you are not going to know what to do with.

MR. HORIN: David. I think what he means by packages is simply the drawings, the red zero drawing with the gap. Then, in the instances where

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there were no field modifications that created the potential instability, the drawings in which the change was made to eliminate instabilities.

MR. WADE: Now, I hear that Bill, but it is not that simple, I think. Because, progression of the design on that system, in some cases, we may have found a way to optimize design and completely changed the functions of all the supports. The original designs will bear no resemblance to the design that is there now,or even this question.

MR. HURIN: I think we know that that is the case in at least two incidents that we have seen.

MR. FINNERAN: Yeah. We have said that.

MR. WALSH: We're looking for a history. That is what most we have made...

MR. WADE: But, the subject is stability, not the entire history of this line and its designed progression.

MS. ELLIS: That is why we asked him for everything.

MR. WADE: You did ask for red zero and everything in between, so, you are asking for everything.

MR. WALSH: No. We are asking for red zero, and a revision to the drawing that made it unstable.

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MS. ELLIS: Not if there were 15 others in between. We don't want those.

MR. WADE: That is what I am saying. You are comparing apples and oranges. The original drawing that may have existed on that line years and years ago, may not even be of any similar configuration which you could have made unstable.

MR. WALSH: We are interested in the one that was issued to the field.

MR. WADE: You don't understand what I am saying, do you?

MR. WALSH: Before the field engineers get ahold of it.

MR. WADE: You don't understand what I am saying, you are not listening.

MS. ELLIS: Wait a minute. I think I understand what you are saying. Okay, rather than necessarily asking for the original drawing, maybe we should ask for the drawing that made it potentially unstable, and the drawing immediately preceeding that.

MR. WADE: There you are getting closer.

MS. ELLIS: Is that more what you are talking about?

MR. WADE: Yeah. What I am saying is they may have done a completely different design configuration

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than existed years ago. Because of optimization or changes to the system, it may have occurred, we may have completely changed the design of that supporting system. So, there is no resemblance at all. Therefore, the original design that was put out there might never have been unstable or could have been unstable.

What you are concerned with is the support which may have proceeded back up the way maybe two or three revisions.

MS. ELLIS: Right.

MR. WADE: But, not the original. You go back to the original, and you are going to get a pile of paperwork you won't know what to do with.

MS. ELLIS: Okay. We don't want all the stuff in between, but I see what you are saying, I think. So, what we want, what we basically want is the history.

MR. FINNERAN: I think you want the history of the unstable aspects, the history of what exists there today. I think it was prior to that time.

MS. ELLIS: Right. What it looked like right before it was made potentially unstable.

MR. WADE: I understand what you are looking for.

MS. ELLIS: Right. And then, up through now.

MR. WADE: We understand, but don't ask for

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rev. zero, because you are going to get more than you want. Let us determine, we know what you are looking for, let us supply that information.

MR. FINNERAN: In probably 13 of these supports, he is going to get reg. zero.

MR. WALSH: Well, that is what I was under the impression. So, that is why I said, Reg. zero.

MR. WADE: I know the history that has been main steam and of the design progressions. I am concerned that there could be somewhere that you would not get Reg zero's.

MS. ELLIS: Okay. As long as we understand where we are coming from and what we are really after.

MR. WADE: That is the key, that we understand what the contest is.

MR. HORIN: You said that you wanted a list of the 15 and then a sample of the three of the packages. You said that you would ask for that later.

MS. ELLIS: Right.

MR. HORIN: We will just go ahead and do that sample right now and save time.

MS. ELLIS: Well. We would like to take the sample. You can go ahead, if you want to, it may be alright, but there may be some particular support in there that either we have a drawing of, whether we have

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something like that we may want to pursue.

MR. HORIN: So. Maybe we will just give you the list so we don't duplicate the effort.

MR. FINNERAN: We could go ahead and pick three of those that you don't already have. We know the ones in the Dall exhibit.

MS. ELLIS: I think you know, pretty well, the ones that we have.

MR. FINNERAN: Yeah. You want three that you don't have.

MS. ELLIS: Is that basically it, Mark?

MR. WALSH: Either way, I don't care.

MR. FINNERAN: We'll do that.

MS. ELLIS: Okay. That's the main thing. In the two that are not maintained, we will not bother with that one.

MR. FINNERAN: Okay.

MS. ELLIS: One more thing. If there are any calculations, we would like to have them too, that are applicable to what we are talking about. If there is not, well, fine.

MR. WALSH: Alright. The last thing is on page 27 of the affidavit, discussing a portion of the main steam piping. We would like to see the drawings of the supports that were involved with this pipe run.

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MR. HORIN: What do you mean by involved?

MR. WALSH: Pardon?

MR. HORIN: What do you mean by involved?

MR. WALSH: Well, they analyze 50 feet of pipe. I would like to see all the supports that are involved to this pipe run, that are attached to to pipe.

MR. FINNERAN: You want a copy of the drawing?

MR. WALSH: Yes.

MR. FINNERAN: That's not problem.

MR. IOTTI: Excuse me, this is Bob Iotti. Mark, do you understand that for the purpose of this analysis, all of those supports were assumed to not be acting?

MR. WALSH: Yes. I would like to see those supports. Could you also get me the piping isometric that went along with it so I can identify where they are located?

MR. HORIN: Would it be one iso, John?

MR. IOTTI: No. I think it is two.

MR. FINNERAN: We can provide that.

MR. WALSH: Alright. That is all.

MS. ELLIS: Okay.

MR. HORIN: Juanita, you said you were going to send something on design QA?

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MS. ELLIS: What?

MR. HORIN: You said you would be sending something on design QA?

MS. ELLIS: Right. Just as I suspected, this went a little over 2 hours, and I certainly didn't want everybody, all the technical people to have to go through that.

MR. WADE: Bill, I have noted here several items which we have now agreed to provide, and I think it would be nice so that there are no misunderstandings that we go over those briefly and make sure everybody agrees what those seven items are. If my count is wrong, then let's correct it.

MS. ELLIS: Okay.

MR. HORIN: Would you all like for me to start?

MS. ELLIS: Yeah. Why don't you go ahead.

MR. HORIN: The first item had to do with ascension of U-bolts. We agreed that we would provide you the pertinent parts of an ASTE document that is referenced in the affidavit.

MS. ELLIS: Right.

MR. HORIN: The second item, dealt with the axial restraint. It was documentation on the procedure that we used for modeling trunyon for Gibbs and Hill

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and Westinghouse.

MS. ELLIS: Right.

MR. HORIN: The third thing I have was a drawing or something that demonstrated the largest difference when we were considering rotation, also the calculations to back that up.

MS. ELLIS: Right. We have already prepared them with that.

MR. HORIN: Okay. Is that agreed?

MS. ELLIS: Yes.

MR. HORIN: Okay. The next item was calculations supporting a particular support CT101323S42K, and the drawings showing that trunon effects were taken into account. I think on that one we clarified that the loads would not be on the drawings.

MR. WALSH: Right.

MR. HORIN: The next item has to do with Richmond inserts. It was documentation that showed where we instructed engineering to verify the adequacy of threaded rods.

MR. WALSH: In the original design.

MR. HORIN: The original design counts by all organizations, Gibbs and Hill, ETT, NPSI, all prior to 1982. You wanted to include support MS1-02003C72S, and also from exhibit 669 9Q, which was the moment

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restraint at Gibbs and Hill.

MS. ELLIS: I think he said 9-R also. It is part of the same thing.

MR. HORIN: And then, I believe you requested teh original of the 15 supports which we are going to provide you three in the main steam system, and you wanted both the samples that were not in the main steam system on unstable pipe supporting.

MS. ELLIS: Okay.

MR. HORIN: Then, the last item, the one we just discussed, which was on the drawing of the main steam analysis and the stress isopes. That is everything that I show that we agreed to provide.

MS. ELLIS: Right. I guess we will be going to the board, Bill with the one that we discussed earlier under item 4 under stability.

MR. HORIN: That was the additional documenation with NITT regarding the box frame stability support subsequent to 1982.

MS. ELLIS: I can't hear you too well, but I think you are saying the same thing. This is attachment A3.

MR. HORIN: Right. Documentation subsequent to that, IITT.

MS. ELLIS: Well, by anyone who had anything

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to do with it. If SUZI had anything back and forth with ITT or anybody that had anything to do with it.

MR. HORIN: Okay.

MS. ELLIS: I'm sorry, I can't hear you.

MR. HORIN: Ask Mark to read over the material facts if he really thinks that is material.

MS. ELLIS: I think we agree very definitely that we do.

MR. WALSH: Yeah.

MR. HORIN: Okay, so we all stand.

MS. ELLIS: We disagree, right?

MR. HORIN: Yes. Well, alright, I am gone. I will catch you all later.

MS. ELLIS: I guess that is it.

MR. BURWELL: Okay, if that is it, anyone else. Does that complete it?

MS. ELLIS: It will probably take me, I have got some other stuff that I am committed to do tomorrow. Hopefully by either tomorrow night or Wednesday, I will be able to get something off on this QA for design.

MR. BURWELL: Okay, very fine. With that, then, the meeting is closed, and the record is closed.

(Meeting closed at 10:50 p.m.)

BH
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CERTIFICATE OF PROCEEDINGS

This is to certify that the attached proceedings before the NRC.

In the matter of: COMANCHE PEAK

Date of Proceeding: 8/6/84

Place of Proceeding: BETHESDA, MD.

were held as herein appears, and that this is the original transcript for the file of the Commission.

JOE NEWMAN
Official Reporter - Typed

Joe Newman /DTB
Official Reporter - Signature

Beverly Hook /DTB
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