ORIGINAL

07/21A-91

OFFICIAL TRANSCRIPT OF PROCEEDINGS

Agency: Nuclear Regulatory Commission
Incident Investigation Team

Title: Nine Mile Point Nuclear Power Plant
Interview of: DAVE WILSON

Docket No.

LOCATION: Scriba, New York

DATE: Friday, August 23, 1991 PAGES: 1 - 35

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1612 K St. N.W., Suite 300
Washington, D.C. 20006
(202) 293-3950

Exhibit 3-1 (continued)

ADDENDUM TO INTERVIEW OF DAVID E WILSON / ASSOC. SR GEN. ENGR
(Name/Position)

Page	Line	Correction and Reason for Correction
8	18-24	MIKE ERDO WAS NOT DISTRACTED DURING THE EVENT BUT DURING MY CONVERSATION @ THIS TIME. SO THE CONVERSATION WAS LEFT UNFINISHED. WHICH LED TO MY CONFUSION AS TO THE SEQUENCE OF EVENTS.
9	16	NO COMA AFTER VOLUME 1
10	10	AFTER FIVE: ADD "COLOR RECORDER"
25	14	ADD AFTER "WHAT YOU SAID" -> "WHAT YOU DID"

Page 1 of 1 Signature [signature] Date 8/26/91

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

INCIDENT INVESTIGATION TEAM

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Interview of :

DAVE WILSON :

(Closed) :

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Conference Room B
Administration Building
Nine Mile Point Nuclear
Power Plant, Unit Two
Lake Road
Scriba, New York 13093
Friday, August 23, 1991

The interview commenced, pursuant to notice, at 7:20 a.m.

PRESENT FOR THE IIT:

Michael Jordan, NRC

John Kauffman, NRC

PROCEEDINGS

[7:20 a.m.]

MR. JORDAN: Okay. It's August the 23rd, 1991 at about 7:20 in the a.m. We are at the Nine Mile Point, Unit Two in the P Building. We're conducting interviews concerning a transient that occurred on August the 13th, 1991.

My name is Michael Jordan. I am with the U.S. NRC out of Region III.

MR. KAUFFMAN: John Kauffman out of NRC Headquarters.

MR. WILSON: Dave Wilson, SRO, Nine Mile Point, Unit Two.

MR. JORDAN: Okay, Dave, first off give us a background of what you're background experience is.

MR. WILSON: Okay. I got a degree in -- Bachelor of Science in Civil Engineering from the University of Rhode Island. I worked five years of construction at -- for Pullman Power Products, working on various different aspects of construction. I worked on piping and mechanical construction at Seabrook and Palo -- which one is the one in Arizona -- different power plants.

MR. KAUFFMAN: Palo Verde.

MR. WILSON: Palo Verde, yes.

And came here from Seabrook and worked for ITT

Grinnell and -- as a senior piping engineer in the reactor building. Started with Niagara Mohawk in '82 as a test engineer and took a job in the operations department as an assistant SSS. Go my reactor operator's license -- senior reactor operator's license in the summer of '85 and was promoted to station shift supervisor in January of '88.

I currently work for the -- work in the operation's support department maintaining a SRO license -- current SRO license.

MR. JORDAN: So, you are currently an SSS or are you not an SSS?

MR. WILSON: I am currently not an SSS. I was an SSS through January of this year when I took a job as a -- my current job title is associate senior generation engineer.

MR. JORDAN: What kind of work -- what kind of responsibility do you have?

MR. WILSON: Anything and everything. I'll do -- my primary job is training coordinator which is a liaison between operations and the training department. However, in the role of the -- in my job in the operations support department I can do root cause analysis, answer DER's, write LER's, I coordinate training for the guys on shift. What the heck else do we do? Anything that's required that -- to support the operations; procedure reviews, we do a lot of

procedure reviews. We're involved in a procedure rewrite program.

MR. JORDAN: What -- were you on nights at the time of the event, days?

MR. WILSON: No. I was -- actually I was going to the training center to review exam bank questions.

MR. JORDAN: Why don't you just walk us through when -- what happened as you came into the plant?

MR. WILSON: Basically I came over the hill on the way to work, realized that the plant had scrammed.

MR. JORDAN: How did you determine that?

MR. WILSON: By the absence of steam from the cooling tower. It was not the full power billowing smoke -- more of a wisp.

MR. JORDAN: And what time was this?

MR. WILSON: Seven, 7:05. Approximately 7:00.

MR. JORDAN: Okay.

MR. WILSON: Realized that there was probably enough people at the plant to handle a plant shutdown from a normal scram, but when I came around the corner the -- saw that the security department had set up road blocks and some people were going in and some people weren't. I was about eight, ten cars back. Realized that he was asking for green cards. At that point I got my emergency -- the green card is the emergency -- I don't know what it is -- emergency

access card. And got that out and he let me go through. I went directly to the parking lot to the site. There were a lot of people standing outside. I got out and just as I was going in they were asking -- a lot of people said they weren't letting anybody in, but at that time a call came out from the security department that they wanted I&C, rad protection and operations personnel.

MR. JORDAN: Any way you can tell what time this was?

MR. WILSON: I would like to say approximately 7 o'clock -- 7:05, whatever time I badged in. I normally get to -- I get here at 7 o'clock, so I would say --

MR. JORDAN: Okay.

MR. WILSON: Being in the operations department, being an SSS, maintaining a license, you know, my place was in the control room. So, I came on site and went directly to the control room.

MR. JORDAN: Any problem with lighting between the access to the site?

MR. WILSON: None were observed.

MR. JORDAN: And to the control room?

MR. WILSON: None observed.

MR. JORDAN: Okay. Go ahead.

MR. WILSON: I came to the control room. Basically I got -- you know, I asked for a brief from -- I

think it might have been like Eric Townsend who was in the SSS's office. You know, I saw the operators on station at various panels. I saw Mike Conway on the boards -- on the emergency operating boards, was not sure what he was doing out there. Did not want to go into the controls area at that time. There was more than enough people in there to do what they needed to do. Got a brief from -- like I said, I got a brief from Eric, I think, and discussed what was going on in the site area emergency and, you know, looking from the back panels everything looked pretty good.

I would like to say, you know -- I don't remember exactly what pressure was, but pressure was stable. I asked Mike Eron, I think about that time, I think it was Mike, if I could go out and walk the panels and see what was going on -- see if I could see anything. And they allowed me to do that. And basically just told Mike, you know, that I was there to help him in whatever manner I could.

MR. JORDAN: Did he assign you any responsibility or tasks?

MR. WILSON: At that time, no. I got into -- shortly thereafter, oh, maybe 8:30 after things -- I would guesstimate 8:30. We started looking at where we were in tech specs. I know that they had thought about where they were in tech specs.

We looked at the standby gas, the drywell cooling

isolation valves, RPS, jumpers, basically went through the tech specs to see if we had met or could see any problem with them -- where we were in tech specs. Where the plant was and what tech specs we needed to meet tech spec actions, answering the phone a lot, talking to communication -- a lot of communication comes into the SSS's office on the various different phone lines.

MR. JORDAN: They were all functioning?

MR. WILSON: Yes. As far as I could tell they were.

MR. JORDAN: No problems with communications that you could see at this time?

MR. WILSON: No problems with communications. Well, you know, when I got there, it must have been, like I said, maybe ten minutes after seven a quarter after seven, something like that. The plant was in a stable condition or appeared to be a stable condition.

As I was walking the board they were -- I want to say they were shutting down RCIC. I wasn't sure what was going on with the different feed systems, but it looked like they had gotten condensate -- they had the booster pumps ready. I wanted to say that pressure was around 500 pounds at that time. I think that they had gotten condensate booster pumps running and they were just manipulating RCIC -- shutting RCIC down or putting it in on a tank-to-tank

evolution to aid in the control of pressure.

We talked about -- later on, you know, as things were happening we -- I asked Mike, you know, trying not to interfere with the operation of the plant, you know. My license became inactive in this last quarter. This is the first time since I've had a license that it's been inactive. And so I wasn't -- I didn't have an active license. I couldn't go out there. I couldn't provide the direction to the operators although they've all worked for me at one time or another.

I asked -- so I was talking to Mike Eron about how it happened and got a flavor for what had happened; understood that the UPS's had all failed, they had heard a bang, went out to the panels. The annunciators were off with the exception of, I think he said there was -- on 601 there was three or four annunciators, I think he said, that were still on.

And we talked about putting the mode switch in shutdown and then he went back and -- that he had recommended putting the mode switch in shutdown and then he was distracted and maybe went back to work. And thinking about that, at that point it didn't seem like the turbine had tripped, that they had manually scrammed the reactor.

At this point I didn't have a good feel as to what had happened out in the yard and such and so I got a little

sidelined and focused that they had put the mode switch in shutdown so I was a little confused as to what had happened. So there was some discussion between some of the people in the SSS's office and went back and clarified it and he -- Mike said that before putting the mode switch in shutdown he had seen the reactor scram lights were out. Asked him about the -- whether the turbine had tripped at that point and I don't -- he said, I believe -- I believe he said that he had lost indication over there and wasn't sure -- didn't know whether the turbine had tripped. He was more concerned with the reactor. He knew that the reactor had scrammed and needed to place the mode switch in shutdown and was concerned about the power -- his power level, the APRM recorders had failed as is at 100 percent power.

He said he went around to the back and checked the shutdown scram discharge volume, trip units on the back panel, 609 and 611. They indicated full water so that he was sure that they had got rod motion in that -- he used that as one of his things for saying that he got rods to move. Checked the down-scale alarms -- down-scale lights on the APRM's on the back panels.

Thinking through the even and what happened after -- trying to piece it together, realizing that we got a -- probably got a turbine trip we sent -- had some guys run downstairs and look to see some of the relays -- Eric and I

were talking and the guys went downstairs to check some of the 86's, the protective relays on the generators and the report that came back was they had all tripped. Not that they had all tripped, but that there was -- the ones that had tripped -- I don't remember which ones they were -- I don't remember that they ever got written down -- which led us to believe that the turbine had tripped and that it all made sense. That the generator had blown -- or the transformer had blown, the turbine had tripped and the reactor had scrammed and that's what they saw an it was all in one fell swoop there. So we -- at that point I definitely believed that everything had happened correctly.

We talked about tailpipe temperatures about that time, or I mean SRV's lifting and asked if an SRV lifted and the answer was, no, I don't believe so. And the STA came back shortly thereafter and said that we had a rise in the -- in some of the tailpipe temperatures. So we went back -- Tom Tuttle and myself and Mike Eron went back to the recorder for the tailpipe temperatures and determined that two SRV temperatures -- I think points eight and nine, valves 128 and 135, maybe -- anyway, we determined that points eight and nine had gone from about -- I want to say 150 or 200 degrees up to 300 degrees plus at the time of the transient and then you could see it start to cool down.

MR. JORDAN: This is on the strip chart recorder?

MR. WILSON: Yeah. The tailpipe temperature recorder of -- I don't know what --

MR. JORDAN: Oh. It's a temperature recorder?

MR. WILSON: Yeah.

MR. JORDAN: A dot printout, is that what it is?

MR. WILSON: Yeah. It's a --

MR. JORDAN: It's not a continuous line?

MR. WILSON: It's a rotating cam. It's a rotating cam and, you know, the thing slides up and down and then it rotates and it's a four or five -- it's like the turbine vibration recorders. You know, they rotate and they print a number and that tells you which point -- which it is.

MR. JORDAN: How many of those did you see were trending up and down?

MR. WILSON: Well, we have several leakers, okay.

MR. JORDAN: Do you have any idea how many leakers?

MR. WILSON: Three or four. Four. It looked like there was four or five of them I guess.

MR. JORDAN: Four or five leakers and then --

MR. WILSON: Yeah, you know, and they were -- most of the temperatures is down around 150 degrees. And that's where -- and they all print on top of each other so you can't tell what number it is and then there are several elevated temperatures, okay, and that is due to some steam

leaking through the seat. It basically increases the temperature. The highest temperature there is about 300 degrees and that was on point 12. And then on a scram you can watch the temperatures as soon as the -- as soon as we start depressurizing we can watch the temperatures go right down. When we went back and looked at it, you could see where points eight and nine had been down in the 150 degree range and then were suddenly up in the 300 degree range, right on top of the leaker. You had to look at it to see it because the points -- the numbers eight and nine -- you had to wait for it to come around to verify that it was eight and nine, it was not clearly legible that they were points eight and nine. But transferring that to the valve number and transferring that back to the set points and the pressure relief function, those are the two lowest set points and they were --

MR. JORDAN: Do you know what valves those were?

MR. WILSON: I believe they are 128 and 135.

MR. JORDAN: Okay.

MR. WILSON: At that point we believed, based on that, that we probably had two relief valves that lifted and Mike Eron went and got the procedure to cycle the drywell vacuum breakers as required by tech spec to initiate that.

MR. JORDAN: What time is this?

MR. WILSON: Ten o'clock.

MR. JORDAN: About 10 o'clock?

MR. WILSON: I went to try to figure out if we had any kind of pressure indication and rolled back the PAM recorders to see where the pressure was and the pressure indicated as well as you can tell on a narrow range at approximately 1,070, that's about as close as I can say, that's about 1,070. And it peaked and went right back and based on 130 day run I would have expected the relief valves to lift.

MR. JORDAN: Is that what the run is? Is that how long you run them? You don't know.

MR. WILSON: I think our record run is 135 and we were within a week. I want to say about 130 days.

MR. JORDAN: Okay.

MR. WILSON: You know, made sure that we had had an ARI, we had had our RCS initiation on 1,050 pounds, so we knew right off that we had at least 1,050 pounds that we didn't -- performed that surveillance.

MR. JORDAN: Did that one come out okay? No problem with surveillance?

MR. WILSON: Yes. It was a tech spec violation. That's the point of how we were supposed to have performed that surveillance within two hours after the relief of the -- after the lifting of the relief valve. But we didn't realize we had SRV's lift, because the two indications that

we have -- you know, we have the acoustic monitor indications which provides the red and green indication right on the panel. And we wouldn't get an annunciator in that would say that it would lift the computer points, but the computer went away and you didn't have the annunciator and I expect that the relief valve lifted for a second, maybe and that's why it didn't get seen. So we did the surveillance and wrote it up as a tech spec violation.

MR. JORDAN: Any other tech spec violations that you knew of in your -- you review the tech spec, you're saying with the --

MR. WILSON: I reviewed the tech specs. The only other thing that I saw that could have -- that could be a problem was we installed the RPS jumpers which bypasses the -- oh, the automatic functions, it only leaves the manual function of RPS. In doing that the question that I raised was -- at that point is all of the automatic functions of RPS, are they all inoperable, and then there are several actions that you have to take within -- with those things being inoperable like with APRM's inoperable, you've got to verify all the rods are inserted. And the mode switch locked and shut down, within an hour. I think that's on the APRM's. That was done. We went out and the mode switch was locked and shutdown. The rods had been inserted, it had been verified and that was documented in Mike's log.

However, the jumper was in for longer than an hour and you reset the scram, okay; tech spec action B says if you got both trip systems inop within one hour you have to place a half on one of the trip systems, which we didn't do. So that I brought that point up to Jerry Helker and whether or not we violated tech specs -- because we were directed by the EOP's to put the jumpers in and then thereby are we -- do we have to take the tech spec actions when we're directed to defeat tech spec required things in the EOP's. If we do have to take those actions, we didn't do it all and he's aware of that.

MR. JORDAN: So you're saying that the tech specs require -- what, a half -- you said a half?

MR. WILSON: Yeah. Half scram.

MR. JORDAN: Half scram?

MR. WILSON: Yeah.

MR. JORDAN: On one of the channels?

MR. WILSON: If you've got both channels inop --

MR. JORDAN: If both channels inop --

MR. WILSON: If you've got less than the required number of -- per the table --

MR. JORDAN: Okay.

MR. WILSON: -- then you got to have -- you've got to take the action per the table -- per the action statements which I think is -- verify all the insertable

control rods inserted and the mode switch locked in shutdown. And within an hour put one of the trip systems in the trip condition so it won't cause the trip to occur.

MR. JORDAN: And the reason why the jumpers were installed was because --

MR. WILSON: They were in EOP-RQ trying to -- they didn't know where all the rods were so they were -- put the RPS jumpers in to reset the scram so that they could insert another scram.

MR. JORDAN: In accordance with the EOP's?

MR. WILSON: In accordance with the EOP's.

MR. JORDAN: So they had an authorized procedure for them to install the jumpers in the condition that they were in?

MR. WILSON: Absolutely.

MR. JORDAN: The only question is that once you did the action associated with that, should there also be additional action on --

MR. WILSON: In accordance with the tech specs.

MR. JORDAN: To put in the half scram. Do you have any idea how long the bypasses were -- the bypass jumper was installed?

MR. WILSON: About an hour and a half is my recollection -- about an hour and a half.

MR. JORDAN: Any other tech spec --

MR. WILSON: No other tech spec issues.

MR. JORDAN: Okay. To continue on you were at the -- you said you were involved with the SRV's -- you showed -- you told Mike about the RPS bypass jumpers --

MR. WILSON: Yeah, I told Jerry about --

MR. JORDAN: I'm sorry, Jerry -- about the bypass jumpers.

MR. WILSON: At that time they were taking the jumpers out, so it didn't become --

MR. JORDAN: It was around 10 o'clock in the morning. Is this around ten also?

MR. WILSON: That? No. That was back at 8:30-ish.

MR. JORDAN: Okay.

MR. WILSON: I would guess.

MR. JORDAN: Okay. Any other events of the day that you got involved with?

MR. WILSON: No. Basically from there it was making sure that operators were going to come in. You know, I called operators at home -- the next shift to make sure that they all had their access cards so that they could get on site; provided -- you know, interface to get them so that they could get access to the site so that they could come to work. It doesn't seem like a long day.

MR. JORDAN: Okay. And what time did you get

relieved?

MR. WILSON: I went home around six, 6:30.

MR. JORDAN: In the evening?

MR. WILSON: Yeah.

MR. JORDAN: You said you got permission from the SSS to walk down the panels?

MR. WILSON: Yeah, I believe so.

MR. JORDAN: Okay. When you walked down the panels did you notice anything abnormal? Abnormal conditions, things that --

MR. WILSON: The only thing that I saw that was abnormal was the division two hydrogen oxygen analyzer fan was off.

MR. JORDAN: Do you know what they did because of that?

MR. WILSON: I went back and told the SSS and he had one of the operators restart it.

MR. JORDAN: Did they have any problem with restarting it?

MR. WILSON: Not that I know of.

MR. JORDAN: Do you have any idea why it was off? What trips that fan?

MR. WILSON: I don't know why it was off. The other side was on.

MR. JORDAN: Okay. You asked if you knew that the

turbine had tripped? What indications would you use to identify that the turbine was tripped? Is there an annunciator, turbine trip annunciator or is there a turning gear or is there --

MR. WILSON: The big quick one that you always look for is the turbine trip annunciator in the upper right hand corner of the first -- is it the first or second -- annunciator window on panel 851.

MR. JORDAN: And that --

MR. WILSON: Well, that's where I would look. I wasn't there at the time, you know --

MR. JORDAN: Okay.

MR. WILSON: -- so, you know --

MR. JORDAN: That's what you normally use?

MR. WILSON: That's -- you know, that's the quick and easy one that you can see from a long ways away -- otherwise, you know, you go over and you look at valve positions on the little meters over there; you know, you're looking at the turbine speed coasting down, you're looking at all the indications that you got over there for turbine trip.

MR. JORDAN: And none of that was available as far as you know?

MR. WILSON: I don't know. He didn't get into -- I didn't get into real specifics as to what was available

and what was not available. I didn't want -- you know, it was not -- I didn't think it was appropriate for me to be grilling these guys as to what did they see, because I realized that everything was going to come out in the end. I'm still not sure what was available and what was not available.

MR. JORDAN: Any questions?

MR. KAUFFMAN: Yeah, I do. They're not really related to the event. You mentioned you're the training coordinator and you're also involved in procedure reviews?

MR. WILSON: I haven't done a lot of procedure reviews in the last month. But, yes.

MR. KAUFFMAN: I'd just like you to explain how those processes work and what your involvement is? I guess we can start with training coordinator.

MR. WILSON: The training coordinator job is a liaison between the training department and the operations department. I was chairman of the OTPAC committee which is the operations training program and advisory committee for a little bit over a year, when I was an on-shift SSS. When I came off-shift, I relinquished that position to another on-shift SSS; took the training coordinator position, or was assigned the training coordinator position. I was actually -- while I was a relief SSS I was doing the training coordinator position also.

Basically that entails working with the training department people reviewing lesson plans, providing interface from the operators. If they require or feel the need for additional training in any kind of areas, I help develop those kind of things. I don't develop the lesson plans, but, you know, like we might talk about optical isolators. Optical isolators to us are kind of -- to me are kind of magic, okay. And we have some guys I&C techs that are good at these things and we got -- I helped arrange getting these I&C techs to come over with a couple of -- with a scope and a couple of optical isolators cards, analog digital cards and took them apart and showed the operators -- you know, I mean, like operators like to touch and play and feel and see what's going on here, you know. And you can't do that with these optical isolators in there, you know. So we had them in our hands and we could see what they were and how they worked and what was breaking with them and things like that.

I do a lot of scheduling for the operators. If they miss training we require operators to go to training with their training shifts -- well with their shifts during their training week. However, people have babies, get sick, so forth and so on and miss training. I make the necessary arrangements to get those people back over there to make up the training.

I do performance reviews with the -- in the simulator -- looking at the -- in the simulator. I'm chairman of the simulator configuration control board which evaluates changes to the simulator, modifications, upgrades for software. What else do we do over there? I don't know, a lot of different things. Work with -- when training has proposals as to how to upgrade the program, they'll talk through me to operations management. You know, it's very difficult to contact Mike or Jerry over here between the meetings and where they go between the control room and the -- and the SORC meetings or whatever, you know -- the planning -- daily planning meetings and such. I have a desk over here, I have a desk over there; I spend some of my time over there. I spend some of my time over here. So I can track them down and provide that interface between the groups and it's worked out pretty well. The training program is -- you know -- we --

MR. KAUFFMAN: It's had some problems, right?

MR. WILSON: We've had some problems. Okay. We've worked real hard to upgrade it and I don't know -- I feel and I think the operators as a whole feel that the program has improved a lot. Recently we've worked -- one of the things that we've done recently is changed around the simulator portion of training to provide more simulator training. We spend about half of our time, if not more, in

the simulator, as opposed to classroom lectures on EOP's. We do simulator working demonstration of EOP legs, you know, and then we like time out freeze the simulator if we're making a mistake or if the SSS is working through a particular leg and he gets confused and wants to day time out, I want to talk about this, you know, the operator can freeze the machine and then they talk about it and get the feel for it and then we drive -- you know, start it back up and pick up from where we were and so that's worked out real good.

Some of the systems -- we go back up into the simulator -- RHR, we've just started that. RHR has been a noted weakness for us and it's difficult with all the interlocks to sit in a classroom and hear the interlocks over and over and over again. You can only do that so many times. So, as opposed to that they've devised a short classroom lecture, system overview, and some of the operating procedure overview. Then we go up into the simulator and manipulate the interlocks. You know, hands-on is a whole lot better than the classroom. You can touch and feel and things like that.

MR. KAUFFMAN: Is that -- have you heard any fall out from this event where maybe training could be better? People want more training as a result of this event?

MR. WILSON: No. I haven't heard yet, because I

basically have been on midnights. I started midnights at the beginning of this week. It's -- this event I never could have -- never could have dreamed up this event; all five of the UPS's going away at once.

You know, we've trained on UPS's, we've had a special course on UPS's. It's always -- UPS's are somewhat difficult to train on and understand because they don't do anything. They just kind of sit there and hum. And very rarely do they, you know, break. I mean, we have failures on them, but the failures on them -- there's not much the operator can do. It's all solid-state stuff. You know, it's not like when pumps or relays or breakers happen. This is all solid-state stuff and it just changes and you kind of like go down there and verify what happened and bounce off the procedures and --

The UPS's -- they're difficult to operate. I know Bob Crandall fairly well. We worked as test engineers together. We started out together and he's always been interested in the UPS's and whenever I've had a problem with UPS's, had a question, I call Bob. You know, that's what we would do. There's not a lot of -- there's not a lot of in-depth guidance in the procedures. There's adequate procedures for operating them as they are, but you know, the transients that the machines go through, the trouble shooting that we can get into it's I&C. It's all I&C and

electrical people. I mean there's not much you can do besides call for help.

MR. JORDAN: Yeah.

MR. KAUFFMAN: So there will be something like a scram report that comes out and -- what, do you look at that and try to identify training?

MR. WILSON: Oh, yeah. Oh, we've already sent over a post-event survey from training, you know, we've got a program in place that as soon as an event -- noteworthy training -- you know, training noteworthy occurs, we sent over a post-event -- post-training -- I forget what the name of it is, scenario or summary, post-event summary, I think is what we call it. And we send it to all the operators and it's, write down what you saw, what you -- what was good training that you had for it, what was bad training, what you could -- what more could you want and we get all these things back and then we do a -- basically an evaluation on it, or the training department does an evaluation of it and then we look at that from there and make any additions to the training program that we can. We do that all the way -- not only through the licenses, but all the way down through the non-LOTS and everybody that was involved in it.

MR. KAUFFMAN: Okay. Now, you also mentioned you're involved in procedure review and that the station was undergoing a procedure rewrite, could you explain the

history of that and why you're doing the rewrite and how you're involved in procedure reviews.

MR. WILSON: Well, currently not very much. I'm a qualified technical reviewer. I will have been -- you know, when I was an SSS, all the SSS's are assigned systems that they're quote system experts on. By the nature of the license and maintaining an active and current license, you're an expert on all the systems. I mean that's what you are when you're an SRO or an RO for that matter. But, the operations support department has been tasked with writing -- upgrading the operating procedures and the operating surveillance procedures to the site writer's guide which has been newly developed. It's gone through several evolutions, I guess.

We had several contractors working for us doing this and they were let go earlier this year and the task of rewriting the procedures was delineated to us in the operations support department. Basically there is a -- there's a couple of people, Jim Poindexter and he is an ex-SSS -- no, he is an SSS now, still. That's right, he is still an SSS. He was working -- he worked in the training department as a -- temporarily, he was the training supervisor over there for Unit Two. He's doing a lot of the rewrite of the procedures. He's doing all the rewrite of the procedures now. He has basically taken that function

and going with it.

I have, in the past, reviewed procedures that were draft procedures that were written up for technical content, surveillances, operating procedures, and made comments and, you know, worked them through the process and got them published. I have not taken one myself, yet, and had to work through it because we're coming up to a -- because of the things that I've been doing with the training department basically. My time is full and I don't -- I have not had time to do it.

MR. KAUFFMAN: Okay. Say I was a licensed operator during this event and you -- you got into several areas of EOP's and different procedures that you maybe don't routinely do and I use the procedure and got through the event, but when I was done, I say to myself, you know, that procedure really wasn't very good or helpful there. It needs to be changed. What would I do and it would it be up to me to put in a procedure or change request or would I just flag it to somebody and say please look at this? How would that input get into the system and be taken care of?

MR. WILSON: We have a procedure change evaluation form, PCE, that can be initiated by anyone. Depending on the magnitude, I suppose, of it, it could be the supervisor and I have initiated them for reactor operators and I have had reactor operators initiate them themselves. Then they

will come to -- they basically come to the first-line supervisors to the -- or to the RPO, the procedure owner and he evaluates it for --

MR. KAUFFMAN: What does RPO stand for?

MR. WILSON: Responsible procedure owner.

MR. KAUFFMAN: Okay. We have to take the tapes back and try and figure out what the abbreviations mean.

MR. WILSON: Okay.

MR. KAUFFMAN: So that's why I asked.

MR. WILSON: It's in accordance with AP-2, AP-2.0 and AP-2.1 and AP-2.2.

The procedures -- the RPO can then decide whether it should be an immediate change or a future change and there is two sections of the PCE form. If it's a -- determined to be a future change, it's not relevant for an immediate change, they don't need to do an immediate change, it's sent down to the operations support department and basically I guess it's put into the system file. Jimmy is maintaining that file for the procedure upgrade for the next revision so that when the procedure comes out it's a good or better procedure, you know.

MR. JORDAN: Okay.

MR. KAUFFMAN: Okay. Are you aware of any procedures that as a result of this event that were found needing changes or improvements?

MR. WILSON: I heard that OP-71 might need some changes or they're going to look at the --

MR. KAUFFMAN: THat's a procedure for -- what's that for?

MR. WILSON: I'm sorry. That's right. I forget we're talking on a tape here. That's the operating procedure for normal AC distribution and that has the operation of the UPS's in it and I haven't looked at it yet, but I understand that there is some upgrade to that procedure to make it more user friendly so as to manipulate the UPS's in the situation, I guess, that we found them in.

MR. KAUFFMAN: Okay. Just one last follow-up question that relates to -- there are some questions about when in EOP's, do tech specs apply, not apply, is there some mechanism for resolving that? For example, some plants have licensing do something called a tech spec interpretation.

MR. WILSON: We have tech spec interpretation, but we do not have one specifically on this. I brought it up to Jerry and he believes that it's covered in the safety review for the -- for the EOP's. It was documented and they're going to put that in on their deviation DER -- deviation event report to make sure that that gets clarified. That's one of the items that I've got kind of tucked away that I need to get that clarified to make sure that that gets into the training program. We do a lot of

these things in training. You know, I mean, we do EOP attachments where we bypass RSCS, we do these things as a matter of course in training, but when it comes down to the real thing, all of a sudden there's a lot more things that go through your head. This is real. I've got to do this and this and this. For whatever reason, you know, and those questions all of a sudden they are very obvious questions and I'm flabbergasted that we don't think about those things earlier on.

MR. KAUFFMAN: That seems like it's something you can talk out in your time outs and --

MR. WILSON: Yeah, you know. But it is something that, I guess -- well, we never -- it never came up, you know. Do we take these tech spec actions? What are the tech -- you know it just -- so that's one of the questions that I've got to be resolved and to make sure that that is disseminated through the ranks.

MR. JORDAN: In a normal scram, how many SRV's normally lift?

MR. WILSON: What's a normal scram?

MR. JORDAN: 100 percent power, 120 days, 125-130 days?

MR. WILSON: No reject, level transient, APRM's, what kind -- are you talking this particular --

MR. JORDAN: Similar to what we had here. How

many would you expect to lift?

MR. WILSON: On a load to reject, I would -- I guess I would expect a significant pressure increase and I would look to see indications of whether or not I had had an SRV lift. However, there was not a lot of indications of what they actually -- kind of a transient that they had had until they got people in here. We started looking at different things and asking a lot of these questions. My personal feeling is that we missed it, but then we did identify it. We would not have missed it had we had the annunciators and we would have -- you know, if you're talking about the tech spec violation, no doubt in my mind that we would have taken the appropriate actions had we known that the SRV's had opened.

We don't do many real load reject scrams at full power. I'm trying to think -- we did the -- I was there for the load reject at -- during the start-up and I don't remember if we had SRV's lift or not.

MR. JORDAN: Did you train on it? Do you know if you ever got training on it? What to look for if you get a load reject?

MR. WILSON: We do load reject scenarios in training.

MR. JORDAN: Scenarios.

MR. WILSON: We do load reject training scenarios.

We do them with ATWS's, we do them without ATWS's. You know, we do them -- do we train to look for them? No, we don't train to look for them, we train to see what the indications are, you know. If you were doing a training scenario on a load reject, basically, you know, you would get the load reject, the operators would respond to the panels, respond to the annunciators, they would see the annunciator up here, it looks like we had a couple of SRV's open; if it's an ATWS it will stay open. If it's not an ATWS, even by the time the guy gets over there, you know, the valves are going to be closed, but the guy is going to say, hey, we had SRV's lift. Okay. Let's make sure that we get suppression pool cooling going. You know, what are the temperatures in the suppression pool? Where is pressure going now? Pressure has come back down. It's stabilized at 960, you know, the bypass valves have got pressure under control. Those kind of things, you know, they're reactionary kind of things that we do based on indications. You see it, you go, you know, you kind of like follow it through. It must have been very different when there was nothing there. You know.

MR. JORDAN: Yeah. You're right.

MR. WILSON: And you know, Mike -- I personally think Mike did an extraordinary job. I think he did real well. I worked with Mike on shift for -- he was an E on my

shift and he's a good operator. I worked with all these guys and they did -- I think they did a good job. They kept the plant under control, they took the actions.

The classification of the event was correct, it was timely. It must have been different. I'll tell you what, man, I just can't imagine, you know. You know, we all have our -- I -- we all have our personal worst scenarios, you know, and I don't like the total loss of off-site power, but the total loss of indication that's a different one.

MR. KAUFFMAN: For the record, it wasn't a total loss, they still had some of their safety related --

MR. WILSON: Well, that's true. They had the PAM's and they had the things coming off the UPS. You're right.

MR. JORDAN: I've got one -- two last questions. And this is the -- we give everybody the opportunity to give the good news, bad news and the way I define that is, the activities that you did while you were there, is there something that you had in your hands or in your back pocket, something that was available to you, even training can be one, that you say, gee, thank God I had that, because that helped me accomplish what my tasks were.

And the opposite of that would be is -- gee, I wish I would have had this because it would have made my task easier. Excluding the UPS's. You know, UPS's would

have been nice. But you know -- and I'll give you a classic example as the guy that goes out in the plant and says, gee, thank God that wrench was hanging on that valve because I needed that wrench to operate that valve. And the contrary to that would be the guy goes out there and says, gee, we've got to have a wrench hanging on that valve because when he got out there no wrench was there and I had to go get a wrench and why don't we stage a wrench there.

MR. WILSON: Right.

MR. JORDAN: Was there anything that -- and the answer to the question may be nothing, but was there anything that you can say to yourself, gee, thank God I had this in my hand or this available to me because I used it and it worked well for me and I want to say, thank God I had that, you know, so I can tell the rest of the industry that, gee maybe you guys ought to -- maybe you don't have this, it worked well here, you used it well and it came out good.

MR. WILSON: I can't answer that question because I wasn't there during the transient and then from where -- when I got there it was a normal plant -- semi-normal plant shutdown.

MR. JORDAN: That may be the answer to the question, there was nothing abnormally strong that you said that you had as a result of the way --

MR. WILSON: From where I was, no, because I

didn't have any supervisory -- I wasn't -- I didn't have any direct function in the evolutions above and beyond experience and trying to help divert the -- help the SSS.

MR. JORDAN: Vice versa, there's nothing that you say, gee, I wish we would have this available for us next the next time around if we have this thing; and what you saw, the events that you took care of?

MR. WILSON: No.

MR. JORDAN: Okay. I don't have any more questions.

MR. KAUFFMAN: Nor do I.

MR. JORDAN: I guess we can go off the record.

[Whereupon, at 8:20 a.m., the taking of the interview was concluded.]

REPORTER'S CERTIFICATE

This is to certify that the attached proceedings before the United States Nuclear Regulatory Commission

In the Matter of:

NAME OF PROCEEDING: Interview of Dave Wilson

DOCKET NUMBER: (Not applicable)

PLACE OF PROCEEDING: Scriba, New York

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission taken by me and thereafter reduced to typewriting by me or under the direction of the court reporting company, and that the transcript is a true and accurate record of the foregoing proceedings.

Mark Handy

Mark Handy
Official Reporter
Ann Riley & Associates, Ltd.

07-1218-91

OFFICIAL TRANSCRIPT OF PROCEEDINGS

Agency: Nuclear Regulatory Commission
Incident Investigation Team

Title: Nine Mile Point Nuclear Power Plant
Interview of: DAVE WILSON

Docket No.

LOCATION: Scriba, New York

DATE: Friday, August 23, 1991 PAGES: 1 - 35

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(202) 293-3950

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Exhibit 3-1 (continued)

ADDENDUM TO INTERVIEW OF DAVID EWICSON / ASSOC. SR GEN. EDITOR
(Name/Position)

Page	Line	Correction and Reason for Correction
8	18-24	MIKE ERAU WAS NOT DISTRACTED DURING THE EVENT BUT DURING MY CONVERSATION @ THIS TIME SO THE CONVERSATION WAS LEFT UNFINISHED WHICH LED TO MY CONFUSION AS TO THE SEQUENCE OF EVENTS.
9	16	NO COMA AFTER VOLUME 1
10	10	AFTER FIVE ADD "COLOR RECORDING"
25	14	ADD AFTER "WHAT YOU SAW" -> WHAT YOU DID

Page 1 of 1 Signature [signature] Date 8/26/91

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

INCIDENT INVESTIGATION TEAM

- - - - - - - - - - - - - - - - - - - -

Interview of :

DAVE WILSON :

(Closed) :

- - - - - - - - - - - - - - - - - - - -

Conference Room B
Administration Building
Nine Mile Point Nuclear
Power Plant, Unit Two
Lake Road
Scriba, New York 13093
Friday, August 23, 1991

The interview commenced, pursuant to notice, at 7:20 a.m.

PRESENT FOR THE IIT:

Michael Jordan, NRC

John Kauffman, NRC

PROCEEDINGS

[7:20 a.m.]

MR. JORDAN: Okay. It's August the 23rd, 1991 at about 7:20 in the a.m. We are at the Nine Mile Point, Unit Two in the P Building. We're conducting interviews concerning a transient that occurred on August the 13th, 1991.

My name is Michael Jordan. I am with the U.S. NRC out of Region III.

MR. KAUFFMAN: John Kauffman out of NRC Headquarters.

MR. WILSON: Dave Wilson, SRO, Nine Mile Point, Unit Two.

MR. JORDAN: Okay, Dave, first off give us a background of what you're background experience is.

MR. WILSON: Okay. I got a degree in -- Bachelor of Science in Civil Engineering from the University of Rhode Island. I worked five years of construction at -- for Pullman Power Products, working on various different aspects of construction. I worked on piping and mechanical construction at Seabrook and Palo -- which one is the one in Arizona -- different power plants.

MR. KAUFFMAN: Palo Verde.

MR. WILSON: Palo Verde, yes.

And came here from Seabrook and worked for ITT

Grinnell and -- as a senior piping engineer in the reactor building. Started with Niagara Mohawk in '82 as a test engineer and took a job in the operations department as an assistant SSS. Go my reactor operator's license -- senior reactor operator's license in the summer of '85 and was promoted to station shift supervisor in January of '88.

I currently work for the -- work in the operation's support department maintaining a SRO license -- current SRO license.

MR. JORDAN: So, you are currently an SSS or are you not an SSS?

MR. WILSON: I am currently not an SSS. I was an SSS through January of this year when I took a job as a -- my current job title is associate senior generation engineer.

MR. JORDAN: What kind of work -- what kind of responsibility do you have?

MR. WILSON: Anything and everything. I'll do -- my primary job is training coordinator which is a liaison between operations and the training department. However, in the role of the -- in my job in the operations support department I can do root cause analysis, answer DER's, write LER's, I coordinate training for the guys on shift. What the heck else do we do? Anything that's required that -- to support the operations; procedure reviews, we do a lot of

procedure reviews. We're involved in a procedure rewrite program.

MR. JORDAN: What -- were you on nights at the time of the event, days?

MR. WILSON: No. I was -- actually I was going to the training center to review exam bank questions.

MR. JORDAN: Why don't you just walk us through when -- what happened as you came into the plant?

MR. WILSON: Basically I came over the hill on the way to work, realized that the plant had scrammed.

MR. JORDAN: How did you determine that?

MR. WILSON: By the absence of steam from the cooling tower. It was not the full power billowing smoke -- more of a wisp.

MR. JORDAN: And what time was this?

MR. WILSON: Seven, 7:05. Approximately 7:00.

MR. JORDAN: Okay.

MR. WILSON: Realized that there was probably enough people at the plant to handle a plant shutdown from a normal scram, but when I came around the corner the -- saw that the security department had set up road blocks and some people were going in and some people weren't. I was about eight, ten cars back. Realized that he was asking for green cards. At that point I got my emergency -- the green card is the emergency -- I don't know what it is -- emergency

access card. And got that out and he let me go through. I went directly to the parking lot to the site. There were a lot of people standing outside. I got out and just as I was going in they were asking -- a lot of people said they weren't letting anybody in, but at that time a call came out from the security department that they wanted I&C, rad protection and operations personnel.

MR. JORDAN: Any way you can tell what time this was?

MR. WILSON: I would like to say approximately 7 o'clock -- 7:05, whatever time I badged in. I normally get to -- I get here at 7 o'clock, so I would say --

MR. JORDAN: Okay.

MR. WILSON: Being in the operations department, being an SSS, maintaining a license, you know, my place was in the control room. So, I came on site and went directly to the control room.

MR. JORDAN: Any problem with lighting between the access to the site?

MR. WILSON: None were observed.

MR. JORDAN: And to the control room?

MR. WILSON: None observed.

MR. JORDAN: Okay. Go ahead.

MR. WILSON: I came to the control room. Basically I got -- you know, I asked for a brief from -- I

think it might have been like Eric Townsend who was in the SSS's office. You know, I saw the operators on station at various panels. I saw Mike Conway on the boards -- on the emergency operating boards, was not sure what he was doing out there. Did not want to go into the controls area at that time. There was more than enough people in there to do what they needed to do. Got a brief from -- like I said, I got a brief from Eric, I think, and discussed what was going on in the site area emergency and, you know, looking from the back panels everything looked pretty good.

I would like to say, you know -- I don't remember exactly what pressure was, but pressure was stable. I asked Mike Eron, I think about that time, I think it was Mike, if I could go out and walk the panels and see what was going on -- see if I could see anything. And they allowed me to do that. And basically just told Mike, you know, that I was there to help him in whatever manner I could.

MR. JORDAN: Did he assign you any responsibility or tasks?

MR. WILSON: At that time, no. I got into -- shortly thereafter, oh, maybe 8:30 after things -- I would guesstimate 8:30. We started looking at where we were in tech specs. I know that they had thought about where they were in tech specs.

We looked at the standby gas, the drywell cooling

isolation valves, RPS, jumpers, basically went through the tech specs to see if we had met or could see any problem with them -- where we were in tech specs. Where the plant was and what tech specs we needed to meet tech spec actions, answering the phone a lot, talking to communication -- a lot of communication comes into the SSS's office on the various different phone lines.

MR. JORDAN: They were all functioning?

MR. WILSON: Yes. As far as I could tell they were.

MR. JORDAN: No problems with communications that you could see at this time?

MR. WILSON: No problems with communications. Well, you know, when I got there, it must have been, like I said, maybe ten minutes after seven a quarter after seven, something like that. The plant was in a stable condition or appeared to be a stable condition.

As I was walking the board they were -- I want to say they were shutting down RCIC. I wasn't sure what was going on with the different feed systems, but it looked like they had gotten condensate -- they had the booster pumps ready. I wanted to say that pressure was around 500 pounds at that time. I think that they had gotten condensate booster pumps running and they were just manipulating RCIC -- shutting RCIC down or putting it in on a tank-to-tank

evolution to aid in the control of pressure.

We talked about -- later on, you know, as things were happening we -- I asked Mike, you know, trying not to interfere with the operation of the plant, you know. My license became inactive in this last quarter. This is the first time since I've had a license that it's been inactive. And so I wasn't -- I didn't have an active license. I couldn't go out there. I couldn't provide the direction to the operators although they've all worked for me at one time or another.

I asked -- so I was talking to Mike Eron about how it happened and got a flavor for what had happened; understood that the UPS's had all failed, they had heard a bang, went out to the panels. The annunciators were off with the exception of, I think he said there was -- on 601 there was three or four annunciators, I think he said, that were still on.

And we talked about putting the mode switch in shutdown and then he went back and -- that he had recommended putting the mode switch in shutdown and then he was distracted and maybe went back to work. And thinking about that, at that point it didn't seem like the turbine had tripped, that they had manually scrammed the reactor.

At this point I didn't have a good feel as to what had happened out in the yard and such and so I got a little

sidelined and focused that they had put the mode switch in shutdown so I was a little confused as to what had happened. So there was some discussion between some of the people in the SSS's office and went back and clarified it and he -- Mike said that before putting the mode switch in shutdown he had seen the reactor scram lights were out. Asked him about the -- whether the turbine had tripped at that point and I don't -- he said, I believe -- I believe he said that he had lost indication over there and wasn't sure -- didn't know whether the turbine had tripped. He was more concerned with the reactor. He knew that the reactor had scrammed and needed to place the mode switch in shutdown and was concerned about the power -- his power level, the APRM recorders had failed as is at 100 percent power.

He said he went around to the back and checked the shutdown scram discharge volume, trip units on the back panel, 609 and 611. They indicated full water so that he was sure that they had got rod motion in that -- he used that as one of his things for saying that he got rods to move. Checked the down-scale alarms -- down-scale lights on the APRM's on the back panels.

Thinking through the even and what happened after -- trying to piece it together, realizing that we got a -- probably got a turbine trip we sent -- had some guys run downstairs and look to see some of the relays -- Eric and I

were talking and the guys went downstairs to check some of the 86's, the protective relays on the generators and the report that came back was they had all tripped. Not that they had all tripped, but that there was -- the ones that had tripped -- I don't remember which ones they were -- I don't remember that they ever got written down -- which led us to believe that the turbine had tripped and that it all made sense. That the generator had blown -- or the transformer had blown, the turbine had tripped and the reactor had scrammed and that's what they saw an it was all in one fell swoop there. So we -- at that point I definitely believed that everything had happened correctly.

We talked about tailpipe temperatures about that time, or I mean SRV's lifting and asked if an SRV lifted and the answer was, no, I don't believe so. And the STA came back shortly thereafter and said that we had a rise in the -- in some of the tailpipe temperatures. So we went back -- Tom Tuttle and myself and Mike Eron went back to the recorder for the tailpipe temperatures and determined that two SRV temperatures -- I think points eight and nine, valves 128 and 135, maybe -- anyway, we determined that points eight and nine had gone from about -- I want to say 150 or 200 degrees up to 300 degrees plus at the time of the transient and then you could see it start to cool down.

MR. JORDAN: This is on the strip chart recorder?

MR. WILSON: Yeah. The tailpipe temperature recorder of -- I don't know what --

MR. JORDAN: Oh. It's a temperature recorder?

MR. WILSON: Yeah.

MR. JORDAN: A dot printout, is that what it is?

MR. WILSON: Yeah. It's a --

MR. JORDAN: It's not a continuous line?

MR. WILSON: It's a rotating cam. It's a rotating cam and, you know, the thing slides up and down and then it rotates and it's a four or five -- it's like the turbine vibration recorders. You know, they rotate and they print a number and that tells you which point -- which it is.

MR. JORDAN: How many of those did you see were trending up and down?

MR. WILSON: Well, we have several leakers, okay.

MR. JORDAN: Do you have any idea how many leakers?

MR. WILSON: Three or four. Four. It looked like there was four or five of them I guess.

MR. JORDAN: Four or five leakers and then --

MR. WILSON: Yeah, you know, and they were -- most of the temperatures is down around 150 degrees. And that's where -- and they all print on top of each other so you can't tell what number it is and then there are several elevated temperatures, okay, and that is due to some steam

leaking through the seat. It basically increases the temperature. The highest temperature there is about 300 degrees and that was on point 12. And then on a scram you can watch the temperatures as soon as the -- as soon as we start depressurizing we can watch the temperatures go right down. When we went back and looked at it, you could see where points eight and nine had been down in the 150 degree range and then were suddenly up in the 300 degree range, right on top of the leaker. You had to look at it to see it because the points -- the numbers eight and nine -- you had to wait for it to come around to verify that it was eight and nine, it was not clearly legible that they were points eight and nine. But transferring that to the valve number and transferring that back to the set points and the pressure relief function, those are the two lowest set points and they were --

MR. JORDAN: Do you know what valves those were?

MR. WILSON: I believe they are 128 and 135.

MR. JORDAN: Okay.

MR. WILSON: At that point we believed, based on that, that we probably had two relief valves that lifted and Mike Eron went and got the procedure to cycle the drywell vacuum breakers as required by tech spec to initiate that.

MR. JORDAN: What time is this?

MR. WILSON: Ten o'clock.

MR. JORDAN: About 10 o'clock?

MR. WILSON: I went to try to figure out if we had any kind of pressure indication and rolled back the PAM recorders to see where the pressure was and the pressure indicated as well as you can tell on a narrow range at approximately 1,070, that's about as close as I can say, that's about 1,070. And it peaked and went right back and based on 130 day run I would have expected the relief valves to lift.

MR. JORDAN: Is that what the run is? Is that how long you run them? You don't know.

MR. WILSON: I think our record run is 135 and we were within a week. I want to say about 130 days.

MR. JORDAN: Okay.

MR. WILSON: You know, made sure that we had had an ARI, we had had our RCS initiation on 1,050 pounds, so we knew right off that we had at least 1,050 pounds that we didn't -- performed that surveillance.

MR. JORDAN: Did that one come out okay? No problem with surveillance?

MR. WILSON: Yes. It was a tech spec violation. That's the point of how we were supposed to have performed that surveillance within two hours after the relief of the -- after the lifting of the relief valve. But we didn't realize we had SRV's lift, because the two indications that

we have -- you know, we have the acoustic monitor indications which provides the red and green indication right on the panel. And we wouldn't get an annunciator in that would say that it would lift the computer points, but the computer went away and you didn't have the annunciator and I expect that the relief valve lifted for a second, maybe and that's why it didn't get seen. So we did the surveillance and wrote it up as a tech spec violation.

MR. JORDAN: Any other tech spec violations that you knew of in your -- you review the tech spec, you're saying with the --

MR. WILSON: I reviewed the tech specs. The only other thing that I saw that could have -- that could be a problem was we installed the RPS jumpers which bypasses the -- oh, the automatic functions, it only leaves the manual function of RPS. In doing that the question that I raised was -- at that point is all of the automatic functions of RPS, are they all inoperable, and then there are several actions that you have to take within -- with those things being inoperable like with APRM's inoperable, you've got to verify all the rods are inserted. And the mode switch locked and shut down, within an hour. I think that's on the APRM's. That was done. We went out and the mode switch was locked and shutdown. The rods had been inserted, it had been verified and that was documented in Mike's log.

However, the jumper was in for longer than an hour and you reset the scram, okay; tech spec action B says if you got both trip systems inop within one hour you have to place a half on one of the trip systems, which we didn't do. So that I brought that point up to Jerry Helker and whether or not we violated tech specs -- because we were directed by the EOP's to put the jumpers in and then thereby are we -- do we have to take the tech spec actions when we're directed to defeat tech spec required things in the EOP's. If we do have to take those actions, we didn't do it all and he's aware of that.

MR. JORDAN: So you're saying that the tech specs require -- what, a half -- you said a half?

MR. WILSON: Yeah. Half scram.

MR. JORDAN: Half scram?

MR. WILSON: Yeah.

MR. JORDAN: On one of the channels?

MR. WILSON: If you've got both channels inop --

MR. JORDAN: If both channels inop --

MR. WILSON: If you've got less than the required number of -- per the table --

MR. JORDAN: Okay.

MR. WILSON: -- then you got to have -- you've got to take the action per the table -- per the action statements which I think is -- verify all the insertable

control rods inserted and the mode switch locked in shutdown. And within an hour put one of the trip systems in the trip condition so it won't cause the trip to occur.

MR. JORDAN: And the reason why the jumpers were installed was because --

MR. WILSON: They were in EOP-RQ trying to -- they didn't know where all the rods were so they were -- put the RPS jumpers in to reset the scram so that they could insert another scram.

MR. JORDAN: In accordance with the EOP's?

MR. WILSON: In accordance with the EOP's.

MR. JORDAN: So they had an authorized procedure for them to install the jumpers in the condition that they were in?

MR. WILSON: Absolutely.

MR. JORDAN: The only question is that once you did the action associated with that, should there also be additional action on --

MR. WILSON: In accordance with the tech specs.

MR. JORDAN: To put in the half scram. Do you have any idea how long the bypasses were -- the bypass jumper was installed?

MR. WILSON: About an hour and a half is my recollection -- about an hour and a half.

MR. JORDAN: Any other tech spec --

MR. WILSON: No other tech spec issues.

MR. JORDAN: Okay. To continue on you were at the -- you said you were involved with the SRV's -- you showed -- you told Mike about the RPS bypass jumpers --

MR. WILSON: Yeah, I told Jerry about --

MR. JORDAN: I'm sorry, Jerry -- about the bypass jumpers.

MR. WILSON: At that time they were taking the jumpers out, so it didn't become --

MR. JORDAN: It was around 10 o'clock in the morning. Is this around ten also?

MR. WILSON: That? No. That was back at 8:30-ish.

MR. JORDAN: Okay.

MR. WILSON: I would guess.

MR. JORDAN: Okay. Any other events of the day that you got involved with?

MR. WILSON: No. Basically from there it was making sure that operators were going to come in. You know, I called operators at home -- the next shift to make sure that they all had their access cards so that they could get on site; provided -- you know, interface to get them so that they could get access to the site so that they could come to work. It doesn't seem like a long day.

MR. JORDAN: Okay. And what time did you get

relieved?

MR. WILSON: I went home around six, 6:30.

MR. JORDAN: In the evening?

MR. WILSON: Yeah.

MR. JORDAN: You said you got permission from the SSS to walk down the panels?

MR. WILSON: Yeah, I believe so.

MR. JORDAN: Okay. When you walked down the panels did you notice anything abnormal? Abnormal conditions, things that --

MR. WILSON: The only thing that I saw that was abnormal was the division two hydrogen oxygen analyzer fan was off.

MR. JORDAN: Do you know what they did because of that?

MR. WILSON: I went back and told the SSS and he had one of the operators restart it.

MR. JORDAN: Did they have any problem with restarting it?

MR. WILSON: Not that I know of.

MR. JORDAN: Do you have any idea why it was off? What trips that fan?

MR. WILSON: I don't know why it was off. The other side was on.

MR. JORDAN: Okay. You asked if you knew that the

turbine had tripped? What indications would you use to identify that the turbine was tripped? Is there an annunciator, turbine trip annunciator or is there a turning gear or is there --

MR. WILSON: The big quick one that you always look for is the turbine trip annunciator in the upper right hand corner of the first -- is it the first or second -- annunciator window on panel 851.

MR. JORDAN: And that --

MR. WILSON: Well, that's where I would look. I wasn't there at the time, you know --

MR. JORDAN: Okay.

MR. WILSON: -- so, you know --

MR. JORDAN: That's what you normally use?

MR. WILSON: That's -- you know, that's the quick and easy one that you can see from a long ways away -- otherwise, you know, you go over and you look at valve positions on the little meters over there; you know, you're looking at the turbine speed coasting down, you're looking at all the indications that you got over there for turbine trip.

MR. JORDAN: And none of that was available as far as you know?

MR. WILSON: I don't know. He didn't get into -- I didn't get into real specifics as to what was available

and what was not available. I didn't want -- you know, it was not -- I didn't think it was appropriate for me to be grilling these guys as to what did they see, because I realized that everything was going to come out in the end. I'm still not sure what was available and what was not available.

MR. JORDAN: Any questions?

MR. KAUFFMAN: Yeah, I do. They're not really related to the event. You mentioned you're the training coordinator and you're also involved in procedure reviews?

MR. WILSON: I haven't done a lot of procedure reviews in the last month. But, yes.

MR. KAUFFMAN: I'd just like you to explain how those processes work and what your involvement is? I guess we can start with training coordinator.

MR. WILSON: The training coordinator job is a liaison between the training department and the operations department. I was chairman of the OTPAC committee which is the operations training program and advisory committee for a little bit over a year, when I was an on-shift SSS. When I came off-shift, I relinquished that position to another on-shift SSS; took the training coordinator position, or was assigned the training coordinator position. I was actually -- while I was a relief SSS I was doing the training coordinator position also.

Basically that entails working with the training department people reviewing lesson plans, providing interface from the operators. If they require or feel the need for additional training in any kind of areas, I help develop those kind of things. I don't develop the lesson plans, but, you know, like we might talk about optical isolators. Optical isolators to us are kind of -- to me are kind of magic, okay. And we have some guys I&C techs that are good at these things and we got -- I helped arrange getting these I&C techs to come over with a couple of -- with a scope and a couple of optical isolators cards, analog digital cards and took them apart and showed the operators -- you know, I mean, like operators like to touch and play and feel and see what's going on here, you know. And you can't do that with these optical isolators in there, you know. So we had them in our hands and we could see what they were and how they worked and what was breaking with them and things like that.

I do a lot of scheduling for the operators. If they miss training we require operators to go to training with their training shifts -- well with their shifts during their training week. However, people have babies, get sick, so forth and so on and miss training. I make the necessary arrangements to get those people back over there to make up the training.

I do performance reviews with the -- in the simulator -- looking at the -- in the simulator. I'm chairman of the simulator configuration control board which evaluates changes to the simulator, modifications, upgrades for software. What else do we do over there? I don't know, a lot of different things. Work with -- when training has proposals as to how to upgrade the program, they'll talk through me to operations management. You know, it's very difficult to contact Mike or Jerry over here between the meetings and where they go between the control room and the -- and the SORC meetings or whatever, you know -- the planning -- daily planning meetings and such. I have a desk over here, I have a desk over there; I spend some of my time over there. I spend some of my time over here. So I can track them down and provide that interface between the groups and it's worked out pretty well. The training program is -- you know -- we --

MR. KAUFFMAN: It's had some problems, right?

MR. WILSON: We've had some problems. Okay. We've worked real hard to upgrade it and I don't know -- I feel and I think the operators as a whole feel that the program has improved a lot. Recently we've worked -- one of the things that we've done recently is changed around the simulator portion of training to provide more simulator training. We spend about half of our time, if not more, in

the simulator, as opposed to classroom lectures on EOP's. We do simulator working demonstration of EOP legs, you know, and then we like time out freeze the simulator if we're making a mistake or if the SSS is working through a particular leg and he gets confused and wants to day time out, I want to talk about this, you know, the operator can freeze the machine and then they talk about it and get the feel for it and then we drive -- you know, start it back up and pick up from where we were and so that's worked out real good.

Some of the systems -- we go back up into the simulator -- RHR, we've just started that. RHR has been a noted weakness for us and it's difficult with all the interlocks to sit in a classroom and hear the interlocks over and over and over again. You can only do that so many times. So, as opposed to that they've devised a short classroom lecture, system overview, and some of the operating procedure overview. Then we go up into the simulator and manipulate the interlocks. You know, hands-on is a whole lot better than the classroom. You can touch and feel and things like that.

MR. KAUFFMAN: Is that -- have you heard any fall out from this event where maybe training could be better? People want more training as a result of this event?

MR. WILSON: No. I haven't heard yet, because I

basically have been on midnights. I started midnights at the beginning of this week. It's -- this event I never could have -- never could have dreamed up this event; all five of the UPS's going away at once.

You know, we've trained on UPS's, we've had a special course on UPS's. It's always -- UPS's are somewhat difficult to train on and understand because they don't do anything. They just kind of sit there and hum. And very rarely do they, you know, break. I mean, we have failures on them, but the failures on them -- there's not much the operator can do. It's all solid-state stuff. You know, it's not like when pumps or relays or breakers happen. This is all solid-state stuff and it just changes and you kind of like go down there and verify what happened and bounce off the procedures and --

The UPS's -- they're difficult to operate. I know Bob Crandall fairly well. We worked as test engineers together. We started out together and he's always been interested in the UPS's and whenever I've had a problem with UPS's, had a question, I call Bob. You know, that's what we would do. There's not a lot of -- there's not a lot of in-depth guidance in the procedures. There's adequate procedures for operating them as they are, but you know, the transients that the machines go through, the trouble shooting that we can get into it's I&C. It's all I&C and

electrical people. I mean there's not much you can do besides call for help.

MR. JORDAN: Yeah.

MR. KAUFFMAN: So there will be something like a scram report that comes out and -- what, do you look at that and try to identify training?

MR. WILSON: Oh, yeah. Oh, we've already sent over a post-event survey from training, you know, we've got a program in place that as soon as an event -- noteworthy training -- you know, training noteworthy occurs, we sent over a post-event -- post-training -- I forget what the name of it is, scenario or summary, post-event summary, I think is what we call it. And we send it to all the operators and it's, write down what you saw, what you -- what was good training that you had for it, what was bad training, what you could -- what more could you want and we get all these things back and then we do a -- basically an evaluation on it, or the training department does an evaluation of it and then we look at that from there and make any additions to the training program that we can. We do that all the way -- not only through the licenses, but all the way down through the non-LOTS and everybody that was involved in it.

MR. KAUFFMAN: Okay. Now, you also mentioned you're involved in procedure review and that the station was undergoing a procedure rewrite, could you explain the

history of that and why you're doing the rewrite and how you're involved in procedure reviews.

MR. WILSON: Well, currently not very much. I'm a qualified technical reviewer. I will have been -- you know, when I was an SSS, all the SSS's are assigned systems that they're quote system experts on. By the nature of the license and maintaining an active and current license, you're an expert on all the systems. I mean that's what you are when you're an SRO or an RO for that matter. But, the operations support department has been tasked with writing -- upgrading the operating procedures and the operating surveillance procedures to the site writer's guide which has been newly developed. It's gone through several evolutions, I guess.

We had several contractors working for us doing this and they were let go earlier this year and the task of rewriting the procedures was delineated to us in the operations support department. Basically there is a -- there's a couple of people, Jim Poindexter and he is an ex-SSS -- no, he is an SSS now, still. That's right, he is still an SSS. He was working -- he worked in the training department as a -- temporarily, he was the training supervisor over there for Unit Two. He's doing a lot of the rewrite of the procedures. He's doing all the rewrite of the procedures now. He has basically taken that function

and going with it.

I have, in the past, reviewed procedures that were draft procedures that were written up for technical content, surveillances, operating procedures, and made comments and, you know, worked them through the process and got them published. I have not taken one myself, yet, and had to work through it because we're coming up to a -- because of the things that I've been doing with the training department basically. My time is full and I don't -- I have not had time to do it.

MR. KAUFFMAN: Okay. Say I was a licensed operator during this event and you -- you got into several areas of EOP's and different procedures that you maybe don't routinely do and I use the procedure and got through the event, but when I was done, I say to myself, you know, that procedure really wasn't very good or helpful there. It needs to be changed. What would I do and it would it be up to me to put in a procedure or change request or would I just flag it to somebody and say please look at this? How would that input get into the system and be taken care of?

MR. WILSON: We have a procedure change evaluation form, PCE, that can be initiated by anyone. Depending on the magnitude, I suppose, of it, it could be the supervisor and I have initiated them for reactor operators and I have had reactor operators initiate them themselves. Then they

will come to -- they basically come to the first-line supervisors to the -- or to the RPO, the procedure owner and he evaluates it for --

MR. KAUFFMAN: What does RPO stand for?

MR. WILSON: Responsible procedure owner.

MR. KAUFFMAN: Okay. We have to take the tapes back and try and figure out what the abbreviations mean.

MR. WILSON: Okay.

MR. KAUFFMAN: So that's why I asked.

MR. WILSON: It's in accordance with AP-2, AP-2.0 and AP-2.1 and AP-2.2.

The procedures -- the RPO can then decide whether it should be an immediate change or a future change and there is two sections of the PCE form. If it's a -- determined to be a future change, it's not relevant for an immediate change, they don't need to do an immediate change, it's sent down to the operations support department and basically I guess it's put into the system file. Jimmy is maintaining that file for the procedure upgrade for the next revision so that when the procedure comes out it's a good or better procedure, you know.

MR. JORDAN: Okay.

MR. KAUFFMAN: Okay. Are you aware of any procedures that as a result of this event that were found needing changes or improvements?

MR. WILSON: I heard that OP-71 might need some changes or they're going to look at the --

MR. KAUFFMAN: THat's a procedure for -- what's that for?

MR. WILSON: I'm sorry. That's right. I forget we're talking on a tape here. That's the operating procedure for normal AC distribution and that has the operation of the UPS's in it and I haven't looked at it yet, but I understand that there is some upgrade to that procedure to make it more user friendly so as to manipulate the UPS's in the situation, I guess, that we found them in.

MR. KAUFFMAN: Okay. Just one last follow-up question that relates to -- there are some questions about when in EOP's, do tech specs apply, not apply, is there some mechanism for resolving that? For example, some plants have licensing do something called a tech spec interpretation.

MR. WILSON: We have tech spec interpretation, but we do not have one specifically on this. I brought it up to Jerry and he believes that it's covered in the safety review for the -- for the EOP's. It was documented and they're going to put that in on their deviation DER -- deviation event report to make sure that that gets clarified. That's one of the items that I've got kind of tucked away that I need to get that clarified to make sure that that gets into the training program. We do a lot of

these things in training. You know, I mean, we do EOP attachments where we bypass RSCS, we do these things as a matter of course in training, but when it comes down to the real thing, all of a sudden there's a lot more things that go through your head. This is real. I've got to do this and this and this. For whatever reason, you know, and those questions all of a sudden they are very obvious questions and I'm flabbergasted that we don't think about those things earlier on.

MR. KAUFFMAN: That seems like it's something you can talk out in your time outs and --

MR. WILSON: Yeah, you know. But it is something that, I guess -- well, we never -- it never came up, you know. Do we take these tech spec actions? What are the tech -- you know it just -- so that's one of the questions that I've got to be resolved and to make sure that that is disseminated through the ranks.

MR. JORDAN: In a normal scram, how many SRV's normally lift?

MR. WILSON: What's a normal scram?

MR. JORDAN: 100 percent power, 120 days, 125-130 days?

MR. WILSON: No reject, level transient, APRM's, what kind -- are you talking this particular --

MR. JORDAN: Similar to what we had here. How

many would you expect to lift?

MR. WILSON: On a load to reject, I would -- I guess I would expect a significant pressure increase and I would look to see indications of whether or not I had had an SRV lift. However, there was not a lot of indications of what they actually -- kind of a transient that they had had until they got people in here. We started looking at different things and asking a lot of these questions. My personal feeling is that we missed it, but then we did identify it. We would not have missed it had we had the annunciators and we would have -- you know, if you're talking about the tech spec violation, no doubt in my mind that we would have taken the appropriate actions had we known that the SRV's had opened.

We don't do many real load reject scrams at full power. I'm trying to think -- we did the -- I was there for the load reject at -- during the start-up and I don't remember if we had SRV's lift or not.

MR. JORDAN: Did you train on it? Do you know if you ever got training on it? What to look for if you get a load reject?

MR. WILSON: We do load reject scenarios in training.

MR. JORDAN: Scenarios.

MR. WILSON: We do load reject training scenarios.

We do them with ATWS's, we do them without ATWS's. You know, we do them -- do we train to look for them? No, we don't train to look for them, we train to see what the indications are, you know. If you were doing a training scenario on a load reject, basically, you know, you would get the load reject, the operators would respond to the panels, respond to the annunciators, they would see the annunciator up here, it looks like we had a couple of SRV's open; if it's an ATWS it will stay open. If it's not an ATWS, even by the time the guy gets over there, you know, the valves are going to be closed, but the guy is going to say, hey, we had SRV's lift. Okay. Let's make sure that we get suppression pool cooling going. You know, what are the temperatures in the suppression pool? Where is pressure going now? Pressure has come back down. It's stabilized at 960, you know, the bypass valves have got pressure under control. Those kind of things, you know, they're reactionary kind of things that we do based on indications. You see it, you go, you know, you kind of like follow it through. It must have been very different when there was nothing there. You know.

MR. JORDAN: Yeah. You're right.

MR. WILSON: And you know, Mike -- I personally think Mike did an extraordinary job. I think he did real well. I worked with Mike on shift for -- he was an E on my

shift and he's a good operator. I worked with all these guys and they did -- I think they did a good job. They kept the plant under control, they took the actions.

The classification of the event was correct, it was timely. It must have been different. I'll tell you what, man, I just can't imagine, you know. You know, we all have our -- I -- we all have our personal worst scenarios, you know, and I don't like the total loss of off-site power, but the total loss of indication that's a different one.

MR. KAUFFMAN: For the record, it wasn't a total loss, they still had some of their safety related --

MR. WILSON: Well, that's true. They had the PAM's and they had the things coming off the UPS. You're right.

MR. JORDAN: I've got one -- two last questions. And this is the -- we give everybody the opportunity to give the good news, bad news and the way I define that is, the activities that you did while you were there, is there something that you had in your hands or in your back pocket, something that was available to you, even training can be one, that you say, gee, thank God I had that, because that helped me accomplish what my tasks were.

And the opposite of that would be is -- gee, I wish I would have had this because it would have made my task easier. Excluding the UPS's. You know, UPS's would

have been nice. But you know -- and I'll give you a classic example as the guy that goes out in the plant and says, gee, thank God that wrench was hanging on that valve because I needed that wrench to operate that valve. And the contrary to that would be the guy goes out there and says, gee, we've got to have a wrench hanging on that valve because when he got out there no wrench was there and I had to go get a wrench and why don!t we stage a wrench there.

MR. WILSON: Right.

MR. JORDAN: Was there anything that -- and the answer to the question may be nothing, but was there anything that you can say to yourself, gee, thank God I had this in my hand or this available to me because I used it and it worked well for me and I want to say, thank God I had that, you know, so I can tell the rest of the industry that, gee maybe you guys ought to -- maybe you don't have this, it worked well here, you used it well and it came out good.

MR. WILSON: I can't answer that question because I wasn't there during the transient and then from where -- when I got there it was a normal plant -- semi-normal plant shutdown.

MR. JORDAN: That may be the answer to the question, there was nothing abnormally strong that you said that you had as a result of the way --

MR. WILSON: From where I was, no, because I

didn't have any supervisory -- I wasn't -- I didn't have any direct function in the evolutions above and beyond experience and trying to help divert the -- help the SSS.

MR. JORDAN: Vice versa, there's nothing that you say, gee, I wish we would have this available for us next the next time around if we have this thing; and what you saw, the events that you took care of?

MR. WILSON: No.

MR. JORDAN: Okay. I don't have any more questions.

MR. KAUFFMAN: Nor do I.

MR. JORDAN: I guess we can go off the record.

[Whereupon, at 8:20 a.m., the taking of the interview was concluded.]

REPORTER'S CERTIFICATE

This is to certify that the attached proceedings before the United States Nuclear Regulatory Commission

In the Matter of:

NAME OF PROCEEDING: Interview of Dave Wilson

DOCKET NUMBER: (Not applicable)

PLACE OF PROCEEDING: Scriba, New York

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission taken by me and thereafter reduced to typewriting by me or under the direction of the court reporting company, and that the transcript is a true and accurate record of the foregoing proceedings.

Mark Handy

Mark Handy
Official Reporter
Ann Riley & Associates, Ltd.