Dale Laudermilch

TMI STAFF INTERVIEW

Dale Laudermilch 0315 Hrs. March 30, 1979

Conducted By: R. Long and D. Reppert

LONG: This is Bob Long. Don Reppert and I are interviewing Dale Laudermilch. It's 0315 hours on the 30th of March, 1979. Dale, could you just tell us your name again so the secretary will know your voice, and your position?

LAUDERMILCH: Dale Laudermilch and I'm an aux. operator "B".

LONG: And, you were on shift the morning of the trip?

LAUDERMILCH: Yeah.

LONG: Ok. Can you tell us what you were doing, like an hour before the trip occurred, and give us your recollections of the events during the trip and following the trip?

LAUDERMILCH: For one hour prior, I believe I was involved with the hydrogen supply. I was lining up hydrogen for the main generator on Unit 2. We had some problems with lines and so forth and a small leak out there. So I had just gotten finished with putting hydrogen in the generator and I was just...

LONG: This is the electrical generator then, right?

LAUDERMILCH: Yeah. I was just walking in the door and I heard the safeties go so I made it over to Unit 2 control room as fast as I could. From there I went into the control room and just waited to be dispatched on jobs. I did a number of things and I'm not real sure of the order I did them. But the first thing I did was - Don Miller had called or come back up to the control room. I think he had called the control room and stated he had a leak on the section of the A booster pump. So Terry Daugherty and myself ran down to the A booster pump and when we got there, there was a leak, I'd say maybe two feet downstream of the section valve of the A booster pump. So we started to help out, but they started calling me on the page; so Terry went and answered the page and he was dispatched on a job from there. I can't remember what he was doing, but Don and myself saw an engineer that had been standing by, and we asked him for his help. So the three of us got the valve shut. And, I think I reported back up to the control room.

LONG: Was that within a few minutes of this event? Do you have a feel for the time?

LAUDERMILCH: A few minutes - I'm going to say that's within 45 minutes of me hearing the safeties 'Cause when I went back to the control room initially after hearing the safeties I took the outside route and I went out around; cause you know I had out buildings and I just made a quick tour outside and came back in the west side of the turbine bldg. and came through. I noticed the gland exhausters were blowing steam.

REPPERT: I was just going to ask you, when you were coming back did you notice anything unusual?

LAUDERMILCH: The only thing was that the gland exhausters were blowing steam. I looked at it on the way by and made a judgment that that was not a very critical thing to be worrying about right now; and I should get to the control room as soon as I could, so I went up to the control room and then I was dispatched down on the booster pump job with Don. When I went back up, the next job I remember is Craig said he was having trouble with hotwell level; so he sent me down to throttle a little bit on COV60 [illegible] our turns-because they had it throttled. That's a downstream isolation of the main reject valve.

REPPERT: Ok.

LAUDERMILCH: So I went down and throttled open on the condensate reject valve and watched the hotwell level. Hotwell level was high and was completely out of the sight glass. I came back to the page and told them - well - I went back upstairs as a matter of fact and told them that. They sent me back down to keep an eye on it and Ed told me go down and open it more or till we get level. This was really confusing at this point because Terry was down there, Don was down there and Bill Zewe had come down. They were trying to work on the polisher bypass valve and the polisher bypass valve was missing the handwheel - the manual handwheel - ok? When I was sent back down to try to maintain hot low level, I remember Ed saying, "Open it up all the way and maintain when I get hotwell level down; close her back down and try to maintain her manually". Well, I did and in the course of that, I noticed Juanita and Harold Forst were over at the B feedpump jacking it by hand. So when I came back in, Donnie, Bill Zewe and Terry Daugherty were up on top of the ventilation deck by COV 12 trying to get it open. Apparently they had found the handwheel or something up there and got it on and they were trying to open it. Bill was called back to the page. There was a frantic call and

and I was down at the page and Craig or Bill was on. Bill Zewe was still up at COV 12 helping out. The guys yelled down at me to have him knock off the condensate pump. So I was calling to have them knock off the condensate pump. But that never came about; they never knocked it off. And in that interim, Zewe had come down and he was talking to Craig, 'cause Craig had a question for him about opening up the turbine bypass valve.

LONG: Ok.

LAUDERMILCH: So they were having trouble getting COV 12 open. They cranked it and I was their communication on the ground 'cause I wanted to hang by the phone anyhow. Ed said stay by the phone 'cause if I need that reject line shut, I want you to shut it.

LONG: Can you back up just a little bit?

LAUDERMILCH: Well, we were back on COV 12; they were having trouble getting it open. I was their communication on the ground and I called twice and told them to try COV 12 up in the control room. It wouldn't open and I told Terry and Donnie to keep cranking. I was going to go up and trip and reset the thermals on the breaker for COV 12 to see if that would help us get it open. And I told Terry that if he hears a call for me about hotwell level, he would have to come down and take over there. So, I went up and reset the breaker and I think, by the time I got back down, they had gotten COV 12 open. I don't know whether it was my resetting the breaker or whether they had just gotten it off the seat far enough at that time to get it open. I remember Donnie said that the polishers had gone to pot - that the pneumatic valves had shut - that is the outlet valves on the polishers had... I think it was on the "A" vessel or number 8 vessel the one furtherest west. We had a leak there. Anyhow, we got COV 12 open and I was coming back down. Terry said that they're having a problem with circ water flumes supposedly overflowing. He said, "Do you want to take care of that?", and he would watch the hotwell level. I said, "Ok".

I had a radio with me. I ran upstairs and I ran over to the coagulator building 'cause that was the shortest distance to the circ water hours; and I called the guards and told them to meet me at the gate over there. I got out there before they did and I waited for them. They came and I had them stand by while I went over and checked the flume level. The flume level was maybe two inches from overflowing. It hadn't yet overflowed. I called Ed on the page and told him about it and he said, "Hang on". Then he got back to me and he said, "Ok, let's secure makeup". So I secured makeup to the flume and...

REPPERT: And who was that you were talking to?

LAUDERMILCH: That was Ed Fredericks. I secured makeup. After I secured it I yelled over the page that the makeup was secured in the flume. On the way out the door, I heard Ed acknowledge that he got the message. I ran back over and the guards let me back in. I'm thinking I went directly downstairs to see if there was anything else I could do. I went down and I was with Harold Farst and Juanita Gingrich down at the feedpump and I was keeping my eye on hot well level. The one thing that still sticks in my mind which I don't understand is that the hot well level all the time that I watched it, was high. It was out of the sight glass and it was crystal clear. Sometime in that interim when I came back I had looked at the water in the sight glass and it was cloudy, very cloudy, almost a rust or a muddy color. I thought it could mean a couple of things; either they drew water out of the storage tank that was sitting in there for a long time or I speculated about the possibility of a circ water tube rupturing in the main condensor. That was my concern...I told Terry about it. He didn't say much. Bill Zewe had come down later and I told him, "Bill, the water's muddy." He acknowledged it, but he didn't say much about it. I'm trying to think exactly when that was. It might have even been before I secured the makeup to the circ water, because Bill was still down there on the phone. I can't remember if Bill came down a second time of if it was when I came back in from circ water. But I remember telling Bill when he was downstairs.

LONG: This is like an hour, maybe two hours, after the trip?

LAUDERMILCH: We're talking about -- I'm going to say -- an hour and a half or so. Those sequences of events, they really went fast.

LONG: I'm sure they did.

LAUDERMILCH: And I can remember being downstairs when those guys were up on that COV job. I can remember some horrendous water hammer down there. I don't know where it was coming from -- I'm guessing the condensate system -- but I don't know.

LONG: Did you hear it or see it?

LAUDERMILCH: I heard it.

LONG: Heard it?

LAUDERMILCH: Yeah.

LONG: You didn't see any pipes move?

LAUDERMILCH: No, but I remember Donnie saying that he was down at the polisher and coming around the polisher panel when the whole thing happened, I think, or shortly thereafter. He said the water hammer down there at that time was really horrendous, that the suction to the booster pump line had moved a good two, maybe even three feet horizontally from the hammer. I'm sure that's what broke or caused the leak after the suction valve in the booster pump. After I got

done there, we were all downstairs...we better back up here a minute 'cause there were times I ran up to the control room and back instead of calling on the phone for communication and stuff. In that time period that I was upstairs, Terry Daugherty had been sent to the primary side; I can't remember what he was checking over there; I can't remember.

LONG: Sent to the Aux. Bldg?

LAUDERMILCH: Yeah. To the aux bldg. He was over there taking care of something in the aux. bldg. I was in the control room and I was waiting to be dispatched down on another job. This was one of the other jobs that I talked about earlier, and I remember...I think it was Ed Frederick said, "Look at this alarm over here." It was a fire alarm in the reactor bldg, OK? And there was another fire alarm lit and that was the control bldg. area. That alarm comes in every time we trip. Every time the safeties blew, it's hot downstairs. But I remember seeing the reactor bldg. alarm and they showed real concern about...they didn't understand that. I remember Bill looking at the reactor bldg. fire alarm. Bill went over and looked at the pressure indicator for the reactor bldg. and he said, "Pressure's gone up in the reactor building."

Then shortly thereafter, Terry Daugherty, who was in the aux bldg., had called Ed Frederick on the phone. When Ed got off the phone he said, "The reactor bldg. sump level was pegged high and both sump pumps were running." I made a statement to Ed then. I said, "Ed, both pumps are running; we had a fair amount of water in the miscellaneous tank all week." And I said, "You know, if you got that much water, you're going to be pumping." I said, "I don't know where exactly that tank overflows to, but I know its vented to the vent header." I said, "If you don't knock off those pumps, there's a possibility that we could be putting water into that vent header." 'Cause I had just worked primary side a couple of nights before that, I remember the high levels in the tank and stuff. So he said, "Yeah, you're right," and he told Bill about it. This was all in a matter of seconds and Bill said, "Knock the sump pumps off." He called Terry right back and Terry knocked the reactor bldg. sump pumps right off.

LONG: OK.

LAUDERMILCH: So anyhow, after I was back down in the turbine bldg basement, we were all around there and Terry had been trying to maintain hotwell level. I went over to Terry and Terry was looking at the automatic reject valve and it was shut all the time -- not taking it all the time from the water hammering, 'cause the airline to it was severed. I remember saying, "Did you isolate the air to it?" He said, "Well, no, the airline's severed." I hadn't seen it, so they called instrument guys down and I saw the instrument guys start to tear it down and try to get it open. Well, I imagine they did get it open, but all that time we weren't apparently doing a heck of a lot of good throttling the downstream isolation. At the time I assumed that with the hotwell level situation that that reject valve is going to be opened and I just never checked it out.

Apparently they got to work on that, so Donnie Miller and myself

said, "He should know whether he's getting water or not."

Donnie Miller was there also. He had come over and we heard a fire alarm. We called Ed and we said, "Where is it?" He said, "Aux. Building 228." So all three of us took off and we went upstairs and checked all the filters to the fan units. We checked the whole floor out. We checked the back in around the tendon access gallery between the reactor building and the aux. bldg. That was pretty warm back in there and you could smell like steam from the reliefs, so we figured that's probably the problem. I'd say there was a good 20 degrees difference between the aux. bldg. side, and the other door, when you actually got into that area. Then we came back downstairs and I was with Terry then. Donnie had checked the other part of the floor and I guess he had left and we went downstairs...

LONG: This was still before the site emergency was declared?

LAUDERMILCH: Oh, yeah.

LONG: A long time, a short time? We're just trying to fix the time when the fire alarm tripped.

LAUDERMILCH: I'm going to say about a half an hour before the site emergency was declared -- at least a half an hour, maybe more. I remember when I was upstairs before I got called for that lineup, I tried to follow that intermediate close and stuff and when I checked that intermediate close temperature there, I went back to the one RPS cabinet that we check on our readings. There's a gauge there for reactor bldg. pressure and I checked that and I remember about 2 and a half pounds on that. So I knew there definitely was a problem in the reactor building; 'cause I don't think I've ever really even seen it up close to a pound -- maybe .8 or .9 is about the highest I've seen it and it normally is running like between .5 and 0. So I knew there had to be some problem there.

LONG: Did you comment on that or convey that to the control room?

LAUDERMILCH: No. 'Cause I knew they had indication up in the control room and they had looked at it. I did want to stay off the page as much as I could.

LONG: I forgot to ask you a question earlier; let me ask you one thing, have you been on shift when there had been turbine-reactor trips before?

LAUDERMILCH: Yeah.

LONG: OK. Good. You knew the normal routine.

LAUDERMILCH: Yeah, I knew the things you worry about. I was here when we had a trip from 75 or 80% power when we were doing our power trips.

LONG: Good.

LAUDERMILCH: I'm trying to think of the other ones I was here for, but I've

been here for a couple. I know shaking and a lot of noise goes on and that kind of thing, and I know, especially when I came in from the outside, the thing I was concerned about is -- one of the first things they want to do when they trip is to establish feedwater heating. I figured somebody would be on that, so I came through by the 213 stage heaters. There wasn't anybody there and, I don't know, for some reason things just didn't sound right to me. I don't know if it was a lot of noise or what it was. There wasn't anybody there. I figured I'm not going to go up there and just take it on my own to cut it in. I knew that was one of the things they were going to ask us to do if it was a normal sequence of events. Then I went from there right up to the control room. I'm trying to think of some of the other things I looked at. When I was down at the radwaste panel, I remember looking at the vent header pressure and that was 2½ to 3 pounds; there wasn't anything out of the ordinary there. I remember the miscellaneous waste holdup tank hadn't been flooded. I remember looking at the level because Terry had knocked those pumps off earlier. With everything goin' on I wanted to look at RB bldg. pressure. I remember they had problems with the RC drain tank, because when I was in the control room earlier I remember them saying, "Hey, we don't have any level in the RC drain tank." You know we lost all our water. So when I was in the control room, as soon as we started seeing building pressure going up and stuff, I knew things weren't normal. I knew we had a problem somewhere -- they were talking about...They said, "It can't be a primary leak because we're not having...I remember, I think it was Bill, I'm not sure, but somebody said, "We don't have a LOCA 'cause we have our water inventory," or something to that effect. But the building pressure was going up so I knew there was something wrong.

When I got to the radwaste panel I figured I'm going to try and think about things that can affect the outside. One of the first things I thought about was the waste gas system. So I went and looked at that. I don't remember what was in the tanks, but I was concerned about the vent header, and the vent header looked good. So...

LONG: Who was giving you most of your directions? Was it more than one person in the control room? You mentioned Ed Fredericks a number of times. Did you get it principally from Ed or...?

LAUDERMILCH: Well, primary side was mostly Ed; initial hot low level instructions were from Craig Faust, and then Bill Zewe had come down in the basement when we were trying to get the bypass valve open so he was there helping us out there on the direction...

LONG: Where were you when the site emergency was declared?

LAUDERMILCH: I can't remember, but I can remember -- this is an important..?

LONG: Just try to get the sequence...

LAUDERMILCH: I remember being in the auxiliary bldg with Terry. This was after we lined up the boron injection path and all that. We went back down to the radwaste panel and Ed called Terry and said that they were having a problem that they were getting demin water injection into the primary system. Try to think of anything we could think of where we might be getting steam and water from. So Terry and I sat there and thought about it. We had the printout and we were looking at it. Adam Miller had called and asked about checking the demin water to the makeup pump and another demin water valve. I can't remember what the valve was, but it was three valves to the makeup pump and one other valve -- I can't remember what that valve was at this time. So we were getting ready to check that, and in the meantime, Terry was working on the print. I had outbuildings tour earlier in the evening and I had secured demin water to the sodium thiosulfate tank. I knew that was initially a tank installed for primary purposes, but I didn't know what the piping layout was now. I knew we had demin water in there, so I called Ed back and I said, "Ed, I don't know how it ties in or anything," I said, "but could that sodium thoisulfate be harming it?" And he said, "No, there's no piping hook up in the primary system." We had used that to store caustic in for the polishers. I think we had a bad batch of caustic or something that we used that was in the sodium hydroxide tank, and we had transferred it over to that tank. We used it for Neutralizing secondary side neut. tank.

So, anyhow, we were there figuring it out and, then Adam had told us about these other valves to check. We were getting ready to go and we walked over to the hole in the floor there, in the first floor of the Auxiliary bldg., where you can look down in the basement. Terry said, "Hey, we're getting water out of the floor drains." We immediately came back and told them, "The aux. bldg. sump is overflowing; we don't know where we're getting the water from." Terry got off the phone and started trying to mark the sump level. We concentrated our efforts then on where all this water was coming from, because we knew there was a radiation problem. The HP techs had been around and they told us it was 5R in the 305' Makeup valve alley; it was 10R inside the door where you go into the makeup tank. I saw one of the guys earlier and he said they had gotten water in the HPR 227, the rad monitor for the reactor bldg., and the water was hot. So we knew there was a definite radiation problem.

LONG: This was still before the site emergency?

LAUDERMILCH: Right. We knew there was a problem and we were concerned about the water coming up, because we thought, "Man, oh, man, we are really going to be crapped up around here with this" So we were sitting there trying to figure out where in the devil is this water coming from. In the meantime, Mike Janouski, the rad chem tech, came running down the hall and he just said, "Get the hell out!" Apparently, we had airborne readings or something, but he was running down the hall and said, "Get your stuff and get out." Terry shut off -- I think, I'm sure the Aux. bldg. sumps were either off of he shut them off -- and he secured things there. He checked the reactor bldg pumps and I remember seeing

those were still off. The sump pumps from the reactor bldg. were off the whole time since we had gone back on... We left and went over to Unit 1 HP. We called the Unit 2 Control Room and told them we had been evacuated out of the auxiliary bldg. and we were over there. Terry said, "Well, heck, we might as well go back over to Unit 2, because we're sure there's still a lot of stuff going on over there; we'd better get back over there and see if we can help out on anything." That's what we did. We came around to upstairs there, and then he said, "Well, did you get checked out real well, frisked and everything?" I said, "No." So we went downstairs, and Terry was relatively clean. My shoes and pants and shirt were crapped up 'cause when we went to the fire alarm upstairs I took off running and took a flop on the floor. I got crapped up up there. The HP techs had been taking samples in the unit 2 HP area and they said, "Look we got to get respirators on here. We don't have time to mess around with your clothing. Get them off and get into paper coveralls and get out." They were putting on respirators. I took my clothing off and gave my valuables to Terry. He went up and I got changed and went upstairs. By that time -- somewhere in between there -- I'm sure the site emergency had been declared. As a matter of fact, I'm sure it had. It had to be right after we were evacuated out of the auxiliary bldg. 'cause I remember people over there gathering at the Unit 1 HP area. It might have been the time between when we were there and walking around to the Unit 2 HP area that they announced it. Then we went upstairs and we stayed upstairs. I'm trying to think what I did after that.

REPPERT: Do you remember how long you stayed that day?

LAUDERMILCH: I think it was pretty close 'til noon time 'til we got out of here, and it was a little after one till we got...

REPPERT: Checked out?

LAUDERMILCH: Checked out over at the 500KV sub, off the island. Other than that I don't know...that's a lot of stuff, I guess...

REPPERT: Yes, it is, there's a lot of stuff and a lot of things that other people haven't commented on; that's why we wanted to get individual perspective.

LAUDERMILCH: Yeah.

REPPERT: When we try to put it all together, it may really help sort out things.

LAUDERMILCH: Are we going to get together as a group and discuss this or...

LONG: Eventually, yes.

LAUDERMILCH: Yeah, I mean that might help me remember some more.