

INTERVIEW OF ROBERT D. GUNDERSON JR.

Case No.: 5-82-009

Transcript of tape
recorded interview of: Robert D. GUNDERSON Jr.

Date of Interview: June 1, 1982

Interviewers: John O. ELIN, Reactor Inspector, Eugene J.
POWER, Investigator, and Owen C.
SHACKLETON Jr., Investigator, assigned to
Region V, U.S. Nuclear Regulatory Commission

Purpose of Interview: To obtain Robert D. GUNDERSON Jr.'s
allegations and concerns on the Palo Verde
Nuclear Generating Station

Location of Interview: Radisson Scottsdale Resort and Racquet Club
7601 E. Indian Bend Road
Scottsdale, Arizona 85253

Conditions of Interview: Interview was conducted with GUNDERSON
affirming that he would tell the truth

INTERVIEW OF ROBERT D. GUNDERSON JR.

SHACKLETON: Q.K.

GUNDERSON: Now, I brought you a copy of the telephone bill, the number I was given to contact in Las Vegas. There's that number if you want that.

SHACKLETON: What was that number?

GUNDERSON: That's the number of the Atomic Energy Commission ...

SHACKLETON: Oh, great.

GUNDERSON: ... of, Arizona gave me to get a hold of the NRC.

SHACKLETON: Oh, swell. That is the first thing I want to address with you.

POWER: Do you know who he was talking to or has he already showed you?

SHACKLETON: Which one is it on here now?

GUNDERSON: This is the Nevada call.

SHACKLETON: The Las Vegas number? O.K.

POWER: We'll see about getting a copy unless you have another copy?

GUNDERSON: No sir, I don't.

SHACKLETON: As we can probably get one made out front.

POWER: Out front. They have a machine.

GUNDERSON: As far as that other information I furnished you, if you want to get a copy of it and mail it back, that will be fine. No problem there.

? So how is the (unintelligible)?

POWER: Ah ...

GUNDERSON: It's tight.

POWER: Look ... look forward to (unintelligible).

GUNDERSON: No. I should get out in the next week or so in Las Vegas.

POWER: Yeah.

SHACKLETON: He said he has a hundred thousand dollar home here, which we know from reading the papers is a real nice house.

POWER: Yeah.

SHACKLETON: He said they move relatively rapid.

POWER: Yeah.

GUNDERSON: Yeah. We don't have much of a problem. But, we have a large influx of people too.

POWER: Yeah. Right. People come into the Sunbelt.

GUNDERSON: Yeah. And that gives the date and time.

(Pause)

SHACKLETON: Now, who gave you this number then?

GUNDERSON: The Arizona Atomic Energy Commission.

SHACKLETON: O.K.

GUNDERSON: When I told them it concerns safety factors at Palo Verde Nuclear Generating Station, they gave me that number to contact in Las Vegas and told me it was the NRC.

SHACKLETON: Got this number from Arizona ...

GUNDERSON: Atomic Energy Commission.

SHACKLETON: Do you know where their office is located?

GUNDERSON: No, sir.

SHACKLETON: Was it in Phoenix or ...?

GUNDERSON: Yeah, I looked it up in the phone book.

SHACKLETON: O.K.

(Pause)

Did you talk to a man or woman?

GUNDERSON: A man.

SHACKLETON: You don't remember his name or ...?

GUNDERSON: No.

SHACKLETON: O.K.

GUNDERSON: When I called Las Vegas, I got a woman.

(Pause)

SHACKLETON: Do you mind if we record what we say here ...

GUNDERSON: No.

SHACKLETON: ... as it makes it easier for us?

GUNDERSON: And that's better (unintelligible). No, I don't care if you record it.

SHACKLETON: Are you recording?

ELIN: Yeah, I think so.

SHACKLETON: O.K. (Pause) I want to make it a matter of record, uh, that Mr. GUNDERSON understands that we're recording for purposes of assisting us in keeping, uh, detailed notes, uh, the interview here that Mr. GUNDERSON is providing us. Mr. GUNDERSON, is it clear that ... do you understand the tape recorder is on?

GUNDERSON: I understand.

SHACKLETON: With your permission, sir?

GUNDERSON: With my permission.

SHACKLETON: Fine, thank you.

GUNDERSON: O.K. Item ...

SHACKLETON: Now, this gal, when you talked to the lady in Las Vegas what ...

GUNDERSON: She gave me VAN BRUNT. She told me that they couldn't do anything about it, I had to get a hold of Mr. VAN BRUNT, who was the engineer over construction at Palo Verde.

ELIN: What did the people at the Arizona agency say ... they just said this was the NRC in Las Vegas? Is that right?

GUNDERSON: Yes. They told me the closest NRC office was the one in Las Vegas and that was the phone number that they gave me and that's the one I called.

SHACKLETON: And they told you Mr. VAN BRUNT was in charge of construction?

GUNDERSON: Right.

SHACKLETON: With Arizona Public Service ...?

GUNDERSON: Right.

SHACKLETON: Then what happened, Bob?

GUNDERSON: I called Mr. VAN BRUNT's office and I got a man, and I'm not sure about his name, but I believe it was Bill JOHNSON or Bob JOHNSON. And he just put me on hold and told me Mr. VAN BRUNT wasn't there; I could talk to somebody else if I wanted to hold a while.

SHACKLETON: So then what happened?

GUNDERSON: Then he came back on the phone and told me that, uh, he didn't know when Mr. VAN BRUNT would be back, that if I wanted to leave my name and phone number, that he could contact me.

SHACKLETON: So then what did you do, Bob?

GUNDERSON: I called back about three hours later and I was put on hold again and, uh, that was it; I just finally hung up.

SHACKLETON: Do you remember the date or approximately when this was?

GUNDERSON: That was on the same date that I called Las Vegas.

SHACKLETON: O.K. That would be April 22, then according to the telephone bill.

POWER: April 25.

GUNDERSON: 25th? Yeah.

POWER: Yeah. No, it's March 25th. March 25th.

SHACKLETON: O.K.

GUNDERSON: Right. Because I quit out there the 1st of March.

SHACKLETON: Did, uh, you try and contact anyone else within the Nuclear Regulatory Commission?

GUNDERSON: No, I did not.

SHACKLETON: Have you ever talked, Bob, to our resident inspectors that are based out at the site?

GUNDERSON: Not your ... not the NRC inspectors. You could never get them alone.

SHACKLETON: Have you ever tried to contact them at their office where they are by themselves?

GUNDERSON: No. No.

SHACKLETON: Do you know of anybody else that has?

GUNDERSON: No, I do not.

SHACKLETON: Bob, when you say that, you know, you've mentioned to me before in our prior conversations by phone that when you want to talk to these fellows when they are coming around that they're always accompanied by people from Bechtel.

GUNDERSON: Yes, sir.

SHACKLETON: Um, have you, have you ever seen, uh ... are you ... do you know that the inspectors by sight, which ones they were?

GUNDERSON: They wear the white hats with "NRC" on the side.

SHACKLETON: O.K.

GUNDERSON: So, it's, it's easy to pick out. Because the only persons with white hats is the General Foreman, Bechtel personnel, and NRC. And their hats are different from Bechtel's.

SHACKLETON: Do you know the identity of our residents out there, their names or ...

GUNDERSON: No.

SHACKLETON: O.K.

GUNDERSON: I do not.

SHACKLETON: What we have, uh, in addition to ... we have two men, two engineers that are based there within ...

GUNDERSON: Uh-huh.

SHACKLETON: We have other men from our office that come out almost on a monthly basis. I guess it is, isn't it John?

ELIN: Uh-huh.

SHACKLETON: And what they do is they take different, uh, phases of the construction and then they may check pipe hangers one time and another time someone is looking electrical and all the different safety-related systems are inspected at different times during the course of the construction. See, you do have different NRC inspectors come out. Gene, do you have any, uh, questions you want to address to this NRC side of it?

POWER: No, I think you covered the NRC side. When you, uh, called VAN BRUNT's office and talked to JOHNSON, did you relay your concerns; did you identify yourself?

GUNDERSON: No, I just told him that I wanted to talk to Mr. VAN BRUNT.

POWER: O.K. Did you say it was personal? Or ...

GUNDERSON: Yeah. I didn't tell him what, what I wanted.

POWER: So, he basically had no idea that you wanted to discuss problems at Palo Verde?

GUNDERSON: No.

POWER: Then we have received information to the effect that you have attempted to identify this to them, APS, and they wouldn't talk to you.

GUNDERSON: Yeah, well I, I told them that I, I had worked out at Palo Verde and that I wanted to talk to him. I didn't tell him there was any problems at Palo Verde.

POWER: O.K. Yeah. Do you feel that he realized that you had a problem out there, or ...?

GUNDERSON: I don't know if he did or not.

POWER: O.K. No, no way ...

GUNDERSON: So, I can't judge what the man was thinking.

POWER: Allright. Yeah.

SHACKLETON: Bob, was there somewhere along ... without going back through all the notes I have ... did somebody make some comment to you that QC inspectors or QA would catch it?

GUNDERSON: Yes.

SHACKLETON: Where was that? Can you relate to ...?

GUNDERSON: That was ... when you would complain about different things that were wrong on the job, their total attitude was "don't worry about it, QA or QC will catch it on a walkdown."
O.K.?

SHACKLETON: When did you get that, now? From whom?

GUNDERSON: I, I got that from the supervision, like Hector NUNEZ ...

SHACKLETON: O.K.

GUNDERSON: ... like Richard KEITH, Julio ORTEGA, uh, Pete ANAGOLA ... they're all foremens out there and nobody, nobody seems to worry about it. It's just, they'll catch it.

SHACKLETON: O.K. Bob, the next think I wanted to go over is there is just a little bit of a discrepancy and I wanted to just see if maybe by recall now we could get it straight, and that's the time frame when you received the telephone call ...

GUNDERSON: Yeah.

SHACKLETON: ... because, uh, in reviewing the, uh, petition that was filed by, uh, Patricia HOURIHAN ...

GUNDERSON: Right.

SHACKLETON: ... there's little difference, 'cause they have it on page 2 ... it says during the first week of April 1982, the worker met with Mrs., Miss HOURIHAN and Ms. MORRISON ...

GUNDERSON: Uh-huh.

SHACKLETON: ... to outline the problems with the electrical systems, and when you and I talked on the phone, uh, you said that it was after this meeting that you had gotten this, uh, telephone call.

GUNDERSON: It was after my first meeting with them which was March 26th.

SHACKLETON: O.K.

GUNDERSON: And I received the telephone call on March 29th. A little after 7:00 at night. Like 7:03 or 7:05.

SHACKLETON: So 3/26/82 is when you met with, uh ...

GUNDERSON: Patricia.

SHACKLETON: Patricia.

GUNDERSON: Right.

SHACKLETON: And then on 3/29 ...

GUNDERSON: When I got the phone call.

SHACKLETON: You got the first phone call.

POWER: Some of the paperwork you brought here was the intervenor's motion to file a new contention; this is their copy. Did you read it? 'Cause the question that he is raising - in here it indicates that shortly after this meeting you received a threat on your life, which infers the way it's read, written, that it occurred after April the 18th ...

GUNDERSON: No, it happened on the 29th.

POWER: No, no. I'm not trying to cor ... I'm just saying, yeah, I would, I would advise you to read this because she is apparently, either her or her lawyer ...

GUNDERSON: I met with them like four or five different times ...

POWER: Yeah.

GUNDERSON: ... in the first week.

POWER: O.K. But be careful of ...

GUNDERSON: Yeah.

POWER: ... misstatement in here, because they might get you on the stand and one of these times they are going to start comparing details against this and things like ...

GUNDERSON: I know.

POWER: ... to the Atomic Safety and Licensing Board. O.K.

GUNDERSON: O.K.

(Pause)

SHACKLETON: Bob, do you have any, uh, idea from your contacts or discussions out in the plant who might have, have made that phone call? Who would have any idea that ...

GUNDERSON: No.

SHACKLETON: ... of your concerns and that you were ...

GUNDERSON: They all knew of my concerns. 'Cause I was very open about it.

SHACKLETON: O.K. So, all your fellow workers are cognizant that you were upset about the way some of the things were being done.

GUNDERSON: About what was going on.

SHACKLETON: Do you have a listed telephone number?

GUNDERSON: Yes, I do.

SHACKLETON: And (pause) from my notes, Bob, I've got ... when you and I talked, uh, on the 26th of May by phone, the first call was on the 29th, and then by your, by your recollection on the 31st when you were at home, you got a ... you received another call with just the breathing.

GUNDERSON: Yeah.

SHACKLETON: And you listened and then just hung up.

GUNDERSON: Right.

SHACKLETON: And then, uh, on the 6th or 7th of April, during the day again ...

GUNDERSON: Yeah, but that ...

SHACKLETON: How did you know that ...

GUNDERSON: ... it had to have been before that, because I left the 3rd.

SHACKLETON: O.K.

GUNDERSON: So I wasn't there, so, it had to been ... I got two calls between the 29th and the 3rd, when I left. And I left the 3rd at noon.

SHACKLETON: You got two calls between ...

GUNDERSON: The 29th.

SHACKLETON: The 29th of March ...

GUNDERSON: And the 3rd of April.

SHACKLETON: ... and 3rd of April. No wh ... did ... were you the party that answered the telephone?

GUNDERSON: Yes. 'Cause my son was in school; my wife was at work.

SHACKLETON: O.K. And they didn't ... so naturally you didn't hear any voice ...

GUNDERSON: Nothing. You could hear some background music and that was it.

(Pause)

SHACKLETON: And then the third call would have come around the 6th or 7th of April to the best of your ...

GUNDERSON: No.

SHACKLETON: No?

GUNDERSON: It would have had to be before the 3rd.

SHACKLETON: O.K.

GUNDERSON: But I haven't had anything since.

SHACKLETON: And it was the same circumstances?

GUNDERSON: Yes.

SHACKLETON: Were you the only one home?

GUNDERSON: I picked up the phone and there was nothing there.

SHACKLETON: (Unintelligible). No further threats of any kind?

GUNDERSON: Nothing. That's what I said, I think that maybe the call was just some prank, because I didn't recognize the voice and the other ones they could have been wrong numbers, 'cause I haven't had any, anybody that threatened. Anybody that knows me, know, knows, I'm very heavy into firearms. I was a deputy sheriff and I'm a darn good shot with a gun, so I ... I don't see how they would logically figure they're gonna ...

POWER: Yeah.

GUNDERSON: ... beat you to the ... to the punch.

POWER: (Unintelligible) in reference to, uh, have you experienced, any, uh, labor problems with the union people on the site?

GUNDERSON: No, because most of them, uh, I did this after I quit. I

quit March 5th out there because they were asking travelers to leave and I believe that I ...

POWER: (Unintelligible)

GUNDERSON: Yeah, because I'm not gonna take a local man's job.

POWER: Right. Yeah.

GUNDERSON: So I just left, and, uh, I have discussed other problems with them and I've talked to some of the APS' engineers who have made Bechtel correct some of the problems with the wiring that they've got out there before they accepted it. But other than that ...

POWER: But other than that, yeah, what I'm saying is you couldn't ... none of the union type individuals (unintelligible) within the organization who would make a telephone call like that to you and threaten ...

GUNDERSON: Oh, there's a few of them out there that would.

POWER: Yeah.

GUNDERSON: Yeah. With that many people out there, you've got so many ...

POWER: Could possibly ...

GUNDERSON: ... loose screws running around, so ...

SHACKLETON: Bob, I just want to get a little background information. What is your date of birth?

GUNDERSON: 12-16-42.

SHACKLETON: And do you know your social security number?

GUNDERSON: 482 ...

SHACKLETON: 482?

GUNDERSON: Uh-huh ... 46-6300.

SHACKLETON: Bob, did you have any other nuclear experience before you came to work on Palo Verde?

GUNDERSON: Yes.

SHACKLETON: What other sites?

GUNDERSON: The Duane Arnold Energy Center, Palo, Iowa.

SHACKLETON: M-m-m ...

GUNDERSON: Arnold Energy Center.

SHACKLETON: And who was your employer there?

GUNDERSON: Uh ... Bechtel.

SHACKLETON: And your position at that time? Electrician?

GUNDERSON: Uh ... cable puller.

SHACKLETON: Cable puller. And how long did you work there? Just roughly?

GUNDERSON: Four and a half months to five months.

SHACKLETON: Any other sites?

GUNDERSON: O.K. Fast Flux Test Facility.

SHACKLETON: Hanford?

GUNDERSON: Yes, sir.

SHACKLETON: We're familiar with that one. And you worked for Bechtel there?

GUNDERSON: Yes, sir.

SHACKLETON: They're still doing a lot of construction. I don't know what they're building over there. Maintenance?

GUNDERSON: Uh-huh.

SHACKLETON: And approximately how long?

GUNDERSON: One week.

SHACKLETON: Any others?

GUNDERSON: Uh, I worked for the Atomic Energy Commission at, uh, 200 West at the Hanford Project and that I put in a remote control plutonium mining machine.

SHACKLETON: Again, what was the job?

GUNDERSON: I put in a robot mining machine to mine plutonium.

SHACKLETON: O.K.

GUNDERSON: And that was Jensen Electric.

SHACKLETON: And how long were you with Jensen?

GUNDERSON: Uh, about two months.

SHACKLETON: Any other nuclear experience?

GUNDERSON: Uh, Diablo Canyon.

SHACKLETON: And who did you work for there?

GUNDERSON: I worked for Foley.

SHACKLETON: Foley?

GUNDERSON: H. P. Foley.

SHACKLETON: And what were you doing for Foley?

GUNDERSON: I was setting equipment, setting gear, motors ...

SHACKLETON: And ... how long?

GUNDERSON: One month.

SHACKLETON: One month. Any other nuke?

GUNDERSON: Uh ... no, I think that's about it.

SHACKLETON: O.K. Then how long are you with people you are with out here?

GUNDERSON: Two years. About ... well, a little over two years.

SHACKLETON: And that employer's name ...

GUNDERSON: About 26 months ... Bechtel.

SHACKLETON: And your job title on Palo Verde?

GUNDERSON: High voltage terminator. I've done just small terminations. Mainly high voltage.

(Pause)

SHACKLETON: O.K. Bob, now I want ... I want to get into, so that John can have benefit of being able to talk to you directly because you two guys can talk and understand each other and John is gonna have to bird dog what your concerns are, so it, it would be a big help for him to nail things down as close as possible to where these various things are located. And I, I prepared very roughly, as a result of our conversations, uh, an outline and the first one addressed the falsification of termination cards, and, uh, these termination cards, I'm not familiar because I haven't seen one, but I had it described to be and usually the fellows tell me that a QC inspector also signs it off, is that ... are those the ones that you're talking about?

GUNDERSON: Yes, sir.

SHACKLETON: Are they set up that way?

GUNDERSON: Uh-huh.

SHACKLETON: When they ask you to sign off a termination card for work that you didn't perform ...

GUNDERSON: Right.

SHACKLETON: ... then they also had to have some QC inspector sign it off.

GUNDERSON: Right.

SHACKLETON: And how do they do that, Bob? Do you know, do you know what ...?

GUNDERSON: They just tell them we lost a card, here it is, the work is done and they'll go out and look at the work sometimes; sometimes they won't, and they just sign it off.

SHACKLETON: Have you ever seen any QC inspector sign any of these off in your presence?

GUNDERSON: I've seen them where they have ... in the QC trailer ... where they have gone out and inspected it and brought the cards back in and signed off. They'll have a hand full of cards that they say they've already inspected, whether or not they inspected or not, I don't know, but they've done the work right there, you know; I can't call the man a liar and say that he didn't do it, because I didn't see him check it.

SHACKLETON: Have you ever seen any of these fellows like Reggie JOHNSON, uh, or Hector NUNEZ direct QC people to sign them off without inspection?

GUNDERSON: No. No, I haven't seen them direct any QC people.

(Pause)

SHACKLETON: Do you have any QC inspectors out there that, that you would recommend to us to talk to, who would be knowledgeable about the improper procedures on termination cards?

GUNDERSON: Uh, you've got ... Kevin BROYHILL is out there ...

SHACKLETON: Yeah, right. I got that name.

GUNDERSON: O.K. And then, uh, the guy over him ... now I can't think of his name ... I didn't do too much with him. I only seen him a few times. But he seems pretty sharp. Uh, the rest of them I just don't know that well.

SHACKLETON: And you told me when we talked before that Kevin resides in, in ...

GUNDERSON: Phoenix.

SHACKLETON: ... Phoenix, so his name is ... we'll probably be able to find him in the phone book. If not, we can trace him through the plant. John, do you have any questions you want to go over on these termination cards?

ELIN: Yeah, let me go over this ... you're saying that there is altogether about 250 to 300 cards that you think were not signed properly?

GUNDERSON: Were signed improperly. Yes.

ELIN: O.K. And they're signed by electricians as the electrician having installed the cable when in fact they did not.

GUNDERSON: Right.

ELIN: O.K. And this, these took place over in 1981, 1982?

GUNDERSON: Yes.

ELIN: Do you have any idea what particular time period we're talking about?

GUNDERSON: Oh, no. But, there, they run ... sometimes they'll have one or two a week and sometimes they won't have any for a while and then they'll have lost a bunch of cards, so they'll come up with a stack of them.

ELIN: So, this was not a one-time effort; it was like a couple of weeks they will have you sign.

GUNDERSON: Yeah. It was ... it ran on the whole time I was there.

ELIN: O.K. So what you are required to do was sign two or three extra per week?

GUNDERSON: Right.

ELIN: That was what was happening.

GUNDERSON: Now most of the people, and I have a man's name for you to get a hold of which will swear to it, just went ahead and signed 'em. I didn't. I refused to sign some and put "UP" under the other one. Because it was the point where now if I don't want to sign them, they would just fire you.

ELIN: What was the purpose for having you sign these cards?

GUNDERSON: They had lost them. They had lost the record of them.

ELIN: The foreman had lost them? Is that ...

GUNDERSON: No, engineering had lost them, so they'd come back to Reggie with the cards ...

ELIN: Now, the way things usually work is, uh, let me see if I get this right. When you pull the cable or do the termination, you get a termination card that says this is what you are going to terminate, is that ...?

GUNDERSON: O.K. After the cable is pulled, there's supposed to be a QC inspector there to watch the cable being pulled in any quality control cable.

ELIN: O.K. So you had a cable pull card?

GUNDERSON: Right. That's the pull card.

ELIN: O.K.

GUNDERSON: O.K. Then they drop it in whatever cubicle it goes into.

ELIN: Yeah.

GUNDERSON: Allright. From that point, they come to us with the termination card; as they're turning systems over, they'll want a specific system ...

ELIN: Terminated ...

GUNDERSON: ... terminated so they can sell that system to APS. So

they will come out with a bunch of cards on one system and they will say you terminate these, you terminate these, and so on. They're handed out and logged in and out of the book by your foreman.

ELIN: O.K. So that's like what you get in the morning when you go out to work.

GUNDERSON: Right.

ELIN: And then you, at the end of the day, you turn those cards in.

GUNDERSON: Just the ones you've completed.

ELIN: You turn those back in. The ones you haven't completed, you keep.

GUNDERSON: You start on the next day.

ELIN: O.K. So you turn those in to to your foreman ...

GUNDERSON: No, you just stick them in a bin with your name on it.

ELIN: Oh, I see.

GUNDERSON: Nothing gets turned back in to the foreman.

ELIN: O.K. Now what ...

GUNDERSON: But it's locked up.

ELIN: O.K. What's, what's the next thing that happens to the card?

GUNDERSON: O.K. Then when we ... after we get done terminating the card, then, uh, QC comes out and inspects it for the termination.

ELIN: And they go to this bin, uh ...

GUNDERSON: No, it has to go ... after I've signed the card off, my foreman logs it back out of my name of the book, he turns it over to Hector NUNEZ, Hector gives it to Reggie JOHNSON, Reggie JOHNSON gives it to QC, QC goes out and inspects it, and then if they have any problems, it goes back down to Hector, to our foreman, and back to us to correct any problems that QC won't buy.

ELIN: O.K.

SHACKLETON: Correct me if I'm wrong then, Bob. Now that we know that ... the steps QC then wouldn't really know whether or not the craftsman's name was on there was right or not, would they?

GUNDERSON: No.

SHACKLETON: I see.

GUNDERSON: No, because they've lost the card. They don't know if the name is right, they don't know if the termination tool is right, they don't know anything other than they can go out and see whether the work was physically done or not done.

SHACKLETON: So, what I'm getting at, is I'm trying to get a full picture of who could be involved in any falsification. They could be innocent.

GUNDERSON: Certainly.

SHACKLETON: The QC people?

GUNDERSON: Sure. Because you've given them a card with ... that's signed off by your name, with a tool, with a date, and that's all the man has got to go by, and he takes that card. Now they have a margin in which they write all their propaganda down on in the margin, what they want done. They tear that margin off before QC gets it, so if they make a mistake, QC doesn't get a copy of it. It's where the possum markers are at.

SHACKLETON: Is that in violation of procedure or ...

GUNDERSON: I don't know, it's just a margin and it has a possum marker with the I.D. of the wire and its origin and its end, where it begins and where it ends.

ELIN: Are these computer generated cards?

GUNDERSON: Yes, they are.

ELIN: O.K. The possums are little markers they put on the tags to say (unintelligible).

GUNDERSON: Right. To slide over the wire, pull it up. Right.

ELIN: O.K. Um, so what was happening was they ... your foreman or your boss would ask you to submit two or three extra cards per week other than the ones you have terminated, is that ...?

GUNDERSON: I, I didn't get, I only terminated maybe a dozen of them altogether, and the only time I terminated them was when I got in hot water, and it was either do it or go look for another job.

ELIN: You mean, sign the termination cards. So, but they, he would, he would give you a dozen or so to ... er, uh ...

GUNDERSON: He'd give them, yeah, he'd give some people, 7(C)
7(D) and, uh, 7(D) as many of them as they wanted to sign. Sometimes they would sign off ten damn cards, but it made 'em look good. We got all the work done. They didn't ask no questions. They weren't told that there was anything wrong with it. You can't sign off work you didn't do.

(end of tape)

ELIN: ... whoever put the card out knew that there ...

GUNDERSON: They would tell you. Reggie JOHNSON and Hector NUNEZ would tell you that they were cards, cards lost by engineering.

ELIN: O.K. So they ...

GUNDERSON: Everybody knew it. Or it was a person where they had lost the card, and it wasn't the original person that signed it, but the person that originally signed the card had been terminated, left the job, wasn't here anymore and it was done a year and a half ago. They didn't know who did it.

ELIN: Would they ask you to go out and look at the terminations?

GUNDERSON: No, just sign the card.

ELIN: O.K.

POWER: Can you give us some names of other individuals that have signed the cards? (Unintelligible).

GUNDERSON: Oh, yeah. 7(C), 7(D) }, Kenny ACUFF.

SHACKLETON: Wait a minute, wait a minute. 7(D) ...

ELIN: 7(C)...
7(D)

GUNDERSON: Yeah.

SHACKLETON: 7(C), (D) ... Are these fellows still out there to your knowledge?

GUNDERSON: No, but I know where 7(C), (D) } are, and I got their address for you.

SHACKLETON: O.K. Great. Anyone else?

GUNDERSON: Kenny ACUFF.

ELIN: How do you spell that?

GUNDERSON: A-C-U-F-F.

POWER: Just like the singer.

GUNDERSON: Yeah, that's his uncle or something.

POWER: Is it?

GUNDERSON: Yeah.

POWER: Is he still there? ACUFF?

GUNDERSON: No. He's over in Las Vegas. He's not working. He lives over by me, but he's in the phone book, information.

SHACKLETON: Roy ACUFF?

GUNDERSON: Yeah. That's his uncle.

SHACKLETON: Yeah.

GUNDERSON: O.K., uh, let's see, who were they, uh, Phil AGUAYO, and don't ask me how to spell his last name, 'cause he's Mexican.

SHACKLETON: Phil AGUAYO?

GUNDERSON: Uh, maybe I got it right here.

ELIN: (Unintelligible).

POWER: Is he still on site?

GUNDERSON: Yes, sir. (Pause) A-G-U-A-Y-O.

POWER: I was close. H-m-m.

SHACKLETON: I wouldn't have even come close.

GUNDERSON: Ah ...

POWER: These are all electricians?

GUNDERSON: They're all electricians. Uh, you've got, uh, Forrest, uh, HALL, 7(D) ...

POWER: Are they still on site?

GUNDERSON: Yeah. 7(D) and Forrest HALL are still on site; so is Phil AGUAYO. Uh ...

POWER: In reference to those individuals, have you actually seen them prepare these and sign off without actually being the individual who did the termination?

GUNDERSON: Right. Because they'd bring 'em down to you in a stack, that they wanted signed off right now. You sign these, you sign these, he'll sign the rest of them.

POWER: O.K. Can you give us a specific date that is, the last time it occurred to you or anybody else (unintelligible)?

GUNDERSON: The last time for me would be around the middle of February. About three weeks before I quit was the last time I signed one.

POWER: And who brought them down to you?

GUNDERSON: Reggie JOHNSON.

POWER: Reggie? Do you recall how many?

GUNDERSON: I think I signed a couple of them. A couple of them I didn't even bother signing because they already had my name signed to 'em.

ELIN: Somebody else signed your name?

SHACKLETON: Yeah.

GUNDERSON: Yeah.

SHACKLETON: At this time, I want to, while we're talking about that, I want to ... 'cause you said you sign your name with a very ...

GUNDERSON: Ain't nobody gonna copy it.

SHACKLETON: Do you want to come over here where you can write? So that we ... when we look through the records, what I want to do is be able to, uh, tell your signature from the ones that, uh, were not written by you.

POWER: (Unintelligible).

GUNDERSON: That's Robert D. GUNDERSON Jr.

SHACKLETON: O.K. And do you normally always write it in longhand, you never print, or ..

GUNDERSON: No, I never print.

SHACKLETON: O.K.

GUNDERSON: There is my payroll number.

SHACKLETON: O.K. And when you sign these termination cards off, Bob, do you always put your payroll number after your name?

GUNDERSON: Yes.

SHACKLETON: So that's the way it would look?

GUNDERSON: I either sign it Robert D. GUNDERSON Jr. or R. D. GUNDERSON Jr., and I always sign it junior.

SHACKLETON: As we go through these cards, John, with you ...

ELIN: Yeah ...

SHACKLETON: ... with his signature here ...

GUNDERSON: That's a hell of a signature to copy.

POWER: O.K., good. The last one then would have been the middle of February about three weeks before you ...

GUNDERSON: Yes.

POWER: .. and you had a couple of cards that you signed off. Where were you working at the time?

GUNDERSON: O.K. I was working up at 140 in the control room.

POWER: At what unit, which unit?

GUNDERSON: Uh, well, you know, what you end up with, you end up with two termination cards for one cabinet, two more for another, then you might end up with one on fire protection on 160 out in the hallway, so you're right in that area. What they do is they stick you in ...

POWER: (Unintelligible).

GUNDERSON: ... I was mainly in the control room and generating area ...

POWER: Yeah, of which unit on the site?

GUNDERSON: Unit 1.

POWER: Unit 1? O.K.

GUNDERSON: Yeah.

POWER: 'Cause I understand they generate thousands of these cards, is that correct?

GUNDERSON: Lots of them.

ELIN: So, these would be cards that would be for terminations in the control room?

GUNDERSON: Yes. Well, they ... no, I don't know where the cards were that they brought me to sign. All I know was they were cards that I had not done the work on.

ELIN: O.K. So you don't know where the specific (unintelligible).

GUNDERSON: No, 'cause all I got is numbers on them.

ELIN: Yeah.

SHACKLETON: You know, John, just for your own, to refresh your memory, 'cause you haven't had the advantage of talking to Bob as much as I have and ... but he put ...

GUNDERSON: "UP".

SHACKLETON: ... on the card the letters "UP", which means "under

protest," so when we pull the cards with his signature where he does have his signature, those with the "UP" are the ones that he was forced to sign.

GUNDERSON: Cary did that too. And I don't know what Cary's ... it's WALLENSTEIN or something like that.

SHACKLETON: Cary?

GUNDERSON: Yeah.

SHACKLETON: Do you know how he spells his first name?

GUNDERSON: C-A-R-Y.

SHACKLETON: WALLENSTEIN or something like that?

GUNDERSON: Yeah.

POWER: He put "UP"?

GUNDERSON: He put "UP" on his tool?

POWER: Is he still on site?

GUNDERSON: Yes. Should be. We did it at the first few times that we did it, we didn't put anything on the card and Cary and I were sitting there talking and I says you know we're gonna get our ass in a lot of trouble. And we're gonna have to do something to cover our back door because they're gonna get us.

POWER: Yeah.

GUNDERSON: ... so we decided we'd start putting "UP" at the bottom of the card.

7 (D)

7 (D)

SHACKLETON: O.K.

POWER: Do you recall any of the other indicators on the cards, who used the stars?

GUNDERSON: Uh, someone uses checks down in the ... it was always ... we told the guys to put it in the bottom lower hand corner. We used "UP" and some of them said they were gonna just put a star there, so they'd know, and other ones were just gonna put a check down in the bottom right, it would be the bottom left hand corner, the card is ...

POWER: (Unintelligible).

GUNDERSON: ... You sit and you're looking at the cards, you sign it here and it's right down by their name.

POWER: O.K. But you don't recall who indicated they would ...

GUNDERSON: No.

POWER: O.K.

GUNDERSON: 'Cause we sit and talked it over several different times with a lot of different people. Like Cary signed off an awful lot more of them than I did. 'Cause I just flat refused to sign them for a long time.

ELIN: You don't know of any specific examples where the Quality Control inspectors signed these without looking at the ...

GUNDERSON: No, I don't. See I can't say that because I didn't ... I don't know whether they inspected it or not.

POWER: You indicated in one of your conversations ... one of your comments here that you were told either to, uh, sign them or, uh, go look for another job.

GUNDERSON: Right.

POWER: When did this transpire?

GUNDERSON: This transpired ... the last time was around November of '81 and that was on the spray pump. We were having trouble with the spray pump.

POWER: And who gave you this?

GUNDERSON: Hector NUNEZ.

POWER: Hector? Do you recall specifically what he said?

GUNDERSON: He said that, uh, let's see, how did he say it. Something ... I can't ... I can't tell you what ...

POWER: To the best of your knowledge.

GUNDERSON: It was more or less that if you didn't want to sign them off, that's fine; there was no question me being out there because they would find somebody that would sign them off.

POWER: He didn't say this in jest?

GUNDERSON: No.

POWER: No, I'm just (unintelligible). That's the last time?

GUNDERSON: Yes.

POWER: Oh. Do you recall whether or not, uh, there were any witnesses present (unintelligible)?

GUNDERSON: No. Hector is a smart Mexican.

7(C), 7(D)

7(C), 7(D)

POWER: Do you know whether or not there has ever been any instances or ... where cards were ... termination cards were prepared for faulty or work that wasn't even completed? Any indications?

GUNDERSON: No. But ... see, they hand you the card and you don't know whether you have done it or not. They say, here it is, we lost the card, sign this one off so we can get rid of the system, 'cause QC wants to buy it off ...

POWER: Yeah.

GUNDERSON: ... or ...

POWER: Yeah.

GUNDERSON: ... and you don't know whether the darn thing is done or what's done or whether it's done right or ...

POWER: Right.

GUNDERSON: ... nothin'.

POWER: Uh-huh. (Pause) Are you from Alameda?

GUNDERSON: No.

POWER: California?

GUNDERSON: I was over at, uh, Oakland at the local over there. I stayed at Lynn Oaks, uh, in Alameda.

POWER: Oh. 'Cause I saw that's where your statement was made.

GUNDERSON: Yeah.

POWER: I thought maybe you were from California.

GUNDERSON: No. I'm from Waterloo, Iowa. Poor dumb farm boy.

ELIN: You said on here, uh, I am sorry to back track. You said in this statement that you're, you're, that, uh, you had contacted the NRC regional inspector (unintelligible) NRC representative on site, I think were the words you used, about these allegations.

GUNDERSON: That was not the NRC inspector. That was engineering from APS.

ELIN: Oh. So this Item number 13 is not NRC ...

GUNDERSON: No.

ELIN: ... it's APS engineering?

GUNDERSON: Right.

ELIN: O.K. And he's the one that referred you to ...

GUNDERSON: No. He didn't refer me to anybody. He just told me that if, if it's a safety problem, get a hold of the NRC.

POWER: But do you realize the possible consequences of statements like that that have wrong information contained in them?

GUNDERSON: Yeah.

POWER: O.K. 'Cause ... 'cause that's how we got it. It was very ... congressmen get upset very much and so does the NRC when ...

SHACKLETON: See, our boss from the NRC ...

POWER: (Unintelligible).

SHACKLETON: ... wants our people to perform properly ...

POWER: And if they won't talk to you, we want to know. We're not ...

GUNDERSON: No, we can't, we can't talk to 'em, 'cause we can't get near 'em.

POWER: Yeah. O.K.

GUNDERSON: They should let your people go wandering through there without being tailed by ...

POWER: Tailed by somebody else, yeah.

GUNDERSON: ... an engineer. Because that's the only way we can get 'em and talk to 'em. And when you have two engineers following one man, you can't get him cornered.

POWER: Yeah. O.K. But this statement that you stopped ...

GUNDERSON: Yeah.

POWER: ... and talked to one is incorrect ...

GUNDERSON: Right.

POWER: ... then. O.K.

GUNDERSON: And I explained that to you too.

POWER: Yeah.

GUNDERSON: I did not talk to an NRC man because I couldn't get him.

POWER: Yeah.

GUNDERSON: I talked to APS engineering, which corrected some of the problems.

POWER: Yeah. But to do with, uh, the intervenors here, now, if you're going to appear before a board and under any circumstances I would make sure that you correct that sworn statement to insure that everything in there is correct ...

GUNDERSON: Uh-huh.

POWER: ... before they ever go over it. That's personal opinion, now.

GUNDERSON: Yeah.

POWER: (Unintelligible).

SHACKLETON: It's just so you won't have to go through the embarrassment. Everybody understands how these mistakes got made ... let's just get it corrected.

GUNDERSON: Well, when I made the statement of what was going on, I had three women taking notes and they were all taking different notes.

POWER: O.K.

GUNDERSON: And this is what they come up with.

POWER: Yeah. Allright.

SHACKLETON: This is, this is the very reason when I talked to you earlier, Bob, that I wanted it to be just our agency present at this time to address these safety-related problems because it gets ... when you interview by committee, it gets very confusing.

GUNDERSON: Yeah.

POWER: Yeah, even with us.

SHACKLETON: Even with us.

POWER: With an enginer and two investigators, it gets complicated.

ELIN: O.K. It also says on the statement that the NRC regional office referred you to Mr. VAN BRUNT but that was ...

GUNDERSON: That was ... I ...

ELIN: That was the office you (unintelligible).

GUNDERSON: No. I had talked to the Arizona Atomic Energy Commission.

ELIN: Yeah.

GUNDERSON: Allright. They referred me to ... I asked them if it was ... if they knew where the NRC office was at in Phoenix. They said there is no NRC office in Phoenix. It ... the closest regional office is in Las Vegas. And this is the number. And that was the number they gave me to get a hold of the NRC in Las Vegas.

ELIN: And what, what did they ... how did they identify themselves when you ... when they answered that number?

GUNDERSON: I don't remember.

ELIN: O.K. You don't know where ... who these ... was it a woman who said ...

GUNDERSON: No ... the woman had answered the phone.

ELIN: And you don't know how they identified themselves?

GUNDERSON: And they ... no.

SHACKLETON: We have that number so we can ...

GUNDERSON: Yeah. (Unintelligible).

SHACKLETON: Department of Energy.

ELIN: DOE?

SHACKLETON: I'm guessing that's probably what it is.

GUNDERSON: Probably is.

SHACKLETON: Because ...

GUNDERSON: But I don't remember how she addressed, you know, so I ...

SHACKLETON: It's very confusing for the public.

GUNDERSON: Yeah.

SHACKLETON: All these agencies and ... what is now Department of Energy and what is NRC used to be all together as AEC, and when they split it up ...

GUNDERSON: Yeah.

SHACKLETON: ... in 1972? 4 ...

ELIN: 4. 4.

SHACKLETON: ... in the Energy Reorganization Act, effective January 1st, 1974, they took the peaceful uses of nuclear energy and gave that to NRC, and the military side of the house went over to DOE, and ... but it's very confusing for people who aren't with it every day, to understand. O.K., any further questions on termination cards?

ELIN: No, I ...

POWER: I don't have any.

7(C), 7(D)

7(C), 7(D)

SHACKLETON: O.K. Now the next subject, uh, Bob, that I broke out from our conversations, was ... I just used the caption "break 'em off" the splicing of QC cable.

GUNDERSON: Right.

SHACKLETON: Now, what does QC cable mean to you? What is that ...

GUNDERSON: That's a colored indicated cable. QC cables to me means: red, green, blue, and yellow, which are shutdown systems for the reactor in an emergency. Here comes somebody.

MAID SERVICE: I'm just making a room check; sorry to disturb you.

SHACKLETON: O.K. That's kind of unusual.

ELIN: Red, yellow, blue, or green?

GUNDERSON: Right. (Pause) They split the cables, which QC was involved in. The black cables are strictly power or control cables which are the main cables.

SHACKLETON: So that's where you get the QC; is that quality control people are the ... they're interested in these particular cables?

GUNDERSON: In these particular cables. Right.

SHACKLETON: O.K.

GUNDERSON: They're not interested in anything else.

SHACKLETON: So, now we understand.

POWER: And that's all shapes; think shutdown.

GUNDERSON: Safety-related.

POWER: Right.

ELIN: You said that, um, from what I have here, that on the 120' level in the 100' level of the Aux. Building of Unit 1 that there was some, uh, red and green cables that were burned by slag dripping on them?

GUNDERSON: Yeah. People welding overhead. Not having done work ...

ELIN: Are these on overhead trays, or ...?

GUNDERSON: Yes, they are. They're up by the ceiling. And the General Foreman that ordered the patching is Mike OSGOOD. And there's his name. And the patching of the pipe, there's those guys' names and I'm gonna borrow your bathroom and I'll be right back.

SHACKLETON: Oh, sure. Help yourself.

POWER: O.K. Why don't you hit that pause.

SHACKLETON: Why don't you hit that pause there? (Pause) Bob, does ... on this piece of paper you've given us ... now Mike OSGOOD was the foreman that was responsible when the cable was, uh, burned and then spliced it?

GUNDERSON: Right.

SHACKLETON: He was the one in charge?

GUNDERSON: He was the one responsible for getting it patched back together.

SHACKLETON: And then who is, uh, Larry STEWART?

GUNDERSON: Jerry.

SHACKLETON: ... or, uh, Jerry STEWART?

GUNDERSON: Jerry STEWART and Bill WILLIAMS were the ones that patched ... tried to patch the pipe where they core drilled through it going between the Auxiliary Building and containment.

SHACKLETON: O.K. That's another subject.

ELIN: That's another subject.

POWER: What ... when did this QC cabling, uh, hot slag, burn?

GUNDERSON: Ah, shoot.

SHACKLETON: Just approximately, Bob.

POWER: Yeah, it doesn't have to be ...

GUNDERSON: I'd say it was right after the first of the year.

POWER: From this year?

GUNDERSON: Yeah.

POWER: O.K. Did you observe this or did someone tell you?

GUNDERSON: No, they came down to get some shrink tube from me to, uh, patch it with.

ELIN: And so they were gonna patch this, uh, cable, or this was from the splices, now?

GUNDERSON: Yeah.

ELIN: O.K. They didn't really splice the cable but they never tried to patch the insulation.

GUNDERSON: No, they did splice it.

ELIN: It was ... with the splice on the cable?

GUNDERSON: Yeah. It burned through between the con .. insulators. Between the conductors.

ELIN: Yeah.

GUNDERSON: O.K. So what they did, was they cut the wire in two.

ELIN: O.K.

GUNDERSON: They've slid a piece of shrink tube over it, and they come back and put ...

ELIN: (Unintelligible).

GUNDERSON: No, black.

ELIN: Black.

GUNDERSON: O.K. They've come back and they put their in-line splices in, which we stagger 'em. We'll put the first splice ...

ELIN: Yeah.

GUNDERSON: ... here, the next splice here, the next splice down a little farther, then we slide the shrink tube back, shrink it down with a heat gun, a torch, and that's it.

ELIN: O.K. Were these power cables?

GUNDERSON: They were control cables, is all I know.

ELIN: Control cables?

GUNDERSON: Yeah. They were red and green cables.

ELIN: And they were left with, uh, a black, black splice?

GUNDERSON: Black splice.

ELIN: They, they made attempt to color code or ...?

GUNDERSON: No, they just stick it under the rest of the wire on the tray.

ELIN: So you have to dig through the wire in the tray to find it.

GUNDERSON: Yeah, the wires are loose. Mike can tell you exactly where he did it at.

ELIN: Mike OSGOOD?

POWER: Was Mike the one that came down for the ...

GUNDERSON: Yeah. He's the one that came down for the shrink tube. He's the one respon ...

POWER: Anyone else with Mike that you recall?

GUNDERSON: No.

SHACKLETON: Is Mike still out there, Bob?

GUNDERSON: Yes, he is.

ELIN: Do you think if we went to Mike he would be willing to, you know what, would be voluntaring this ... showing us where these ...

GUNDERSON: If you told him that you knew he'd spliced it, and you were wanting to know where he had spliced it at, I'm sure that he'd be voluntary on it.

ELIN: O.K. If I just asked him if he spliced cable, he would not be ...

GUNDERSON: I don't know. He might, he might not.

ELIN: Yeah. O.K. So this was, uh, Aux. Building at the 100' level in the overhead.

GUNDERSON: (Unintelligible).

ELIN: Do you know what they were welding on? I'm trying to figure out (unintelligible).

GUNDERSON: They were probably welding on unit strut brackets or structural steel, pieces that were left out.

ELIN: Do you have any other, you know, the Aux. Building was a fairly large building and it's been a couple of years since I've been out there. But that's a fairly large building.

GUNDERSON: Uh-huh.

ELIN: Can you locate as we ...

GUNDERSON: O.K. On the 100 elevation, it would be the southeast section of the building.

ELIN: O.K.

GUNDERSON: Allright. On the 140 elevation, it was the north, the north, the southwest section of the building.

ELIN: Southwest section of the 140?

GUNDERSON: Yeah.

ELIN: Now, were they near outside walls, or ...?

GUNDERSON: No, they were in a corridor area.

ELIN: O.K. So they were in a corridor area.

GUNDERSON: Yeah.

ELIN: (Unintelligible).

GUNDERSON: Yes.

ELIN: So there's, uh, stacked trays that they have in the corridors, is that right?

GUNDERSON: Right.

ELIN: (Unintelligible). O.K. Did quality control have anything to do with these that you would use, did they ...?

GUNDERSON: No.

ELIN: Is there any QC involvement in the splices?

GUNDERSON: No. Not that I know of.

ELIN: O.K.

GUNDERSON: That was electrical.

ELIN: Wh ... have these cables been previously bought off, do you think, by QC?

GUNDERSON: I don't know that either.

ELIN: So you're not really sure what their status was at the time?

GUNDERSON: No. I couldn't tell you.

ELIN: Do you think when the electricians did this, sort of circumvented the quality control or ...?

GUNDERSON: They did it so they wouldn't have to pull the cable up.

ELIN: To re-pull them. O.K. So, if they had been previously been bought off by QC, they would not have ... doing this would not have realerted QC through (unintelligible).

GUNDERSON: No, because if they'd a had to re-pull them, they'd a had to determinate 'em, and they'd a had to get a pull card to pull them out and then they'd a had to get a pull card to

pull them in again, and they'd a had to get a new termination card. But, they don't ... on their determination procedures, they don't follow that out there either. Start-up takes the wire off right after you put it on. They don't have a determination card. And then they leave it hanging in the cabinet and walk off. So they come back out with another card for you to go back and hook it up the way it was supposed to be. It's dumb procedures. So ... I've, I've hooked wires up, and, uh, Kevin BROYHILL has inspected them, and, uh, Louey, he's a black engineer out there, I can't remember his name, had me check the same wire three times and one day where I had terminated the wire, turned the card over to him ... he'd went up to check it and it was wrong.

ELIN: Uh-huh.

GUNDERSON: ... So, I got the card back and I had to go back and I had to take the wires off, which you can tell they weren't laced in right; one was stretched down to this corner and the other one had a big loop in it where somebody had changed two of the wires wrong. So I changed the wires and I went back and I got Louey, took him out there, and the damn thing has been changed again, so I had him watch me change 'em, and then I called him up about 2:30 that afternoon and he come back up and took a look at the cabinet, and there the wires had been changed again. Start-up keeps getting in there and ... that was a battle with me and start-up that day, because I was changing them the way they were supposed to be and they were changing them the way they wanted to make them look. So, this happens a lot; they don't get determination cards, they just do what they want to do, and that's it.

SHACKLETON: Now, Bob, to make sure that I .. when I initially talked to you I must have been in error because I had 100' elevation and 120' elevation.

GUNDERSON: Well, the 120' is the floor.

SHACKLETON: Uh-huh.

GUNDERSON: And it's up above the floor ... it's almost to the next floor up.

SHACKLETON: Oh, that's where you got the 140?

GUNDERSON: Yeah. Because they're ... the same way with ...

SHACKLETON: (Unintelligible) you said it's between 120 and 140.

GUNDERSON: Right. Well ...

SHACKLETON: I mean ...

GUNDERSON: ... yeah. The 120 is where the floor is at, and the 140 is the next floor, but all your cable trays are clear up to the ceiling. Nothing is down close. The same way with the 100 elevation. It's like that pipe that I told you about. It's about 118 feet, 115 feet. It's above the floor up in a corner. Same way with the tray, it's clear up by the ceiling.

ELIN: O.K. So the 140' elevation is, uh, at the 120' floor at the overhead.

GUNDERSON: Yeah.

POWER: (Unintelligible), yeah.

ELIN: On the 100' elevation is what the 9' floor?

GUNDERSON: No, the 100' elevation is 120, or 117 or 118 or whatever it is.

POWER: (Unintelligible).

GUNDERSON: They're right up by the ceilings.

ELIN: O.K. So, that's on the 100' floor?

GUNDERSON: Yeah. It's on the 100' floor and the 100 ...

ELIN: About to the 120' foot elevation?

GUNDERSON: Yeah. And the other one's 140. Well, it's 120, but at the ... almost to the 140 elevation.

ELIN: O.K. So it's real close to the ceiling?

GUNDERSON: Ceiling. They're all ... yeah. There's stacks of them up there. You'll see four or five trays in a stack up there.

SHACKLETON: Is there still, uh, what do they have, uh what the hell do you call it, uh, when you're getting up high where you work?

ELIN: Scaffolding?

SHACKLETON: Is scaffolding still in up there?

GUNDERSON: No, the scaffolding has to be ordered to be built, but they do have ladders, safety belts ...

ELIN: Yeah, we can get up there.

GUNDERSON: ... they have, uh ...

ELIN: (Unintelligible).

GUNDERSON: ... apple pickers we call 'em, or high jackers, whatever you guys call 'em, uh ...

ELIN: I've had, put new scaffolding up there; it's easier.

GUNDERSON: Yeah, yeah.

ELIN: It's no problem.

SHACKLETON: Now we get into that with piping.

GUNDERSON: Yeah.

SHACKLETON: You get back up high and ...

GUNDERSON: Yeah, I know, in some of them places they've got are ... what was dumb was they'd give you an area to do and they would give you ... there might be ten valves and a couple motors, valve operated motors up there, and they would give you two termination cards to do that area. So you have to go and you order a scaffold built. And then they build a scaffold and you go up, they, they'd terminate these cards. And then they come along and they tear the scaffold down and two days later they'll get two more valves for another guy to do. He goes up there and has a scaffold built and crawls up there and terminates his two valves and they come along and tear the scaffold down and somebody else comes along and has two more of them up there to do. They won't give them

to you all at once, so you can do it and be done with it.
It's dumb, but that's the way they do it.

ELIN: How many cables ...

GUNDERSON: They say, well, it's not a part of this system or not part of that system.

ELIN: How many cables are we talking about that were, uh, spliced?

GUNDERSON: Probably three or four in each area where they were right together where the slag came down.

ELIN: And these were three conductor cables, or two conductors?

GUNDERSON: The one was seven conductor, and I think the rest were two conductors because he got a handful of couplings from me and some shrink, and he made reference to the point where, uh, they'd spliced them already upstairs on the 120 ... between the 120 and 140.

ELIN: Uh-huh.

GUNDERSON: So they had the stuff for that.

ELIN: Did you actually see these splices yourself?

GUNDERSON: No. I was right there on 100 .. when you come in the door and you go down the corridor; right there is where I met him ...

ELIN: Uh-huh

GUNDERSON: ... when I gave him the couplings and the shrink tube.

ELIN: I see. But you didn't go up to see the splices or anything?

GUNDERSON: No, he just give it to some guy he hollered at that was on his crew and told him to go ahead and fix it.

ELIN: And this was on the 100 and ...

GUNDERSON: Between the ...

ELIN: .. this was on the 105th floor ...

GUNDERSON: Yeah.

ELIN: ... close to the 120' ceiling?

GUNDERSON: Up to the ceiling. Yeah.

ELIN: Do you have anything else on the splices?

POWER: No.

SHACKLETON: No. That's ... we can go on to the next point. The important part is that you get what you need while we got Bob's brains to pick here because he knows where this is. 'Cause like you say, that Aux. Building is huge.

GUNDERSON: Yes, it is. And tracing everything down ...

SHACKLETON: O.K. and cable trays are plenty.

GUNDERSON: ... takes a long time.

SHACKLETON: Right. O.K. The next point I have from our discussion,

Bob ... I ... just categorized by improper use of insulation ...

GUNDERSON: Right.

SHACKLETON: ... and this is related to the high-voltage splices on the high pressure safety ...

GUNDERSON: Right.

SHACKLETON: ... injection pumps.

GUNDERSON: Yeah. IPSIS.

SHACKLETON: And the low-pressure safety injection pumps ..

GUNDERSON: Right.

SHACKLETON: ... circulating water motors in the end of the turbines, the emergency ..

GUNDERSON: Which aren't safety ..

SHACKLETON: O.K. That's right. The emergency motors of the water intake for the cooling towers ...

GUNDERSON: Right.

SHACKLETON: ... the spray ponds, and they use 2200 Scotchfill ...

GUNDERSON: Scotchfill.

SHACKLETON: ... rated at 600 volts.

GUNDERSON: Right.

SHACKLETON: ... on 4160 motors ...

GUNDERSON: Right.

SHACKLETON: ... and 13,800 motors when they should have used C-130.

ELIN: Who makes the 130-C?

GUNDERSON: 130-C.

SHACKLETON: 130-C?

ELIN: Who makes that?

GUNDERSON: Uh ...

ELIN: Is that a Dupont ... or ...?

GUNDERSON: No, it's not Dupont.

ELIN: Scotch goes, uh, Scotch ...

GUNDERSON: Scotch 130 ... er ... 2200 is Scotchfill.

ELIN: Yeah, that's, uh, Dupont ...

GUNDERSON: But, uh ...

ELIN: ... or that's Monsanto, right? 3-M?

GUNDERSON: Yeah, 3-M. Uh, the 130-C is made by somebody else. I

don't know whether it was made by Rayco or who. It's not Scotch ... it's not a 3-M product.

ELIN: O.K. Now where exactly did they use this material at?

GUNDERSON: O.K. Where they bolted the motor, the line to the motor.

ELIN: O.K., in the peckerhead, or ... (unintelligible)?

GUNDERSON: Yeah.

ELIN: ... (unintelligible) motor?

GUNDERSON: Yeah. In the peckerhead of the motor.

ELIN: O.K. And what, what do they use it for exactly?

(end of tape)

One more time ... O.K. So, you and your foreman wrote an RFI to Bechtel engineering in about November of 1980 ...

GUNDERSON: Uh-huh.

ELIN: ... that asked for what, for the ...

GUNDERSON: Specifics on ...

ELIN: ... for specifics on which of these insulations ...

GUNDERSON: ... on which of these insulations we were supposed to use on these motors that we were hooking up.

ELIN: O.K. And they basically said in this ... in response to the RFI that they could use them interchangeably.

GUNDERSON: Right.

ELIN: Did, uh ... was it evident at that time in November of 1980 that you were having this problem with the, uh, Scotchguard, uh, squeezing out from underneath the ..

GUNDERSON: No. We were not having the problem at that time but it ... because it was cold.

ELIN: O.K. So it's really when it warms up, then.

GUNDERSON: Yeah, when it warms up, because you can imagine how hot it gets out here in the summer ...

ELIN: Yeah.

GUNDERSON: ... just think of how hot that peckerhead gets out there in the sun.

ELIN: O.K. And, uh ... let's see. Have there ever been any other RFIs written that you ... to your knowledge asking about it after we'd helped this running problem on the squeezing?

GUNDERSON: No, afterwards, uh, no, they came back and after they'd had the squeezing problem, then they came out with the 130-C. Up until that time, we didn't have 130-C to use.

ELIN: I see. So originally, like before November 1980 ...

GUNDERSON: All we had ...

ELIN: ... all you had was ...

GUNDERSON: ... 2200.

ELIN: O.K. And at that ... and the RFI asked wh ...

GUNDERSON: Why we were using 2200 because it was only rate at 600 volts.

ELIN: O.K. And their response was it's O.K. to use on higher voltage?

GUNDERSON: Right. They sent out an idiot sheet with a detail on it ...

ELIN: Well, what was their ...

GUNDERSON: ... that they had copied off the copy machine that sh .. showed using 2200 on a high voltage splice.

ELIN: O.K. What ... did they give justification like a heat shrink or something was supposed to provide the insulation?

GUNDERSON: No. No. Didn't give justification at all.

ELIN: O.K.

GUNDERSON: It just said that this is our procedure, this is the procedure you'll follow.

ELIN: O.K. And then, uh, later after that time, it, you had your problem with, uh, it squeezing ...

GUNDERSON: Squeezing out.

ELIN: ... out and so then they generated another design spec; I guess that required the C-130 or 130-C?

GUNDERSON: 130-C.

ELIN: O.K. And did it require retrofitting on a lot of the motors?

GUNDERSON: No. Going back over them, you mean?

ELIN: Yeah.

GUNDERSON: No.

ELIN: So anything ..

GUNDERSON: We just started using it from that day on we started using 130-C and that was in like, uh, October, October/November of '81, a year later.

ELIN: O.K. October or November 1981 was a new spec and that implies 130-C.

GUNDERSON: 130-C.

ELIN: Now what was it. - just on high voltage equipment or on all equipment?

GUNDERSON: On, uh, high voltage. They still use 2200 or 480 and 220 and 277 and (unintelligible).

ELIN: So you're talking about what, 4160?

GUNDERSON: 4160 and 138 (unintelligible).

ELIN: O.K.

POWER: So all of these now at the present time we should be able to go and find this problem existing at these rates?

ELIN: So, I guess the concern is ..

GUNDERSON: Well, you won't find it at the ones like at the spray pond ...

POWER: O.K.

GUNDERSON: ... and you won't find it ... they tore into the HIPSI's and re-did the splices on 'em.

ELIN: This is the high pressure safety injection pumps?

GUNDERSON: Right.

ELIN: And the low pressure safety inj ...

GUNDERSON: But you will find the one bolt on there.

POWER: O.K. So the HIPSI then, as far as this, uh, 130-C ...

GUNDERSON: It's got th 130-C right now.

POWER: ... has been corrected.

GUNDERSON: Right.

ELIN: O.K., uh, let's go back over this now. The ones that we got were the high and low pressure safety injection pumps ...

GUNDERSON: Uh-huh.

ELIN: ... and you say then it's been replaced with 130-C?

GUNDERSON: Uh-huh.

ELIN: O.K. Circulating water pumps motors?

GUNDERSON: No, they have not been replaced.

ELIN: O.K. Uh, emergency motors, uh, water intake for the cooling towers?

GUNDERSON: No, they have not been replaced.

ELIN: O.K. Spray ponds?

GUNDERSON: They have been. 130-C.

ELIN: O.K.

GUNDERSON: But they still have the one-bolt lug ...

ELIN: O.K.

GUNDERSON: And two bolts in it.

ELIN: O.K. I think that's another one ... that's our next subject.

GUNDERSON: Yeah.

POWER: Yeah.

ELIN: Um ... do you have any ideal why they might have replaced the, uh, particular ones they replaced like the HIPSI and the, uh, spray pond?

GUNDERSON: Because startup tore 'em ... tore the motors apart to test them after we had put the shrink kits on 'em they come in and cut them all off, decided they were gonna high pot/megger the motors. So, since they already had 'em tore down, they went ahead and replaced it with 130-C.

ELIN: Do you know of any other safety-related motors that might have had this type of treatment?

GUNDERSON: Well, I don't know. I didn't ... see I only did a small percentage of 'em. You'd have to get a hold of the high voltage crew.

ELIN: What about, uh, the other places other than the motors; how about in the switchgear? Terminations in the switchgear?

GUNDERSON: That's all bus bar gear. It's all bus bar with rubber pads ...

ELIN: With rubber pads, so they wouldn't have used any that, uh ...

GUNDERSON: No, they wouldn't have used 130. They wouldn't have needed it.

ELIN: O.K. The reason I asked in that particular way was because, uh, of all these ones that are listed here, high pressure and low pressure safety injection pumps and spray pond motors would be safety-related with the circulating water pumps for the turbines would not be ...

GUNDERSON: Would not (unintelligible).

ELIN: ... and, uh, intakes for the cooling towers typically or not 'cause the cooling towers aren't safety-related. Spray ...

GUNDERSON: No, this is an emergency intake water in the cooling tower. They've got two separate motors sitting over there by themselves.

ELIN: O.K. Emergency from the big lake they have or ...?

GUNDERSON: No, from the cooling towers. The cooling towers, all three of them run into a canal ...

ELIN: Yeah.

GUNDERSON: ... which feeds into the building.

ELIN: O.K.

GUNDERSON: O.K. They've got two motors sitting on the west end of that. You'll see three of four big upright motors. 138 motors.

ELIN: That's the condensating water for the conduct ...

GUNDERSON: Right.

ELIN: O.K.

GUNDERSON: O.K. And to the west of them is two more motors.

ELIN: Uh-huh.

GUNDERSON: A red one and a green one ...

ELIN: Oh, O.K.

GUNDERSON: ... which are emergency motors ...

ELIN: For cooling water.

GUNDERSON: ... for cooling water ..

ELIN: Component ...

GUNDERSON: ... to pump water into that dang building.

ELIN: Component cooling water and stuff.

GUNDERSON: Right.

ELIN: O.K. And those were not replaced?

GUNDERSON: Those were not replaced, no.

ELIN: O.K. So, uh, so that would be a good place to go to look then is right there ...

GUNDERSON: For the 2200 ...

ELIN: ... It would be, uh, ... O.K. So that ... you call it emergency motor for water intake structure, is that what it ...?

GUNDERSON: I don't know for sure what they're called, but they're a

red and green emergency water to get water into the building in case they have to have it. I don't know where they go or .. all I know is they're emergency motors.

ELIN: And they have a Class 1 (unintelligible) color code (unintelligible). O.K. O.K. Do you you have any other questions on the, uh ...

SHACKLETON: No, as long as you ... you've gotten it down so you know where you can point yourself.

ELIN: Well, I think these cooling tower motors would be the best ones to go look at there (unintelligible) if they're the ones that have a ...

GUNDERSON: They've, they've got the 2200 in it. But they've got a two-bolt lug on 'em that come wired in the peckerhead.

ELIN: O.K. So as far as the insulation now, do you ... it wouldn't do me very much good to go look at safety injection pumps or anything like that?

GUNDERSON: No. No. They've been changed.

ELIN: O.K. O.K. So ...

GUNDERSON: And the other ones ... the circulating steam motors you don't have anything to do with 'cause they're black.

ELIN: Yeah.

GUNDERSON: So you wouldn't have any control over them anyway.

ELIN: O.K. I guess that's all I have on that subject.

SHACKLETON: O.K. We'll go on then ... Gene, do you have any other questions?

POWER: No, no.

SHACKLETON: We'll go to the next point, Bob, and this is one that you've been relating to 'cause they're so closely related and that was the use of one, uh, one-bolt lug when two-bolt lugs are required ...

GUNDERSON: Right.

SHACKLETON: ... and I'll just review my notes here; you can correct me if I made any mistakes. Bechtel used a one-bolt lug, which is a 45 to 65 amp rating ...

GUNDERSON: Uh-huh.

SHACKLETON: ... on motors that draw 480 amps surge and runs at 120 amps. They require two bolts.

GUNDERSON: Right.

SHACKLETON: This violation included the spray pond pumps. They put in two-bolts to make it look like they used two-bolt lugs. One is ...

GUNDERSON: Uh-huh.

SHACKLETON: ... not connected. This was done on all the motors mentioned in Item 3; that's what we just talked about, except for the circulating water.

GUNDERSON: Uh-huh. One motor on the south side has got two bolts in it; the motor on the north side has got one bolt in it.

ELIN: On the circulating water?

GUNDERSON: Uh-huh. On the spray ponds. Emergency circulating water.

ELIN: This is the north side that has one bolt?

GUNDERSON: Yes. The north side has got one bolt, the south side has got two. They're both on the west end of Unit 1.

ELIN: O.K. Now, they put two-bolt lugs on there and they only put one bolt into the lug?

GUNDERSON: No. They put one-bolt lugs on there and the one on the north side they only put one bolt in. 'Cause they only had a one-bolt lug.

ELIN: The termination on the motor, what does it have on it?

GUNDERSON: O.K. Here. This is what it's got. It's got just a blade ...

ELIN: Go ahead.

GUNDERSON: ... it's got just your blade, which doubles out and this takes your wire.

ELIN: Uh-huh.

GUNDERSON: And it's got two holes in it here. O.K. And then what they've got coming off the peckerhead is a little lug; it's out like this and it's just, uh, a little wire lug; it's got

a plastic shield on it, but we cut the shield off because we have to put semi-con over it and it's the only way we can get a half inch of semi-con on it - overlap over it. So what they've done is on this, they've put a bolt here and a bolt here ...

SHACKLETON: But there really ...

ELIN: But there's no lug on this (unintelligible).

SHACKLETON: There's no lug connector.

GUNDERSON: But there's no lug connector to the second bolt.

ELIN: O.K. Are these ...

GUNDERSON: There's nothing under it. This can be checked very easily just by x-raying it or just take a look at it and you can see how the one on the north side has only got one bolt in it and the one on the south side has got two.

ELIN: Is it evident through the, the wrapping? ..

GUNDERSON: You can see it through th ... yeah, through the ... no, it's not wrapped, it's a shrink ...

ELIN: Shrink, heat shrink and you tell it through the heat shrink?

GUNDERSON: Yeah. Sure. 'Cause you'll see this big flat spot on the second one.

ELIN: Can you make out the outline of the lugs through the heat shrink?

GUNDERSON: No, you cannot, but there's x-ray equipment on the job that you can x-ray that lug, and that lug is like that thick.

ELIN: We'll take one apart.

GUNDERSON: And, uh, it is about that wide, it's about 3/8ths of an inch wide, and maybe 3/32ths thick and then it's rated at 480 amps. And there's no way ...

ELIN: How do they inspect it ...

POWER: How did you become aware of this?

GUNDERSON: I told them they couldn't use this ... you can't use this kind of lug on there. 'Cause see, we been, we put two-bolt lugs on ..

POWER: Did you install it ... no what I'm saying ...

GUNDERSON: No, I installed ... O.K. I installed the one out at the cooling tower ...

POWER: Yeah.

GUNDERSON: I also worked on the ones ... the big steam tur ... ones at the end of the generator, turbine. O.K. But we had two-bolt lugs that came with the equipment. It was tie wrapped right inside the equipment ...

POWER: Yeah.

GUNDERSON: Allright. And we got down to these other motors and I asked him where the lugs were at. Well, we didn't have any. Said well, we got to get some. Well, we're gonna use these.

Said you can't use those. Well, that's what engineering says we're gonna use, and that's what we're gonna use. And engineering was ANDERSON and Bob RUFF.

ELIN: What size, what size, uh, leads going into this line?

GUNDERSON: Uh, a number 2. This is 4 odd or 250 going out. The incoming side?

ELIN: Yeah.

GUNDERSON: That's, that's the motor right there; it's number 2.

ELIN: This is from the motor?

GUNDERSON: Right. This is 4 ought or 250. 250 is just a hair bigger than a 4 ought.

ELIN: Yeah. 250 amps, yeah.

GUNDERSON: Yeah.

SHACKLETON: Now the two people you identified, Bob, that, to your knowledge are responsible for this, is a guy by the name of ANDERSON ...

GUNDERSON: And RUFF.

SHACKLETON: How does RUFF spell his name?

GUNDERSON: R-U-F-F.

SHACKLETON: And ANDERSON, what's his first name? Do you know?

GUNDERSON: Andy.

ELIN: (Unintelligible).

GUNDERSON: They're engineering. Where ... that's when I went ahead and I got a hold of Kevin and told him that they couldn't do this and Kevin put a red tag on it, wrote an NCR against it. Reggie JOHNSON jumped over him somehow 'cause when I was down there picking up my stuff to leave, Kevin came back, Reggie was with him, made him take his red tags off it, 'cause we can't work behind on anything with tags, made him tear up his NCR and I still don't know how he got by with that.

ELIN: This was about ... when was this NCR written?

GUNDERSON: This would be in '81 in the last of November, the first of December.

ELIN: O.K. Let me, let me just go back over this picture one more time. This is the, uh, cable going to the outside world on this side?

GUNDERSON: Right. That's the line coming in.

ELIN: O.K. And the line ... what ... and th ...

GUNDERSON: It's a two-bolt lug.

ELIN: Oh, I see there's a ... it's terminates over here.

GUNDERSON: It's belled. You know how they smash 'em.

ELIN: Yeah.

GUNDERSON: O.K.

ELIN: This is a crimp fitting here that ...

GUNDERSON: That's your crimp, right.

ELIN: ... the cable.

GUNDERSON: Right. That's where your high press goes.

ELIN: O.K. And then it has a two-hole lug crimped onto the end of the cable, and these are the lugs that are on the, uh, this is the wire coming out of the motor inside the head ...

GUNDERSON: Right.

ELIN: ... and this is crimped on here also, this other type of lug?

GUNDERSON: Right.

ELIN: O.K. These weren't supplied with the motor?

GUNDERSON: No.

ELIN: So it's just bare wires on it.

GUNDERSON: No. We could use the Mickey Mouse ... that's what I say ... we used a Mickey Mouse little lug that they dug out of, uh, the shop ...

ELIN: Did they ...

GUNDERSON: ... to put on here.

ELIN: When they supplied the motor, they didn't supply any termination ...

GUNDERSON: No.

ELIN: ... post? So these wires, once they are crimped together, they're just sort of just floating in there. It's not, it's not a fixed termination post or anything like that?

GUNDERSON: No, it's got a one point crimp instead of a two point ...

ELIN: Yeah. Right here.

GUNDERSON: ... which it calls for a two-point on your specs.

ELIN: Yeah.

GUNDERSON: O.K. It's only a one point and, uh, it's a one-bolt lug and not a two-bolt lug and the lug itself is rated, you know about ... it depends on application; it's rated between 45 and 65 amps, depends on what kind of application.

ELIN: And this ... on the cable side that's going out the outside world, it's what, a multiple crimp, two crimps, three crimps?

GUNDERSON: Yeah. That's a two-crimp. That's a regular standard ...

ELIN: Two crimp lug?

GUNDERSON: Yeah. High voltage lug. Because you've got your stress cone right after that.

ELIN: Yeah.

GUNDERSON: And your shrink comes clear up here on your ... on this one - to the end of your crimp.

ELIN: And what do they have ... what do they have over this? Do they have, uh ...?

GUNDERSON: O.K. They have 130-C. Next layer, uh, I think it's 23 semi-con ...

ELIN: Yeah. O.K.

GUNDERSON: Next layer, 133 ...

ELIN: Yeah, 130-C?

GUNDERSON: No. 130 ... No ... only have to put 130. That's 33 Scotch.

ELIN: Scotch 33?

GUNDERSON: Yeah. O.K. Then over that they got the shrink tube - Ray Chem shrink ... comes in a kit.

ELIN: O.K.

SHACKLETON: You're talking about a peckerhead. Is that the fr ... the end of the line?

GUNDERSON: Peckerhead is the box on the motor where the line comes in and hooks to the leads for ...

ELIN: Termination box.

SHACKLETON: O.K.

ELIN: So they really just handle this sort of like a bored together splice, then is what they handled it.

GUNDERSON: Yeah. In-line splice.

ELIN: O.K. So this is not a fixed lug or anything on the motor head? O.K.

GUNDERSON: No. The only thing is the motor see is the shield so it's, it's a stress column on this end.

ELIN: Yeah.

GUNDERSON: Because the lead from the motor is not shielded and that's just grounded to the peckerhead somewhere.

ELIN: O.K.

POWER: Is it alright if I make a copy of this?

GUNDERSON: Sure. Do you want any of this other stuff?

POWER: No, we already have those, yeah ...

GUNDERSON: O.K.

POWER: Same as we have in the trailer ...

ELIN: O.K. So let me just see ... a good place to find this would be Unit 1, uh, spray pond motors on the north side.

GUNDERSON: Right. Right. Well, there's two motors, one on the north, one on the south. They're both on the west end of Unit 1.

ELIN: Yeah.

GUNDERSON: And there's portable x-ray equipment available if you'd want to x-ray it instead of, uh, tearing it apart and you can do that.

ELIN: Yeah. I don't mind having to take one apart, it doesn't really ...

GUNDERSON: Yeah.

ELIN: That's our problem. O.K. And I guess that's all I need on that one, Owen.

SHACKLETON: O.K. And then the next one we had, Bob ...

GUNDERSON: Yeah.

SHACKLETON: ... is where you expressed your concerns about the lack of qualifications of the ...

ELIN: Oh, I'm, I'm sorry. I do have one more question. You say an NCR was generated on this same subject in November or December of 1981.

GUNDERSON: Yes, sir.

ELIN: Don't they have a policy there that when you pull an NCR, it has to have a number ...

GUNDERSON: Yeah.

ELIN: ... assigned to it at the time? Even if it's later destroyed?

GUNDERSON: Right.

ELIN: Did this one have a number assigned to it?

GUNDERSON: Yeah. Kevin BROYHILL give it the number. You'd have to get that from him.

ELIN: Do you know ...

GUNDERSON: He's the one that wrote the NCR on it.

ELIN: O.K. So I probably should be able to go locate that NCR or (unintelligible).

GUNDERSON: Yeah.

ELIN: Even if it's been voided or whatever ...

GUNDERSON: Well, if it's been voided or destroyed, they lost the number somewhere along the line.

ELIN: Well ... yeah, I thought their system was supposed to be that, uh, that's where they had to take a sequential number so that even if it was voided, they had a record of what it was that was voided.

GUNDERSON: Unless they reissued the number.

ELIN: Yeah.

GUNDERSON: Because this was all took place in one day.

ELIN: Yeah, but Kevin BROYHILL doesn't ... he's not the one that controls the numbers is he?

GUNDERSON: No.

ELIN: I thought you had to go to some central spot to get a number.

GUNDERSON: Yes, you got to his head field engineer, the one that's in charge of him.

ELIN: O.K. O.K. That's all.

SHACKLETON: Well, the next point was about the QC inspectors and ...

GUNDERSON: Right.

SHACKLETON: ... what I have noted here just in brevity of our conversation that you stated that many of the QC inspectors-electrical are not qualified to do their jobs. You cited an incident where when Reggie JOHNSON and Hector NUNEZ wanted him to splice QC cable down the manholes in front of the spray ponds.

GUNDERSON: Yeah, right.

SHACKLETON: The cables they had run from the section motors were too short ...

GUNDERSON: Right.

SHACKLETON: ... the code doesn't allow this splicing ...

GUNDERSON: Right.

SHACKLETON: The cables were then pulled and cables of the right line were run.

GUNDERSON: Right.

SHACKLETON: But the point that Bob was making here is that when we're looking for QCIs to ...

GUNDERSON: When you take the QC personnel and you stick him with an electrician for two or three days so I can show him how to do a high voltage splice so he can come back and tell me whether I'm doing it right or not, there's something wrong, and there's a BURHAM, SHAW, BROYHILL, Bob RUFF, Andy ANDERSON, uh, Steve RIGGS - these are all engineers. QC engineers are RIGGS, BURHAM, SHAW, which have both been transferred to start-up and are not QC anymore.

SHACKLETON: Now, when you say they're engineers, are they given the title of engineer?

GUNDERSON: Yeah, electrical engineer.

ELIN: But they're the ones that are performing the quality control inspections on your work?

GUNDERSON: They were, they're not anymore. Now they're on start-up. Andy ANDERSON is just an electrician, RIGGS is QC out there right now. Andy ANDERSON is, is, uh, an electrical engineer for terminations right now.

ELIN: Who are these people right now with QC?

GUNDERSON: RIGGS is.

ELIN: RIGGS is. But they were all on QC at one time?

GUNDERSON: All of 'em but ANDERSON.

SHACKLTON: What's SHAW's first name; do you know?

GUNDERSON: Duane, I think it's Duane SHAW. And I don't know what BURHAM's name is.

SHACKLETON: How about RIGGS?

GUNDERSON: Steve.

SHACKLETON: Now, SHAW, RIGGS, and BURHAM were all former QC?

GUNDERSON: RIGGS is now.

SHACKLETON: O.K.

GUNDERSON: Kevin BROYHILL is another one I showed how to inspect, how to check high voltage, how to check and find out if somebody's trying to sabotage 'em, you know what you look for like a pencil line down the back ...

SHACKLETON: Uh-huh.

GUNDERSON: ... you know, carbon arc on ya and how to tell if the work's done right, uh, what to look for, like cuts through the semi-con into the conductor, uh, you know, what you would teach somebody to look for to make sure somebody is doing the job the way we're supposed to do it.

ELIN: Now you say they were placed what, with you for four or five days to do this?

GUNDERSON: No. A couple days. They'd put me on a cabinet with three wires and, uh, they'd stay with me and see how I did it step by step on all three of 'em and then as we'd go through it,

they'd ask questions. You know, why are you doing this, what are you doing that for? Uh, then if they had any questions, I'd answer 'em. But I'd show 'em on each one ...

ELIN: This was before they were doing quality inspections?

GUNDERSON: Right.

ELIN: So this was sorta like their training program.

GUNDERSON: Right.

ELIN: O.K. So, go, go ahead.

GUNDERSON: So, I'd train 'em, and then they'd come back and tell me that I'm not doing it right.

ELIN: What would they say, for instance?

GUNDERSON: Well, they'd get a hard on for Reggie JOHNSON or somethin' so they'd turn his work down because SHAW would get into an argument with Reggie, so he'd come back and he won't buy off what I did.

ELIN: Yeah ... for what sort of reasons?

GUNDERSON: He's pissed at him. They're mad at each other.

ELIN: So they wouldn't really give a reason.

GUNDERSON: No, they'd just be mad.

ELIN: Don't they write inspection reports on them?

GUNDERSON: Yeah, they'd just say improper termination. Do it over again. And Reggie would get mad at him and say do it, I don't care if he ain't there; do it anyway.

ELIN: So it would not really be technical reasons.

GUNDERSON: The point is, they would turn down work that was good ...

ELIN: Yeah.

GUNDERSON: ... they wouldn't inspect the work that we did, because Reggie would say I'm not waiting for him to show up. Go ahead and terminate the wire, if they want ... if you talked ... told him to be there, if they are not there, tough shit, we're not waiting for him. So we'd go ahead and terminate the wire without it ever being inspected. They'd have to come back when it's completely done and buy it or turn it down.

ELIN: After, after the termination was complete.

GUNDERSON: Sure. But they didn't watch the crimping to make sure it was ...

ELIN: O.K. So basically what you're saying is that these, these four people, uh, these three people, it's BURHAM, SHAW, and RIGGS ...

GUNDERSON: Yeah.

ELIN: They were the QC ...

GUNDERSON: And BROYHILL.

ELIN: O.K. BROYHILL.

SHACKLETON: Andy ANDERSON was never in QC, right?

GUNDERSON: No. Neither was Bob RUFF. And those are two other ones that I showed how to do high voltage splices. I think because they'd never seen it done before.

ELIN: O.K. So these four QCIs, BURHAM, SHAW, RIGGS, and BROYHILL, were assigned to watch and do splices ...

GUNDERSON: Right.

ELIN: ... for training.

GUNDERSON: No, for inspection.

ELIN: Well, initially for training?

GUNDERSON: No. They were to watch me do the splices so they would know how to inspect 'em.

ELIN: O.K.

GUNDERSON: QC.

ELIN: O.K. That sounds like training.

GUNDERSON: Well, yeah, it's training.

ELIN: O.K. Did they buy those particular splices off themselves?

GUNDERSON: Sure.

ELIN: They inspected that particular splice?

GUNDERSON: Sure.

ELIN: O.K. And then they were later assigned to inspect other splices?

GUNDERSON: That were done by other people.

ELIN: O.K.

GUNDERSON: I was ... I got delegated teacher out there.

ELIN: Uh-huh.

GUNDERSON: Somebody new would come in the crew; I got to teach him how to do high voltage ...

ELIN: O.K.

GUNDERSON: ... because I'm good at it.

ELIN: O.K.

GUNDERSON: And, uh, you know as well as I do, the most important thing there is on a high voltage splice is keeping it clean.

ELIN: Yeah, that's right.

GUNDERSON: You know.

ELIN: But now, you know, let me get ... I'm, I'm trying to figure out what exactly where the problem comes in now. You say that they, uh, rejected splice, or terminations that other

people did later without real technical reasons for that,
uh ...

GUNDERSON: Yeah. They'd ... what it would amounted to would ... oh,
let's say I did a splice ...

ELIN: Yeah.

GUNDERSON: I was directed by Reggie JOHNSON to go ahead and do the
splice; we don't have time to wait for 'em all day.

ELIN: So they would accept the splice without watching the
entire ...

GUNDERSON: (Unintelligible).

ELIN: ... procedure of splicing. They would accept it.

GUNDERSON: .. Sometimes they would, sometimes they'd just turn 'em down
because they got in an argument with 'em and, uh, I don't
know all what was going on in their power struggle out there
but it was a mess there for a long time. You didn't know
whether to do it or not to, because you didn't know whether
you was going to be in trouble with one or the other.

ELIN: So, in other words, what would happen is that you'd be
told ... the QC inspector wasn't there to watch you do the
splice; you'd be told to go ahead and make the splice.

GUNDERSON: Do it anyway.

ELIN: O.K. And then you'd make the splice and either they would
come out at that time to buy it as it was ...

GUNDERSON: Right.

ELIN: ... without just inspecting the finished product ...

GUNDERSON: Right.

ELIN: ... not inspecting what you were doing in the process.

GUNDERSON: Right.

ELIN: Or they would reject the splice ...

GUNDERSON: Make you do it over again.

ELIN: ... and make you do it over again while they were watching.

GUNDERSON: Yeah. So what you'd have to do then is cut your tube, your two shrinks off, clean your splice all out, let 'em inspect it, crimped, and put it back together again. So you'd go through two kits on one splice, sometimes. Or they might just say, you know, it's O.K.

POWER: Can you give any specific incidents that (unintelligible)?

GUNDERSON: No, it was ... this was where they were having the problem was in the generator area in the sw ... switchgear and generator area.

ELIN: Unit 1, again?

GUNDERSON: Unit 1. Yes.

POWER: So we're very much interested in them not performing their

procedures wherein they are required to watch you perform that work that gets down to a QC function.

ELIN: This is the diesel generator?

GUNDERSON: No. This is the switchgear rooms on both sides. The generators are in back.

ELIN: Diesel generators?

GUNDERSON: Yeah. It's ... well, it's not the diesel generator, it's the 100 elevation of control on the red and green side, the outside walls of the back cabinets where the splices were made.

ELIN: O.K.

GUNDERSON: Which ... you're trying 'em in the bus bar, you're putting a, a stress cone on and just bolting it up to a bus bar ...

ELIN: (Unintelligible) into the cabinet.

GUNDERSON: Right.

ELIN: O.K. Do you know of any cases where they accepted splices that were defective on these particular type of things?

GUNDERSON: No. I couldn't tell you which cabinets it was 'cause we just moved on down the line in the cabinets, but there was some that were accepted that weren't inspected.

ELIN: They weren't inspected?

GUNDERSON: They weren't inspected at ...

ELIN: (Unintelligible).

GUNDERSON: No, when we were making 'em, they weren't inspected.

ELIN: If they were inspected at all, it was, was a finished product?

GUNDERSON: Right.

ELIN: O.K. Do you know of any of these that were, to your knowledge, bad splices that were accepted?

GUNDERSON: Not that I did. No.

ELIN: O.K. So the real concern here is that the ...

GUNDERSON: But you've got ten men on a high voltage crew and you've got two together ...

ELIN: No, I know what you're talking ...

GUNDERSON: I don't know what the other eight did.

ELIN: So the real concern here is that they didn't watch in-progress work on the splices ...

GUNDERSON: Right.

ELIN: ... but they, but they bought off finished splices.

GUNDERSON: They bought off some of 'em anyway.

ELIN: O.K. Do you think that maybe, uh, the ones that they'd

have you re-do would be like a sampling, or, anything like that? I mean like, like if you had a three, three lug cable, right? That you're splicing ...

GUNDERSON: Uh, it's three conductor.

ELIN: Three conductor cable.

GUNDERSON: Right. Armored cable.

ELIN: Would they automatically have you re-do one of 'em or they'd buy all three?

GUNDERSON: No, they'd make 'em re-do 'em all three.

ELIN: O.K. So, it wasn't like they were doing any sort of sampling?

GUNDERSON: .. No.

ELIN: It's just ...

GUNDERSON: If, if they got into the argument and it was done because we were waiting for QC. QC didn't show up 'cause they have got a lot of other things to do ...

ELIN: Yeah.

GUNDERSON: ... so our ... Reggie would order us to go ahead and do the splicing anyway. The hell with it ...

ELIN: So they just sort of ...

GUNDERSON: Yeah, he would ...

ELIN: Willy-nilly sometimes ...

GUNDERSON: He wasn't waiting on 'em any longer, so we'd go ahead and do it and, uh, they, only a couple of 'em that they had to tear apart.

ELIN: So they didn't have you tear very many of them apart?

GUNDERSON: No. The rest of 'em they'd just buy off. And that was BURHAM and SHAW that did most of that.

ELIN: O.K.

GUNDERSON: But then the guy will tell you, too, he says I know what kinda work you do. So I didn't have too much of a problem with 'em because I don't do lousy work. That's the only thing you got to sell the man is the ability to do the job and do it right the first time.

ELIN: (Unintelligible).

GUNDERSON: But then you'd watch 'em test 'em; now this is another thing that I could not get through their head that they couldn't understand. You cannot take an armored cable and tie your three conductors together and go to a ground grid and run a high pot test ...

ELIN: Uh-huh.

GUNDERSON: ... because one, you don't know if the wire has been ruptured and there's a short between the phases.

ELIN: Yeah, that's true.

GUNDERSON: You'd have to test 'em individually. They wouldn't do it. They'd bolt 'em all together. Same way with their, uh, with their shields when they'd have three separate cables, they'd bolt the three shields under one bolt and tie it to the high pot, the ground on the high pot they bolted three conductors together, but you don't know if you have a short between 'em. Because they don't jumper some of their splices. I was told that, by this, Al BOYCE, he made some splices up where they were in-line splices. O.K. He didn't jumper them with his (unintelligible).

ELIN: Jumper his shields?

GUNDERSON: No, he didn't jumper the sh ...

(end of tape)

GUNDERSON: I'd have to inspect his work. Of course, he's been in, he's been in construction about four years, so ..

ELIN: These would be, these would be in ...

GUNDERSON: ... he knows an awful lot about it too.

ELIN: uh, three phase shielded conductor ...

GUNDERSON: Yeah.

ELIN: ... cables on all one cable ...

GUNDERSON: Right.

ELIN: ... with three separate shields?

GUNDERSON: What he did, was he made a mistake, which is easy to do; he got a stress cone kit ...

ELIN: Yeah.

GUNDERSON: ... and he followed that instructions to put a in-line splice in, so the point is, you have a barrel log where you put your wires together, but on your stress columns it shows ...

ELIN: Yeah, (unintelligible).

GUNDERSON: ... and braid around the end and tailed out.

ELIN: Yeah. It didn't show the (unintelligible).

GUNDERSON: That's exactly what he did. He wrapped it around one end, and tailed it out, left it across the rest of the splice. No jumper, no mesh, no nothin'.

ELIN: Uh-huh. What, what kind of wire was that on? Was that a (unintelligible).

GUNDERSON: That was 750 mcm, that feeds out to water rec. No, it's not safety-related, other than being the feeder cables for water rec.

SHACKLETON: Well, it's still something that when we talk to the, to the owners, we'd like to let 'em know. If it's not safety-related, they might want to correct it.

GUNDERSON: Yeah. I've already told 'em about it.

SHACKLETON: Do you remember who you told it to?

GUNDERSON: No. I cornered some guy upstairs on 160 of the radwaste building and, had a APS hat on. 'Cause I wasn't getting anywhere with Reggie. They weren't ... they didn't care.

SHACKLETON: Did the fellow you talked to give any, uh, acknowledgement?

GUNDERSON: Yeah, he said he was gonna get a hold of his supervision and get the damned thing straightened out because they've got temporary feed out to water rec. now, and once they switch to permanent power, they can't afford to lose it.

SHACKLETON: Uh-huh.

GUNDERSON: And like I told him, this is just not gonna hold, and especially the way the splices were made, and that's in several manholes out there; it's not just one, but it's in several of 'em. 'Cause they had, had the day crew do this manhole and the night crew do this one, and, uh ...

ELIN: Never the twain shall meet.

GUNDERSON: They just ... yeah, and uh, I flat refused. They sent me down there one day to clean up ends for 'em so all they have to do was put them together the night when they come in and they'd cut half way between the semi-con and the conductor through the insulation with a razor knife, and I just flat refused to do it. I won't do it. They'd cut through the shield where they take the jacket off, the shield's right underneath it. They'd bury that knife a quarter of an inch down through the semi-con into the conductor again, and I just wouldn't take the responsibility of doing that kind of work. So ...

SHACKLETON: How long ago, Bob, approximately, did you bring it to the attention of this man in APS; do you remember?

GUNDERSON: Yeah ... it was in like, uh, let's see, maybe the end of January, because we were out there splicing them in. This is where they couldn't ... our boys couldn't get this high pot to read because he did the jumpers twice ...

SHACKLETON: Uh-huh.

GUNDERSON: ... so he took his high pot record was from the conductor, three of them together, in each pipe, A, B, and C phase, so the lead in the high pot and the ground, instead of going through the shield because it wouldn't work, took it down to the grid ground, so ...

ELIN: So, he didn't, he didn't high pot to the shield at all then?

GUNDERSON: No. It wouldn't work. Couldn't get a reading on it.

ELIN: O.K.

SHACKLETON: We addressed that point.

GUNDERSON: But he's said it was the machine. We went through three machines and it still did the same thing so he just took it to ground.

SHACKLETON: Because when we get into high pot and Bob we'll address how many times in some cases in violation of the specs by Anaconda they high potted it a lot more than one time.

GUNDERSON: Yeah.

SHACKLETON: O.K. Now, the next point we had was, uh, one we've talked about somewhat, but construction is overriding QC, and this is the one where you addressed that Kevin BROYHILL, a QC inspector, put a red tag on the high pressure safety injection pump on the 40' elevation ...

GUNDERSON: Right.

SHACKLETON: ... and this is in Unit 1, right?

GUNDERSON: Right.

SHACKLETON: Uh, because it had the wrong lugs ...

GUNDERSON: Right.

SHACKLETON: This issue relates to the use of lugs with a wrong amperage. Reggie JOHNSON went over BROYHILL's head to engineering. Engineering went to BROYHILL and made him pull the NCR ...

GUNDERSON: Right.

SHACKLETON: ... and JOHNSON made him remove the red tag.

GUNDERSON: Right.

ELIN: O.K. We've already talked about that one.

GUNDERSON: We've already talked about that.

POWER: Yeah. You can go on.

ELIN: O.K. Repeated high potential testing on the same cable. That would be the next subject which we just talked about a little bit.

GUNDERSON: O.K. Uh, we would terminate a cable, um, termination would high pot it. Then Pete ANAZOLA was set up as a high pot crew. Pete ANAZOLA. He come back; that's all he did was high pot testing. Meggering and high potting.

ELIN: And he would come back out and re-high pot it?

GUNDERSON: And re-high pot it. Then re-start would high pot it. Then start-up would high pot it.

ELIN: Where do you get the, where do you get the specifications, uh, for the cables from the, says to do only one high pot?

GUNDERSON: O.K. on the specifications that they gave us on termination, which is a book of specifications, that that cable is good for one high pot. You're to high pot it after it's been terminated and that's it.

ELIN: O.K. So this is ...

GUNDERSON: Because every time you pump it up the 69,000 volts, you're breaking down the shield on it.

ELIN: O.K. So this is a specification for the termination crew?

GUNDERSON: Right. From Anaconda, that they would only guarantee one high pot test on their wire.

ELIN: O.K. Anaconda didn't write the termination requirements for these cables, did they?

GUNDERSON: Anaconda wrote the w ... made the wire.

ELIN: Didn't you have a procedure that you worked to on terminations that was a locally generated procedure?

GUNDERSON: I don't understand what you are talking about. Go ahead.

ELIN: When you went to terminate a cable, didn't you have some termination procedure?

GUNDERSON: We had to have the termination card. That was it.

ELIN: You didn't have some procedure that worked to?

GUNDERSON: No, we just went ahead and spliced it according to the specs on the kits. It depends on the size of the wire.

ELIN: There wasn't like a Bechtel procedure on terminating cables?

GUNDERSON: No, it was a kit ... Ray Chem was the procedure that you used. You would, you would take your termination card on a high voltage wire and you would take it into the engineer because it didn't have a termination kit number on it and he would look it up and tell you according to it ... where it was at, whether it was inside the reactor or inside the containment, whether it was outside, where it was at, and he would go ... that and wire size and tell you what kit you're supposed to put and your procedure is to follow the Ray Chem kit for that application, whether it's inside or outside or ...

ELIN: O.K. When you went over and picked up the kit that he told you to take for the cable, uh, wha ... it had instructions in the kit?

GUNDERSON: Yes.

ELIN: O.K. And what in it ... what did those instructions basically deal with? How to apply ...

GUNDERSON: How to prepare it and how to put on your ...

ELIN: Yeah. I think I've seen this before. It's got the pictures of the cable, how it's cut ...

GUNDERSON: (Unintelligible) yeah, yeah, the prop ...

ELIN: How to make, the proper way to cut it ...

GUNDERSON: Too much heat, not enough heat, yeah, you know ...

ELIN: Yeah. O.K. And, O.K. Did those instructions include high potting the cable?

GUNDERSON: No.

ELIN: O.K. So, wh ... what told you to high pot this (unintelligible). ...

GUNDERSON: The termination book they give you. They give you a book out there when you go into terminations. It tells you what to do, and what procedures to follow and how to follow 'em and who to get a hold of. Like you're supposed to have an engineer there when you high pot, not a quality control, but an engineer ...

ELIN: Uh-huh. So it's ...

GUNDERSON: Because quality control goes back through the start-up when they high pot ...

ELIN: So this termination book is like a book of procedures you should use ...?

GUNDERSON: Procedures for termination.

ELIN: O.K.

GUNDERSON: It covers everything. From 22 gauge wire to ...

ELIN: O.K.

GUNDERSON: ... to you know, 1,000,000 mcm.

ELIN: And that's a Bechtel document?

GUNDERSON: Right. Field.

ELIN: O.K. Now, I look up the specific procedure for say, a high voltage cable ...

GUNDERSON: Right.

ELIN: ... for a 4160 volt cable. Is that how it was for a 4160 volt, or ...?

GUNDERSON: Yeah.

ELIN: ... 13800?

GUNDERSON: Yeah. They had the procedure for high voltage. They had a

high voltage section in it and a low voltage section in it.
It's a ...

ELIN: O.K. So I'm gonna take a high voltage procedure ...

GUNDERSON: ... It's a book about like that, except it's blue.

ELIN: O.K. So if I go to that, it's a book with a whole bunch of procedures on termination; I look up the high voltage termination procedure?

GUNDERSON: Right. It's like that except it opens up this way.

ELIN: And for putting the termination on it says for this size cable use this Ray Chem kit ...

GUNDERSON: Right.

ELIN: ... follow the kit instructions ...

GUNDERSON: Right.

ELIN: O.K. And then later it says to high pot it once.

GUNDERSON: It tells you your specifications on meggering and on high potting. Clean cable with CRC, you know ...

ELIN: ... O.K. It tells you how to do a meggering ...

GUNDERSON: Right.

ELIN: ... and tells you how to do a high pot?

GUNDERSON: Right.

ELIN: And it also has, uh, instructions in it cautioning you to only do one high pot?

GUNDERSON: To do one high pot on, uh, Anaconda wire.

ELIN: Do you know what the, like the procedure number would be for that or anything (unintelligible)?

GUNDERSON: I couldn't tell you that.

ELIN: O.K. Now what were all these other people working to? They weren't obviously working through a termination book.

GUNDERSON: No. The high voltage crew was working through the termination book.

ELIN: Uh, O.K.

GUNDERSON: The rest of them were working through a ...

ELIN: Pete ANA ...

GUNDERSON: ... termination book, but it was low voltage ...

ELIN: Pete ANAZOLA ...

GUNDERSON: ANAZOLA.

ELIN: ANAZOLA, O.K. Pete ANAZOLA; he was doing just meggering in general?

GUNDERSON: No. High potting and meggering.

ELIN: High potting and meggering.

GUNDERSON: Right.

ELIN: O.K. You ... he just went around and high potted, meggered everything that ...

GUNDERSON: Right. We'd go put the stress cone on for the morning.

ELIN: And then you guys would high pot?

GUNDERSON: No, no. And then we would leave.

ELIN: Then you'd ...

GUNDERSON: Well, we were high potting 'em to begin with ...

ELIN: ... and then you stopped high potting ...

GUNDERSON: ... and then we stopped ...

ELIN: and he did all the high potting?

GUNDERSON: And he did all the high potting.

ELIN: O.K.

GUNDERSON: And then pre-start would come back ...

ELIN: And they're, they're working the something ... he was doing the high potting per this procedure?

GUNDERSON: Right.

ELIN: O.K.

GUNDERSON: But, pre-startup got in there.

ELIN: And start-up, they weren't following these procedures?

GUNDERSON: No. They wouldn't listen to anybody.

ELIN: So they're off on their own thing?

GUNDERSON: Right. They're ... you can't tell us what to do.

ELIN: O.K. So then ...

GUNDERSON: And then they'd lose the records of 'em and we'd go back and do 'em again and say hell, we just did this motor you know, two damn weeks ago, and they'd run you back in there and want you to start all over again. When we had dead time, we'd be fillers on Pete ANAZOLA's crew. You know what I mean?

ELIN: Yeah. You'd help ...

GUNDERSON: When we didn't have nothing to make, we'd go help and we'd go back and do the same motor that was done two weeks ago.

ELIN: Now originally, you say, what was this, like a couple of years ago in 1980 or so, and you would do a high pot and there Pete ANAZOLA would do a high pot.

GUNDERSON: We would do a high pot and then turn it over ...

ELIN: And then Pete ANAZOLA would do it?

GUNDERSON: He wasn't established at that time.

ELIN: Oh, I see.

GUNDERSON: He was, he was on the high voltage crew with me.

ELIN: So, the idea of establishing him was that was just ... somebody in the crew that did the high potting ...

GUNDERSON: That he had known what was done.

ELIN: O.K.

GUNDERSON: Right.

ELIN: O.K. And then after all of this, and to ... precluding all the termination procedures was this startup or pre-startup activities which were not controlled in a way would give you just one high pot test per kit?

GUNDERSON: No. No, they weren't controlled at all. Because nobody would get together. Nobody ... see that, that was one of the problems that engineering and then we had pre-startup and we had startup and nobody would get together, nobody wanted to, seemed to want anybody else to know what they were doing. You know, like it's none of your business and you're getting in my way, you know, this is my turf and get out of it.

ELIN: O.K. Do you d ... was Pete ANAZOLA or the previously, the termination crews that did the high potting, were they conscientious of the limit of one high pot per, per Anaconda cable?

GUNDERSON: Sure.

ELIN: So they followed that very carefully?

GUNDERSON: Yes.

ELIN: Pete ANAZOLA, even when you quit, was following that requirement pretty carefully?

GUNDERSON: He wasn't doing it anymore.

ELIN: O.K. Who was doing it then?

GUNDERSON: Whoever wanted to then. It finally ended up that if we wanted to do it, we did it, startup did it.

ELIN: Oh, so they just established a crew?

GUNDERSON: Yeah, it just back to ...

ELIN: Well, by the termination people, was this procedure being followed very carefully by ...?

GUNDERSON: It was up until about the last year.

ELIN: O.K. So we can look at the last year.

GUNDERSON: And then after that point, uh, they'd say well, we don't have time to do this and let startup get it, uh, let pre-startup get it ...

ELIN: So they weren't even high potting at all, then?

GUNDERSON: No. Well, sometimes we would. But everything was done two and three different times out there. By two and three different groups of people because they didn't ...

ELIN: Yeah, but wait a minute ..

GUNDERSON: But they didn't get everything together.

ELIN: ... I'm trying to get it down to one group. The termination crew that was following the termination book procedure; were they careful to see that they didn't exceed the one ...

GUNDERSON: No.

ELIN: So they weren't even tracking what they were ...

GUNDERSON: Well, you didn't know if it had been done earlier ...

ELIN: Then why ...

GUNDERSON: ... you know, you don't know if he came and did it.

SHACKLETON: They don't keep any kind of a ... log ...?

ELIN: Yeah, you're not, you're not high potting as you make the termination?

GUNDERSON: No. You might go back and catch it, because they, they'll tag it or they'll put a yellow tag on it or a red tag on it because something is wrong with it, you can't work behind your tag, they've got it barricaded off, but you don't know if he came in and high potted it, if he came in and high potted it, and then I came back and high potted it again.

ELIN: Do you know if any items of noncompliance, requests for

information, or any other inspection reports, official quality control documents, would identify this problem of multiple high potting of cables?

GUNDERSON: The megger record and the high pot record should identify it.

ELIN: O.K. Was it ever brought up as a like, uh, a request for information; I gotta high pot a cable twice. Is there anything like that ever written up?

GUNDERSON: Well, they had talked about it and, uh, at the time they had agreed that it was only supposed to be done once, but it wouldn't hurt to do it twice, and then it wouldn't hurt to do it three times, and then it wouldn't hurt to do it whatever ...

ELIN: Was this all verbally done or was it ...

GUNDERSON: Yes.

ELIN: So there wasn't really a written ...

GUNDERSON: No, but every time they high potted it, they had to make out a sheet, so startup's got a sheet on it, pre-startup's got a sheet on it, and high voltage has got a sheet on it.

ELIN: So several people may have a sheet on it.

GUNDERSON: S ... same sheet on the same motor.

ELIN: Uh-huh. And they, they do this at the motor? Is that where, is that where they used to go down to the peckerhead on the motor?

SHACKLETON: No. As long as you're satisfied. Of course that's ...

ELIN: O.K.

SHACKLETON: It's turned out to be ... it's relatively complicated.

ELIN: Yeah, well our problem is their's, you know, the NRC doesn't have specific requirements on high potting.

GUNDERSON: Yeah.

ELIN: What we have to do is get an engineer to design control over it, and you have to have testing to show that you're not damaging it, and so I guess this procedure has got to reflect that testing.

GUNDERSON: Also, uh, a friend of mine out there just got layed off, Russell FOVELL. Did you know they layed off a bunch of people out there last week?

ELIN: No, I haven't been here for a couple of years; I don't know.

GUNDERSON: Yeah, they laid off about 300 startup people, 'cause they told Russell, well they figured out that their testing procedure is wrong and they've been doing it for a year and a half, and they just figured it out now? That's the point that gets me, 'cause we've been telling 'em for a year and a half they can't do things that way.

SHACKLETON: So, what's the reason ... they lay these people off now because ...

GUNDERSON: 'Cause I got to get back together and find out what they

GUNDERSON: He was ... I was hooking a motor up and he was testing the other end of it, and I had the tags in my hand.

ELIN: He was high potting it while you were hooking it up?

GUNDERSON: Yeah.

SHACKLETON: With all that voltage?

ELIN: How come you're still here?

GUNDERSON: Huh?

SHACKLETON: Jesus.

GUNDERSON: Well, yeah, but it's no amperage ...

ELIN: Yeah, that's what I mean.

GUNDERSON: ... you know what a high pot machine is, you know, 69,000 volts at one two thousandths of an amp or whatever it is, it's ... no, I, what is it?

ELIN: (Unintelligible).

GUNDERSON: One ... it's real little.

ELIN: It's all insulation, right? That's what you're measuring to see that you are getting no current.

GUNDERSON: Yeah. Yeah, I got hit in the hand and elbow with it ...

ELIN: So, he was mounting the red tags on it.

GUNDERSON: No. What had happened was on the red tags on it you have to get a stub.

ELIN: Yeah.

GUNDERSON: O.K. I had the stub. I went and signed my name to the back of it, stuck it in my pocket and away I went. His engineer went and took the K tags off the equipment and put his K tags off the equipment and put his K tags on there and gave Russell his stubbles ... his stubbs.

ELIN: Uh-huh. Took yours off?

GUNDERSON: Yeah. So Russ didn't know I was even on the other end of it. Because he had the stubbs for the new K tags that his engineer had put on the cabinet. And this happened a bunch of times to people out there. And it happened two or three different times to me.

SHACKLETON: What's this fellow's names again, Bob?

GUNDERSON: Russell FABLE ... and he's gonna ride to Las Vegas with me and he's on the bottom half of your list here. Russell FABLE, San Juan Trailer Park ...

SHACKLETON: O.K.

GUNDERSON: ... 91st and Grand in Peoria.

SHACKLETON: Where's Peoria now, I don't know?

GUNDERSON: That's north of Phoenix, a little town.

SHACKLETON: That's Peoria, Arizona then? He has no phone number?

GUNDERSON: Yeah. I'm getting to it. He's in space 15 and his phone number is 979-8738.

SHACKLETON: What area code is that?

GUNDERSON: Ar ... the whole state of Arizona is 602.

SHACKLETON: Oh. O.K.

ELIN: (Unintelligible) go over your red tag system with me one more time, 'cause that, that kinda bothers me (unintelligible).

SHACKLETON: (Unintelligible). How's he spell his last name?

GUNDERSON: F ... F-A-B-L-E. FABLE. O.K. The red tag procedure is ... there's a tag on the equipment ...

ELIN: That you hang?

GUNDERSON: That ... no, the engineering hangs the tag.

ELIN: O.K. Engineering hangs the tag?

GUNDERSON: Right.

ELIN: Engineering hangs a red tag on their equipment?

GUNDERSON: Well, this is, uh, striped.

ELIN: O.K.

GUNDERSON: For startup and for any field work that has to be done on it. O.K.

ELIN: O.K.

GUNDERSON: O.K. So the tag is on there. So we go get ... the engineering has the stub then. They put the tag on there and tear the stub off the bottom.

ELIN: And they keep the stub (unintelligible).

GUNDERSON: Right.

ELIN: (Unintelligible) tag.

GUNDERSON: So when we have to terminate a cabinet, we go to the both ends of it and we take the number of the stub.

ELIN: The tags is what is on the equipment?

GUNDERSON: Right. Yeah, well, well, the stub and the tag have the same names, number. So we take the number of the tag then ...

ELIN: Yeah.

GUNDERSON: And then we go get the stub with that number on it.

ELIN: Then you put 'em in your pocket.

GUNDERSON: And we keep 'em. Right.

ELIN: O.K. Oh, so what happened was he went out without accounting for his stub ...

GUNDERSON: No ...

ELIN: He went out and changed the tag?

GUNDERSON: No. His enginer cut the other tags off ...

ELIN: Without accounting for where the stub ...

GUNDERSON: Without accounting for the stubs and put his tag, new tags on 'cause everybody's got their own damn tags out there.

ELIN: Oh, I see. So, uh, like you would be working ...

GUNDERSON: What happened was ...

ELIN: ... you would be working for other than the startup engineer that would have the tags that you had to (unintelligible).

GUNDERSON: I was on high voltage. Yeah.

ELIN: Yeah. So there's some high voltage engineer who'd tagged this out.

GUNDERSON: No. This is on startup.

ELIN: O.K.

GUNDERSON: O.K. But what happens is, see that ... they'll have startup and pre-startup and terminations all have access to the tags ...

ELIN: Yeah.

GUNDERSON: Alright. So what happens when you go in there and you open a file cabinet and the number's not there?

ELIN: Yeah.

GUNDERSON: Oh, well you lost the tag, that's what happened. So they just go make out a new tag and cut the old tag off and throw it away, don't bother asking nobody nothin' 'cause they also got a log book that you're supposed to write your name and the number of the tag and the piece of equipment you're working on and it's supposed to be turned in every night. It didn't used to be turned in every night ...

ELIN: Uh-huh.

GUNDERSON: ... In other words, I, I kept a tag as long as I was working on that equipment. If I started it one day and it took me a day and a half to finish, then I kept the card 'till I was done.

ELIN: Or if it would take you two weeks you kept the tag ...

GUNDERSON: I still kept the tags. Right.

ELIN: Oh, but now you have to turn 'em in every day.

GUNDERSON: Now you have to turn 'em in every day.

ELIN: So the problem was that when you worked ... where you were, uh, (unintelligible) before this every day thing, or ...?

GUNDERSON: No. The problem still exists because if the engineer wants something, he just goes and puts his tag on it. And he gives you a stub and here's the poor guy standing there with a stub and everything's alright. And, you know ...

ELIN: Uh-huh.

GUNDERSON: I've got the stub. Well, whose on the other end of it? You know, all you got is the stub for the motor control center. You don't have the stub for the motor ...

ELIN: Yeah.

GUNDERSON: ... and some dummy's down there trying to hook the drive shaft up on it.

ELIN: Yeah.

GUNDERSON: (Unintelligible) you know the armature on it. And it ...

ELIN: So, what would happen when ... you'd be working on like the switch area and you'd have the stubs for the switchgear but they were megger or, or, uh, high potting from the motor ring ...

GUNDERSON: Yeah.

ELIN: I see. So the red tag system is really designed for their system in an operating mode.

GUNDERSON: Uh-huh.

ELIN: In other words, the power feeding down from the switchgear to the motor ...

GUNDERSON: Yeah.

ELIN: ... it's not really designed at all for (unintelligible) somebody high potting something.

GUNDERSON: No. 'Cause even when we ... when I take a tag, I check both ends of my wire out.

ELIN: Q.K. That's very nice ... something you'll be ...

GUNDERSON: Save from getting zapped ...

ELIN: That's not really something we would directly be involved with but I think we ought to look at that, uh, from an OSHA requirement standpoint.

SHACKLETON: O.K. Very good. The next point ...

ELIN: The reason I say that is we, you know, we deal with the safety of the power plant to the public, not to the workers and, you know ...

GUNDERSON: Yeah.

ELIN: ... you know, we're not worried about when somebody gets electricuted, we're worried about ...

GUNDERSON: Whether it runs efficiently.

ELIN: Right. But I think this is something that we ought to be involved with a little bit from the possible electrical (unintelligible).

SHACKLETON: They ought to have a system that's a little more fail safe than that one.

ELIN: Yeah. Especially for high potting.

SHACKLETON: At least the discipline of the people so they don't do that.

ELIN: Yeah.

GUNDERSON: But there's too many people worried about getting ahead out there. They're worried about looking good.

ELIN: Well, they're not going to look too good when they zap somebody one of these day, uh ...

GUNDERSON: Yeah.

ELIN: ... that's not a good way to do it.

SHACKLETON: Well, the other point that Bob brought up and this was the omission of the use of O-rings ...

ELIN: Oh, yeah. Let's talk about that one.

SHACKLETON: ... and Bechtel's not using O-rings as required in cabinets downstairs in the control building at the 100' elevation.

GUNDERSON: Right.

SHACKLETON: These cabinets are located underneath piping systems and are required to have water integrity.

GUNDERSON: Right.

ELIN: What ...

SHACKLETON: ... and it's safety-related equipment.

ELIN: Ah, let's go over that one ...

GUNDERSON: That's around the walls, the out ... you go take a look at the outside walls in there and you'll see two pipes coming into the top of a box with O-rings on 'em and the next pipe coming in that doesn't have nothin'.

ELIN: What, what ... you say they are required to have water integrity, what ... by what, by the design specs?

GUNDERSON: By the specs because it's ... everything there and it's got sprinkler systems up above the tray so in case of a fire, it shuts it down.

ELIN: It requires some NEMA type enclosure for these cables, is that what it is?

GUNDERSON: It's, I don't ... it requires what?

ELIN: A NEMA, like a NEMA for a unit 12 or something like that enclosures; is that what you're saying? What are the, what are the O-rings like ...

GUNDERSON: They're ...

ELIN: ... they're on like termination boxes?

GUNDERSON: No, they're on the pipe. The O-ring is a little metal ring with rubber grommet inside it, the locknut ...

ELIN: On the conduit.

GUNDERSON: It's against the O-ring and then there's a locknut inside the can that you tighten up and it pulls the O-ring down ...

ELIN: Yeah. This is on that ... where the conduit goes into the ...

GUNDERSON: Cans.

ELIN: Oh.

GUNDERSON: In the cabinets, in the control cabinets.

SHACKLETON: It fits on the cabinet material.

GUNDERSON: Right.

ELIN: Are these, uh, water tight cabinets?

GUNDERSON: They're supposed to be. The cabinets has got rubber seal doors on 'em. Water tight doors ...

ELIN: So like a NEMA 12, I guess.

GUNDERSON: I don't now what it is.

ELIN: O.K. So it really doesn't matter if ... you think this is fairly, uh, there's quite a few of these or is this fairly common ...?

GUNDERSON: Yeah. There's a bunch of 'em. They were out of O-rings for six months and they didn't use 'em. They just went ahead and kept piping.

ELIN: So if I go to the ... 100 foot level of the control building and just look for boxes ...

GUNDERSON: Yeah.

ELIN: ... and (unintelligible) conduit going into 'em ...

GUNDERSON: Without O-rings on 'em.

ELIN: ... and look for O-rings under it between the conduit (unintelligible).

GUNDERSON: The generator area up in the ceiling down around ... just walk around and look around the floor in the generating area and you can see two pipes with a O-ring on it and one pipe without and the next box might not have any, and the next box might have 'em all on.

ELIN: O.K. So it really depends on when it was installed.

SHACKLETON: But at ... to your knowledge you're talking about the 100' elevation?

GUNDERSON: 100' elevation. By the diesel generators.

SHACKLETON: Any other questions?

ELIN: Nah, I guess I can (unintelligible).

SHACKLETON: O.K. And the next one, block wall used in diesel generator area ...

GUNDERSON: That's the same thing, that's the battery area.

SHACKLETON: ... where concrete wall is required.

GUNDERSON: Right.

SHACKLETON: Between A and B sides of the ... at the 100' elevation.

ELIN: Seems like I, I haven't been to the site for a couple years but it seemed like I answered questions on that one time before. These are the walls around the battery (unintelligible) you're talking about?

GUNDERSON: Right.

ELIN: Aren't they ... isn't there something more than those walls, like don't they have, uh, rebar in the block walls ... I can't remember ...?

GUNDERSON: They got motar in it.

ELIN: But don't they also have rebar core?

SHACKLETON: Filled cells with rebar?

GUNDERSON: No, not that I've noticed. But they've cut the holes off for the chaseways they haven't.

ELIN: I, I seem to remember this question (unintelligible) come up a couple of years ...

GUNDERSON: Yeah.

ELIN: ... ago, and I don't remember what the resolution was, but, O.K., these are the walls around the batteries?

GUNDERSON: Right.

ELIN: And there are four battery rooms I think in there ...?

GUNDERSON: Right.

ELIN: ... they have walls that go all the way around them. O.K.
I know, I know ...

GUNDERSON: You know what area I'm talking about?

ELIN: ... where it's at, I just can't remember how they got it
resolved when we talked about it before. I remember this
question coming up before. So that's battery room walls.
O.K. I can (unintelligible) to that one without too much
trouble. Damaged conduit for drilling ... now this is the
one where you drilled into ...

GUNDERSON: Right. That's the guys' names I gave you. Jerry ...

ELIN: O.K. I'll (unintelligible) southeast corner
(unintelligible).

GUNDERSON: ... and Bill.

SHACKLETON: Jerry STEWART and Bill WILLIAMS?

GUNDERSON: Right. They're the ones that were fixing 'em. I was on
the can right behind 'em splicing the penetration when they
were doing it. Laughing and giggling.

ELIN: Do you know of any, uh ... that's usually the way they do
something like this, I guess. Do you know of any NCRs or
any other quality control documents that would have
identified this problem?

GUNDERSON: No. They were supposed to patch it, that's all. I can
tell you which pipe it is.

ELIN: O.K.

GUNDERSON: Uh ...

SHACKLETON: Here is a piece of paper.

GUNDERSON: You've got ... they're all green pipes and you've got four in a row and I think there's three rows high. There's like two in the top ... there's either two in the top row or four in the top row and two in the second row. These would be up here ...

ELIN: Yeah.

GUNDERSON: ... and it's this right down here on the bottom row. And this is 100 where the reactor wall comes around and it goes back out like this. This is, uh, this is containmnt in here and this is auxiliary control.

ELIN: O.K.

GUNDERSON: And they're right here. These pipes going through right here. And it's up about 115 feet.

ELIN: O.K.

GUNDERSON: And this would be the northeast corner of auxiliary control. Right.

ELIN: O.K. (unintelligible) So it's outside the containment but it's in the Aux ... Aux Building right on the outside containment.

GUNDERSON: It goes into containment.

ELIN: O.K. The, the containment's right here? (Unintelligible)

GUNDERSON: Uh-huh.

ELIN: O.K.

GUNDERSON: Yeah. The wall goes on ... right on around.

ELIN: O.K.

GUNDERSON: It's got a little square corner out there.

ELIN: O.F. (unintelligible).

SHACKLETON: O.K. Any other questions on that point?

ELIN: No.

SHACKLETON: O.K. And then number 11 was the use of improper cable at the 100 and 120 foot elevations in the Aux. Control building ... the Q cables. Now when you say Q cables, Bob, you mean the same as QC cables?

GUNDERSON: Green and red, right.

SHACKLETON: O.K. So Q and QC are the same.

GUNDERSON: Right. (Unintelligible) Q cables are quality cables.

SHACKLETON: Uh-huh. Anyway, the cables of the cabinets are not properly installed.

GUNDERSON: Right.

ELIN: You had some one size termination on the cabinet and the cable ...?

GUNDERSON: Right.

ELIN: (Unintelligible).

GUNDERSON: You've got rows and rows of these cabinets. You got one cabinet here, you got a aisle with one here ...

ELIN: Yeah.

GUNDERSON: ... down here, all ... O.K. then you got over here you got another one, another one, they're all in the wrap around area around it, and where they brought the feeders in, it's inside the raceway. So what you've got is you a little ...

(end of tape)

ELIN: When you specify bare wire, and so the wire wouldn't fit into the lugs.

GUNDERSON: Right.

ELIN: So instead of replacing the block to get to the ...

GUNDERSON: Right size block.

ELIN: ... so you could put the right size lugs on ... they weren't crimped to reducer down a couple feet ahead?

GUNDERSON: Yeah. They went back on the wire, put an in-line splice in.

ELIN: A couple feet ahead, then?

GUNDERSON: Yeah, well, ahead of the block, yeah.

ELIN: O.K. So it would be ... how far away from the block would, would ...

GUNDERSON: Well, it would be a couple feet where it comes down and it turns in that gutter and goes into the block ...

ELIN: O.K. So, it's in the gut ... it's in a ...

GUNDERSON: ... and it's right up here ...

ELIN: O.K.

GUNDERSON: ... you know, like two or three feet was at the most ...

ELIN: It's inside the cabinet, then?

GUNDERSON: Yeah, it's right inside that door.

ELIN: O.K.

GUNDERSON: Had the long do ... wire doors where ...

ELIN: Yeah.

GUNDERSON: ... you bring your wires down (unintelligible).

ELIN: Yeah. Does it look like it, it has heat shrink ... it looks like, uh ...

GUNDERSON: Yeah, it's got heat shrink on it ...

ELIN: It's a big bolt ...

GUNDERSON: ... and bolts ...

GUNDERSON: Both. They had the same problems with all of them.

ELIN: O.K. (Pause) O.K. I guess I can find that one easy enough. You know what ... it just hit me. I thought maybe I'd turned it over again.

SHACKLETON: We're paranoid on that thing.

ELIN: Yeah, damn tape recorder.

SHACKLETON: But that's so much better than to try and write it all.

GUNDERSON: Oh, I imagine. Besides that, you can recall it a lot easier and not have to read it all.

SHACKLETON: Oh, yeah.

GUNDERSON: O.K.

ELIN: I guess I don't have anything else on that one, we'll go onto this welding, uh ...

SHACKLETON: Weld ... these are welding allegations and this is where you related about they were using, uh ...

ELIN: (Unintelligible).

SHACKLETON: Cobra welding machine with a Lincoln rod rated at 300 psi and a bunch of steam lines underneath the 140 foot ...

GUNDERSON: Right.

SHACKLETON: ... elevation into the reactor building. These steam lines are rated 850 psi ...

GUNDERSON: Right.

SHACKLETON: ... the lines are approximately 36 inches in diameter ...

GUNDERSON: Right.

SHACKLETON: ... and they're not preheating the pipes but are making cold welds.

GUNDERSON: Right.

SHACKLETON: And that one ...

GUNDERSON: You said it's on the secondary side. You don't have anything to do with that.

SHACKLETON: Yeah. Yeah.

ELIN: These are on ... these are on the steam lines, on the secondary side downstream of the isolation valves?

GUNDERSON: Right.

SHACKLETON: Yeah, when Denny KIRSCH talked to Bob on that ...

ELIN: Oh. Yeah.

SHACKLETON: Yeah, we'll just double check that and make damn sure.

GUNDERSON: Yep.

ELIN: O.K.

SHACKLETON: O.K. And the next point, uh, was inadequate x-ray of splices.

GUNDERSON: Right. They only ... they only x-ray like one out of ten. They, they won't x-ray all the splices out there.

ELIN: Do they have something that requires them to x-ray all these splices?

GUNDERSON: No, but one of the x-rayers has already come forward and then talked to them about it too. Like, we were, we were in there splicing a 24,000 horse motor, putting a stress cone on it ...

ELIN: Yeah.

GUNDERSON: ... and they were in there x-raying in the same cubicle we were working in. Nobody told us nothing. That's with that high intensity x-ray that they use.

ELIN: Sounds like you ought to get the health physicist guys out here.

GUNDERSON: There was a complaint lodged ... 7(C), 7(D) were the two in .. caught in the vessel when they were x-raying.

ELIN: So, they were x-raying in the same compartment as where you were working on splices (unintelligible).

GUNDERSON: I wasn't. I wasn't working on that one. 7(C), 7(D) were.

SHACKLETON: What's 7(C) last name?

GUNDERSON: 7 (C)

SHACKLETON: Are they electricians?

GUNDERSON: 7 (C), 7 (D)

SHACKLETON: O.K.

GUNDERSON: ... on terminations. O.K. What they did was they come down ... they went in with their x-ray unit and they put their x-ray radiation symbols up over the door but that didn't make any difference because 7 (C) & (D) were up in there splicing.

ELIN: Already.

GUNDERSON: Yeah.

SHACKLETON: They didn't check to see if anybody was inside.

GUNDERSON: No, they just started shooting.

ELIN: That sounds like you're gonna need health physicists ...

SHACKLETON: Yeah. What vessel were they in?

GUNDERSON: I ... well, all I can tell you is you go in the containment ...

SHACKLETON: O.K.

GUNDERSON: ... through the hatchway and it's the first vessel on the

right, about 50 feet down around the corner and go back and
sachet up in there.

SHACKLETON: Were you on the steam generator?

? Steam generator ...

ELIN: Yeah, it sounds ...

GUNDERSON: Yeah, it's one of the big 24,000 horse motors.

ELIN: So, they were working on a, um, one of the main colant pump
motors termianting it?

GUNDERSON: Right.

ELIN: And they were x-raying with the same terminations?

GUNDERSON: No, they were x-raying the pipe underneath them.

ELIN: Oh ...

GUNDERSON: Shooting their x-rays on the line.

ELIN: Yeah, you better get, uh, HP boys going on that. That
could be real bad.

SHACKLETON: How long ago did this happen, Bob?

GUNDERSON: This was around Christmas time.

ELIN: What sort of, uh ... did you say 7(C)&(D) and, uh,
7(C) went to APS about this?

GUNDERSON: Yeah, they went to ... all they did was make them write out a little report.

ELIN: Q.R.

GUNDERSON: Give it to the electrical steward and he gave it to safety and that was it; that was the last we ever heard of it.

ELIN: How far away ... they were, they were x-raying underneath them, is that right? Do you have any idea about what distances you are talking about?

GUNDERSON: No, I don't.

SHACKLETON: Who's the electrical steward, do you know?

ELIN: I think maybe (unintelligible).

GUNDERSON: (Unintelligible).

ELIN: Were the x-ray ... was it a x-ray machine or was it a radiographic source?

GUNDERSON: It was a x-ray machine. It was a hand held one. The guy said that it'd ... that it'd penetrate ... penetrate ten inches or twelve inches of plate steel.

ELIN: Sounds like the, uh, sounds like the radiography, radiography source. That doesn't sound like an x-ray machine. That sounds like a source you know; they come in small boxes.

GUNDERSON: Yeah, I don't know what it is.

SHACKLETON: Yeah, they put out gamma rays.

GUNDERSON: Yeah.

SHACKLETON: ... and they usually have on the other side, they've got a receiver it makes, it makes a picture just like you would take an x-ray.

GUNDERSON: (Unintelligible).

ELIN: Yeah, but it, it was a pipe, it was a pipe weld they were trying to x-ray.

GUNDERSON: Shoot.

ELIN: Yeah. That was a radiography source.

SHACKLETON: Hell, it's still dangerous.

ELIN: Yeah. Probably worse. You damn right.

SHACKLETON: That gamma is probably worse than x-ray ...

ELIN: Yeah, I th ... I think it ought to be ... we ought to get the HP on it ...

GUNDERSON: Well.

SHACKLETON: Listen, I told, uh, uh ...

POWER: Are you finished here?

SHACKLETON: Yeah. You got some more questions?

POWER: Yeah, yeah, I want to go ... did you go over the Ray Chem splicing kit (unintelligible)? Did you cover that?

ELIN: Yeah, we talked ...

GUNDERSON: Yeah, because of the heat ...

POWER: O.K. Allright.

GUNDERSON: Because of the heat system.

POWER: I'm just going over your statement and I want to make sure we got 'em all here.

SHACKLETON: While we got you ... I ... 'cause I ... you've been so patient to go through this with us, I don't want to have to do it any more than I have to.

ELIN: Let me see what ... can I see what that says ...?

SHACKLETON: Do you understand, 'cause there's so much detail.

GUNDERSON: I understand your position.

SHACKLETON: Well, as long as you understand, Bob, I ...

GUNDERSON: Yeah. No, I don't ...

SHACKLETON: I, I don't mean to put you through this ...

GUNDERSON: I haven't tried to hassle anybody, I've just tried to cooperate.

SHACKLETON: No, we appreciate it very very much.

GUNDERSON: So ... um ...

ELIN: O.K. Your statement was that 220 Scotchfill was in the emergency pumps in the cooling towers, the high pressure (unintelligible) low pressure safety injection (unintelligible) ...

GUNDERSON: Yeah. These things changed.

ELIN: But they changed out the APSI (unintelligible).

GUNDERSON: Yeah, and they cut into, startup cut into those kits for some reason ...

ELIN: In the circ. water pump ... the circ. water pump doesn't matter so that only ones that we really still have a problem with is emergency pumps in the cooling tower.

POWER: In the cooling tower.

GUNDERSON: Uh-huh.

POWER: Yeah.

ELIN: O.K. (unintelligible) about 220 (unintelligible).

GUNDERSON: Now, I don't know if they've done the LIPSIs.

ELIN: O.K. You know that they've done the, uh, HIPSIs.

GUNDERSON: I know they've, uh ... I know they've the one HIPSI; I assume they've done both of them.

ELIN: O.K.

GUNDERSON: You can tell by squeezing them.

ELIN: Yeah, if they're soft.

GUNDERSON: If they ... if it feels like duck seal in there, it's got 2200 Scotchfill in it. If it's firm ...

SHACKLETON: It's that wrapped tape.

GUNDERSON: ... it's got 130-C in it.

ELIN: O.K. The one-bolt lug is the best place we can go look on those on the spring pond ..

GUNDERSON: They're also on the HIPSIs and the LIPSIs.

ELIN: ... HIPSIs and LIPSIs, O.K.

GUNDERSON: Right. And they're also in that steam building.

ELIN: Ray Chem splicing cabling is not adequate to splice under very hot air conditions; why is that now?

GUNDERSON: Because it keeps shrinking.

ELIN: O.K. The shrink doesn't stop shrinking ...

GUNDERSON: No. It ...

ELIN: (Unintelligible) cracked.

GUNDERSON: Well, see it's, it's used ... they use a little burnsamatic torch on it and you run your torch up and down and it doesn't get ... it gets hot enough to shrink, but it doesn't

really get hot; but you put it inside that peckerhead outside ..

ELIN: Yeah, it gets hot ...

GUNDERSON: ... in the Arizona sun, and every time you shrink that, you're gonna cause weak spots in it.

ELIN: Yeah.

GUNDERSON: You can't re-shrink one of these, and what they're doing is they're finding they're cracking on 'em, they get hairline cracks in 'em, and, uh ...

ELIN: So you, so some of these shrink tubes are starting to crack?

GUNDERSON: ... with more heat, it, it's just gonna pop open on them ...

ELIN: .. Some of them are starting to crack on 'em?

GUNDERSON: Yeah ...

ELIN: Some of them are starting to crack on them. Do you know if they, they have reported any of these problems with these splicing kits ...

GUNDERSON: Sure.

ELIN: To the NRC?

GUNDERSON: No.

ELIN: You don't know whether or not (unintelligible).

GUNDERSON: No, just to our supervision. They don't like us talking to NRC.

ELIN: Well, you know, there is a requirement in the Code of Federal Regulations that if they have a design or construction problem that they are aware of, they have to submit a report to us on it.

GUNDERSON: Well, the only thing they're aware of is what we tell 'em ...

ELIN: O.K. But you're ...

GUNDERSON: ... what is wrong.

ELIN: But you don't know, you don't know whether or not any report has been submitted?

GUNDERSON: No.

ELIN: O.K.

GUNDERSON: We're not allowed to talk to you guys out there.

SHACKLETON: Th term he used ..

GUNDERSON: If they catch you, they'll raise hell.

SHACKLETON: ... 50.55(e) is what he's talking about.

GUNDERSON: Well, I don't know what, what it ...

SHACKLETON: It refers to our code which is ...

ELIN: In the ... there is ... there is a requirement that, that the licensee is aware of a construction deficiency, he has to make a formal, uh ...

GUNDERSON: Well, they ought to be aware of those lugs, 'cause I raised hell about those lugs for a month.

ELIN: ... (Unintelligible). O.K.

GUNDERSON: Same way, the ... same way ... you go down and take a look at the HIPSI's and LIPSI's. The cable that comes into 'em is supposed to be supported by a cable tray ...

ELIN: The three ...

GUNDERSON: ... within 18 inches of the peckerhead and that's where the ground comes through. They decided not to do it that way; it's just looped through a couple doughnuts up in the ceiling, and it's all open air, free, armoured cable.

ELIN: I often have seen, uh, 300 psi rods (unintelligible).

GUNDERSON: Rods, right.

ELIN: ... that's on the, uh, steam system down through the (unintelligible) ...

GUNDERSON: Right. That's when I was upstairs hooking them valves up, and they were using it on the lines coming back in.

ELIN: O.K. But this is on steam lines down through the (unintelligible) rods.

GUNDERSON: Right. Right.

ELIN: O.K. Termination cards signed by other than the one terminating them. We talked about that a while ago.

POWER: Did you get 11?

ELIN: I was asked to splice a QC cable to the spray pond.

GUNDERSON: Right. That's the one in the manhole I told you about ...

ELIN: And that's ... O.K. That cable turned out not to be spliced and you pulled that, is that right?

GUNDERSON: Right.

SHACKLETON: Well, when he raised hell, he refused to do it.

ELIN: Yeah, but I mean ... as far as what I would find right now if I went out there would be one (unintelligible).

GUNDERSON: It would be one, ca, cable now, yeah.

SHACKLETON: 'Cause they repulled it.

ELIN: O.K.

GUNDERSON: Yeah. But I had to go through five engineers to get an engineer ...

ELIN: Yeah.

GUNDERSON: ... say you're right, you can't do it, you know, and the reason I got around it was I just told them allright give me the specifications; you give me the specs on splicing a 4160 cable in a manhole ...

ELIN: Yeah.

GUNDERSON: ... a Q cable, they don't have it.

ELIN: (Reading GUNDERSON's sworn statement of May 18, 1982, Item 12) "The unistrut, a component of the electrical control cable shut down system, does not meet ..." What, what is this all about, I don't ...?

GUNDERSON: O.K. The unistrut up there ... they have a habit of ... when QC buys it off, O.K., they stamp their name and number in the imbed ..

ELIN: Yeah.

GUNDERSON: ... then the electricians come along and change it the way they want to ... or the pipefitters, or whoever, or whatever ...

ELIN: You mean, you're changing ...

GUNDERSON: ... and sometimes they do such a shitty job just to get the QC guy in trouble.

ELIN: They, uh, change the, uh, support after it's been ..

GUNDERSON: They change the whole God damn bracket.

ELIN: ... after it's been inspected.

GUNDERSON: Sure. 'Cause his name and number ... he's already bought it off in the imbed.

ELIN: O.K. The way we're gonna get that is through the as-built program, we're supposed to (unintelligible).

SHACKLETON: They're changing a bracket after a QC buy? Huh?

GUNDERSON: Sure.

POWER: And they didn't do it with the as-built, then.

ELIN: (Unintelligible).

POWER: Would be a procedural violation.

ELIN: Well ...

GUNDERSON: You're not supposed to touch nothing like that.

POWER: No, no you're not, but they, they're ... yeah, that's why I'm saying is it worth raising hell, that's what I'm (unintelligible).

ELIN: Oh, certainly it is, but (unintelligible).

POWER: Can you be a little more specific?

GUNDERSON: The bottom in the control building on the lower elevation of, uh, Unit 2.

ELIN: And these are ..

GUNDERSON: And I was over there when they were doing it.

POWER: And who was doing it?

GUNDERSON: Uh, who was the electricians doing it?

POWER: Yeah.

GUNDERSON: Oh, heavens, I couldn't tell you, they were getting fired. They were doing it to get even with Ray WOODS and YOSHIMOTO. So they'd put the ...

POWER: So it was an intentional ...

GUNDERSON: Yeah, yeah. Hell yeah. Uh, another guy that's over there is Jim AUSTIN is working on it over there right now. I'm not over there, I'm over on Unit 1 where I was ...

SHACKLETON: Who's Ray WOODS?

GUNDERSON: Ray WOODS is a GF for Bechtel. He's a horse's (unintelligible) too.

SHACKLETON: And YOSHIMOTO?

GUNDERSON: Is an electrical general foreman.

SHACKLETON: Is that ... did I say it right. YOSHIMOTO?

GUNDERSON: Yeah. YOSHIMOTO or YOSHIMOTO. I'm not sure how you pronounce it either.

ELIN: These, um ... these are mainly on electrical cable supports?

GUNDERSON: Yeah.

ELIN: Rather than piping supports?

GUNDERSON: No. Tray supports, pipe supports ...

ELIN: So you could be on pipe supports also?

GUNDERSON: Sure. Could be on everything down there. It's a big joke. And they're doing it ...

SHACKLETON: Unit 2, right Bob?

GUNDERSON: Yeah. And they're doing it to get even with QC.

ELIN: Oh, this is at Unit 2, not Unit 1?

GUNDERSON: Right.

ELIN: O.K.

SHACKLETON: Why ... you say they're doing to get even with Ray WOODS and YOSHIMOTO?

GUNDERSON: Yeah.

SHACKLETON: Oh ... who is WOODS, he's a GF but in what field?

GUNDERSON: He's ... Bechtel's ... general foreman.

SHACKLETON: Yeah.

GUNDERSON: He's Bechtel's supervision. Ray WOODS is the union super ... uh, WOODS is, uh, Bechtel's supervision, YOSEIMOTO is electrical supervision, uh, for the union, for the tradesmen.

SHACKLETON: Well, why would the men ... have they got something against these two guys that they're ...

GUNDERSON: 'Cause they go around and fire you for drinking coffee and, uh, this and that, and one thing, get on ya ... ride you about too many early outs ...

ELIN: It says here, there's another one in here, it says I have often seen a quality control supervisor mark a job finished and a Bechtel employee then removes the mark indicating the job is complete, and marks out that the job needs additional work; is this the same type of thing as the unistrut?

GUNDERSON: Uh-huh.

ELIN: So sometimes they just take the tags off where he's signed it?

GUNDERSON: Yeah.

ELIN: Take the stamp off?

GUNDERSON: Well, see, they can get buy with it on a lot of these, because he stamps the imbed ...

ELIN: Yeah.

GUNDERSON: ... Well, the imbed is what it's welded to ...

ELIN: Yeah.

GUNDERSON: ... and they grind her down and put up what they want.

ELIN: So then it's not stamped at all.

GUNDERSON: No, they're still stamped in the imbed. He can't stamp the weld. He can't stamp the bracket, so he ... you got a God damn imbed that's that wide and that long ...

ELIN: Oh, I see.

GUNDERSON: ... and you've got a weld up here and right underneath it you've got a seal that says QC, bought off, my number is, whatever it is, and they just go ...

ELIN: So they can grind the weld out without disturbing the seal ...

GUNDERSON: Sure, sure. And it's still bought off.

SHACKLETON: That stamp in the imbed, is that done with a metal, uh, tap of some kind?

GUNDERSON: It's (unintelligible) yeah, a little hammer and a little punch set.

SHACKLETON: Now, I'm lost. So long as you understand, I can't see what they're gaining. It's been bought off ...

GUNDERSON: They're saying look at the ... look at the ...

ELIN: They're hoping that somebody ...

GUNDERSON: ... do you want to see what a stupid QC guy ... look at the dumb ass that's bought that off.

SHACKLETON: And they've changed it after he's bought it.

GUNDERSON: Sure.

SHACKLETON: Yeah, O.K. So it's just ... it's a method to get somebody's ...

GUNDERSON: Get him fired. Get him run off.

SHACKLETON: Yeah.

GUNDERSON: Get rid of somebody that's giving you a bad time.

SHACKLETON: And that ... what's the period of time that that took place?

GUNDERSON: Oh ...

SHACKLETON: Roughly.

GUNDERSON: Well, let's see, I was first out there in '79 and it was still going on ...

ELIN: This is a (unintelligible).

GUNDERSON: ... last Christmas, so that's been over three years.

ELIN: So it's pretty much a continual thing.

GUNDERSON: Yeah, they just do it to get even. Think they're cute.

SHACKLETON: Is there ... are there any more on that list? 'Cause that's, that's one problem that I didn't discuss.

ELIN: Yeah, that was ...

POWER: Uh, you indicated in here you're still not willing to appear before the board; is that still a true statement or would you be willing to appear?

GUNDERSON: Well, it's about to the point where everybody knows who I am anyway.

POWER: I'm just asking. I'm not requesting that you appear, I just want to know if you're against it or ...

GUNDERSON: Well, I figure if the guy is gonna shoot me, he's gonna shoot me anyway.

POWER: Who's he?

GUNDERSON: I don't know.

POWER: Guy that made the threat? O.K.

GUNDERSON: But I don't ... I just think that ... I think that just happened.

POWER: O.K.

GUNDERSON: I think it was more like a quirk.

POWER: You don't have a young daughter running around the house or someone who might be calling up harassing her or playing games ...?

GUNDERSON: No, um ...

POWER: ... with you kids, or ...

GUNDERSON: ... my son is, uh, is, uh, just finished at Stanford and I've got another son at Ames at Grinnell. It's just me and my wife.

POWER: Very good.

SHACKLETON: I talked to one of your boys. I think he answered the phone.

GUNDERSON: Brandy. Yeah.

POWER: Other than what we've discussed, have you brought up any other concerns with a HOUARIHAN and MORRISON?

GUNDERSON: No, nope.

SHACKLETON: Have we covered everything ...

POWER: Is there anything else that you would like to ...?

GUNDERSON: No. That's pretty much what I saw, what I observed ...

SHACKLETON: Uh-huh.

GUNDERSON: ... and what I know was going on. Other things, you know, I've seen some of the drugs out there, but that's ... I always believe in ... I'll let people do their thing and I do mine. I won't work with a person that's on it, because it's my safety.

SHACKLETON: Are drugs, uh, a big problem, or what, what's your opinion on what you've observed? You've worked on quite a few other sites ...

GUNDERSON: Yeah. It's a mess. It's the same on all of them, though.
(Unintelligible).

SHACKLETON: When you say drugs, uh ...

GUNDERSON: Cocaine, Black Beauties, marijuana, hash, and anything you want to get. Anything you got enough money to afford.

SHACKLETON: Is the selling and the dealing of it going on during working hours or after work or in the morning, or ...?

GUNDERSON: Out in the parking lot, mostly. So ... on the job, some of it. And how they do it is they'll say well, you know, you'll put a order in, say you want a lid. O.K., you put a order in and give the guy the money and then ... Forty-five dollars is what they're charging them for that stuff ... and then, uh, a couple hours later you show up down here and open this cabinet and in this cubicle the second one on the right that says "fair," open the little door, take it and go away. It's been so bad up in the control room, I had to get out of the control room a couple times. Because they get up in the cable trays down below in the spreader room.

SHACKLETON: What are they ... smoke ...

GUNDERSON: They smoke that "wacky tobaccy" ...

SHACKLETON: "Wacky tobaccy" ...

GUNDERSON: ... and that stuff is so strong that you've got to get out of the control room. You just can't stand the smell - it comes up through the chases in the floor, 'cause they're right up against the ceiling where nobody can get 'em.

SHACKLETON: Were they laying up in the trays?

GUNDERSON: Yeah. Well, hell, they got beds and everything up there. Do you want to know where to go look for the beds?

SHACKLETON: Yeah, we want to know.

GUNDERSON: You go in that ... O.K., here's the door going out to the hallway ... here's the elevator, O.K.? So you go in this spreader room and it's a big "U" shape here, right?

ELIN: Yeah.

GUNDERSON: O.K., and then you ...

ELIN: This is the one below the control room ...

GUNDERSON: This is underneath the control room.

SHACKLETON: O.K.

ELIN: Don't you have two, one above and one below?

GUNDERSON: Yeah.

ELIN: O.K.

GUNDERSON: O.K., then, uh, you got your cable trays down here and around here and out the side, O.K. This is the corner; most of them are up in. Here you'll see a, a, row of cable here and then a row of tray run along the wall, it comes out like that ... from here on back up in this corner is where most of them hide.

SHACKLETON: And what elevation are we on?

GUNDERSON: This is 120.

SHACKLETON: And in what building?

GUNDERSON: This is, Aux ... Auxiliary Control. This is right underneath the control room.

ELIN: Right under the control room.

GUNDERSON: 'Cause you work on them cabinets up there and that smoke comes up through the floor and it's so damn bad you can't stand it and I don't know, it stinks something ferocious. Have you ever smelled that stuff?

POWER: No, not that stuff.

GUNDERSON: Oh, God, it smells terrible.

SHACKLETON: Area of pot smoking?

GUNDERSON: Uh-huh. Yeah, this area right in here.

ELIN: Does this go on pretty much every day, or ...?

GUNDERSON: Yeah.

SHACKLETON: All the shifts, or ...?

GUNDERSON: Yeah.

SHACKLETON: And what unit are we in over here?

GUNDERSON: That's Unit 1.

ELIN: Unit 1.

GUNDERSON: Same way with sunshine acres.

ELIN: Sunshine acres?

GUNDERSON: That's where the engineers go to have theirs.

ELIN: Where's that at? Where's that?

GUNDERSON: Uh, O.K., you know the east end of the unit? When you're in Unit 1, take a look at the east end ...

ELIN: Uh-huh.

GUNDERSON: ... and you'll see a big laydown area out there with a bunch of metal that they're prefabbing for Unit 3 for the dome ...

ELIN: Yeah.

GUNDERSON: ... O.K., that's sunshine acres.

SHACKLETON: Do you know where it is?

ELIN: I think so. It's where the, it's where the prefab is; it's out across the roadway there ...

GUNDERSON: Right.

ELIN: (Unintelligible) roadway there.

GUNDERSON: Right. It's just a b ... a big prefab area is all it is.

SHACKLETON: It's a prefab area for ...

GUNDERSON: Well, right now, they're prefabbing the inside of the, of the forms for Unit 1, uh, for Unit 1, for Unit 3, for the dome on the reactor building. But they're not there day and night. And you can go just about anywhere and find it.

SHACKLETON: Oh ... is there any particular ... do you know any names of any individuals that are dealers?

GUNDERSON: I know some people that are in it, but I'm not going to say who they are.

SHACKLETON: Yeah. O.K. It's bad enough when it's being constructed, but it's God awful when we got an operating plant.

GUNDERSON: Yeah. Well ...

SHACKLETON: And we know ...

GUNDERSON: Them and drunks I won't work with ...

SHACKLETON: Yeah.

GUNDERSON: Uh ... you know, you don't have to make the mistakes; they make it for you. You know, the trouble is, you're not the one around to tell anybody about it ...

SHACKLETON: These people are working on safety-related equipment ...

GUNDERSON: Some of 'em are QC ...

SHACKLETON: That are up in those trays?

GUNDERSON: ... Yeah. But I'm not going to tell you who they are, you get them a polygraph test and if they want to tell you, that's fine, but I won't tell you.

SHACKLETON: O.K. Are there any further questions anyone wants to ask? Why don't you get us off the, uh ...

ELIN: Do you hae anything else you'd like to say?

GUNDERSON: No, sir. I think I've said plenty, I'm gonna go home.

(end of tape)