ENCLOSURE 11

Attached is a copy of the transcript of the Enforcement Conference held on 8/2/94 with the Salem Senior Nuclear Shift Supervisor involved in the 4/7/94 event.

cc w/Transcript: KSmith GMeyer JWhite BLetts JLieberman

DJH - 8/10/94

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9612170106 961212 PDR FOIA D'NEILL96-351 PDR BEFORE THE UNITED STATES NUCLEAR REGULATORY COMMISSION

RE: MICHAEL D. GWIRTZ-ENFORCEMENT CONFERENCE

The above referenced matter was held in the offices of the SALEM NUCLEAR TRAINING CENTER, 244 CHESTNUT STREET, ROOM 42C, SALEM, NEW JERSEY, on August 2, 1994, commencing at or about 1:15 P.M. before Carol L. Skipper, Court Reporter and Notary Public for the Commonwealth of Pennsylvania.

BEFORE:

GLENN MEYER, CHIEF-PWR/BWR SYSTEM, NRC, CHAIRMAN DAN HOLODY, ENFORCEMENT OFFICER, NRC, REGION I

JOSEPH J. HAGAN VP NUCLEAR OPERATIONS/GM SALEM OPERATIONS

PHILIP PJ. O'DONNELL, SALEM OPERATIONS ENGINEER

MICHAEL D. GWIRTZ SENIOR NUCLEAR SHIFT SUPERVISOR NRC-SALEM OPERATIONS

APPEARANCES :

WINSTON & STRAWN BY: MARK J. WETTERHAHN, ESQUIRE 1400 L STREET, N.W. WASHINGTON, D.C. 20005-3502 FOR MR. GWIRTZ

> ALL POINTS REPORTING 723 ERLEN ROAD NORRISTOWN, PA 19401

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ORIGINAL

1 MR. MEYER: Good afternoon, I am Glenn Meyer, I am the Chief of PWR/BWR Systems in Region 2 3 1, and I direct the actions regarding the licensing of operators and senior operators. 4 Today we are here as part of an Enforcement 5 Conference associated with the event that occurred 6 at Salem Unit One on April 7. I had contacted you 7 Mike, on Friday, the 29th with the interest to 8 have the Enforcement Conference, and you had 9 expressed the interest in having it fairly soon, 10 so we have been able to make the arrangements to 11 12 have it today, August 2nd. As part of the arrangement I did ask 13 whether you would want to get copies of some of 14 the NRC documents that relate to the event, 15 specifically the AIT report and also the letter 16 that was sent to the public service regarding the 17 potential violations, and you said that you had 18 copies and didn't need them. 19 MR. GWIRTZ: Yes, that is correct. 20 MR. MEYER: At this point I would like 21 to introduce the people that are here. As I said, 22 I'm Glenn Meyer, and I'm from Region 1. 23 MR. HOLODY: I'm Dan Holody, I'm an 24

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3 Enforcement Officer of Region 1, and I'm 1 responsible for coordination of any enforcement 2 actions in the Region. 3 MR. GWIRTZ: My name is Michael Gwirtz, 4 I'm the Senior Reactor Operator, Senior Nuclear 5 Shift Supervisor at Salem Generating System. 6 MR. WETTERHAHN: For the record my name 7 is Mark Wetterhahn from the firm of Winston and 8 Strawn, and I'm representing Mr. Gwirtz today. 9 Also with us is Mr. Phil O'Donnell. 10 11 MR. O'DONNELL: Phil O'Donnell, I'm the Salem Operations Engineer and Mike reports to me. 12 MR. HAGAN: And my name is Joe Hagan, 13 I'm the Vice-President of Operations and General 14 15 Manager of Salem Operations. MR. WETTERHAHN: I would note for the 16 record these two individuals are appearing at Mr. 17 18 Gwirtz' request here today. I just want to note for the record that we're in the Training Facility 19 of Public Service Electric and Gas in Salem, New 20 21 Jersey, and it is approximately 1:15 in the 22 afternoon. 23 MR. MEYER: All right, thank you. I 24 would like to clarify, Mike, that Mark has also

1	represented Public Service on a number of
2	occasions. Are you aware of that?
3	MR. GWIRTZ: Yes, I am.
4	MR. MEYER: So you are agreeable to
5	his representing you in this instance?
6	MR. GWIRTZ: Yes, that is correct.
7	MR. MEYER: I would like to
8	re-emphasize the point Mark made, and that is this
9	is an Enforcement Conference between the NRC and
10	you Mike, and it is at your option that legal
11	representation and corporate representation are
12	here to support you.
13	Okay, that being said, Dan will you
14	describe the enforcement and Enforcement
15	Conference process.
16	MR. HOLODY: Sure. We have enforcement
17	conferences with licensees, facility licensees
18	like PSE & G and periodically with individuals
19	like yourself, a licensed operator. The purpose
20	of an Enforcement Conference are to discuss
21	apparent violations. In this particular case our
22	focus is on the issue of the defeating of the
23	vacuum permissive when you had left the control
24	room so that the circ water pump I believe was 12

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8 could be started. That is why we're having this conference today. We would like to hear your focus on that particular violation, the apparent violation, what caused it, the significance of it from your perspective, any actions that were taken or planned yourself in conjunction with the company to preclude a recurrence of that type of violation.

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9 As you know, or I am sure you are aware we had a conference on the 28th with PSE & G to 10 discuss a number of apparent violations that were 11 12 presented to them in the letter dated July 6. It was basically our review of the AIT report and the 13 apparent violations we had identified as a result 14 15 of that review. We went through the same type of format with them to discuss the violations, 16 17 causes, significance, corrective action, et 18 cetera.

What we do is we'll take into consideration what we hear from you today as well as what we heard from PSE & G on the 28th, July 28th, as well as what was in the AIT report, and we'll utilize that information to determine what, if any, enforcement action should be taken with

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respect to your license. 1 Any mitigating factors that you feel 2 3 should be presented during this meeting in terms of what transpired back on April 7th we would like 4 5 to hear that from you today also. At the end of this conference I'll go 6 over some of the options that are available to the 7 Commission if the Commission decided that they 8 were to take any action with respect to your 9 license. With that, I'll turn it back to Mr. 10 Meyer. 11 MR. WETTERHAHN: One point, Mr. Gwirtz 12 was not in attendance at the Enforcement 13 Conference, and while people have probably 14 informed him of what occurred I think you should 15 take that into consideration in your questioning 16 and also in your consideration of these events 17 rather than take into consideration what happened 18 there but it is not brought to his attention here 19 it would be difficult to rely on that as far as 20 any action against Mr. Gwirtz. 21 MR. MEYER: I agree. I would also like 22 to note I was not there. 23 MR. GWIRTZ: I was not there. 24

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MR. MEYER: So Joe, Mark and Dan were there. Anything that may have come out at that meeting we would need to specifically repeat because a number of us were not there. It is not our intent that this be an extension of that Enforcement Conference.

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MR. HOLODY: Yes, that needs to be clear. This is not a conference with the PSE & G. The representatives of PSE& G management are not here at our request. This is a conference between the NRC and you. We are hear from you regarding these issues, and as Mr. Meyer said earlier they're here at your request as we understand.

14 MR. MEYER: I would like to repeat the 15 mention that Dan made, that our primary focus is 16 on areas where we think you may have violated regulations, specifically procedures that were not 17 followed and not in accordance with our 18 19 regulations. This is the interlock that was, you know, defeated. Being in charge during the event 20 21 obviously you were involved in a number of things 22 that occurred, but, although we may cover them 23 that is not the primary interest that we have 24 today.

One last thing before I turn it over to 1 you, and that is we do expect to discuss what 2 your, what the management's expectations were for 3 you regarding the different circumstances that you 4 faced, and you're perfectly free to speak of them 5 in front of the management or you can choose to 6 7 ask them to leave, it is at your option. At the end of the meeting I would expect to specifically 8 9 at my request ask that they leave and see if there is anything that you would want to discuss. 10 So, now, I'll turn it over to you. If 11 you want to describe what happened that day and 12 the circumstances associated with it. 13 MR. GWIRTZ: I'm going to start out 14 with background information. I already introduced 15 myself, Mike Gwirtz, Senior Reactor Operator, also 16 a Senior Shift Supervisor for that shift at Salem 17 Generating Station. Some of my background is I 18 graduated high school in 1972, I went directly 19 into the Navy into the Nuclear Power Program. I 20 was a mechanical operator, an ELT. I was in the 21 Navy for nine years, came out an E-7, came 22 directly to PSE & G in 1981 as a reactor operator, 23 obtained my reactor operators license in 1982 24

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after going through a training course through PSE 1 & G, I was an operator in the control room from 2 1982 to 1986, and in 1986 I was promoted to Shift 3 Supervisor and went through an SRO course through 4 PSE & G, obtained my SRO license, and from '86 to 5 '89 I was a Shift Supervisor on a shift with 6 various shifts at Salem Generating Station, and in 7 1989 I was promoted to Senior Shift Supervisor and 8 since that time I have been in the capacity of a 9 Senior Shift Supervisor on shift. I had a brief 10 period of time last year, towards the end of last 11 year, as an Acting Operating Engineer during a 12 13 Unit 1 outage. At the completion of that outage I went back on shift as a Senior Shift Supervisor. 14 15 My performance throughout my career I 16 would just like to state that it has always been at the top of all of my peers. I have always been 17 at the top of all classes, SRO classes, requal 18 exams, NRC exams, several letters of commendation, 19 merit levels, and our annual appraisals have 20 always been at the very top. The last few years 21 as a Senior Shift Supervisor have been Merit Level 22 23 One, which is the very top classification as far 24 as performance, and that is just a brief summary

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of some of my background.

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I'm going to very basically talk about 2 the April 7th event in brief, leading up to the 3 time that I assumed the duties as Emergency 4 Coordinator. As you probably know we've had a 5 history of grass problems prior to this event. We 6 had several transients on both units that I was 7 involved with. We had a rather severe transient 8 on April 4th on Unit Two. The grass hits so to 9 speak, the circ water, were becoming very 10 predictable. They were occurring every hour to 11 hour and a half after every tide change. We 12 became very aware of when to expect it. It was 13 also unit specific. On an incoming tide it would 14 be to Unit Two, and on an outgoing tide it would 15 hit Unit One, based on the way the circ water 16 structure is arranged water, so basically we know 17 not only when it would happen but what unit it was 18 going to happen to. 19

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Due to the problems that we had at circ water there were several efforts that were put into place to help us further better our performance with the circ water transients, and as a shift we were self critiquing all of our

problems that we had at circ water. Afterwards we would, the supervisors we would get together and talk about the communications, any problems anybody saw, anything they felt we could do better to better enhance our performance, so we had been doing this for about a week and also that week the department or the organization put a supplemental crew out at circ water. This was actually the first day we had an extra senior reactor operator on overtime at the circ water structure with a crew of maintenance people, extra operations people to help get through the circ water transients.

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That day we came on shift at 7 o'clock 14 in the morning, relieved the midnight shift, I had 15 a brief meeting with both of the units shift 16 supervisors. I'm in charge of both units, so I'm 17 Shift Supervisor on each unit, so I had a 18 discussion with each one of them, and I did 19 discuss on Unit One with the Unit One Shift 20 Supervisor that we expected something to happen. 21 The magnitude was always different. We didn't 22 know if it would be good, bad, or whatever, but we 23 expected something to happen at circ water, 24

probably about 9 o'clock or 9:30-10 o'clock time frame.

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After that I went to the morning plan of the day meeting, which is at 7:30 every morning, normal plan of the day meeting. One of the biggest items that was discussed during that morning meeting was the fact that rod control was still in manual on Unit One. We were trying to get emphasis placed on restoring that to total automatic operation.

After the plan of the day meeting I went out to the circ water structure, after making a brief tour of both of the units secondary sides. I went out to circ water structure due to the fact we had this new guy out there at circ water, discussed with him what we had seen previously, what we expected communication wise, the problems we had seen before, the solutions to the problems, and basically what he could expect to see out there, and what we expected to hear from him. I spent probably about an hour out there talking with him and walking through circ water and 22 arrived back in the control room area a little 23 after 9 o'clock, about 9:20, checked in with both

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control rooms, not much going on, did a further brief with both shift supervisors, updated them on what occurred at the plan of the day meeting, and basically I was completing turnover paperwork and what not until about 10:16 that day the first circulator emergency tripped, obviously on Unit One. I went into Unit One Control Room at that point, talked with the Shift Supervisor who was in the control room at that time, shortly thereafter another circulator emergency tripped. That was 13 A circulator. Other items on the unit, as I did mention rod control was in manual, 12 A circulator was previously out of service to clean the water box, and initial reactor power was approximately 75 percent, and we were operating at reduced load on both units due to the problems at circ water just to reduce our challenge as a proactive move. After the circulators, we had a couple of circulators emergency trip we got people in

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of circulators emergency trip we got people in
place out in the turbine building. Several things
have to happen out in the turbine building,
drawing prime, cleaning valves, we had teams out
doing that.

The decision was made, I made the order

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at 10:32 to begin a unit load reduction at one 1 percent a minute. The Shift Supervisor was 2 already proceeding in that direction. I just 3 confirmed that direction with him, and we started 4 5 a load decrease, and at one point it increased to the point where we were decreasing the load at 6 eight percent a minute. That was the maximum rate 7 8 of decrease. It wasn't very long when we made, I made the decision that we were going to remove the 9 turbine from service, that we were heading in that 10 direction. Actually it was at 10:28 when we had a 11 combination of circulators such that the procedure 12 required the turbine to be removed from service 13 within one hour, so that direction was given and 14 the crew knew that we were heading towards 15 removing the turbine from service. 16 The load decrease continued until we

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The load decrease continued until we were approximately 35 percent power was the time that I started concentrating on the attempts at getting 12 A circulator into service. We had two circulators in service at the time. However one of those had not cycled fully in service and was not providing service to the hot wells. 12 A circulator at the time was the only circulator

that was ready to start.

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We had gotten a report from the field 2 that they were priming the water box. There is a 3 water box vacuum switch that makes up at 15 4 inches. This is the switch we're talking about 5 today that makes up at 15 inches. The previous 6 report from the field was that that vacuum was at 7 13 inches, and they were still trying to draw 8 prime on that. Shortly after that time the Shift 9 Supervisors ordered a start on 12 A circulator. 10 They attempted to start it, and it did not start. 11 He had all of the permissives checked. There are 12 several permissives that go into starting the 13 circulator, valve positioning, bearing lube 14 pressures, all of those were checked, and they 15 were all found satisfactory, at that point in my 16 mind the only thing holding out the circulator was 17 the vacuum permissive, and it had been 5 minutes 18 since we had to report that it was at 13 inches. 19 At that time in my mind I felt that prime should 20 have been greater than 15 inches. The reason for 21 that is the last outage we did install a new 22 vacuum priming system on the water boxes that can 23 24 pull a prime from zero to full prime of greater

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than 15 inches, 18 to 20 inches in less than 10 minutes. The system had worked extremely well since it had been installed, so I felt that at that time we should have been greater than 15 inches in that water box. My thoughts were that either the vacuum switch was malfunctioning or there was something causing possibly the prime not to go any higher than 13. I didn't know what it was at that time.

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The status of the unit, we were 10 continuing to decrease load, vacuum was not good. 11 However, it was not getting worse. It was not 12 approaching yet the turbine trip at that time on 13 vacuum. My intentions were to attempt to increase 14 our margin that we had to a required that we would 15 have to manually trip the turbine so we could 16 manually trip it before an automatic trip, and I 17 wanted to increase that margin because during the 18 circ water transient when we were losing vacuum 19 and losing circulators, if we were to have a 20 turbine trip greater than ten percent power, which 21 is the limit of the capacity of the atmospheric 22 dumps we would rely upon the condenser steam dumps 23 to accept that additional heat load. Without the 24

circulators and without the condenser being available the condenser steam dumps would not function. Therefore there is a potential to challenge lifting of the steam generator safety valves. Now although that is within the design of the plant, and that is what the safety valves are there for, and I have no doubt that they would function correctly, it was a transient that if I could keep it from happening it would be a better situation to take the turbine off the line in a controlled fashion and not challenge lifting of the steam generator safeties.

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So based on those all of those reasons 13 14 I decided that I was going to lift the vacuum trip permissive on 12 A circulator. The option to go 15 16 and do it myself at that point was based on the fact that the people in the field I felt were not 17 familiar enough with the circuitry, that it would 18 19 take me more time on the phone to explain to them how to do it than it would be to just go out and 20 do it myself. 21

Lifting of this permissive, although it has happened in the past, I have done it at least on one other occasion, but that was several years

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ago, I would say '86-'87 time frame, probably
'87-'88 time frame, I don't know for sure, but I
had done it on one other occasion as a Supervisor,
as a Shift Supervisor, I didn't want any equipment
operator performing this function thinking that it
was something that is a normal evolution or a
normal occurrence at the station. My feelings
along those lines are that I had basis for doing
it, I knew the basis for that permissive being
there, and that basis is to mitigate pressure
transients on a water box for a condenser
circulator start.
I was involved with testing, we did
some testing on Unit Two back in 1987 to allow a
reduction in set point on this vacuum permissive.
It used to be set at 20 inches, it is now set at
15 inches. To perform that reduction we did
starts on circulators from 20 inches to zero
inches, and those tests determined that the
pressure transient at 0 inches was actually less
than it was at 20 inches. The reason they went
only from 20 to 15 inches is to maintain the water
box full and pressure transient is not a concern.
So based on all of those I made the

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decision that I was going to go and lift the 1 2 vacuum permissive. I informed the Shift Supervisor of the fact that I was going to do 3 that. The status of the plant at the time was 4 such that we were continuing to load decrease in a 5 fairly consistent manner. The Shift Supervisor 6 still had good control of the plant in my mind and 7 in his mind at that point. So, all of those 8 9 circumstances weighed into the fact that I went out of the control room to lift the switch myself. 10 I told him I was going to do it. I went out of 11 the control room area, I passed the day shift 12 Senior Shift Supervisor at the time and informed 13 him of the plant status. He headed towards the 14 control room. I told him I was going to lift the 15 permissive on 12 A circulator and come right back 16 in. I proceeded to the turbine building, which is 17 just 100 feet or so away from the control room 18 area door, went to the permissive switch location 19 on 12 A circulator. On the way there I passed the 20 work control center, Senior Reactor Operator that 21 was out in the field assisting in drawing water 22 box primes and headed a team of people out in the 23 turbine building. I gave that team a brief update 24

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1	of the unit status, told them I was going to lift
2	the permissive, proceeded and I lifted the
3	permissive. I did not, you can't really hear the
4	circulator start.
5	MR. HOLODY: Who was it that you told
6	that to?
7	MR. GWIRTZ: The Work Control Center,
8	Senior Reactor Operator, who is also our SDA on
9	that day. I did not really hear the circulator
10	start, but I heard the vacuum breakers open almost
11	immediately, which is indicative of an emergency
12	trip on that circulator. I did not know why that
13	occurred at that time, but I immediately turned
14	and went back into the control room area. I got
15	security reports. I was out of the control room
16	area for one minute and 58 seconds from security
17	door to security door. As I got back into the
18	control room I talked to the Shift Supervisor,
19	asked him if anything had changed while I was
20	gone, he said no, they had just completed swapping
21	over the auxiliary power transformer to the
22	station power transformer in preparation to remove
23	the turbine from service. The load decrease was
24	continuing at that point, and the unit was

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approximately 25 percent power when I re-entered the control room, so it had dropped 10 percent load during the 2 minutes I was gone, which is 5 percent a minute, which is our designed rate of power decrease.

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I asked him what happened to 12 A 6 circulator. He said as soon as they pushed the 7 start button it tripped free and emergency 8 tripped. Later we found out that was due to the 9 fork heavy breaker not being racked in correctly, 10 and that is the reason it had not started earlier 11 after the cleaning they had tried to start it and 12 it tripped free. 13

I continued to survey the control room 14 at that point. Usually I stand towards the back 15 of the control room, the Shift Supervisor is 16 commanding Control in the control room, directing 17 the abnormal operating procedures to the crew, 18 looked at the overheads, looked at the back 19 panels, stepped up into the horseshoe area. I 20 don't know how familiar you are with our control 21 room area, but I stepped into the horseshoe area. 22 It is a rather small area. That is why I don't 23 normally stand up there to look at the board a 24

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little bit closer, picking out key parameters such 1 as RCS temperature, pressure, reactor power. 2 I saw at that point the AV was low, 535 degrees when 3 I looked at it. I asked the Shift Supervisor if 4 he was aware of that. He said that he was, he 5 then directed the Reactor Operator to restore the 6 D AV using rod control. I made them aware of the 7 tech spec requirement being less than minimum R temperature for criticality, and at that point 9 they were working on recovering temperature. I 10 continued to survey the console, and I believe 11 that I was behind the console looking at some 12 recorders when the reactor tripped. They 13 announced that they received the reactor trip. I 14 immediately tried to determine why the reactor 15 tripped, looked at the first out, saw that it was 16 power range high flux sub point, I continued to 17 look at recorders on the console to determine why 18 that happened, saw the power increase on the power 19 range recorder, looked at rod control, and saw 20 quite a few steps on rods. At that point I 21 thought it had something to do with it, but I did 22 not know that that was the only event that 23 occurred. My concerns at that point were did we 24

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have some kind of steam flow transient, an 1 excessive steam draw, so I was checking out steam 2 dumps, steam flows, steam generator pressures, 3 those type of things as the crew was getting into 4 EOPs. The EOP's proceeded to the point that we 5 had to verify safeguard valves. We realized we 6 7 did have an immediate safety ejection. I asked the Work Control Center Senior Shift Supervisor, 8 9 same guy I passed in the hallway, he was in the 10 control room. He got there about the same time I 11 did, coming back from the trip permissive. I 12 asked him to look at the P-250 typewriter to try 13 and determine what the cause of safety ejection 14 was, and at that point we reached the spot in the EOP to verify safeguard valves. I was standing on 15 16 the side of the console, so I went to the status panel right off the valves that were not in the 17 18 correct position as they were positioning them and 19 they completed the EOP, came to the next step 20 after the immediate action is to request that the Senior Shift Supervisor implement the emergency 21 22 classification guide. I acknowledged that step, 23 went into my office area, which is one door away to get out the ECG and to refer to the ECG and 24

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implement the emergency plan. At that point I 1 declared the unusual event at 1100 and implemented 2 3 the emergency plan. And that is about as far as--That covers the critical areas kind of gives you 4 some kind of idea as to where we were up to that 5 point. Just to summarize what I felt --6 7 MR. WETTERHAHN: Questions? Is this a good time for questions? 8 MR. MEYER: We'll want to go back and 9 discuss some of the specifics. We don't have 10 quite the background that you do, so we'll want to 11 understand the specifics. You prefer to give a 12 summary at the end? 13 MR. WETTERHAHN: Yes, sure. 14 MR. MEYER: Let's go back. Okay, you 15 16 know, I think that was a good summary of the events. We would like to understand -- Well, 17 let's take, let's focus on your actions in the 18 field to lift the permissive. And you said that 19 there is a turbine trip for load condenser vacuum? 20 MR. GWIRTZ: Yes. 21 MR. MEYER: What is the setting? 22 MR. GWIRTZ: It is 18 to 22 inches. 23 MR. MEYER: So, it could happen as 24

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1	early
2	MR. GWIRTZ: It could happen as early
3	as 22 inches.
4	MR. MEYER: Now, 22 inches of mercury?
5	MR. GWIRTZ: Yes, so the turbine had not
6	tripped?
7	MR. GWIRTZ: no.
8	MR. MEYER: But you are saying is this
9	measured in a different place, because the
10	circulators are saying 13 inches?
11	MR. GWIRTZ: This is water box side on
12	the circulators.
13	MR. HAGAN: It is the circulating water
14	pipes.
15	· · ·
16	(Mr. Gwirtz is drawing a diagram.)
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18	MR. WETTERHAHN: You cannot draw it,
19	you have to explain it on the record.
20	MR. HAGAN: It is the circulating pipe.
21	MR. MEYER: Let's have a diagram.
22	You're going to have to talk about the diagram,
23	but a diagram would be helpful.
24	THE WITNESS: Steam side is in the

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condenser. Our circulator pump is way --

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MR. WETTERHAHN: Excuse me, slow down. As you draw, explain what it is, and then we'll make this a part of the record, okay. Mark with A's or B's what you are talking about, so that someone who is reading this record will be able to figure out what the 5 of us or 6 of us were talking about, okay. Thank you.

MR. GWIRTZ: Condensor is a fairly 9 standard shell and tube condenser, turbine is on 10 the top, direct condensing into the condenser 11 across the tubes, so we have the steam side. And 12 talking turbine trip, and the turbine trip set 13 point it is the vacuum inside of the condenser, 14 steam side of the condenser. To start a 15 circulating water pump, we have vacuum prime 16 valves that come off the top of the water side of 17 the heat exchanger, circ water goes through the 18 tubes. Our circ water works on a pump and siphon 19 effect, but it not only forces flow throw the 20 condenser, but by maintaining the water box side 21 full of water by pulling this prime it creates a 22 loop seal, so as the water flows through the 23 condenser the siphoning effect of the water going 24

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out the outlet side because there is an 1 elevational difference here aids in the flow of 2 the condenser water box. If you were to start a 3 circulator without vacuum, the water level in this 4 water box would be way down inside the piping even 5 though there is a condenser. That was the concern 6 about starting a circulator in this air space 7 causing some sort of water --8 MR. MEYER: You have a mixture of water 9 and air? 10 MR. GWIRTZ: Of water and air, that is 11 correct. So we pulled prime on these water boxes 12 to increase this level in the water boxes, so that 13 when the circulator started we don't create that 14 water hammer effect. 15 MR. MEYER: Right, although there may 16 be some water all the way through the system? 17 MR. GWIRTZ: Exactly. There will always 18 be some air and the system normally stays in 19 service as the circulators are operating also. 20 The permissive is actually located on the outlet 21 water box but inlet and outlet vacuum is the same 22 by virtue of the tubes across the heat exchanger, 23 so this is where the permissive is located, 24

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pressure switch for the permissive. 1 MR. MEYER: So the vacuum in the 2 circulating water system is not necessarily 3 directly related to the vacuum you're measuring 4 5 for the condenser? MR. GWIRTZ: Correct. This is just for 6 circulator start permissive. That is all that 7 pressure switch is for. 8 MR. MEYER: Is there any reading in the 9 control room of the circ water vacuum? 10 MR. GWIRTZ: No, there is not. 11 MR. MEYER: So when you said you didn't 12 know what it was, you thought it should be 15 13 inches, there was no way in the control room to 14 confirm that? 15 MR. GWIRTZ: That is correct. The only 16 basis I had was the report several minutes ago of 17 13 inches. We had a confirmed report from an 18 19 operator in the field. There is also a pressure gauge located out there, that it was 13 inches. 20 MR. MEYER: The place that you went to 21 22 the interlock is that adjacent to the reading, the pressure switch reading? 23 MR. GWIRTZ: Yes, it is fairly close. 24

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29 They're mounted on a column, and it is kind of 1 like around the corner from the column. 2 MR. MEYER: Did you confirm what the 3 reading was? 4 MR. GWIRTZ: No, I did not. 5 MR. MEYER: I would like to go through 6 your technical explanation about the safety, the 7 steam generator safeties. 8 You had indicated that the steam dumps 9 a turbine trip greater than 10 percent reactor 10 power would be beyond the capacity of the 11 atmospheric dump valve? 12 MR. GWIRTZ: Correct. 13 MR. MEYER: And there was a likelihood 14 that you would have had to, that the system would 15 have used the steam generator safety valves? 16 MR. GWIRTZ: Correct. 17 MR. HOLODY: That is if you lost the 18 condenser? 19 MR. GWIRTZ: If we completely lost all 20 of the steam dumps on the condenser yes. 21 MR. MEYER: The steam dumps have a 22 permissive on the condenser available? 23 MR. GWIRTZ: On condenser steam side 24

vacuum of 20 inches.

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MR. MEYER: You said that turbine trip was 18 to 22. If it had tripped at something less than 20 inches, you would have had the turbine removed and you would not have been able to use the steam dumps?

THE WITNESS: Correct. There is also 7 another permissive on steam dumps, and that is 8 that the circulator in the associated, at least 9 one circulator in associated water or associated 10 condenser shell has to be in service. So, there 11 is three different condenser shells, two 12 circulators in each shell. One of those two 13 circulators in each shell will have to be in 14 service for those to operate. 15 MR. MEYER: All three water boxes? 16 MR. GWIRTZ: All three condenser 17 shells. 18 MR. O'DONNELL: They're individually 19 lined up. 20 MR. MEYER: When you talk 13 A and B, 21 that is into one shell? 22 MR. GWIRTZ: Right. 23 MR. MEYER: How many -- At that point 24

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1	how many of the shells were available?
2	MR. GWIRTZ: At that point we had only
3	two circulators running, so there were two shells
4	available. That would be the minimum at that
5	point.
6	MR. MEYER: And you would have had to
7	have had how many shells available for the steam
8	dumps to work?
9	MR. GWIRTZ: Any shells available the
10	steam dumps in that shell would be available.
11	MR. MEYER: So in effect you were
12	limited, the steam dump capacity was already
13	limited, you would not have had the three shells
14	work?
15	MR. GWIRTZ: Correct, plus the
16	availability of their continued use was in serious
17	jeopardy due to the losing of the circulators.
18	MR. MEYER: Right. In other words, when
19	the steam dumps operate you would have had steam
20	going directly into the condenser, which would
21	tend to further reduce the vacuum?
22	MR. GWIRTZ: Correct.
23	MR. MEYER: So, you said that this
24	condition was a possible challenge to the steam

generator safeties; why would you have not wanted 1 to challenge the steam generator safeties? 2 MR. GWIRTZ: I had no concern to 3 challenge them. Like I said, I'm not afraid that 4 they wouldn't work or anything like that, but the 5 concern was that the preferred method would be to 6 do a controlled shutdown of the turbine, which is 7 the direction we were going. As long as we could 8 maintain vacuum well enough to do a controlled 9 shutdown of the turbine, then we would not be 10 putting the plant through a more severe transient 11 than it was already going through. 12 MR. MEYER: Okay. You said that there 13 was one prior occasion you thought in '86 to '87 14 where you personally had --15 MR. HOLODY: Before you ask that 16 question, let me just follow up on this. 17 MR. MEYER: Sure. 18 MR. HOLODY: You may have said this 19 already, was it clear to you that you were going 20 to lose the turbine? 21 MR. GWIRTZ: It was not clear that the 22 turbine was going to trip. It was clear to me 23 that we were going to take the turbine out of 24

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service. If vacuum continued to deteriorate or if 1 we lost more circulators than we were losing at 2 the time, we were managing to get some back into 3 service, then we would have had to manually trip 4 5 the turbine before the automatic turbine trip occurred. That was our cut-off point at that 6 time. 7 MR. HOLODY: Did you ever feel that -- Go 8 9 ahead. MR. MEYER: You had said that the 10 turbine was -- You, at one point, at 1028, you 11 ordered the turbine taken out of service, and that 12 13 was per procedures? MR. GWIRTZ: That is correct. 14 MR. MEYER: Which procedures would they 15 have been? 16 MR. GWIRTZ: Turbine Operating Procedure 17 and Circ Water AV specifies which circulators have 18 to be at abnormal operating procedures for circ 19 water system. They specify which circulators have 20 to be in service to support maintaining turbine 21 operation. If you do not meet that set 22 combination then the direction is to remove the 23 turbine from service within one hour. That was 24

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the direction we had to do. 1 MR. MEYER: You were less than the three 2 shells and that would have directed an abnormal 3 condition that you should not keep the turbine on 4 line, you were going chrouch a controlled turbine 5 shutdown? 6 MR. GWIRTZ: Correct. The criteria is 7 not less than three shells, it is the various 8 combinations. I don't have the procedure here, I 9 could go through and explain it all. 10 MR. MEYER: No, that is not important. 11 MR. GWIRTZ: But there are various 12 circulator combinations that if you have two 13 circulators out then one of the adjacent ones have 14 to be in, and these two have to be in, and that 15 type of set up. We did not meet that criteria, so 16 the one hour to remove the turbine from service 17 18 did apply. MR. HOLODY: So your motivations 19 correct from what I have heard is simply you did 20 not want to challenge the safeties and that is why 21 the lift was lifted? 22 MR. GWIRTZ: I did not want to put the 23 plant through a more severe transient. If we 24

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could do a controlled shutdown and maintain 1 circulators in service to perform a controlled 2 turbine shutdown that was the preferred transient 3 other than a turbine trip with a reactor trip and 4 a potential lifting of generator safety. 5 MR. HOLODY: At the time you made that 6 decision that permissive existed for a reason? 7 MR. GWIRTZ: Yes. 8 MR. HOLODY: You went through some 9 analysis in your own mind that the consequences of 10 not lifting the lead would be more significant 11 than challenging the safeties? 12 MR. GWIRTZ: Yes. Plus, you know, in my 13 mind at that point I felt that the vacuum should 14 have been greater than 15 inches or that the 15 switch could have been malfunctioning. Now I did 16 not know for a fact either one of those, but, 17 those were the options in my mind also that went 18 into that decision. 19 MR. HOLODY: But even if it were not a 20 malfunctioning switch you thought it was? 21 MR. GWIRTZ: It could have been. 22 MR. HOLODY: It could have been? 23 MR. GWIRTZ: Yes. 24

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1	MR. HOLODY: Did you consider if it was
2	what would be the impact if it was not a
3	malfunctioning switch?
4	MR. GWIRTZ: Yes, I did, and that was
5	when I mentioned the testing that we did and the
6	basis for the switch being installed, that I was
7	confident that there were no effects of starting
8	the circulator with less than 15 inches of vacuum
9	in the water box.
10	MR. HOLODY: And the vacuum was at 13
11	you said?
12	MR. GWIRTZ: That was the last reported
13	vacuum was 13.
14	MR. MEYER: So you knew the
15	consequences of starting a pump at less than 15
16	permissive were acceptable, that they had been
17	demonstrated in the past, you were aware of that
18	data?
19	MR. GWIRTZ: Yes.
20	MR. HOLODY: Did you feel that you were
21	at the time that you did that you were authorized
22	to do that; were you precluded by procedure from
23	doing that?
24	MR. GWIRTZ: At that time?

l	MR. HOLODY: At the time that you made
2	this decision?
3	MR. GWIRTZ: At that time it was I felt
4	that it was fully within my authority as a Senior
5	Shift Supervisor to perform that function or to
6	order that function performed, that I was not held
7	back by any procedure to not perform that
8	function.
9	MR. HOLODY: Since that time have you
10	felt that you were precluded by a procedure?
11	MR. GWIRTZ: Since that time two things
12	have become aware to me, I have become aware of,
13	one, a directive was issued from Operations
14	Management that that would not be performed and it
15	is no longer acceptable to be performed. That was
16	the expectation.
17	MR. MEYER: You are saying subsequent
18	to the event the directive was issued, so today it
19	would not be done?
20	MR. GWIRTZ: That is correct.
21	MR. HOLODY: You are familiar with this
22	procedure?
23	MR. WETTERHAHN: Let him finish
24	answering the question. He said there were two

things.

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2	MR. GWIRTZ: There are two things, and
3	that is the second thing. In preparation for this
4	I did a lot of review of AP's, AD's, all of our
5	procedures. Yesterday I did get a chance to
6	review the normal circ water operating procedure,
7	and there are two statements in that procedure,
8	one is a prerequisite that water box vacuum or
9	water box prime is drawn, and the next is a step
10	in the procedure that is to insure that water box
11	vacuum is greater than 15 inches. I'm aware of
12	that as of yesterday. During that day I was not
13	aware of those steps. They were not in my mind
14	during April 7.
15	MR. HOLODY: This procedure, I'm
16	looking at a copy that is revision four, dated
17	April 23, 1994, which was after the event. It is
18	a procedure entitled, "Circulating Water Pump
19	Operation Procedure Number S2.0P-SO.CW-0001(Z)Rev
20	4.
21	MR. WETTERHAHN: One second.
22	MR. GWIRTZ: That is a Unit Two
23	procedure. I looked at the Unit One procedure,
24	and I don't believe there is any difference.

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l	(Perusing a document before him.)
2	MR. WETTERHAHN: Why don't you examine
3	it and make sure.
4	MR. HOLODY: My question was
5	MR. WETTERHAHN: Wait one second, let
6	him examine it.
7	MR. GWIRTZ: The two steps that I
8	mentioned, the pre-req for water boxes are primed,
9	and the step that water box vacuum is greater than
10	15 inches, they're the same as the one I looked at
11	yesterday.
12	MR. HOLODY: Would those steps have
13	been the same on the Unit One procedure that
14	existed at the time of the event on April 7th?
15	MR. GWIRTZ: I don't know for a fact
16	that they were. This rev, as you said, is dated
17	after the event. However, the changes made in
18	this rev did not deal with either of those steps.
19	I don't know when the previous revs went into
20	place, so I don't know it could have. It could
21	have existed in that fashion April 7th.
22	MR. HOLODY: So you were unaware at the
23	time you made the decision of this particular step
24	existing and this particular procedure?

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1	MR. GWIRTZ: Yes.
2	MR. HOLODY: Do you periodically review
3	such procedures?
4	MR. GWIRTZ: We have reviews, we have
5	required reviews as a licensed operator, yearly
6	reviews. They include all of the abnormal
7	operating procedures and the emergency operating
8	procedures. They do not include a required review
9	of all operating procedures. As a matter of habit
10	I tried to review procedures as things come up in
11	the plant. Being the Senior Shift Supervisor I'm
12	not directly involved with all operations, so this
13	is a category three procedure, which does not have
14	to be in hand, does not have to be referred to
15	when performing the function. However, I do try
16	to periodically look through procedures and just
17	become updated with what they say. As new
18	procedure revs come out, we do receive cover
19	sheets saying okay, basically new procedure is
20	issued or a rev is out, but there is quite a few
21	of those, and I'm trying to remember each one is
22	not always possible, but I do attempt to review
23	procedures on a regular basis.
24	MR. MEYER: I would like to pursue, you
	이 같이 집에서 집에 있는 것 같이 집에 집에 있는 것 같이 있는 것 같이 있는 것 같이 없는 것 같이 않는 것 같이 없는 것 같이 않는 것 같이 없는 것 같이 않는 것 않는 않 않는 않는 것 같이 않는 것 같이 않는

established that A, in terms of a design of the 1 permissive you were aware of the design, the 2 3 equipment permissive, but you were not aware that the procedure basically said that that should be 4 met before you proceed, and you talked about the 5 basis and previous testing, and things like that. 6 Let's stick with your understanding at that time, 7 where you knew of the design and not the 8 procedure. You temporarily lifted the interlock 9 10 so that the pump could start; is that something that was permissible under the procedures if we 11 ignore this procedure, specific circ water 12 procedure that talked about the permissive, was 13 that an acceptable thing to do? 14 MR. GWIRTZ: It was something that was 15 not delineated in any procedure, how to do this. 16 It was not in a procedure to do that, and it was 17 not in any procedure that it was forbidden to do 18 that. 19 MR. MEYER: Right, so, under what 20 process would you have been able to do a thing 21 like that of temporary lifting interlocks to start 22 23 the pump? What process does the station provide to do that? 24

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MR. GWIRTZ: The process that I felt 1 that I had at that time was just my authority as a 2 Senior Shift Supervisor taking into account the 3 status of the plant and what needed to be done to 4 put the plant in a safe condition. 5 MR. MEYER: Okay, so is that because 6 the circulating water system is a secondary site; 7 could you do the same thing on the reactor? 8 MR. GWIRTZ: There are specific 9 prohibitions to bypassing any interlock on a 10 safety release system. That is definite. 11 MR. MEYER: So this being a not safety 12 related system you felt you had the authority to 13 lift the interlock? 14 MR. GWIRIZ: Yes. 15 MR. MEYER: Okay. 16 MR. GWIRTZ: If it was a safety related 17 system, there would be no question even if I had 18 all kinds of basis or whatever, the only way that 19 I could do that would be possibly 5054 X. 20 MR. MEYER: What about --21 MR. HOLODY: Is there any prohibition 22 on that in procedures for lifting leads on safety 23 related systems? 24

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1	MR. GWIRTZ: Yes, there is.
2	MR. HOLODY: But there is no similar
3	prohibition on non safety related systems?
4	MR. GWIRTZ: No.
5	MR. MEYER: The process you would use
6	on a safety related system, how would a temporary
7	modification apply to, let's take the safety
8	related system; wouldn't this in effect be a
9	temporary modification where you have modified the
10	system on a temporary basis for a specific reason?
11	MR. GWIRTZ: T mod could apply in this
12	case. We do have procedures for T mod. We do
13	have procedures for T mod.
14	MR. MEYER: Does T mod apply to non
15	safety related systems?
16	MR. GWIRTZ: T mods apply to all systems
17	in certain situations.
18	MR. MEYER: Why wouldn't a T mod apply
19	to this system in this instance?
20	MR. GWIRTZ: In my mind the T mod didn't
21	apply at that instance because I was not making a
22	permanent type of It was The modification
23	didn't stay. I lifted the switch, and as soon as
24	I put the switch back down the system was normal.

I didn't jumper the switch or put a piece of wood 1 or jimmy the switch or anything like that so that 2 it was disabled for a period of time. What I did 3 lead to immediate restoration of the system to a 4 normal condition. 5 MR. MEYER: So the period of time that 6 the interlock was lifted was how many seconds? 7 MR. GWIRTZ: Just a second. (Gesturing 8 with his hand.) If that. 9 MR. MEYER: So you feel that a T mod 10 would not apply because the duration was a second? 11 MR. GWIRTZ: Not only the duration, but 12 the circumstances at the time, the unit in that 13 condition there was no time. If we were sitting 14 running at 100 percent and I had a malfunctioning 15 switch similar to this and I knew that the switch 16 was malfunctioning and all of the other 17 circulators were in, there is no way I would even 18 consider lifting the switch in that situation. We 19 would have the switch fixed at that time. 20 MR. MEYER: But let's take the example 21 that you have given where you're in the April 7th 22 event, and let's say you had some way to confirm 23 that it was a malfunctioning switch, I don't know 24

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1 that there would have been, but you assumed that 2 that was a possibility; wouldn't the lifting of the interlock be documented in some way, some 3 process to address that? 4 5 MR. GWIRTZ: I imagine it probably should have been documented, but looking back --6 MR. MEYER: Should have but not must 7 8 be? 9 MR. GWIRTZ: Not that I can think of, 10 no. MR. MEYER: All right. 11 12 MR. HOLODY: When you indicated that 13 you informed the Shift Supervisor of your decision to attempt to restart the circulator 12 A --14 15 MR. GWIRTZ: Yes. MR. HOLODY: -- did you actually go into 16 the details? 17 18 MR. GWIRTZ: I told him that I was going to lift the vacuum permissive on 12 A circulator. 19 20 MR. HOLODY: You also told the day shift supervisor? 21 MR. GWIRTZ: The Remote Control Center 22 23 Senior Supervisor. MR. HOLODY: Is that the STA? 24

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1	MR. GWIRTZ: No.
2	MR. HOLODY: You told the STA when?
3	MR. GWIRTZ: The STA was out in the
4	turbine building when I performed that.
5	MR. HOLODY: You told the STA of the
6	decision to lift the lead?
7	MR. GWIRTZ: To lift the switch, yes.
8	MR. HOLODY: Would you tell anybody
9	else besides those three individuals?
10	MR. GWIRTZ: No.
11	MR. HOLODY: Was there any, did anybody
12	take issue with that decision?
13	MR. GWIRTZ: No.
14	MR. HOLODY: To do that?
15	MR. GWIRTZ: No.
16	MR. HOLODY: Anybody say that sounds
17	fine or?
18	MR. GWIRTZ: No.
19	MR. HOLODY: Were they mute on it?
20	MR. GWIRTZ: Basically just
21	acknowledged that I was going to do that.
22	MR. HOLODY: No opposition? Was there
23	any opposition to doing that?
24	MR. GWIRTZ: No.

1 MR. MEYER: You had talked about the design and equipment aspects and that was the T 2 mod discussion, now we'll get back to the 3 procedures. You stated that you were not aware 4 that there was a specific procedure step that said 5 that that was to be in effect before starting the 6 pump. Let's pursue the procedure aspect. Had you 7 been aware of it, was there a process that would 8 have permitted you to, because of the conditions, 9 10 to take that step? 11 MR. GWIRTZ: If I was aware of that step 12 and procedure the only way that I could continue and perform that function would be to change the 13 14 procedure via an approved on the spot change 15 process or a normal procedure change process, or 16 invoke 5054 X, those are the only options. 17 MR. MEYER: Given that this was in a 18 sense an emergency condition and you needed timely action an on the spot change could that have been 19 20 done in that kind of time frame? 21 MR. GWIRTZ: It could have been possibly 22 done. It would have taken 15, 20 minutes. It 23 would not have functioned. 24 MR. MEYER: It would not have been

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1	effective?
2	MR. GWIRTZ: Would not have been
3	effective.
4	MR. HOLODY: When you did this in 1986
5	do you recall the circumstances?
6	MR. GWIRTZ: No, I don't. I just know
7	that I I don't know that it was in 1986. I
8	know it was when I was a shift supervisor and that
9	it happened then, and it was something that again
10	didn't routinely happen, but it was something that
11	people did.
12	MR. MEYER: To?
13	MR. GWIRTZ: Restart, restore
14	circulators. The history, as I mentioned there
15	was a new modification on the priming lines to the
16	water boxes on Unit One. The old system had float
17	valves and, you know, I don't know if you know
18	what our river looks like, but you take a carbon
19	steel float valve and you put that kind of
20	environment inside there they get stuck, they got
21	plugged up, there were a lot of problems in our
22	prime on water boxes. This system was changed.
23	It was much improved on Unit One, and this type of
24	thing became not as necessary as maybe it was in

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1	the past.
2	MR. MEYER: Are you aware of anybody
3	else with the current equipment that had to resort
4	to lifting the switch to get a circulator to
5	start?
6	MR. GWIRTZ: Not recently on Unit One,
7	not definitely no.
8	MR. MEYER: Unit Two?
9	MR. GWIRTZ: I'm aware that other people
10	have done it on Unit Two. I don't know how
11	recent. I couldn't say when or who, but I am
12	aware of that.
13	MR. HOLODY: How did you become aware
14	of that? Did you see people do that?
15	MR. GWIRTZ: When I was a Nuclear
16	Control Operator it occurred at that time.
17	MR. MEYER: We're talking about ten
18	years ago?
19	MR. GWIRTZ: Right, in the early '80's.
20	MR. HOLODY: Have you seen it happen
21	under your shift, anybody do that?
22	MR. GWIRTZ: No, nobody under me has
23	done that.
24	MR. HOLODY: Are you aware of any other

shifts that were doing it while you were a shift 1 2 supervisor? MR. GWIRTZ: While I was a shift 3 supervisor probably. I don't know the times or 4 the dates or who, but I was aware that it 5 6 happened. MR. HOLODY: While you were a senior? 7 MR. GWIRTZ: While I was a senior. 8 MR. HOLODY: Senior Shift Supervisor? 9 MR. GWIRTZ: Not unless it was several 10 years ago, nothing recent, nothing really recent. 11 MR. MEYER: I didn't make a note, you 12 said that the system was modified and the flow 13 switch was removed; when did that occur? 14 MR. GWIRTZ: The last Unit One outage, 15 it was October of '93, this past year. 16 MR. MEYER: Let's go back to when you 17 were aware that it was done. You did it, you were 18 aware that other people did it, what was the -- Now 19 that was a considerable amount of time in the 20 early '80's, was there any station ops management 21 response that said that it was okay or it was not 22 okay? 23 MR. GWIRTZ: I don't recall any response 24

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either way.

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2 MR. MEYER: Okay, let's pursue your 3 decision to do it yourself. You said that you were, you didn't think that field people would be 4 5 familiar with the specific step, the specific 6 action, and you felt it was guicker to do it yourself; is that correct? 7 8 MR. GWIRTZ: Correct. 9 MR. MEYER: Were you reluctant to go to the switch and do it and be out of the control 10 room for some period of time? How did you weigh 11 12 the process of your having to leave the control room to do that? 13 14 MR. GWIRTZ: I did weigh that into the 15 decision. What was happening in the control room at the time, as I mentioned earlier, I felt that 16 17 the plant was under, doing the power decrease. 18 However, it was a controlled power decrease, that the shift supervisor was fully in control of the 19 20 situation at the time, and that was probably the best time to go and do that. If I had waited too 21 much longer either we would be tripping the 22 turbine and I would not leave under those 23 circumstances, or we would be close to getting 24

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less than ten percent power, and then tripping the 1 turbine in a controlled manner, and I would not 2 3 want to leave during that time either. MR. MEYER: Had there been some 4 auxiliary operator or electrician familiar with 5 that and you knew that he was able to do that 6 would you have directed him to do it? 7 MR. GWIRTZ: It is hard to answer that. 8 I don't know if I would have or not in that 9 situation. It depends I guess on who the person 10 was and how much confidence I had in that person. 11 MR. MEYER: Why is the confidence in 12 the person a factor? Is this a tricky thing to 13 do? 14 MR. GWIRTZ: No. 15 MR. MEYER: What would the consequences 16 of doing it wrong have been? 17 MR. GWIRTZ: Just the confidence that 18 the person knew exactly where to go and how to do 19 it. It wouldn't get into a real time consuming 20 evolution and distract from what was going on. 21 MR. MEYER: So you're saying it was the 22 aspect of timeliness, you needed it done sooner. 23 It was not if it was done wrong, if he held it for 24

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1	5 seconds instead of one second that that was
2	going to be a problem?
3	MR. GWIRTZ: No, as long as he was on
4	the right switch. That is the only switch in that
5	cabinet. Wrong type of aspects are not really a
6	concern, just the timeliness.
7	MR. HOLODY: If the individual had
8	pulled, if you sent someone else and someone had
9	pulled the relief and didn't reattach it, all you
10	would do is lose that interlock? I mean the
11	circulator would still function?
12	MR. GWIRTZ: This interlock is a vacuum
13	switch. It is mounted on a hinge. There is a
14	bellows under the vacuum switch, and as the vacuum
15	is pulled the bellows pulls down and the button on
16	the switch pops out. The switch is mounted on a
17	hinge with an adjustment screw on the other side
18	of the hinge, so as the bellows pulls down and the
19	switch button pops out, that starts the
20	circulator, allows the circulator to start. By
21	lifting up the switch on the hinge, the button
22	comes down and allows the circulator to start, so
23	there is really no physical change in the switch.
24	There is no lifting of a lead. It is the same as

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1	pushing a button, a spring return button. It is
2	lifted and put back down, and that is it.
3	(Gesturing.)
4	MR. HOLODY: Simply to allow the
5	circulator to start?
6	MR. GWIRTZ: Yes.
7	MR. HOLODY: And if it tripped and your
8	vacuum was at 14, so you're still one below and
9	you thought you were still going up, you would
10	have to go and perform the same function again?
11	MR. GWIRTZ: If an emergency, if a
12	circulator emergency trips, the noise I referred
13	to as I was leaving I heard the vacuum breakers
14	open up. When an emergency trip occurred on a
15	circulator on the water box side there are vacuum
16	breaker valves that open up, and this water goes
17	all the way down to river level, and this whole
18	area fills with air. It breaks all of the vacuum
19	in the water box side, so basically after an
20	emergency trip you have to start over again, reset
21	the emergency trip, get the vacuum valves closed,
22	which is what you do by resetting the emergency
23	trip, and then start drawing prime on the water
24	box again.

1	MR. MEYER: You described interacting
2	with this interlock. In effect, you did not have
3	to disconnect anything, you didn't have to use a
4	screw driver to do it; is that correct?
5	MR. GWIRTZ: That is correct.
6	MR. MEYER: Had you, let's assume that
7	the switch did involve lifting a lead; would you
8	still have done it?
9	MR. GWIRTZ: Probably not.
10	MR. MEYER: Why?
11	MR. GWIRTZ: I believe that one of the
12	reasons that it became something that was done in
13	some instances was the ease of doing it, the fact
14	that when you lift a lead, now we're concerned
15	we're not really qualified lifting lead, relanding
16	the lead, inspecting the connection, you get into
17	lifting leads situation. There are definite
18	procedures for lifting leads to insure that they
19	do get relanded, to insure that they get relanded
20	correctly. Those procedures would be in effect,
21	and that is not really something that an operator
22	would be qualified to do, and I wouldn't feel it
23	would be something that we should do in any
24	situation.

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MR. MEYER: So you are saying had it 1 been a lead, an electrical wire connection or 2 something that you would have had to physically 3 disconnect would procedures have prohibited you 4 from doing that? 5 MR. GWIRTZ: In my mind, yes. 6 MR. MEYER: Despite the fact that it 7 was a non safety related system? 8 MR. GWIRTZ: Yes. 9 MR. MEYER: Okay, so, you considered 10 that in this instance it was permissible for you 11 to interact with this instrument because it was 12 not lifting of a lead, placing some jumper in 13 place, anything like that, you temporarily 14 interacted with the switch and got it, you know, 15 to work, and that that was not really covered by 16 your procedures, it wasn't prohibited by your 17 procedures? 18 MR. GWIRTZ: I agree with the not being 19 prohibited by the procedures. 20 MR. MEYER: There was nothing in the 21 procedures that specifically allowed you to do 22 that, is that true? 23 MR. GWIRTZ: That is correct. 24

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ALC: NOT THE OWNER	
1	MR. MEYER: Can you think of any other
2	switches similar to this that you or anyone else
3	has ever interacted with?
4	MR. GWIRTZ: No, I cannot.
5	MR. MEYER: This is to a large extent a
6	special situation?
7	MR. GWIRTZ: Yes.
8	MR. MEYER: So, that you can interact
9	for a second or two, take it out, off the circuit
10	so to speak, you can get it to do what it should
11	do but it doesn't involve changing the control,
12	lifting the lead, placing a jumper in any kind of
13	physical modification or action?
14	MR. GWIRTZ: Correct. I think the part
15	you mentioned about changing a control is
16	important in my mind also because if you actually
17	had to turn the set point adjustment or something
18	like that to make this happen now you risk
19	changing a set point of a component which would
20	again be something that we would not be allowed to
21	do.
22	MR. MEYER: And your concern would be
23	if it was an action you took you would have to
24	reverse it, but in this case you put your finger

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on the lever and it returns to its normal 1 situation, it is not something you need to verify 2 that it has been done right. It inherently once 3 your finger is removed returns to an acceptable 4 position? 5 MR. GWIRTZ: Correct. 6 MR. MEYER: Okay. 7 MR. HOLODY: Help me here, I'm not an 8 engineer. When you push a button, it returns, 9 this is done instantaneously. If you don't get 10 the start in the control room at the same time how 11 does it -- Then the permissive is still in, is that 12 13 true? MR. GWIRTZ: Yes. 14 MR. HOLODY: And then the pump would 15 never stop? 16 MR. GWIRTZ: If the circulator -- I 17 don't understand your question. 18 MR. HOLODY: You go down and you make 19 this adjustment, not an adjustment I should say 20 you just push a button? 21 MR. GWIRTZ: Basically yes. 22 MR. HOLODY: To get rid of this 23 permissive? 24

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1	MR. GWIRTZ: Yes.
2	MR. HOLODY: And that would allow the
3	pump to start?
4	MR. GWIRTZ: Yes.
5	MR. HOLODY: When you go out, when you
6	went down to do this okay, as soon as you pushed
7	the button, you said that it just goes back to
8	where it was before?
9	MR. GWIRTZ: (Nods head up and down.)
10	MR. HOLODY: The operator then after
11	you've done this tries to start the pump. Why
12	would it start since the permissive is still in, I
13	mean the interlock is still in? It has not been
14	defeated?
15	MR. GWIRTZ: It would not start in that
16	situation.
17	MR. HOLODY: So you have to hold the
18	button down while someone is trying to start the
19	pump?
20	MR. GWIRTZ: Yes. What actually occurs
21	is they initiate a start signal by pushing a start
22	button. That start signal latches in. It is a
23	latching relay, so that start signal is there. As
24	soon as all of the interlocks are made up, the

1	circulator is going to start.
2	MR. HOLODY: So that signal is in when
3	you push the button?
4	MR. GWIRTZ: That signal is locked in,
5	yes.
6	MR. MEYER: What happens when the
7	circulator starts? Does the start signal return
8	to some neutral position?
9	MR. GWIRTZ: Yes, that is in the
10	circuitry design.
11	MR. MEYER: So you knew that they had
12	pushed the start button and a start signal was
13	somewhere in process, and if the permissives were
14	met it would start?
15	MR. GWIRTZ: That is correct.
16	MR. HOLODY: You would surmise this is
17	the permissive that was precluding it from
18	starting?
19	MR. GWIRTZ: Yes.
20	MR. MEYERS: All right.
21	MR. WETTERHAHN: Mike, do you need a
22	break?
23	MR. MEYER: I think a break might be a
2.4	good idea, because I would like to check my notes

1	in terms of what we intended to cover to make sure
2	that there isn't something that we have neglected,
3	so I would like to interrupt the transcription,
4	take a break, and we'll come back.
5	MR. WETTERHAHN: Off the record.
6	
7	(A brief recess was held.)
8	
9	MR. MEYER: Back on the record. We're
10	back, we've reconvened the Enforcement Conference.
11	It is 2:34, and we're going to begin with some
12	further questioning of the different specifics.
13	I was wondering Mike, are you aware of
14	what the safety analysis report talks about
15	regarding the circulating water system; do you
16	ever, do you routinely consult what you called the
17	Updated Final Safety Analysis Report; do you ever?
18	MR. GWIRTZ: UFSAR?
19	MR. MEYER: Yes.
20	MR. GWIRTZ: I do not routinely refer to
21	it for dynamic decisions.
22	MR. MEYER: Certainly not for dynamic,
23	and there might be some instances where you would
24	refer to it?

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1	MR. GWIRTZ: Yes, that is correct.
2	MR. HOLODY: How often would you refer
3	to the UFSAR in the course of a day, a week, a
4	month, a year?
15	MR. GWIRTZ: I would probably say I look
6	at it more as a reference document. If I have a
7	question or a concern I may look at it, and that
8	may be a couple of times a month maybe. It is
9	used as a training document to some extent, not to
10	a great extent, but there is references made to it
11	in training, and that would be about it.
12	MR. HOLODY: Were you aware that this
13	particular system, the vacuum priming system,
14	circulating vacuum primer, is described in the
15	UFSAR?
16	MR. GWIRTZ: No, I'm not.
17	MR. MEYER: Are you aware that any
18	change to the facility as described in the UFSAR
19	requires a safety evaluation?
20	MR. GWIRTZ: Yes.
21	MR. MEYER: Would you or did you
22	consider the action to lift the interlock to be a
23	change in the facility design?
24	MR. GWIRTZ: No.

1 MR. MEYER: Have you read the AIT 2 report? In the report there are different 3 sections that talk about actions that you were 4 involved in; have you read the report? 5 MR. GWIRTZ: Yes, I just read it 6 yesterday. 7 MR. MEYER: Are there any parts of the 8 report that deal with activities that you were 9 involved in that you feel may not be completely accurate or that you would want to address? 10 11 MR. GWIRTZ: Yes, there were some things 12 in there that were not correct that I noted. 13 MR. MEYER: Let's start with the things 14 that we talk about today; is there anything that relates to what we have discussed today? 15 16 MR. WETTERHAHN: Give us a second to get the document please. 17 18 MR. MEYER: I'm most interested in the 19 section of the report that is 4.0 Plant Operator 20 Performance and Procedure Issues that begins on page 21 and runs through page 25. 21 22 MR. WETTERHAHN: Okay. 23 MR. GWIRTZ: This has to do with the 24 entire event. At the bottom of page 24, where it

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talks "A time of reactor trip the only licensed 1 personnel in the control room were the shift 2 supervisor and two assigned control room 3 operators." 4 MR. MEYER: Which paragraph is that? 5 MR. GWIRTZ: Last paragraph, last 6 sentence of the last paragraph, and continuing on 7 to the next page. It says, "And the Senior Shift 8 Supervisor was in the turbine hall attending the 9 water box priming." That is not correct. At the 10 time of the trip I was, as I stated earlier, in 11 the control room, and in addition to that a Senior 12 Shift Supervisor of the Work Control Center was 13 also in the control room at the time of the trip". 14 MR. MEYER: Frankly I'm a little 15 confused. You referred to informing two people. 16 I thought it was two people, one was the Work 17 Control SRO? 18 MR. GWIRTZ: Yes, right. 19 MR. MEYER: Who is also the STA? 20 MR. GWIRTZ: Yes, correct. 21 MR. MEYER: You also talked about the 22 day shift SRO, I'm sorry the day shift senior 23 nuclear shift supervisor, so there was another 24

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shift doing things not in the control room and did 1 he report to the control room? 2 MR. GWIRTZ: When I talk about the work 3 control center day shift senior shift supervisor 4 we have two positions that are staff positions 5 these are both senior shift supervisors, qualified 6 senior shift supervisors who are assigned to a 7 staff day shift position. They are the operations 8 work control interface. That is their position. 9 MR. MEYER: Both of them do that? 10 MR. GWIRTZ: Both of them do that. The 11 person that I passed in the hallway was one of 12 these people. He does fill in for vacation relief 13 as a Senior Shift Supervisor. That is why I kind 14 of call him an extra Senior Shift Supervisor but 15 16 that is a staff position. MR. MEYER: So were there two people 17 that were similar? I was confused, or was it 18 19 really one? MR. GWIRTZ: I saw the one person who is 20 the Senior Shift Supervisor on day shift, and then 21 I also saw the Work Control Center Shift 22 Supervisor who is a member of our shift. 23 MR. MEYER: Is he SRO licensed? 24

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66 MR. GWIRTZ: It was a she in this case, 1 and she is SRO licensed, and she was also the STA 2 for that day. 3 MR. MEYER: So she's the STA and there 4 5 is also the day shift senior? MR. GWIRTZ: Yes. 6 MR. MEYER: Did both of them come to 7 the control room? 8 MR. GWIRTZ: The day shift senior 9 immediately came into the control room. The STA 10 came into the control room just after the reactor 11 12 tripped. MR. MEYER: So the record that you are 13 clarifying is that at the time of the trip you 14 were in the control room? 15 MR. GWIRTZ: Yes. 16 MR. MEYER: In addition to the shift 17 supervisor? 18 MR. GWIRTZ: Yes, which that did state 19 that, the shift supervisor. 20 MR. MEYER: And also the work control 21 supervisor, who is licensed? 22 MR. GWIRTZ: Work Control Senior Shift 23 Supervisor. The best way to word it would be an 24

1	extra Senior Shift Supervisor.
2	MR. MEYER: Right, okay. All right I
3	appreciate that.
4	MR. GWIRTZ: On page 24 in the second
5	paragraph second full sentence it starts, "Senior
6	Shift Supervisor left the control room during the
7	transient to override the circulator pump
8	interlock." Do you follow that one?
9	MR, MEYER: Yes.
10	MR. GWIRTZ: " And restart the 12 A
11	circulator pump in an attempt to maintain
12	condenser vac and prevent turbine trip." As we
13	discussed today I had a lot of reasons for doing
14	this. The main reason was not to prevent a
15	turbine trip, it was to increase our margin and
16	allow us to do a controlled turbine shutdown.
17	MR. MEYER: It was whenever the turbine
18	is tripped that you have a condenser available to
19	handle the trip?
20	MR. GWIRTZ: Yes.
21	MR. MEYER: All right.
22	MR. GWIRTZ: And in the next sentence,
23	these are minor, but I mean if you're going to use
24	these for judgment for my actions I would like to

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clarify how I feel about the statements. 1 MR. MEYER: Okay. 2 MR. GWIRTZ: The next sentence right 3 after that says, "The Senior Shift Supervisor 4 would normally provide direction to the Shift 5 Supervisor on when a reactor or turbine trip 6 should be initiated." That would, normally I'm 7 not the only one that gives that input. I don't 8 know if that statement means to say that, but it 9 is like without me there that input is not there 10 at all. Anybody can make that input to when to 11 trip the turbine. It could be either one of the 12 Reactor Operators or the Shift Supervisors. 13 MR. MEYER: All of the licensed people 14 have the right and responsibility to trip the 15 reactor? 16 MR. GWIRTZ: Right, so I could provide 17 that direction to Shift Supervisors if necessary. 18 19 (Mr. Gwirtz and Mr. Wetterhahn peruse 20 several documents.) 21 22 THE WITNESS: The statement, same 23 paragraph, I guess this is a key paragraph, it 24

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says, "Senior Nuclear Shift Supervisor in 1 combination with the extensive effort undertaken 2 by station personnel to maintain turbine operation 3 both the circ water intake and turbine hull 4 reflected perceived management expectations that 5 extraordinary effort would be used to overcome 6 grass intrusions." My feelings on that statement 7 is yes, we did take efforts, and they were strong 8 efforts, they were thought out efforts to try to 9 overcome these grass intrusions, and the reason 10 for those, and it wasn't a perceived management 11 pressure to maintain the turbine on line but it 12 was to reduce the risk of placing the plant 13 through an unnecessary transient, an extreme 14 transient such as a trip, otherwise we wouldn't 15 have been operating if we thought it was going to 16 trip every time. 17 MR. MEYER: You had already directed 18 that the turbine be taken out of service? 19 MR. GWIRTZ: Yes. 20 MR. MEYER: I understand. I was not at 21 the Enforcement Conference on July 28th, the 22 people that were, was it brought out that Mike was 23 not, contrary to the AIT, that he was in the 24

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control room at the time of the trip? 1 MR. HAGAN: I don't recollect whether it 2 was ever discussed, Glenn. I don't specifically 3 remember it being discussed one way or the other. 4 MR. MEYER: All right, I appreciate 5 that. 6 MR. GWIRTZ: The other things are back 7 after the trip, the safety injection. You just 8 want to keep it to the --9 MR. MEYER: I would prefer, I don't 10 want to exclude anything you want to say, but I 11 don't think they apply. 12 MR. GWIRTZ: I don't feel it is 13 14 necessary. MR. MEYER: All right. We've talked 15 16 about --MR. WETTERHAHN: Have you now reviewed 17 that section, satisfied that you got the major 18 items? 19 MR. GWIRTZ: Yes, I think that one 20 paragraph is the one that deals with my going out 21 into the field, and I think we clarified that. 22 MR. MEYER: You talked extensively about 23 the interlock, and that was for the 12 A 24

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1	circulator; were there any other circulators for
2	which the permissives were lifted, or I'm sorry
3	the interlocks were lifted?
4	MR. GWIRTZ: No.
5	MR. MEYER: I would like to talk about
6	management expectations; is this a good time for
7	you?
8	MR. WETTTERHAHN: I have one question
9	by way of clarification. Mike, you noted that it
10	was your practice to attempt to read as many
11	procedures as you could, beyond those which are
12	required to be read; can you tell me how many
13	procedures there are in total regarding the
14	operation of the Salem units?
15	MR. GWIRTZ: I don't know that I could
16	put a number on total number of procedures, but we
17	did recently undergo a procedure upgrade project
18	and in the past several years there have been
19	thousands of procedure changes and upgraded
20	procedures in the past couple of years, and the
21	upgrade just finished, and there are several
22	procedures, all of the procedures basically have
23	been upgraded.
24	MR. WETTERHAHN: Okay, just to clarify;
do you recall reading the procedure that we 1 discussed earlier in the last year say? 2 MR. GWIRTZ: No, I do not. 3 MR. WETTERHAHN: Thank you, that is all 4 of the questions that I had. Mr. O'Donnell is 5 here at the request of Mr. Gwirtz, and I would 6 like to ask him to review Mr. Gwirtz' performance, 7 both before and after the event if he could. 8 Could you identify yourself and state your 9 position and your relationship to Mr. Gwirtz, and 10 then briefly describe those issues. 11 MR. O'DONNELL: My name is Phillip 12 O'Donnell, I'm the Salem Operations Engineer. I 13 have been the Operations Engineer for the past 14 three years. Mike reports to me, as do all of the 15 other Senior Shift Supervisors. As part of that 16 process we do periodic reviews on all of the 17 Senior Shift Supervisors. Mike's performance 18 specifically has been outstanding. He has 19 significantly exceeded the expectations on a 20 regular basis. His file is full of commendations 21 as he indicated before. There are some specific 22 examples I guess I would like to bring up to you 23 people. Specifically as the Operations Engineer 24

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we're required to monitor start up and plant shut 1 downs of a particular unit. On several occasions 2 meeting on shift with Mike and his shift, Mike has 3 taken the opportunity transitioning up through 4 power the senior level control sometimes does not 5 control as well as we would expect. On those 6 occasions where we start seeing deviations, 7 significant deviations in the steam water level 8 control Mike has taken on himself and said I don't 9 feel comfortable with this, back the unit back 10 down, I want to get it fixed. On several 11 12 occasions he has done that, so that he is not driven by just getting the unit on line, he wants 13 to do it safely and without incident. 14 One of the other instances Mike was the 15 test engineer for the this past December for the 16

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Unit One Hot Mid Loop, we ended up with a problem 17 following the refueling outage where we had a 18 problem with one of the RCP seals. During that 19 time Mike was designated as one of the test 20 engineers. I was the test manager. In 21 preparation for that, because of the significant 22 consequences even when it was shutdown in the hot 23 mid loop Mike took the approach that we were going 24

1	to do it right, it doesn't matter how long it is
2	going to take, we are going to do it right and do
3	it by the numbers. On several occasions he wanted
4	to make sure all of the equipment was available.
5	He stopped the evolution at several points to make
6	sure that the instrumentation was correct, to make
7	sure that it was working as we described in the
8	procedure, took the time to change the procedure
9	if it was necessary, and then go through, and we
10	had a very uneventful RHR mid loop operation. It
11	was done safely due to a large part with Mike's
12	assertive decision making process and his
13	adherance to the standards that we have.
14	Even after the April 7th event one
15	recent event occurred where we lost our
16	circulators during a lightening strike. Mike has
17	translated that safety consciousness to his shift,
18	so that as soon as they recognize they lost one of
19	the circulators they went for a manual reactor
20	trip and this happened a couple of weeks ago, they
21	went for the manual reactor trip before they got
22	the automatic, so I think that Mike reflects
23	assertive decision making and tries to instill
24	that in his shift, and I think he's one of the

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	에 이렇게 해외에서 이렇게 이렇게 있었다. 이렇게 하는 것이 있는 것이 같은 것이 있는 것이 가지 않는 것이 가지 않는 것이 가지 않는 것이 있다. 이렇게 가지 않는 것이 있는 것이 있는 것이 있는 것이 있다. 이렇게 가지 않는 것이 있는 것이 있다. 이렇게 있는 것이 없다. 것이 있는 것이 있는 것이 있는 것이 있는 것이 있는 것이 없는 것이 없는 것이 없다. 것이 있는 것이 없는 것이 없는 것이 없는 것이 없다. 가지 않는 것이 없는 것이 없는 것이 없는 것이 없는 것이 있는 것이 없다. 것이 없는 것이 있는 것이 없는 것이 없는 것이 없다. 가지 않는 것이 없는 것이 없는 것이 없는 것이 없다. 것이 없는 것이 없는 것이 없는 것이 없는 것이 없다. 것이 없는 것이 없는 것이 없는 것이 없다. 것이 없는 것이 없는 것이 있는 것이 없다. 것이 없는 것이 없는 것이 없는 것이 없다. 것이 없는 것이 없는 것이 없는 것이 없다. 것이 없는 것이 있 않는 것이 없다. 것이 없는 것이 없는 것이 없다. 것이 없는 것이 없는 것이 없다. 것이 없는 것이 없는 것이 없는 것이 없다. 가지 않는 것이 없는 것이 없는 것이 없는 것이 없다. 같이 같이 없는 것이 없다. 것이 없는 것이 없 같이 없는 것이 없 않는 것이 없다. 것이 없는 것이 없다. 것이 없는 것이 것이 없는 것이 없는 것이 없는 것이 않는 것이 없는 것이 없 않는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없 않는 것이 않는 것이 않는 것이 없는 것이 없는 것이 없는 것이 않는 것이 없는 것이 없는 것이 않는 것이 않 않 것이 않는 것이 않는 것이 않는 것이 없는 것이 없는 것이 없는 것이 없는 것이 않는 것이 없는 것이 않는 것이 않 않는 것이 않는 것이 없다. 것이 않는 것이 않는 것이 않는 것이 않는 것이 않는 것이 없다. 것이 않 않 않 않 않 않 않 않는 것이 않 않는 것이 않는 것이 않이 않 않 않 않 않 않 않는 것이 않 않 않이 않
1	best Senior Shift Supervisors that we have, and he
2	adheres to the standards, and he has got the
3	safety consciousness. That is all I have.
4	MR. WETTERHAHN: Thank you. Do you
5	want the summary first?
6	MR. MEYER: No. Why don't we ask the
7	plant management to step out, and we'll have an
8	opportunity to talk about management expectations.
9	Joe and Phil.
10	
11	(Mr. Hagan and Mr. O'Donnell have left the room.)
12	
13	MR. MEYER: Let it be noted at this
14	point that Phil O'Donnell and Joe Hagan have left
15	the conference room, and we'll proceed.
16	MR. WETTERHAHN: So that the record is
17	perfectly clear, and I discussed this with Mr.
18	Gwirtz before he agreed to have me represent him,
19	that he knows that I represent the company and
20	have represented the company, and there might be
21	an instance where there would be shared
22	confidences. We have not seen any, at least I
23	have not seen any conflicts between the company
24	position and Mr. Gwirtz' position, and I assume to

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this point you have not either? 1 MR. GWIRTZ: That is correct. 2 MR. WETTERHAHN: I just want to place 3 that on the record. The second thing, while I'm 4 still talking, is a procedural request. I would 5 like to make a request that Mr. Gwirtz be given an 6 opportunity to review the transcript after it has 7 been delivered to you at a convenient time. There 8 9 have been a lot of acronyms and a lot of initialisms used, and I want the record to be the 10 best that it can be, to allow you to make your 11 decision, so I would request that you give us the 12 opportunity to review the transcript at King of 13 Prussia or any other place that is convenient for 14 you. As I mentioned off the record in OI 15 Interviews they would grant that opportunity after 16 their field investigation is complete, and again I 17 ask for that opportunity. Thank you. 18 MR. MEYER: The review that you propose 19 will be done by Mike or you and Mike? 20 MR. WETTERHAHN: The two of us would 21 review it, and we would make our corrections right 22 on the transcript, and that is the opportunity 23 that we would ask for. 24

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1	MR. HOLODY: You're not asking for a
2	copy of it, you're asking for an opportunity to
3	review it and correct it?
4	MR. WETTERHAHN: That is correct.
5	MR. HOLODY: We note that, we'll take it
6	up with our management, and we'll get back to you.
7	MR. WETTERHAHN: Okay.
8	MR. MEYER: Specifically I would like
9	to speak first about management expectations
10	regarding your actions on the switch. You had
11	indicated that there were a number of times
12	previously, well years prior, that people,
13	including you, had interacted with the switch;
14	what did you believe the management's expectations
15	were regarding interacting with the circulator
16	permissive switch? Was this an acceptable action?
17	MR. GWIRTZ: At the time of the event in
18	my mind management's expectations were that it was
19	as I stated before, their expectations were this
20	is something that is not a normal occurrence, it
21	is not an expected occurrence, it is not something
22	that we would be expected to do in normal day to
23	day operations. However, that it was fully within
24	my authority as a Senior Shift Supervisor to

perform that function, if I felt it was necessary 1 for the safe uneventful operation of the unit. 2 MR. MEYER: Is that based on your 3 interpretation of their general guidance or had 4 they provided specific guidance regarding the 5 6 circulator? MR. GWIRTZ: There had been no specific 7 guidance regarding this vacuum permissive switch, 8 and to my knowledge in either positive or the 9 negative that basically I felt that it was known 10 that this occurred on occasion, and that by 11 absence of any further direction that it was 12 13 accepted. MR. MEYER: Okay, had you ever 14 specifically discussed with any managers the issue 15 of the circulator and lifting the permissive to 16 allow the start? 17 MR. GWIRTZ: No, I did not. 18 MR. MEYER: Okay, were you aware of any 19 instances where management had taken actions, 20 including disciplinary actions, following one of 21 the instances where someone had interacted with 22 the interlock? 23 MR. GWIRTZ: No, that has not occurred. 24

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l	MR. HOLODY: If management were there
2	in the control room at the time of this event
3	would you have made the same decision?
4	MR. GWIRTZ: Yes.
5	MR. HOLODY: If an NRC inspector was
6	there inspecting at the time would you have made
7	the same decision?
8	MR. GWIRTZ: Yes. At that time, during
9	that day, yes.
10	MR. HOLODY: Going back in time to
11	April 7?
12	MR. GWIRTZ: Yes, that would not have
13	precluded me, I would not have been afraid to do
14	that or concerned about doing that in front of
15	anyone. I did not think I was doing something
16	wrong or against any rule.
17	MR. HOLODY: Are you aware of the
18	procedure that we referred to earlier, the
19	circulating water pump operation? I believe you
20	indicated earlier that you were not aware of that
21	step that stated that insure the following start
22	permissives are satisfied: Water box vacuum is
23	greater than or equal to 15 inches. If you were
24	aware of that procedure, would you have done that

procedure?

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2	MR. GWIRTZ: No, our procedures state
3	that we have to follow the procedure as written.
4	Otherwise it must be changed. The only other
5	option is 5054 X. I would not consider this an
6	emergency situation where 5054 X would apply.
7	MR. HOLODY: What was management's
8	response to what you did do after the event?
9	MR. GWIRTZ: The first discussion I had
10	concerning this individual action was with a
11	one-on-one with my manager. We discussed the
12	event, I asked him
13	MR. MEYER: Could you be specific, who
14	is your manager?
15	MR. GWIRTZ: Lee Catalfomo, the
16	Operations Manager.
17	THE COURT REPORTER: Can you spell
18	that?
19	MR. GWIRTZ: Lee Catalfomo,
20	C-A-T-A-L-F-O-M-O. We had a one-on-one
21	discussion, after which I asked him what he felt
2.2	were my shortcomings during the event. He
23	specifically mentioned that he wished and was
24	concerned with my leaving the control room and

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1 manipulating the switch, and I told him I understand that, I did give him the same basis, 2 3 the same reasons that I have given you earlier, and he made it clear that is something he did not 4 want to continue at that point. 5 MR. HOLODY: When was that session? 6 7 MR. GWIRTZ: It was probably within a week to two weeks after the event. That is 8 9 probably as good as I can pin it down. 10 MR. HOLODY: Was his concern with the fact you left the control room or with the fact 11 12 that you had manipulated the switch, or both? 13 MR. GWIRTZ: His concern was basically 14 both, the fact that I left the control room for 15 that reason was the concern. 16 MR. MEYER: Did you have the sense that 17 if you had looked back to a knowledgeable 18 auxiliary operator that knew how to do it, if you had directed someone else to do it, do you think 19 it still would have been a concern? 20 21 MR. GWIRTZ: At this point I believe it 22 still would have been a concern, yes. 23 MR. HOLODY: Can you give us some 24 insights into what his specific concerns were with

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the switch manipulation? 1 MR. GWIRTZ: I don't really recall 2 anything specific, just the fact that it occurred, 3 that I did it. He did not cite any violation of a 4 procedure, he did not cite anything concrete, he 5 just cited i., to my recollection, as poor 6 7 judgment. MR. HOLODY: Did he refer in any detail 8 9 to what he meant by that, why it was poor judgment? Not the leaving of the control room but 10 the manipulation of the switch? 11 MR. GWIRTZ: No, not that I recall. 12 MR. HOLODY: Do you believe it was poor 13 judgment? 14 MR. GWIRTZ: Looking back on it at this 15 time I do believe that it was. 16 MR. HOLODY: Because? 17 MR. GWIRTZ: I made some assumptions 18 that the control room crew was going to perform up 19 to what I expected them to perform as far as the 20 control of temperature in the reactor coil system. 21 Those were incorrect assumptions on my part and 22 possibly by my continued looking for those two 23 minutes in the control room situation I might have 24

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1	been able to pick up on that earlier and prevented
2	that instance from occurring. I can't say it
3	definitely would have, because it was only two
4	minutes, but there would have been more of a
5	chance.
6	MR. HOLODY: That is the leaving of the
7	control room?
8	MR. GWIRTZ: Yes.
9	MR. HOLODY: That is what you are
10	referring to?
11	MR. GWIRTZ: Yes.
12	MR. HOLODY: That was poor judgment in
13	leaving the control room?
14	MR. GWIRTZ: Yes.
15	MR. HOLODY: Do you believe it was poor
16	judgment to manipulate that switch?
17	MR. GWIRTZ: Now I do believe, yes, it
18	was poor judgment. Yes, I believe that now. I
19	realize there is a procedure in place. I realize
20	that there are probably several precautions and
21	steps in places that I may not be fully aware of,
22	and I'm going to have to really analyze anything
23	that is done not correctly, everything that is
24	done not correctly in accordance with a procedure,

anything that is, any type of work around 1 bypassing I have to be more sensitive to. 2 It has to be analyzed further, and I 3 cannot accept the fact that it has been done in 4 the past as being okay for it to be continued to 5 be done. 6 MR. HOLODY: Should you have known that 7 procedure? 8 MR. GWIRTZ: Yes, I should have. 9 MR. HOLODY: Should you have known that 10 step? 11 MR. GWIRTZ: Probably should have. I 12 can't say that I know every precaution and every 13 step and every procedure, but as a licensed 14 operator I feel that I should be familiar with 15 everything. I don't think I ever can, but I 16 should try to be able to. 17 MR. HOLODY: Was management aware of 18 any -- You indicated that you had done this once 19 before, I think you said 1986 but you were not 20 sure, it was somewhere in that time frame? 21 MR. GWIRTZ: Right. 22 MR. HOLODY: And that others had done 23 this also? Was management aware of that to your 24

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knowledge?

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2	MR. GWIRTZ: I don't know for a fact
3	that they were, I'm assuming that they knew it
4	occurred, because to me at that time it wasn't
5	anything that it was something that was done
6	infrequently but it was not something that was
7	being hidden or anything like that from
8	management. I thought it was common knowledge
9	through the operations department that it
10	occurred.
11	MR. HOLODY: Had you ever discussed
12	doing this type of an action, had it ever been
13-	discussed with management by you or had it ever
14	been discussed with any peers prior to that April
15	7th event?
16	MR. GWIRTZ: I know it had been
17	discussed with peers because that is how I learned
18	about doing it. I've seen other people, not seen
19	other people doing it, but I'm aware of other
20	people doing it, and that is through discussion
21	with peers, other control room operators, shift
22	supervisors. That is about all I'm aware of.
23	MR. HOLODY: But I think you eluded
24	earlier, this was not something that was recent?

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1	This goes back in time?
2	MR. GWIRTZ: This is back in time,
3	nothing recent.
4	MR. HOLODY: After you had the session
5	with your management was there any disciplinary
6	action that resulted from this?
7	MR. GWIRTZ: There was no formal
8	disciplinary action. However, the discussions
9	that we had, we had like I said individual
10	discussions, we had team discussions with the
11	shift in Operation Management team and all of
12	these items were discussed, all of the
13	deficiencies plus the positive things that
14	occurred were all discussed, and it was a coaching
15	counseling that occurred throughout those
16	sessions, but there was no formal discipline, no
17	written formal disciplinary process.
18	MR. HOLODY: Did you have any
19	discussions, formal or informal, with peers after
20	this event regarding performance? Lessons
21	learned?
22	MR. GWIRTZ: Nothing, no formal
23	discussions, normal shift turnover discussions.
24	Well, what happened, what do you think, that type

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of, those types of discussions. Nothing formal. 1 2 Each shift went through a scenario at the training 3 center. They simulated the event on the Salem 4 simulator, each shift came out and witnessed, they did a walk through of the event, everything was 5 6 discussed, high points, low points, exactly what happened. There were several shift training 7 8 sessions that occurred, nothing shift to shift type of discussions. 9 10 MR. HOLODY: You are aware that we had 11 what we call augmented inspection teams out here at Salem in the past I guess two and a half years 12 since November of '91 when PSE & G had the turbine 13 14 event? MR. GWIRTZ: Yes. 15 MR. HOLODY: Were you on shift for any 16 17 of those occurrences, the turbine, when the turbine was destroyed, the annunciator problem 18 they had; are you familiar with what I'm referring 19 20 to? 21 MR. GWIRTZ: Yes, I am familiar. We had the turbine event, the overhead annunciator 22 problem, the rod control problem, this AIT, I'm 23 familiar with all three. I was not present during 24

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the turbine event. I relieved the watch on the day shift following the day it occurred, didn't get to see everything, the condition of the turbine first hand. As far as the overhead annunciator, I was not involved with that either, however, did get briefed on exactly what happened in training. The rod control event was something that occurred over several shifts. There was a portion of that that I was involved in. We were actually on watch the time that we were doing the rod testing when we went to insert the rods in and the two rods withdrew. We were on shift during that portion of that.

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MR. HOLODY: On the turbine overspeed event, prior to that event there was a test of the overspeed control system that was done in October of '91, prior to the November event. One of the concerns that we had, the NRC had at that time, was that particular test; were you involved at all in that particular test of the overspeed? MR. GWIRTZ: No, I was not, not the one that was done in October. However, I had been involved in other overspeed tests on the turbine

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and, in fact, there was one that we failed, and we

stopped and wrote the work orders and made the repair take place.

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3	MR. HOLODY: But you were not involved
4	in the when there was an actual test failure,
5	there were some operators involved, and they were
6	not sufficiently inquisitive regarding that
7	failure. You referred, in fact, in this
8	enforcement action, we noted "There were 5
9	licensed operations staff, including two RO's,
10	shift supervisor including a senior shift
11	supervisor, a senior ops engineers, who did not
12	demonstrate a sufficiently questioning and
13	inquisitive attitude regarding the test results.
14	In addition, the Senior Shift Supervisor and the
15	Senior Operating Engineer apparently did not
16	understand that an actual test failure had
17	occurred".
18	You were not one of those individuals
19	referred to?
20	MR. GWIRTZ: No, I was not.
21	MR. HOLODY: I don't have any more
22	questions.
23	MR. MEYER: I would like to discuss
24	management's expectations regarding grass attack

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in general. You had described special efforts that was made to put a team of people in the technical structure to deal with the circulators and screens and things like that. Was there any effort by management to describe what was expected during these effects on the primer system in terms of turbine reductions, power reductions, things like that?

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MR. GWIRTZ: I think we had discussions 9 on what to do. It was clear to everyone that 10 there were no management concerns or pressures 11 about not doing, about a load reduction. Nobody 12 felt any pressures not to start a load reduction. 13 As I said, we were operating at a reduced load for 14 quite sometime. There were a lot of discussions, 15 and I don't recall anything specific about so and 16 so does this, does that in a control room. Most 17 of the actions that were in place were at the circ 18 water structure, additional actions. 19

MR. MEYER: So, in terms of actions to deal with this condition in the control room in the turbine building there were no, there was no specific guidance or procedure that was described, any special effort to coordinate a power

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reduction, rapid power reduction, changes in responsibility in the control room, anything of that nature?

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MR. GWIRTZ: We had procedures in place at the time, the abnormal circ water operating procedure which gave direction for reducing load. As I mentioned previously, the turbine procedure, the portion for one hour to remove the turbine from service integrated operating procedure for directing the load decrease. There were procedures in place to accomplish the load decrease for circ water.

13 MR. MEYER: Does that procedure describe power reductions up to eight percent per minute?

15 MR. GWIRTZ: It does not specify a rate. It is not specifically a rapid load reduction 16 17 procedure. It was recognized that a procedure of that nature could be of benefit, and since that 18 19 we've implemented an AV load procedure. It is 20 called AV Load. It is an abnormal operating 21 procedure for rapid load decrease. It basically streamlines and coordinates the load decrease. 22 23 MR. MEYER: But the efforts regarding

grass were focused on the intake structure and how

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to handle it there? 1 2 MR. GWIRTZ: For the extra people, yes. MR. MEYER: It was considered 3 additional procedures, guidance addressed what you 4 need to do with in the control room? 5 MR. GWIRTZ: Yes, and I agreed with 6 that. I felt that operations transients would be 7 one that would be able to be handled. 8 MR. WETTERHAHN: Let me follow that up. 9 You had discussed earlier the April 4th event in 10 your shift crews handling of that event; did that 11 also give you real confidence that you could 12 handle a similar event? 13 MR. GWIRTZ: I wouldn't say it gave us 14 confidence that we could handle anything, I think 15 it made us realize that these events were very 16 challenging and anything we could due to improve 17 our performance would be very beneficial. During 18 the April 4th event what we found were most of the 13 extreme challenges were out at the circ water 20 structure and at the turbine building, and that is 21 where we could gain the most benefit from 22 increasing our manpower and our focus. 23 MR. MEYER: Was manpower increased in 24

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1	the turbine building?	
2	MR. GWIRTZ: Not on watch people, but we	22
3	had extra people available. We had set places	
4	where people were to go during a circ water grass	
5	problem.	
6	MR. MEYER: What type of people,	
7	mechanics, electricians, operators?	
8	MR. GWIRTZ: Operators.	
9	MR. MEYER: So these would be licensed	
10	people or operators?	
11	MR. GWIRTZ: Operators.	
12	MR. MEYER: That is all that I have.	
13	Any other management issues that we want to	
14	discuss?	
15	MR. WETTERHAHN: I have a couple of	
16	questions.	
17		
18	BY MR. WETTERHAHN:	
19	Q. When Mr. Catalfomo spoke to you, counseled	
20	you, do you recall that?	
21	A. Yes.	
22	Q. Had the procedure with regard to bypassing	
23	interlocks been changed at that point in time?	
24	A. There really was no specific procedure dealing	3

1 with the bypassing of these interlocks. What did occur is that there was management direction that 2 circ water interlock was not to be bypassed 3 anymore. I don't recall right now how that came 4 about. I don't think -- I kind of looked for it a 5 little bit yesterday. I don't think it was an -- I 6 had an information directive which is a formal op 7 department directive. I believe it was a night 8 order book entry, but I did not locate it, but I 9 do know the word went out to all operations 10 department personnel that it was to no longer 11 occur. 12 Do you recall whether that would have been 13 0. before or after Mr. Catalfomo spoke to you? 14 No, I don't recall. 15 Α. Did you do an assessment with your shift 16 Q. afterwards with regard to this event, as to their 17 performance during this event? 18 Yes. 19 Α. We talked about other shift and peer 20 Q. discussions; did you have a discussion with your 21 crew? 22 Yes. 23 Α. And just generally tell us about that 24 0.

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discussion.

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2	A. We had individual discussions with our crew
3	and they paralleled most of the other findings
4	and, in addition to that I think the biggest one
5	that we did was a leadership seminar that we did
6	with our crew and management. Most of that was
7	done separately where we each evaluated our crew.
8	We evaluated the positives and the negatives, and
9	then management did the same thing separately. We
10	got together afterwards and compared notes, and
11	the alignment was just about 100 percent. We
12	discussed individuals performances, and I felt
13	everybody on the crew realized where the
14	shortcomings were.
15	MR. WETTERHAHN: Thank you, I have
16	nothing further.
17	MR. MEYER: At this point I would like
18	to break and to bring the managers back in.
19	
20	(A brief recess was held at 3:15 P.M.
21	and Mr. O'Donnell and Mr. Hagan entered the
22	conference room.)
23	
24	MR. MEYER: Welcome back. At this

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point Mike would you provide the summary that you 1 have indicated that you have? 2 MR. GWIRTZ: I would just like to state 3 that as we talked before, I spent my entire career 4 trying to do the right thing and what I felt was 5 the right thing to do, and what I felt was 6 expected of me by whoever my superiors were at the 7 time, and that includes the NRC, the people that 8 have issued me my license. I have always been 9 basically a top performer, and I have had a hard 10 time dealing with this incident because I don't 11 feel it is indicative of my performance or my 12 crews performance. We've learned a lot from the 13 event, the biggest one, the biggest thing I think 14 I have learned is that the oversight, how 15 important the continued oversight is into the 16 control room operations, that just because I feel 17 that as an NCO I would have been able to do 18 something or should have been able to do something 19 or any NCO should be able to perform a certain 20 evolution I should not assume that all can do 21 that, and that is why supervision is there, to 22 maintain that oversight. As far as the lifting of 23 the interlock, it is something that I feel at the 24

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time I did for the right reason. There is a basis 1 for doing it in my mind. It wasn't just go out 2 3 there and do it type of thing. It was thought out. However, in hindsight I feel it was not the 4 correct thing to do at the time, and as I 5 6 indicated, anything that is done not correctly whether just because it is not in the procedure 7 doesn't necessarily mean it is okay to do, and I 8 have to evaluate all of those types of actions. I 9 feel that the actions that we've put in place and 10 what I have learned from the event will make me a 11 better operator, and I really don't feel that 12 anymore action is necessary. I think I have been 13 my worst critic through this whole event as well 14 as with the rest of the crew. 15 MR. MEYER: Anything further? 16 17 (No responses.) 18 19 MR. MEYER: Anyone else have any 20 summary or remarks? 21 22 (No responses.) 23 24

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MR. MEYER: I'm reluctant to ask a 1 specific question at this point, but the one thing 2 that came to mind, you have stated you were not 3 aware of any procedure steps that prohibited what 4 you were doing and that at the same time you were 5 aware that the 15 inch permissive was something 6 that could potentially a malfunctioning switch 7 prevent the circulator start; did the control 8 room, any of the people have the procedure out? 9 MR. GWIRTZ: No. 10 MR. MEYER: Okay. So you were aware of 11 the 15 inch interlock because of previous, just 12 knowledge, previous experience? 13 MR. GWIRTZ: Yes, system design 14 training, I knew the system. I knew the functions 15 of the system. 16 MR. MEYER: All right. Thank you. 17 At this point Dan is going to describe 18 some of the outcomes that can happen as a result 19 of enforcement conferences. 20 MR. HOLODY: As I alluded to in the 21 beginning, we have these enforcement conferences 22 to understand from the licensee, in this case 23 yourself as the Senior Reactor Operator, you know, 24

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get your side of the story, hear any mitigating 1 features, understand your perspective on causes 2 and significance of violations, et cetera. Then 3 we take into consideration what you've told us, as 4 well as what we found during the AIT, and also we 5 have the Enforcement Conference with PSE & G. 6 We'll make a decision on what, if any, enforcement 7 is warranted with respect to your license. The 8 options are, if there were to be any action, we 9 could issue a letter of reprimand, we could issue 10 a notice of violation, because you're required to 11 insure that the facility adheres to, you are 12 required to do everything under your license that 13 would insure that the facility was in compliance 14 with their license. We can issue notice of 15 16 violation with civil penalty. We can modify, suspend, or revoke a license. We'll make a 17 decision on any of those actions, if we decide 18 action is warranted, and then we'll inform you in 19 writing, also give you a call what that action is. 20 Normally we would like to take these actions 21 within 30 days. Actions involving individual 22 licenses generally take longer. Whatever action 23 we do take, if we do take an action, we give you 24

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1	an opportunity to respond in writing, and we'll
2	address what all of your rights are within that
3	letter. If we don't take an action, you will not
4	have to respond to that. Do you have any
5	questions?
6	MR. GWIRTZ: No.
7	MR. MEYER: Okay, thank you for your
8	participation today, and we appreciate your
9	efforts.
10	MR. HOLODY: Thanks for coming in.
11	MR. MEYER: The end.
12	MR. HOLODY: The conference is
13	concluded.
14	(Proceedings concluded at 3:25 P.M.)
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5	I, Carol L. Skipper, hereby certify that
6	the testimony and proceedings in the foregoing
7	matter taken on August 2, 1994, are contained
8	fully and accurately in the stenographic notes
9	taken by me, and that the foregoing is a true
10	and correct transcript of the same.
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12	· in in
13	Jern Hegen
14	Court Reporter and Notary Public
15	Commonwealth of Pennsylvania
15	Carol L. Skuper, Notary Public Brown #1 Text, Montoymer, County
16	My Commission Express May 15, 1993
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MED INST WELL LOGGERS OTHER TYPE: CITE SIMILAR CASE: EA NO.	ACADEMIC		GAUGE	MOISTURE DEN	ISITY	
MED INST WELL LOGGERS OTHER TYPE: SITE SIMILAR CASE: EA NO. SHOULD OE ATTEND ENF CONF	ACADEMIC		GAUGE	NO	IRRAC	
MED INST WELL LOGGERS OTHER TYPE: CITE SIMILAR CASE: EA NO. CHOULD OE ATTEND ENF CONF	PHYSICIAN ACADEMIC		YES NO	NO	ISITY	
MED INST WELL LOGGERS OTHER TYPE: TTE SIMILAR CASE: EA NO. HOULD OE ATTEND ENF CONF IONDELEGATED CASE NONDELEGABLE TYPE	PHYSICIAN ACADEMIC VES OI RE	PORT/WILLFULL	VUC PHARM GAUGE YES NO CO	NO MOISTURE DEN	ISITY	
MED INST WELL LOGGERS OTHER TYPE: DITE SIMILAR CASE: EA NO. HOULD OE ATTEND ENF CONF HONDELEGATED CASE NONDELEGABLE TYPE DISCRETION	PHYSICIAN ACADEMIC VYES OI RE COMM	PORT/WILLFULL M APPROVAL	YES NO CO	NO MOISTURE DEN NO MPLEX/NOVEL	ISITY SL 1 OR 2	
MED INST WELL LOGGERS OTHER TYPE: DITE SIMILAR CASE: EA NO. HOULD OE ATTEND ENF CONF IONDELEGATED CASE NONDELEGABLE TYPE DISCRETION OTHER REASON:	PHYSICIAN ACADEMIC VES OI RE COMM	PORT/WILLFULL M APPROVAL	VUC PHARM GAUGE YES NO CO	NO MOISTURE DEN NO MPLEX/NOVEL	IRRAD	
MED INST WELL LOGGERS OTHER TYPE: DITE SIMILAR CASE: EA NO. HOULD OE ATTEND ENF CONF NONDELEGATED CASE NONDELEGABLE TYPE DISCRETION OTHER REASON: STHERE & BASIS TO CLOSE FMI	PHYSICIAN ACADEMIC VYES DI RE COMM	PORT/WILLFULL M APPROVAL	YES NO CO	NO MOISTURE DEN NO MPLEX/NOVEL INTEREST	ISITY SL 1 OR 2	
MED INST WELL LOGGERS OTHER TYPE: DITE SIMILAR CASE: EA NO. HOULD OE ATTEND ENF CONF IONDELEGATED CASE NONDELEGABLE TYPE DISCRETION OTHER REASON: S THERE A BASIS TO CLOSE ENI	PHYSICIAN ACADEMIC VES DI RE COMM	PORT/WILLFULL M APPROVAL	VUC PHARM GAUGE YES NO CO LOI F YES, EXPLAIN:	NO MOISTURE DEN NO MPLEX/NOVEL INTEREST	ISITY	
MED INST WELL LOGGERS OTHER TYPE: TE SIMILAR CASE: EA NO. HOULD OE ATTEND ENF CONF NONDELEGATED CASE NONDELEGABLE TYPE DISCRETION OTHER REASON: S THERE A BASIS TO CLOSE EN	PHYSICIAN ACADEMIC VYES OI RE COMM	PORT/WILLFULL M APPROVAL	YES NO CO LOI	NO MOISTURE DEN NO MPLEX/NOVEL INTEREST	IRRAD	
MED INST WELL LOGGERS OTHER TYPE: DITE SIMILAR CASE: EA NO. HOULD OE ATTEND ENF CONF HONDELEGATED CASE NONDELEGABLE TYPE DISCRETION OTHER REASON: S THERE A BASIS TO CLOSE EN	PHYSICIAN ACADEMIC VYES OI RE COMM	PORT/WILLFULL M APPROVAL	YES NO CO FYES. EXPLAIN:	NO MOISTURE DEN NO MPLEX/NOVEL INTEREST	ISITY	
MED INST WELL LOGGERS OTHER TYPE: TTE SIMILAR CASE: EA NO. HOULD OE ATTEND ENF CONF HONDELEGATED CASE NONDELEGABLE TYPE DISCRETION OTHER REASON: S THERE A BASIS TO CLOSE ENI EA # ASSIGNED BY OE	PHYSICIAN ACADEMIC VES DI RE COMM FORCEMENT COM	PORT/WILLFULL MAPPROVAL NFERENCE? Y/N IN	YES NO CO LOI ES ASSIG	NO NOISTURE DEN NO MPLEX/NOVEL INTEREST	IRRAD	
MED INST MED INST WELL LOGGERS OTHER TYPE: DITE SIMILAR CASE: EA NO. HOULD OE ATTEND ENF CONF HONDELEGATED CASE NONDELEGATED CASE NONDELEGABLE TYPE DISCRETION OTHER REASON: S THERE A BASIS TO CLOSE EN EA # ASSIGNED BY OE	PHYSICIAN ACADEMIC VYES OI RE COMM FORCEMENT COM	PORT/WILLFULL MAPPROVAL AFERENCE? Y/N II	YES NO CO LOI ES ASSIG	NO NO MOISTURE DEN NO MPLEX/NOVEL INTEREST NO	ISITY	

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