

NUCLEAR REGULATORY COMMISSION

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IN THE MATTER OF:

PORTLAND GENERAL ELECTRIC COMPANY, et al.

(Trojan Nuclear Plant)

Docket No. 36-344

(Control Building Proceeding)

Place - Portland, Oregon

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

In the matter of:

PORTLAND GENERAL ELECTRIC COMPANY,  
et al.

(Trojan Nuclear Plant)

Docket No. 50-344

(Control Building  
Proceedings.)

Bonneville Power Administration,  
1002 N.E. Holladay Street,  
Portland, Oregon.

Friday, October 26, 1978.

The hearing in the above-entitled matter was  
reconvened, pursuant to adjournment, at 9:00 a.m.

BEFORE:

MARSHALL E. MILLER, Esq., Chairman,  
Atomic Safety and Licensing Board.

DR. KENNETH A. McCOLLUM, Member. (Not present.)

DR. HUGH C. PAXTON, Member.

APPEARANCES:

On behalf of Licensees:

ROLAND F. BANKS, Esq., Souther, Spaulding, Kinsey,  
Williamson & Schwabe, Standard Plaza,  
Portland, Oregon 97204.



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1 On behalf of Bonneville Power Administration:

2 WILLIAM KINSEY, Esq., 1002 N.E. Holladay,  
3 Portland, Oregon.

4 On behalf of State of Oregon Department of Energy,  
5 Oregon Public Utility Commissioner:

6 JOHN H. SOCOLOFSKY, Esq., Department of Justice,  
7 State Office Building, Salem, Oregon.

8 On behalf of the Nuclear Regulatory Commission:

9 JOSEPH GRAY, Esq. and JANE AXELRAD, Esq.,  
10 Office of Executive Legal Director,  
11 United States Nuclear Regulatory Commission,  
12 Washington, D. C.

13 On behalf of Coalition for Safe Power, Intervenor,  
14 and pro se:

15 EUGENE ROSOLIE, 3926 N.E. 12th Street,  
16 Portland, Oregon.  
17  
18  
19  
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23  
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CHAIRMAN MILLER: The hearing will resume.

Is there someone who has asked to make a statement on limited appearance? Who wishes to be heard?

Come forward, please.

You may just be seated before the microphone.

Let us have your name, please.

MS. RICHEY-BURKHART: My name is Karen Richey-Burkhart.

CHAIRMAN MILLER: Will you spell that, please?

MS. RICHEY-BURKHART: K-a-r-e-n R-i-c-h-e-y dash B-u-r-k-h-a-r-t.

CHAIRMAN MILLER: Thank you. You may make your statement.

LIMITED APPEARANCE STATEMENT OF KAREN RICHEY-BURKHART

MS. RICHEY-BURKHART: Well, I just want to say that I have been very strongly opposed to nuclear power for a long, long time, and that if I had my way, every nuclear power plant in the world would be shut down. And I think that it's a big mistake to reopen Trojan until the walls are definitely earthquake proof. I think it's a big mistake to reopen it, period, but if you're going to reopen it, I think for sure that the walls should be safe.

I don't feel safe as an Oregon resident living in this state, knowing that the walls are not earthquake

eb2

1 proof, that they don't meet the requirements, and I just hope  
2 that the NRC makes sure that PGE doesn't operate Trojan  
3 until it is safe.

4 I'm just a citizen and I'm not even all that  
5 educated about all the construction and what-not. I just  
6 don't think it's safe and I don't want it running.

7 That's all I have to say.

8 CHAIRMAN MILLER: Fine. Thank you.

9 We are pleased to announce that the power outage  
10 has been concluded and our Reporter is utilizing the standard  
11 electricity.

12 Who is next, please? Does anyone wish to be  
13 heard who hasn't been heard? Anyone on our list which we  
14 read yesterday, some of whom made statements, some of whom  
15 were not here? Is there anyone who has been requesting the  
16 opportunity to make a limited appearance?

17 I have a written statement which was handed in  
18 which I'll read.

19 "Testimony of Jay C. Young.

20 "My name is Jay C. Young. I reside at  
21 1401 S.W. Midvale Road, Portland, Oregon.  
22 I'm a scientist, having been schooled and  
23 trained in physics and nuclear engineering.  
24 I appreciate this hearing process which per-  
25 mits airing such issues before those members



wb

1 of the public who may be impacted by the outcome.

2 "I am pro-nuclear as long as the  
3 plants are demonstrated to be beneficial, cost-  
4 effective and present no undue risk to the health  
5 and safety of the public. Therefore, while I desire  
6 to see the Trojan Nuclear plant back on line and  
7 generating the electricity for which it was built,  
8 I also desire that its operation not be hazardous  
9 to the public.

10 "At the time Trojan was approved for  
11 operation it was concluded by the appropriate  
12 federal and state regulatory agencies that the  
13 benefits to be derived from its operation far  
14 outweighed any potential hazard to the public.  
15 I hope that the only purpose of these hearings  
16 is to determine whether or not that risk has  
17 significantly increased as a result of the PGE  
18 identified non-conformance of the Trojan control  
19 build shear walls with their overall design cri-  
20 teria as specified in the safety analysis report.

21 "I would also hope that this determina-  
22 tion be made solely on the technical aspects of  
23 the issue rather than the emotional ones. If  
24 this determination shows that the risk to the  
25 public is not significantly increased, interim

wb

1 operation of the plant should be permitted while  
2 the control building is modified to correct this  
3 non-conformance.

4 "Having studied the testimony submitted  
5 by persons skilled in structural engineering and  
6 seismic loading evaluation, namely Professor Harold  
7 I. Laursen of Oregon State University, the Bechtel  
8 team of Anderson, Katanics, Johnson and White, and  
9 Kenneth S. Herring of the NRC, it is my conclusion,  
10 as it is the unanimous conclusion of these experts,  
11 that the Trojan control building can withstand the  
12 effects of an SSE, including the less severe OBE,  
13 in its present condition. Therefore the risk to  
14 the public during the proposed interim operation  
15 of the plant while the control building is being  
16 modified does not significantly change from that  
17 upon which approval for initial operation was  
18 granted.

19 "On this basis I urge this Board to  
20 rule in favor of interim operation."

21 Are there any more statements, either oral or  
22 written?

23 Come forward, please.

24 Let the record show that we have a statement,  
25 a written statement from Larry H. Neilson. And there's also



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1 a statement on behalf of Dennis A. Tollefson. Mr. Tollefson  
2 is here and will make the presentation, unless you wish to  
3 submit it in writing. It's whichever you wish.

4 LIMITED APPEARANCE STATEMENT OF DENNIS A.

5 TOLLEFSON, 1525 LIBERTY STREET, ALBANY, OREGON

6 MR. TOLLEFSON: My name is Dennis A. Tollefson.  
7 I live at 1525 Liberty Street, Albany, Oregon 97321. I am  
8 a student at Oregon State University. I am speaking today  
9 as a resident of the State of Oregon who is affected by the  
10 operation of the Trojan Nuclear Power Plant.

11 Expert testimony has been submitted during these  
12 proceedings, specifically by Harold I. Laursen, Robert C.  
13 Anderson, George Katanics, Theodore E. Johnson, and William  
14 H. White and others, which demonstrates the structural  
15 adequacy of the Control Building wall during a .25g earth-  
16 quake.

17 With these assurances, I do not believe that  
18 the operation of the Trojan Nuclear Plant during modifications  
19 poses any undue risk to the health and safety of the general  
20 public.

21 Therefore, I urge the Nuclear Regulatory Commis-  
22 sion and the Atomic Safety and Licensing Board to permit  
23 the interim operation of the Trojan Plant while the  
24 required modifications are being made.

25 At this time I would like to present to the Atomic

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1 Safety and Licensing Board a petition signed by 99 people of  
2 a wide variety of professions. The petition reads as  
3 follows:

4 "We agree with the U. S. NRC Staff  
5 that the Trojan Nuclear Power Plant should be  
6 allowed to operate while modifications to the  
7 plant control building take place.

8 "We recommend that the U.S. NRC grant  
9 an interim operating license to the Trojan Nuclear  
10 Power Plant provided any necessary operating  
11 restrictions are placed on the plant while  
12 modifications to the control building are in  
13 progress."

14 Thank you for your time.

15 CHAIRMAN MILLER: Thank you.

16 Let the record show that we have received the  
17 written statement referred and the petition. Both that  
18 petition and all other written statements have been received  
19 and will be filed as part of the record, and will be con-  
20 sidered.

21 There is one additional statement that was  
22 presented and I was asked to read it, which I will, the  
23 statement of Larry H. Nielsen.

24 "My name is Larry H. Nielsen and I live  
25 at 1975 Breakwood Circle, Albany, Oregon. I am



eb2

1 a senior in Nuclear Engineering at Oregon State  
2 University. I urge the Board to grant Portland  
3 General Electric permission to operate its Trojan  
4 Nuclear Plant in the interim period while modifi-  
5 cations are being made to the control building.

6 "I make this request not primarily as  
7 a nuclear engineer but as the head of a family  
8 finding it increasingly difficult to keep up with  
9 the rising cost of living, including electricity  
10 costs. Since August 1 of this year, PGE has pur-  
11 chased over 1.25 billion kilowatt-hours of energy  
12 at a cost of over \$7 million. This was \$7 million  
13 spent to replace Trojan's output and will even-  
14 tually be repaid by ratepayers like myself.

15 "I enjoy the luxury of knowing that a  
16 light will always come on when I turn the switch  
17 and I expect to pay for that luxury. However, I  
18 do not enjoy having to pay more than is necessary  
19 when that is a result of buying more expensive  
20 power elsewhere while a safe, cheaper supply is  
21 needlessly idle.

22 "The real question at hand is not the  
23 economics of nuclear power but the safety margin  
24 of the control building structure to withstand  
25 a safe shutdown earthquake (SSE). Expert testimony

eb3

1 has already been given to this effect. Mr. Kenneth  
2 S. Herring presented an analysis in testimony sub-  
3 mitted to the Chairman of the ASLB on October  
4 13, 1978, which showed that '....the structure  
5 had approximately 1.4 times the required SSE  
6 resistance....'

7 "Testimony submitted on or about Octo-  
8 ber 3, 1978, by Bechtel engineers Anderson,  
9 Katanics, Johnson, and White stated '....the  
10 structure will safely withstand the seismic shear  
11 forces of a 0.25 SSE.'

12 "Professor H. Laursen of Oregon State  
13 University testified that '....I can state with  
14 reasonable assurance that the shear wall of the  
15 control building can withstand a .25g safe shut-  
16 down earthquake.'

17 "With these expert assurances, it seems  
18 that there is no danger to the health and safety  
19 of the general public and that the Trojan plant  
20 should be restarted as soon as possible."

21 Who next wishes to be heard or to submit a  
22 written statement?

23 Come forward.

24 MR. HILL: Good morning.

25 CHAIRMAN MILLER: Good morning. Will you give

eb4

1 us your name, please?

2 MR. HILL: Mark Hill.

3 CHAIRMAN MILLER: Thank you.

4 LIMITED APPEARANCE STATEMENT OF MARK HILL,  
5 ST. HELENS, OREGON

6 MR. HILL: I'm a resident of St. Helens. It's  
7 in Columbia County, about 12 or 13 miles south of the Trojan  
8 Nuclear Plant. I came here this morning to share with you  
9 some of my experiences in living near the plant, and to give  
10 you some idea of what it's like to have the Trojan plant as  
11 a neighbor, and from that perspective to comment on the  
12 proposal to allow startup of the Trojan plant before it is  
13 brought up to earthquake standards -- that is, in the in-  
14 terval while it is being brought up to the standards.

15 There are good neighbors and bad neighbors. I'd  
16 like to give some impressions of what it is like to live  
17 next to the Trojan plant. I'd like to discuss two events  
18 which have happened recently, just in the last 60 days.

19 One is an airplane accident that occurred within  
20 a half mile of the nuclear plant, and the other is a planned  
21 bombing of the plant.

22 CHAIRMAN MILLER: Did you say "planned" or  
23 "plant" bombing?

24 MR. HILL: A planned, p-l-a-n-n-e-d.

25 CHAIRMAN MILLER: Thank you.



eb5

1 MR. HILL: In both cases the PR representatives  
2 from Portland General Electric were quick to respond. You  
3 know, the airplane could have collided directly into the  
4 cooling tower wall without effecting any damage or threaten-  
5 ing the health and safety of the residents living nearby.  
6 No mention, however, was made-- We didn't see a PR repre-  
7 sentative saying, "Oh, boy, I sure am glad that that plane  
8 didn't land in the spent fuel storage pool," which is housed  
9 by nothing more than a metal, corrugated steel shed, "or  
10 other critical buildings around the plant."

11 The response was not one to illuminate the public  
12 as to the real hazards out there but herely to protect their  
13 own interests. I don't expect them to behave otherwise.

14 Similarly with the bombing, the planned bombing  
15 by some wierdo. He had a pack of dynamite on his back. He  
16 told news people later that, Oh, no, he was going to put  
17 this anywhere where it might make any difference. He was  
18 just going to plant it somewhere near the plant and give  
19 people a good scare.

20 And so I assume that this particular bomber was  
21 a nut but a benign kind of nut.

22 However, I want to quote the Sierra Club,  
23 Mr. Douglas Knight, who spent a good deal of time studying  
24 the safeguards problem in the nuclear industry. He points  
25 out that:

eb6

1 "Recent violent crimes and terrorist  
2 attacks suggest very strongly that there are  
3 always a few persons who will commit the most  
4 heinous deeds within their power. Their eventual  
5 employment of radioactive materials appears almost  
6 certain --"

7 Excuse me. He says:

8 "Their eventual employment of radio-  
9 active materials appears virtually certain."

10 So in this we were lucky, and again we didn't see  
11 a PR representative, "Goodness, I sure am glad that this nut  
12 was just a good nut and not a bad nut, you know, when it  
13 came to the possibility of bombing a nuclear power plant."

14 I just wanted to give you the sense of the kind  
15 of uneasiness living near a nuclear power plant. Okay?

16 Now the proposal to allow startup of the plant--  
17 Let me find my notes.

18 (Pause.)

19 Before I get into the actual proposal for the  
20 startup of the nuclear power plant I would like to show one  
21 more experience, also happening in the last 60 days.

22 Recently PGE exercised its -- carried out a  
23 radiological emergency drill or exercise out at the plant.  
24 I, along with a few other members of the Columbia Environmen-  
25 tal Council, attended the critique, a meeting which was

eb7

1 conducted by -- a kind of self-critique conducted by the  
2 people who had participated in that drill.

3 I was surprised to learn that the NRC requires  
4 a once-a-year practice only. I was surprised to find that--  
5 Well, okay, part of this drill is to inform large numbers  
6 of people. Person X informs ten people. Each of those  
7 informs ten more people by phone or whatever, in order to  
8 get the message out, and each person then knows exactly what  
9 to do and how to respond in the case of an emergency. This  
10 is according to the plan.

11 We found people calling on their telephone and  
12 getting dead lines or telephone numbers that had been changed,  
13 or "Dr. Blotsmore? We don't know where Dr. Blotsmore is  
14 any longer. He moved, or quit," or whatever.

15 One person called and got a taped message,  
16 "After the tone, leave your message."

17 The only message the State of Washington, right  
18 across the river, received from Portland General Electric  
19 was a single phone call which stated hurriedly that "This is  
20 a drill," and gave the information that was needed to some  
21 secretary who happened to pick up the phone Cowlitz County,  
22 and then this secretary got down as much as she could and  
23 wandered about wondering whom to give this note.

24 They later wanted to -- these same people at  
25 Cowlitz County want to confirm it, once that she finally



eb8

1 found someone who recognized what it might be. That person  
2 attempted to call the Trojan plant to get confirmation and  
3 was unable to do so.

4 Also additionally, the person who left the message  
5 on the taped recording-- As you recall, someone got a taped  
6 message to leave a message on a tape. That person failed to  
7 mention that it was a drill. However, the receiver, the  
8 person who received the message said in this critique that he  
9 could tell by the tone of the voice of the reporter that  
10 we were talking about a drill and not a real emergency.

11 In any case, it was a very disconcerting and  
12 troubling event for us. The one thing that impressed us  
13 most was the representative from the National Guard. The  
14 National Guard, by the way,-- This was a trial, or this  
15 drill had to do with a very minor kind of accident, minor  
16 relative to the potentials as far as nuclear accidents go,  
17 no evacuations were deemed necessary or anything like this.

18 However, due to the communications problems in  
19 this drill, the National Guard, if it had actually been the  
20 real thing, would have been evacuating the whole strip along  
21 the Columbia River and dropping pamphlets and loud speakers  
22 and communicating to people to highball it to the nearest  
23 decontamination center along the river, wherever that might  
24 be. So, you know, they had in a sense overresponded or they  
25 believed that they had overresponded in view of the actual

eb9

1 nature of the mock drill.

2 So there were what we believed were some serious  
3 problems here, and he seemed to agree, also, the National  
4 Guard person. He pointed out that in emergency preparedness  
5 plans, the National Guard has emergency preparedness plans,  
6 the communications network through which they run every six  
7 hours. They just keep their communications network alive  
8 and active and healthy by continuing to exercise them all the  
9 time.

10 He felt strongly and suggested very strongly,  
11 you know, that we need more drills. You can't expect to keep  
12 an adequate safeguards system alive by exercising it only  
13 once a year.

14 Now we carried this message to the Oregon State  
15 Siting Council. I wasn't able to attend so I'm giving you  
16 hearsay. A number of people stood up and attempted to  
17 communicate these problems to the Siting Council. From what  
18 I understand, they were ridiculed and mocked, you know, and  
19 treated just ridiculously -- disrespectfully.

20 So that's just about the end of that story but  
21 you can see that this scare again is a disturbing kind of  
22 thing.

23 How serious is the nuclear industry? How serious  
24 is PGE? How serious are these agencies that are set up  
25 presumably to protect us, to watch after our safety, how

eb10

1 serious are they about our health and safety?

2 I called to the Columbia County, a John DeFrance,  
3 who is to coordinate radiological emergency response in  
4 Columbia County. My wife made telephone calls to him and  
5 asked him, in anticipation of the eventual startup of the  
6 Trojan plant with substandard conditions. She said, "What  
7 should I do in case of an emergency? Is there any kind of  
8 evacuation plan for the St. Helens area?"

9 He stated matter of factly that, "No, there was  
10 not."

11 So another call to the State Health Division.  
12 He said that he and other people involved in State Health,  
13 including Dr. Marshall Parrot --

14 CHAIRMAN MILLER: Do you know how to spell those  
15 names?

16 MR. HILL: The last name, Parrot? I believe that  
17 DeFrance is spelled D-e F-r-a-n-c-e. And Parrot is spelled  
18 P-a-r-r-o-t.

2 19 But in any case, Dr. Marshall Parrot assured me  
20 that although he didn't have the radiologic emergency plan  
21 for Columbia County handy, there was one in the library, in  
22 our public library, although a survey of our libraries  
23 brought up none of this.

24 It seems like the whole thing is very shoddy and  
25 very minimal. The NRC is requiring once a year trial runs



eb11

1 through their emergency response exercise, and that's exactly  
2 what they'll do, you know. Perhaps next year-- We had all  
3 these problems you know this year but perhaps next year we'll  
4 trying something different and see if we can work out some  
c2 5 of these wrinkles. It's just not very reassuring.

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1 Anyway, as I was saying, I, and I think other  
2 Columbia County citizens, have serious doubts whether  
3 decision-makers are really that interested in our health and  
4 safety, or if they're more interested in the buck, frankly.

5 Another reason which I have which creates more  
6 doubt, creates a little more dissidence here in my mind as  
7 to whether or not the NRC or PGE or the nuclear industry is  
8 really interested in my well-being as a neighbor of the  
9 Trojan plant, I see a kind of current of continual secrecy.  
10 We just saw it again. We just saw it again. The Bechtel  
11 and PGE contract, it was secret for this long.

12 It's not limited only to the industry either.  
13 I've seen it in the NRC itself. The WASH-1400 study re-  
14 mained secret for eight years, until the Freedom of Informa-  
15 tion Act, until somebody sued to get ahold of that thing and  
16 make it public. Would it be public knowledge today if some-  
17 one hadn't sued and found out about it? I don't know.

18 And I think part of it is that-- I think there  
19 is kind of a melding of the governmental regulatory agency  
20 here and the industry itself. It's hard to say here is  
21 where one ends and one begins. And you know, that kind of  
22 coordination may be good but it also can -- but unless there  
23 is a clear distinction as far as responsibility goes, there  
24 can be serious conflicts of interest.

25 The person who is responsible, for example, for

eb2

1 making public an emergency at the Trojan plant is the plant  
2 superintendent, Mr. Bart Withers, at the plant. Now I'm  
3 sure that Bart Withers is a nice man but I'm not sure that  
4 his interests in the case of an emergency at the plant are  
5 identical with mine as a member of the public. His would be  
6 an admission of a problem there at the plant for which he  
7 takes ultimate responsibility, so he's kind of between  
8 protecting his own ass and the ass of the public, is what  
9 I'm saying. He's in a state of dissidence, in a state of  
10 conflict of interest, and I don't think it's fair to put  
11 somebody in that kind of a state, for one thing. And I  
12 don't think it's fair for us to expect him to conduct him-  
13 self always in an honest fashion when we put him there.

14 The Nuclear Regulatory Commission is a part of  
15 the government, and the government itself has tied itself  
16 into the nuclear industry in just so many ways that-- Well,  
17 for example, the Price-Anderson Act. If we want to stick  
18 closely with emergencies or accidents, the government has  
19 accepted responsibility for any kind of accident at nuclear  
20 power plants ultimately. So it has its liability there.

21 Again, the government may find itself in the  
22 position of either protecting itself, because the government  
23 is of limited resources -- I mean our government is not  
24 omniscient and all powerful and all this, and it's torn  
25 between protecting itself and protecting the public interest.



eb3

1 So I really would like to see a clearer demarca-  
2 tion between the industry and the agencies of government  
3 which are presumed to regulate that industry.

4 Now corporations are economic beings. They are  
5 motivated by a profit motive, mainly. As such, I don't  
6 expect them to behave any way other than amorally, but I  
7 think that our government, the people should expect our  
8 government to behave according to an ethic higher than that  
9 which you can get, you know, and I think this is the case  
10 here, that the issue is can we get away with putting the  
11 public into this increased risk in order to fatten our  
12 wallets.

13 Okay. Now there's going to be sacrifice. There's  
14 going to be sacrifice involved if we decide not to take  
15 the risk with the public's health and safety. There is  
16 going to be a certain measure of suffering. People are not  
17 going to be as well off as they were. The average PGE  
18 customer may have to pay more. The average PGE stockholder  
19 may not get the dividends that he got before.

20 But I think that people are willing to make  
21 some kind of sacrifice for the well-being of the race in  
22 the long run, you know. And I think we should think of it  
23 in that fashion that we are setting precedent here, that  
24 we're making decision here that are -- you know, that are  
25 going to have ramifications into the future endlessly, so

1C1cont'd  
agbl  
seb3

1 that we have to -- we are really thinking about our future  
2 here.

3 I think I'm finished. Thank you.

4 CHAIRMAN MILLER: Thank you.

5 (Applause.)

6 CHAIRMAN MILLER: Who else wishes to be heard?

7 Come forward, please.

8 LIMITED APPEARANCE STATEMENT OF ANDREW PRICHARD

9 402 S.W. 10th, CORVALLIS, OREGON

10 MR. PRICHARD: My name is Andrew Prichard.

11 I live at 402 S.W. 10th, Corvallis, Oregon. I'm a graduate  
12 engineering student.

13 I'm here to urge that Trojan be allowed to  
14 start up on an interim basis. Let me state, to begin with,  
15 that I'm not qualified to evaluate either the magnitude of  
16 an earthquake or the seismic loading that the building can take,  
17 therefore, I am forced to base my judgment on the analysis  
18 of others.

19 The problem with starting Trojan, as I see it,  
20 in event of the largest -- the safe shutdown earthquake,  
21 can the plant be shut down safely. The second is, at what  
22 level of an earthquake can Trojan continue to operate at?

23 The first problem is by far the most important.  
24 The definition of the safe shutdown earthquake will have to  
25 be left to experts in the field.

ab2

1 The NRC, on the advice from experts, has set this  
2 safe shutdown earthquake at which Trojan is expected to  
3 shut down at 0.25g ground acceleration.

4 At least three expert groups, the Bechtel staff  
5 the NRC Staff and Harold I. Laursen, working for Oregon  
6 DOE, all working as independent identities, have indicated  
7 that Trojan can shut down from a 0.25g earthquake.

8 I feel that while the SSE design requirements  
9 are not met as originally stated in Trojan's license, the  
10 NRC standard is still met. I feel that this makes for a  
11 very secure feeling on my part.

12 The second problem is at what level earthquake  
13 should Trojan be required to go to cold shutdown and undergo  
14 complete inspection? Expert analysis on this level of  
15 earthquake varies more than the analysis for an SSE earth-  
16 quake from the ground acceleration from 0.08g to 0.11g.  
17 However, if the lowest of these levels is set for the  
18 required level to shut down, I see no reason why there should  
19 be any sacrifice to the safety to running Trojan.

20 While this hearing is only a safety hearing,  
21 I feel some economic consideration should be taken since, if  
22 it were not a large economic penalty in not operating Trojan,  
23 there would be no reason to restart the plant.

24 However, there is a large penalty for not running  
25 Trojan, either economic for the cost of replacement power,



agb3 1 or social for the unavailability of power.

2 In conclusion, I urge Trojan be allowed to restart.

3 Thank you.

4 CHAIRMAN MILLER: Thank you.

5 Who next would like to be heard?

6 LIMITED APPEARANCE STATEMENT OF LEROY WENCE,

7 A RESIDENT OF COLUMBIA COUNTY, OREGON

8 MR. WENCE: My name is Leroy Wence, W-e-n-c-e,  
9 and I'm a Columbia County resident since 1954.

10 I would like, as a layperson, to give a very  
11 simple testimony on why I feel Trojan should not be started  
12 up. I would like to never see it started up period.

13 The earthquake standard of 2.5 is very, very  
14 low, I believe. In effect, in 1947 or 1948, there was an  
15 earthquake of somewhere around 4. in the Rainier area.  
16 It did considerable damage to the local grade school. There  
17 was a concrete structure, supposedly one of the 1. and  
18 modern buildings of the time.

19 That puts, in my mind, a question of the validity  
20 of a 2.5.

21 The proximity of Trojan to the Columbia River,  
22 which is very dear to my heart, and a very valuable lifestream  
23 to the whole area also that bothers me that Trojan is sitting  
24 there right on the bank of the Columbia River, and if any  
25 leakage should occur, it goes into the Columbia River.

ab4  
1 And the Columbia River is dead, and sooner or later, the  
2 whole Pacific Ocean is dead. That bothers me as a Columbia  
3 County resident.

4 I have oftentimes run into workers that have  
5 worked on Trojan in the last four or five years. And one of  
6 my trades has been bartending. And I've been able to have  
7 a rapport with these people, that a lot of people that really  
8 don't see the quality of persons that are working on these  
9 plants.

10 And, after say three months of dealing with  
11 these people, I drew the conclusion that they were not  
12 really interested whatsoever in safety but more in the over-  
13 time and the dollars in their pockets.

14 I, myself, am a welder and I am qualified to  
15 at least give my opinion on some of the quality of the  
16 people that were working there as welders. And, in my  
17 opinion, they are very shoddy quality-wise.

18 So I have real doubts as to the real structural  
19 quality of the whole plant.

20 The overseers of this whole thing, as far as  
21 PGE is concerned is, we find out a problem and if it  
22 is not too big a problem then the public never really hears  
23 about it. If it's a big problem, and they can't contain it  
24 within their own little clique, then it is exposed to the  
25 general public eventually.

agb5

1 This is something that bothers me. Why isn't  
2 there someone from a walk of life that is more in tune with  
3 public safety rather than industrial safety and the industrial  
4 dollar? Why isn't there someone say, in my capacity, at  
5 that plant to kind of give and check and balance on that  
6 situation there?

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1 I don't understand with the magnitude of the  
2 problems that nuclear power can bring up, why isn't there  
3 someone with more of a public image involved there, other  
4 than just business? I believe that someone should be in  
5 the position to inform the public.

6 We find out things years later sometimes and --  
7 who knows? -- I don't know if we ever find out about some of  
8 them.

9 I have just now lately been going to some of  
10 the meetings at the CEC, which is the Columbia Environmental  
11 Association. And I've just found out that, due to this  
12 airplane accident, that the wastes are being stored in a  
13 swimming pool, similar to a swimming pool situation, a cooling  
14 pool, they call it. And it is housed in a corrugated tin  
15 structure.

16 Had this airplane or any piece of that airplane  
17 disrupted that and moved any of these containers closer  
18 together, we would have had a big problem right there.

19 And this is what I'm talking about so far as the  
20 Columbia River is concerned.

21 The life of the uranium, or plutonium, is 500,000  
22 years, I understand. The rate of cancer in this county has  
23 risen, and in the world, in fact, since radioactivity has  
24 been introduced into our atmosphere.

25 It takes something like 15 years for a person

agb2

1 after they have been exposed to contract this cancer. It is  
2 not detectable as plutonium cancer, it's just cancer. If  
3 this person is to be cremated, it goes right up into the  
4 atmosphere again for someone else to breathe.

5       Getting to my point of what do we do with our  
6 wastes, what is the industry doing with the wastes? It's  
7 an incomplete cycle.

8       The scientists tell us that they will have it  
9 cured when it's necessary. But to me, that's insane, it  
10 should be taken care of now before the process even continues  
11 to build more and more pounds of plutonium. Plutonium is  
12 my number one concern right now.

13       Trojan pumps out -- if it is running year-round --  
14 four to five hundred pounds of plutonium. It takes 10 pounds  
15 to make a nuclear bomb the size that could wipe out a hundred-  
16 mile radius, or at least affect a hundred-mile radius, if it  
17 dropped.

18       And it's always with us, 500,000 years. Can we  
19 contain that in stainless steel?

20       My technical knowledge on the subject is not to  
21 the point that I can reel off all the statistics, but to me  
22 it seems insanity to continue in an industry that is so  
23 terribly dangerous in just the waste that it's creating.

24       Trojan -- or PGE, when they first told us they  
25 would like to build, or apply for a license to build a nuclear

agb3

1 plant at Prescott, said there would be no waste storage  
2 there.

3 They had a license --- I believe it is 60 or 90  
4 days --- to hold wastes, and now they have just been granted  
5 not only a license to store one year refueling, they've  
6 been granted double that.

7 And the people that are living in this area,  
8 that's something that is really coming across to them now,  
9 how lethal and how dangerous that is. Because we understand  
10 that there are several states that now have outlawed even  
11 the transportation through their state of nuclear waste.

C3

12 My real concern, as living in this northwest,  
13 and seeing the politics that are happening. We have in  
14 Washington State now a pro-nuclear person in the Office of  
15 Governor.

16 I personally talked to the lady some years ago.  
17 And I can attest to the fact that she will always be pro-  
18 nuclear. And as long as she has anything to say about  
19 Washington State, it will progressively be pro-nuclear as  
20 far as anything that a governor -- the powers of the governor  
21 can affect that.

22 We have, at Hanford, the possibility -- and this is  
23 a mere projection -- that it will be the dumping ground of  
24 the whole northwest as far as this waste problem goes. Right  
25 now, they have 115,000 gallons of wastes in the sands that



agb4  
1 have leaked out of containers. This is a fact that I read  
2 in our local newspapers. This really scares me.

3 This is all upriver, on the Columbia River that  
4 we have and that we love out here. It's just laying in the  
5 sand.

6 Say we have a 2.5 earthquake over there, and it  
7 opens a fissure that drops this into the Columbia River  
8 There again it's dead. And how many cities along the way  
9 are dead. And, again, the Pacific Ocean is dead. They've  
10 already picked up increasingly amounts of radioactivity in  
11 fish in the Pacific Ocean.

12 We don't want it, as Columbia County residents,  
13 we don't want to have to worry about if we go out and cast  
14 our fishing pole out there and catch a fish, to worry about  
15 whether we're going to be poisoned from that fish.

16 It used to be that you could go out there as a kid  
17 and catch a fish and it was such a prize. You bring it  
18 home now -- the kid brings it home, and the parents say,  
19 Oh, well what do we do with this fish? We have to go take  
20 it to the university or something to get it tested to see  
21 if it is safe to eat, because we don't know.

22 The public, I feel, is very uninformed about the  
23 dangers and the actual problems that a plant like Trojan  
24 Nuclear Plant is creating for our county.

25 My understanding, as a layperson, is that we don't

agb 5

1 need the electricity. In Columbia County we don't need it.  
2 We've always had very cheap hydroelectric power to meet our  
3 needs.

4 I understand that a lot of the power that is  
5 created by Trojan is sent to our southern states. I'm not  
6 against helping someone in need, but if it is at the danger  
7 level that nuclear power -- I see no need. If these people  
8 want the increase in power, then they should take the increase  
9 in risk not us.

10 We're here because it's a very clean environment  
11 and we'd like to keep it that way. This plant is going to  
12 be here forever. There is no way that we can say, just move  
13 it out of our area, we don't want it. It's here to stay,  
14 we have to live with it for 500,000 years now, there's no  
15 way we can get out from underneath it.

16 If the people of this Board were living in this  
17 area and having to deal with their neighbors bringing up  
18 questions, I'd feel that we'd probably get a little more  
19 response in our outcries that we don't want this plant here.

20 I'd like to leave you with one observation by  
21 a Mrs. Helen Coldcott, the lady who was instrumental in  
22 stopping the French from atmospheric testing in her area,  
23 which was Australia, at the time. Now, she's over here helping  
24 us with our nuclear cause. And until she made this  
25 observation, I had never really made the connection. Plutonium

agb6

1 I feel, is the number one problem that we have to deal with  
2 here because it has such a long life span.

3 It's a Greek name, it was named after the Greek  
4 God of Hell, Pluto. And therein lies the real danger. I  
5 don't want to have to have my children live under that  
6 danger forever.

7 If I could move -- if I thought I could move  
8 to a safe place away from this danger, I would. But I  
9 understand that now there are 60 of these plants in operation  
10 or in near-operation in the United States today.

11 This lady makes an observation of by the Year  
12 2020, we will have something like 100,000 pounds of plutonium  
13 to deal with. I don't see how we can watch it for 500,000  
14 years without having a mishap. And it only takes one-millionth  
15 of a gram to kill you and kill me and kill my children.

16 Thank you.

17 CHAIRMAN MILLER: Thank you.

End WRB

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1 CHAIRMAN MILLER: Who's next that would like to be  
2 heard?

3 MS. CRIBBY: I think I'm on the list. Phyllis  
4 Cribby --

5 CHAIRMAN MILLER: Right.

6 MS. CRIBBY: -- from Oregon.

7 CHAIRMAN MILLER: All right.

8 LIMITED APPEARANCE STATEMENT OF PHYLLIS CRIBBY  
9 RESIDENT, OREGON

10 MS. CRIBBY: I was here yesterday, but it's almost  
11 a 300 mile trip which I had to make on the bus the night  
12 before yesterday, but I wasn't organized enough to speak  
13 yesterday.

14 CHAIRMAN MILLER: Sure. We're glad to hear from  
15 you.

16 MS. CRIBBY: I am about a 32 year resident of  
17 Oregon. I'm a registered nurse. I am not at present employed  
18 and so I am able to be here and participate in this sort of  
19 thing

20 I know that some people are able to carry this  
21 activity on while they're also carrying on a full-time job,  
22 and I don't see how they can do it.

23 I just wish to say that I am not now and never have  
24 been collecting food stamps, welfare, or unemployment, and  
25 I think it's applicable to bring that out for a reason that

mph?

1 I'll elaborate on later.

2 I have been kept informed about these hearings, and  
3 I appreciate that. Maybe it's just that our mail service  
4 down there is a little better; but I got my notice about the  
5 hearings.

6 CHAIRMAN MILLER: Yes, I'm glad.

7 MS. CRIBBY: Although I live in a place that is  
8 quite far from here, probably as far from here as you can  
9 get living in Oregon, people in that area are concerned about  
10 Trojan and its operations. I am not only because of the  
11 dangers to ourselves and our friends and relatives that do  
12 live in the immediate periphery, but also because of the  
13 never ending implications of nuclear proliferation which  
14 were brought out so well yesterday and so far today also.

15 I fully agree with I believe it was Mr. Nemcek's  
16 opening statement yesterday that the world would be better  
17 off if more people could cry about the present plight of the  
18 earth and its people.

19 I have spent over seven years of my life in what  
20 are referred to as Third and Fourth World countries. And  
21 the reality of figures such as 20 percent of the world's  
22 population using 80 percent of nonrenewable resources is  
23 very meaningful to me.

24 We currently have a plethora of books written on  
25 ecological matters, and there is really no reason for anybody

mpb3

1 to be uninformed about them. But we find that the everyday  
2 activities of most people keep them from either being informed  
3 or involved as they should be. But probably even more than  
4 that what concerns me is that self-centered attitudes which  
5 are to a certain extent natural, but I think they're being  
6 carried to a much greater degree than they should be in our  
7 way of living in this country especially.

8 And I think that the aim and pursuit of an ever-  
9 expanding economy is not only unfeasible but very disaster-  
10 ously immoral.

11 As if you don't have enough to read, I'd just  
12 like to bring to your attention this rather obscure book  
13 called Economics and the Crisis of Ecology, by Nuringdar Sing,  
14 which I found in our little library. And just for an example  
15 I would like to read a couple of things out of it.

16 He says:

17 "What is needed evidently is essentially a  
18 conservation-oriented economy and not one of which  
19 self-exciting entrepreneurial dynamism is the driv-  
20 ing force."

21 And he refers to what we have had before in that  
22 vein as being "creative destruction". But he says now we're  
23 having destructive creation.

24 His book is quite technical; it's more scholarly  
25 perhaps than that sounds. But I wish you would have a chance



mph4

1 to look at it sometime.

2 It would seem that the revelations of PGE and  
3 Bechtel's own testimony would be sufficient evidence for the  
4 need to keep Trojan closed. However, as was brought out  
5 yesterday, past decisions in hearings have only resulted in  
6 a perpetuation of these conditions which have not met even  
7 minimum standards.

8 And so we of the public that are concerned do feel  
9 that we should participate even though we're not experts. As  
10 you listen to these presentations I hope that you will keep  
11 in mind our past experience with such, and try to understand  
12 our impatience and not take it personally if it doesn't apply.

13 What amazes me is that not only do deficiencies  
14 exist despite supposedly stringent regulations that we're  
15 always hearing about, but that this information comes solely  
16 from designed plants. Can it be true that the NRC did no  
17 onsite inspection, and that there are no verifications of  
18 the materials that are actually used?

19 One of my concerns is that the requirements of  
20 NEPA, the National Environmental Policy Act, are not being  
21 met by Trojan operation. I can't see that any of the points  
22 are met.

23 But I might just read under Title 1, Section 101B,  
24 number 3, which is:

25 "Attain the widest range of beneficial uses

moh5

1 of the environment without degradation, risk to  
2 health and safety, or other undesirable or un-  
3 intended consequences."

4 It's hard for me to believe that -- well, maybe  
5 I'm not right, but it's my impression that no Environmental  
6 Impact Statements have ever been issued on any of these  
7 projects at Trojan. And every time I've put written input  
8 in I've asked for the Environmental Impact Statement or to  
9 know where I could read one, and I've never received any ans-  
10 wer.

11 And as far as I can understand, only Environmental  
12 Impact Review has ever been issued, and of course that's much  
13 less comprehensive than an Environmental Impact Statement  
14 which would require going into considerations of the full  
15 impacts and alternatives, which it seems to me is absolutely  
16 essential for anything such as this.

17 While I think that the operation of Trojan could  
18 be successfully challenged just on an economic basis alone,  
19 just economic objections to it leave me cold because I think  
20 that there are so many other more important considerations.

21 I'd just like to put in here some of the experience  
22 that I've had at the time of the Trojan occupation in August.  
23 I wasn't able to participate in that occupation because I had  
24 some other responsibilities. But I did picket at the PGE  
25 plant downtown at that time, and just some of the things that

mpb6

1 happened there -- of course, that was a very hostile environ-  
2 ment to be in. You couldn't expect to have much communica-  
3 tion with the people coming out of that building.

4           However there was a surprising amount of it. And  
5 also surprisingly, people that didn't even know about it  
6 would come across the street and actually thank us for doing  
7 what we were doing in opposing the Trojan Plant and nuclear  
8 power. And even some people coming out of the building would  
9 say that too. They said they couldn't get involved, but they  
10 did appreciate it.

11           And the adverse remarks that we got -- we would  
12 have liked to enter into a dialogue with some of the people  
13 that didn't feel the way we did. However, this is hard to  
14 do. Usually they would just fling comments at us over their  
15 shoulder, such as saying "Get to work" and things like that.  
16 And that was why I made that statement at the beginning,  
17 because I didn't know of any people that were participating  
18 at that day with me who were on welfare or anything like that.

19           They were medical students on leave from college,  
20 and things like this. And I think that the image that this  
21 projected about any opposition is not a true one.

22           And I am also concerned about the coverage that  
23 things get in the newspaper. I know that some newspaper do  
24 try to cover it completely; but where I live I couldn't even  
25 find a word about the hearings in the paper at all.



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1 I attended the Monday hearing and then I went home  
2 for a couple of days before I came here, and I couldn't find  
3 anything about it. So it's not surprising that the general  
4 populous is not more concerned, because they just don't know  
5 about things.

6 And one question I'd like to ask now is where can  
7 one find the Transcript of these hearings? Will it be in the  
8 libraries of the state?

9 CHAIRMAN MILLER: We'll supply some information  
10 about that, and the Environmental Impact Statement.

11 Mr. Gray, would you give that information, please?

12 MR. GRAY: As to the Transcripts, a copy will be  
13 available in the local Public Document Room in the Columbia  
14 County Courthouse. That is up in the area of the Trojan  
15 Plant. I don't have the exact address at the moment, but I  
16 can get that.

17 As far as the Environmental Impact Statement is  
18 concerned, there was an Environmental Impact Statement issued  
19 at the time of the original licensing of the Trojan facility,  
20 and as issued prior to the licensing of that facility. And  
21 it was part of the basis for issuing the license; so it was  
22 considered at that time.

23 As to subsequent licensing actions, I infer that  
24 you're referring to, for example, the spent fuel pool amend-  
25 ment. There was an Environmental Impact Appraisal issued at

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1 that time.

2 Now that is not an Environmental Impact Statement,  
3 and is not as comprehensive. But based on that Environmental  
4 Impact Appraisal the determination was made that there would  
5 be no significant environmental impacts from the spent fuel  
6 storage pool license amendment and that it was not necessary  
7 to issue an Environmental Impact Statement.

8 With regard to the present proceeding related to  
9 the control building, the NRC Staff has considered the environ-  
10 mental impacts of interim operation not in an Environmental  
11 Impact Statement or in an Environmental Impact Appraisal. But  
12 the matter has been reviewed and the Staff has concluded that  
13 interim operations will not result in any different environ-  
14 mental impacts -- any environmental impacts different than  
15 what has already been evaluated at the time of the original  
16 licensing of the plant.

17 And that for that reason neither an Environmental  
18 Impact Statement nor an Environmental Impact Appraisal is  
19 required. And we will be presenting a statement to that  
20 effect in this hearing.

21 As to modifications to the control building at  
22 this point the details of the modifications are not known,  
23 so a determination can't be made as to the environmental im-  
24 pacts of those modifications at this time. It may well be  
25 that some substantial inquiry into the effects, environmental



mpb9

1 effects of the modifications will be --- will have to be made.

2 CHAIRMAN MILLER: Are the materials that were filed  
3 before the original FES, or Environmental Impact Statement  
4 prior to licensing, as well as anything subsequent, are those  
5 on file and available to the public at the document center  
6 you've told us of?

7 MR. GRAY: Yes.

8 The Final Environmental Statement for the operating  
9 license stage of licensing of the plant is available at the  
10 local Public Document Room, as is the Environmental Impact  
11 Appraisal for the spent fuel pool proceeding.

12 CHAIRMAN MILLER: All right.

13 We wanted the public to know where these documents  
14 are available.

15 MS. CRIBBY: Well, I still don't quite understand.  
16 The local Public Document Room in Columbia County only, or  
17 would there be one in other counties?

18 MR. GRAY: No, that is in Columbia County alone.

19 CHAIRMAN MILLER: That's the only place where all  
20 the documents are filed so that the public may have access to  
21 them. They're not filed in a number of places, no.

22 MS. CRIBBY: Not even in the state capital?

23 CHAIRMAN MILLER: Well, I don't know where the  
24 Document Room is, but I don't think it's in the capitol  
25 building. It's not in Washington County.



mpb10

1 MR. GRAY: The local document room is in the City  
2 of St. Helens, Oregon, at the Columbia County Courthouse.

3 MS. CRIBBY: Well, did I understand also that the  
4 Transcript of this hearing is only there? Wouldn't it be in  
5 Salem too?

6 CHAIRMAN MILLER: The Transcript would be filed  
7 at the same place. That is the official place.

8 I wanted to give the information for the benefit  
9 of yourself and the public. You wanted to know where, and  
10 that's where it's located.

11 Is there anything more in your statement that you  
12 want to make to us?

13 MS. CRIBBY: Well, I just wish to say that that's  
14 very difficult for people to get at, I mean other people in  
15 the state that are interested in it.

16 I have a question.

17 Can I file a written statement on Monday?

18 CHAIRMAN MILLER: Yes -- well, I don't know about  
19 Monday. You can mail it to us at any time, whatever your  
20 convenience is.

21 MS. CRIBBY: That's what I mean, because I didn't  
22 have a chance to type it up.

23 CHAIRMAN MILLER: Yes.

24 MS. CRIBBY: Thank you very much for your attention.

25 CHAIRMAN MILLER: Thank you for coming.

mpb11

(Applause.)

CHAIRMAN MILLER: Who wishes to be heard next?  
Come forward.

LIMITED APPEARANCE STATEMENT OF LEONARD DELANO,  
RESIDENT, PORTLAND, OREGON

MR. DELANO: My name is Leonard Delano.

CHAIRMAN MILLER: Would you spell your name for us,  
please?

MR. DELANO: D-e-l-a-n-o.

I live in Portland.

I have here a petition of a small group. The  
only time I had to get these together --- in which we wish to  
express our opinion on the need for renewing the operation of  
Trojan. And we feel --- and I'd like to read my letter which  
I am handing to the Board at this time.

(Handing document to the Board.)

"Recognizing that professional study and  
decision must be made on any change, if needed,  
to PGE Trojan control room structure, evidence  
indicates feasibility and need for continued  
operation of Trojan and that this can be done  
during any repairs to control room walls.

"The signers of the enclosed petition are  
but a few of the many who see the need for re-  
newed operation of Trojan in our energy consuming

mpb12

1 area.

2 "Should there be any hazards, real or imagin-  
3 ed, we believe these can be resolved through further  
4 and continued studies without idling a plant already  
5 built and put into operation.

6 "Being occupied in the process of his work  
7 responsibilities, the writer does not have the time  
8 to attend meetings on this matter or much time for  
9 obtaining signatures to a petition, but has been  
10 impressed with the few he has contacted on the  
11 matter. That feeling is that we earnestly hope  
12 no unnecessary delay is involved in restarting  
13 operation of this facility."

14 Now I have here the signers of this, and the peti-  
15 tion reads as follows:

16 "We, the undersigned electric energy users  
17 and ratepayers of Oregon, observe with concern the  
18 idling of the PGE Trojan reactor and the continu-  
19 ing delay in its operation. We believe prolonged  
20 inactivity of such an available power generation  
21 affects the individual and collective economy of  
22 our community and could be a vital factor in a  
23 power shortage period. We also believe evidence  
24 shows provisions have been made for conservative,  
25 safe operation of the plant.



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"We therefore ask the Atomic Safety and Licensing Board and the U.S. Nuclear Regulatory Commission that every consideration be given to continued operation of Trojan and that safety factors be met without delaying the operation if possible. This does not endorse nuclear power generation without proper safeguards, but it proposes to utilize power production where now available and certainly needed.

"Signed by the following Responsible Energy Users and Ratepayers, Dated October 24, 1978."

I have previously sent a letter to the NRC, not knowing just exactly when the hearings would be held, and I just wanted to be brief and express an opinion of a number of us.

Personally I am a --- my occupation is a commercial and aerial photographer and I have been in the photogrammetric mapping field for 24 years, and just recently phasing down on that. But I'm still in the commercial and aerial photography, and I'm quite aware of the environment having been over it many thousands of hours in the air and on the ground. And I do belong to a geology group which recently had a field trip. It's a professional and non-professional group.

We recently had a field trip over in central Oregon and I was quite interested in knowing that this environmentally

mpbl4 1 interested group is partly -- everybody that I talked to was,  
2 of course, hopeful that there would be no further unnecessary  
3 delay in the operation of Trojan.

4 So I would just like to pass this on to you, and  
5 without taking any of your time, that would be all I need to  
6 say. And I would answer any questions that you might wish to  
7 ask.

8 CHAIRMAN MILLER: Thank you.

9 We will accept and file and consider the documents  
10 that you've described.

11 We'll have a recess.

12 (Recess.)

End MPB

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1 CHAIRMAN MILLER: The limited appearance hearing  
2 will resume, please. Who wishes to go next?

3 Please come forward.

4 LIMITED APPEARANCE STATEMENT OF LINDA WERNER,  
5 A RESIDENT OF OREGON

6 MS. WERNER: I'm Linda Werner.

7 And there are many questions that the NRC Board  
8 has to ask itself at this time, and while they're trying  
9 to come to the decision as to whether or not to let the  
10 plant have interim operation.

11 One of the first things I noticed about the  
12 whole thing is all of the -- the majority of information  
13 that the NRC will be relying on is coming from PGE and  
14 Bechtel. And I was wondering if this is a very logical  
15 thing to do, in view of their past history.

16 I have here some things -- and this is just a  
17 really small portion of the reportable occurrences filed  
18 in the St. Helens Law Library in the County Courthouse.

19 And when you're considering how much weight the  
20 information given by PGE should have on your decision, I  
21 think you should look to their history. I don't even have  
22 all of it, I could only afford to copy a little.

23 From a Reportable Occurrence Number 77-23,  
24 there's an interesting paragraph. And it says that the July 6  
25 failure had been previously attributed to an improperly



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1 assembled solenoid in the hydraulic actuator. And then they  
2 find that this was not the correct reason why the reportable  
3 occurrence had happened.

4 And it's sort of like the same thing that happened  
5 with these hearings. It's defective, and so they come up  
6 with figures on how it is effective, and then later they  
7 come up with all new figures.

8 I would not rely on people who can't be right,  
9 or who are consistently wrong.

10 Another interesting one was the rems that the  
11 workers who were accidentally exposed to radiation received  
12 during the refueling.

13 When I first read it in the paper, it was --  
14 they had one figure, I think it was the 14 and 17 rems.  
15 And then later -- and that was on the front page of the  
16 paper in big letters, stating how this isn't going to affect  
17 them or be a danger, because this amount of radiation is no  
18 problem at all.

19 But then later, in the very back pages of the paper,  
20 in little tiny type, they showed that those first figures  
21 were wrong, and that now they had new figures.

22 Another thing on the history of their reliability,  
23 I have letters taken from the spent fuel pool storage  
24 hearings. One is an order rescinding Board's memorandum  
25 and order of August 8, 1977.

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1 And in this letter they're talking about some  
2 rulings that were made, and it said:

3 "We so rule because the State of Oregon,  
4 Portland General Electric Company and the NRC  
5 Staff had represented to us that the spent fuel  
6 storage pool was presently empty and dry and, thus,  
7 was uncontaminated."

8 And where do the NRC and the State of Oregon get  
9 their information that the pool was presently empty and  
10 dry and uncontaminated?

11 Another NRC Staff motion for reconsideration of  
12 order rescinding memorandum. It said:

13 "This determination was predicated  
14 on Portland General Electric Company's repre-  
15 sentations to the NRC...."

16 It's not just logical not to really rely on PGE  
17 and what their statements are.

18 It's not only the logical thing to do but  
19 apparently their unreliability has caused embarrassment in  
20 the past.

21 This letter from Richard M. Sandvik, Assistant  
22 Attorney General, it's to Chairman Wolfe. It says:

23 "We are embarrassed that this error  
24 occurred and can only state that we were  
25 relying upon PGE's representations in its

agb4

1 original application."

2 Now here -- you know, according to what is said  
3 in these papers, they had represented something to be one  
4 way and it wasn't.

5 Okay. There really wasn't a lot of damage done  
6 by this, but if they're representing the control room  
7 building to be safe and earthquake-proof and there's not  
8 going to be any spalling falling and, if it does, well,  
9 it'll be specifically this shape and this weight and it  
10 will only land on this thing, if they're misrepresenting  
11 themselves this time it could mean hundreds of thousands  
12 of lives.

13 So, as to relying on information from PGE --  
14 from what I understand, the NRC is limited in funds, and  
15 apparently there are no funds for the state or the federal  
16 to finance independent studies. And I find it really hard  
17 to think that people hired by PGE can give independent  
18 studies, even though they may be a professor somewhere  
19 else or work for another company.

20 I think something should definitely be done to  
21 help get funding for independent study, so that we don't  
22 have to rely on people that are unreliable.

23 Okay. Another thing that you're going to have  
24 to think about is whether the plant is in generally safe  
25 condition. I mean, it's just like a person. When doctors



agb5

1 are thinking about operating, they think about whether the  
2 whole person is in generally good condition.

3 These are some of the reportable occurrences.  
4 I just picked these at random out of the document room.

5 This one is an unplanned release of radioactive  
6 gas, and this event occurred over a seven-day period  
7 commencing on January 31 and ending the morning of  
8 February 7.

9 A seven-day accident: that really sounds  
10 incredible.

11 And this one, 13 wall and ceiling penetrations  
12 were found deficient in their construction as a fire pro-  
13 tection barrier and/or water barrier.

14 During a design review of piping penetrations  
15 through building walls, a piping section was found to have  
16 stress levels exceeding code allowables.

17 Then it was interesting as I was going through  
18 these, to see how many of the reportable occurrences occurred  
19 on the same piece of equipment.

20 I'll start out these ones by a letter from the ---  
21 the minutes of a Plant Review Board meeting of February 6,  
22 1976. They were discussing probably reportable occurrences  
23 with the DBA sequencers.

24 And in the minutes of this meeting, it was  
25 noted that the sequencers are a design specified by Bechtel

agb6

1 engineering. And this was in '77.

2 We have another one in '78, where they're talking  
3 about two possible reportable occurrences. The first  
4 concerned a failure to actuate several ESF fluids during  
5 periodic testing of the A-train sequencer. So, from '76  
6 to '78 and they're still having problems with these  
7 sequencers and they were designed by Bechtel, the DBA se-  
8 quencers.

9 An accident or reportable occurrence with the DBA  
10 sequencers, another one.

11 So, in the two years, they still don't have these  
12 sequencers fixed. There have been problems, all kinds of  
13 different problems with them.

14 If they can't -- they can't even fix this piece  
15 of equipment. I really have no idea what it is, but if  
16 it's not working in the Trojan plant, why worry, you know?

17 So it starts in '76 when they're having problems,  
18 it goes to '77. And as of February 10, 1978, they're still  
19 having problems. Apparently the design is wrong or something's  
20 wrong, I really don't know but it just doesn't sound good  
21 to me.

22 Another one that I found real interesting, as I  
23 was going through these, was the amount of problems that  
24 they have with the control rod. I went to the Visitors  
25 Information Center and they have this kind of a room -- it's

agb7

1 just terrific because they explain nuclear power and how  
2 it works.

3 And apparently these control rods control, in  
4 the reactor, control the activity that's going on inside  
5 the reactor, if what they have at the Visitors Information  
6 Center is correct which, I'll go out on a limb and say it  
7 is.

8 During the performance of routine surveillance  
9 testing, it was found that rod -- that Control Rod B-12  
10 would not insert from its fully withdrawn position upon  
11 receipt of an inward motion signal.

12 During periodic operating tests to check rod  
13 movement, it was noted that Bank D and Bank A would not  
14 move in Bank Select.

15 This one was really interesting because, if  
16 these rods control the activity inside the reactor --  
5.145 17 this one here was very upsetting:

18 "....individual digital rod position  
19 indication was lost for Rod 1110 for approximately  
20 nine hours."

21 Now if these rods are controlling what is going  
22 on inside the reactor, I don't like them getting lost at  
23 all.

24 Loss of rod control which affected half  
25 of the control rods in the control banks B and D



agb8

1 and shut down bank C.

2 "Rod B-12 of shutdown group would not  
3 respond to an inward motion signal.

4 "Failure of control rod B-12 to  
5 respond while attempting to insert it on  
6 August 18."

7 And there was also some control system, rod  
8 control system failures on August 21, August 18 and August 21st,  
9 both of '77.

10 "During the performance of" -- I don't know  
11 what this is -- "...POT-15-1, rod movement verification,  
12 it was found that control bank D rods could not  
13 be moved."

14 "A circuit failure caused the loss of  
15 rod control which affected half of the control  
16 rods in control banks B and D and shutdown  
17 bank C."

18 I mean, these are important parts of the plant.  
19 I know that the control rods are important.

20 Every industry has problems, every person has  
21 accidents. But when I have an accident and spill something,  
22 or when the paper mill has an accident and one of their  
23 saws breaks down or something, it is generally an accident  
24 that is confined to that area.

25 But when a nuclear power plant has an accident,

agb9

1 if it's bad enough, it's not just them that's going to go  
2 but they're going to take everybody else with them. And so  
3 all of their accidents, no matter whether they resulted in  
4 something terrible happening or not -- obviously these  
5 accidents didn't, otherwise we wouldn't be here -- but  
6 you have to assume that at any time an accident big enough  
7 could happen.

8 . Okay. Let's see.

9 These are all reportable occurrences and this  
10 is the type of thing to take into consideration when  
11 just deciding is the plant generally safe, are these people  
12 generally reliable.

13 This one, the plant was taken from Mode Four  
14 to Mode Three without reading all the prerequisites for  
15 change.

16 "Charging pump rotor, a mechanical  
17 failure of the south centrifugal charging  
18 pump rotor occurred while the pump was in  
19 operation supplying normal charging to the  
20 reactor coolant system."

21 In this one, they're talking about a reactor  
22 cavity seal ring that was designed poorly, and they were  
23 afraid it was going to become a projectile in the reactor.

24 If the plant was totally safe with people  
25 taking care of it -- Here's a failure to perform required

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1 surveillance testing, failure to examine the required number  
2 of containment tendons for surveillance of the containment  
3 structural integrity, failure to perform required technical  
4 specification surveillance, failure -- Okay, this is not  
5 the same thing.

6 But anyway there's a lot of these. And, you know,  
7 all the failures of them to just adequately perform the  
8 inspections and the safety tests on everything.

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2 In this one they had tested something-- Well I  
3 don't understand what they were testing so I'll skip over it.

4

5 Okay. All of these ones that I'm going through  
6 are things being out of calibration, and component failures,  
7 safety pumps not starting.

C6

8

9 There's another one on the failure of normal  
10 shutdown and design basis accident sequencers to energize  
11 all engineered safety feature loads during testing. And the  
12 cause of this was a design deficiency.

13

14 This is a reportable occurrence concerning some  
15 welds that were cracking.

16

17 This is a reportable occurrence about another  
18 weld that cracked in a letdown line.

19

20 In fact, generally speaking-- Here's another  
21 crack in a weld.

22

23 Oh, by the way, these are all different reportable  
24 occurrences. I didn't just copy the same one over and over  
25 again.

26

27 Licensee Event Report dealing with the cracking  
28 of a weld on letdown line.

29

30 A reportable occurrence due to stress corrosion  
31 cracking.

32

33 In fact there are quite a few things cracking.  
34 It's hard for me to believe that standing still it's falling  
35 apart. During an earthquake, you know, everything is going to

wb2

go.

Leakage. A reportable occurrence concerning leakage through the containment personnel airlock.

Leakage from a common four-inch suction piping.

Leakage through the waterproof barrier designed to protect engineered safety feature equipment.

So it's cracked, it's leaking. The general condition of the plant doesn't seem very good to me.

And also with the general condition of the plant one has to realize that a nuclear power plant is safe if it is absolutely built properly, designed properly, and everything is working up to 100 percent, including the people working there.

And I don't mean this part to be any reflection on the people working at the Trojan plant. In fact I live in that area. I live in Deer Island. And just about everybody on my road works at Trojan. So a lot of my friends are people who work at the Trojan plant.

But nobody is perfect. And these reportable occurrences deal with the fact that to have a totally safe nuclear power plant you have to have 100 percent safety on the part of the people. These reportable occurrences have to do with that.

There was a valve that was wired incorrectly as a result of a personnel error.

wb3 1 There was a failure of-- Somebody didn't reset  
2 a lockout relay and caused a failure of power.

3 Personnel error by not initiating required sur-  
4 veillance of an item within the required time period.

5 Original airflow controllers were adjusted and  
6 pre-operationally tested to verify sufficient airflow to com-  
7 ply with tech specs. Subsequently the airflow control trans-  
8 mitters were replaced with a similar narrow range model, but  
9 then were never adjusted or tested to verify required flow  
10 rate. Personnel error.

11 An operator failed to properly reset the trip  
12 and throttle valve for the turbine-driven auxiliary feedwater  
13 pump.

14 Turbine impulse pressures were incorrectly  
15 adjusted.

16 Personnel error in not obtaining a new radioactive  
17 gas discharge permit for nitrogen purge release of waste  
18 decay tank.

19 A dispatcher de-energized switchyard which resulted  
20 in a loss of RHR flow.

21 Personnel mistakenly shut the RHR heat exchanger  
22 bypass valve instead of the pump discharge valve.

23 Loss of power to the reactor coolant pumps occurred  
24 when personnel tripped the generator output breaker before an  
25 interlock, which prevented the energizing of plant busses from



wb4

1 offsite power, had cleared. The cause of this event is  
2 personnel error.

3 The apparent cause of this occurrence is personnel  
4 error. Another one.

5 Personnel did not perform the required surveillance  
6 as scheduled.

7 Monthly surveillance testing of the centrifugal  
8 charging pumps was not performed within the required time  
9 interval.

10 Monthly surveillance of the process and effluent  
11 radiation monitoring system was not performed within the  
12 required time interval.

13 So, you know, nobody is perfect. To run an  
14 absolutely perfectly built plant with perfect design and  
15 perfectly operating equipment would be impossible, to run  
16 it safely. Because people are not perfect.

17 But here we also have the added problem that it  
18 is not a perfectly designed plant, it's not a perfectly built  
19 plant. The mechanisms within the plant are not perfect.

20 Okay. All the rest of these -- I'm not going to  
21 go through them all -- are just different reportable occurrences  
22 on-- Here's one concerning the release of sodium in the  
23 Columbia River.

24 Just generally things are leaking, things are  
25 cracking, things are breaking down.

wb5

1 Another thing: when relying on information from  
2 PGE, it would just seem logical to think that they cared  
3 about the public safety. But I don't think PGE has any  
4 respect for the public whatsoever, they have no respect for  
5 our safety, our lives, they have no consideration for what  
6 the public wants. And there's really no reason why they  
7 should. Unlike you, they're not a government agency who  
8 is paid by the people. I mean they're just sort of doing  
9 their own thing, trying to make their money. And that's up  
10 to them if they want to do that. And I suppose it's up to us  
11 to stop it.

12 But it's pretty clear they have no respect for  
13 the public.

14 In these letters:-- This one is to Dr. Morris,  
15 and I can't read the signature at the bottom as to who it's  
16 from. But it's on PGE stationery, so I imagine it's from them.  
17 It says,

18 "Therefore, the withholding of the  
19 attached answer will not adversely affect the  
20 public interest."

21 And this:

22 "We have determined that disclosure  
23 of the information contained in the above-referenced  
24 supplement is not required in the public interest nor  
25 by the Atomic Energy Commission."

wb6

1 And they were talking here about the amount of  
2 conservatism and uncertainty utilized in the Trojan Nuclear  
3 Plant analysis prepared by Westinghouse. And to think that  
4 the public wouldn't be affected: if they want to believe that,  
5 that's fine. But I believe that everything that goes on in  
6 that plant should be released to the public. And I feel that  
7 it's not just going to affect them; it's going to affect us.  
8 Anything that affects the plant affects us.

9 But obviously from these, they hold back informa-  
10 tion from the public, that they don't -- it's their decision  
11 that it will not affect us. I would prefer to see the  
12 information and then let me decide if it's important or not.

13 During Ballot Measure No. 9, the elections a  
14 few years ago, PGE had things in the paper just prior to the  
15 elections on their spent fuel storage, that there would be  
16 no radioactive waste stored at Trojan. And people relied  
17 on this information. I didn't rely on it because I knew  
18 better. But I know a great many people who did rely on this  
19 information and took all these things into consideration  
20 that PGE had said, and their representatives' statements.  
21 And Ballot Measure No. 9 was defeated in that election. And  
22 then immediately afterwards I think the spent fuel pool hear-  
23 ings started. And the information is clear now that they had  
24 been planning to do this even before the election. But  
25 apparently they didn't feel that the public was important



wb7

1 enough to give them the truth.

2 As a member of the public I resented it. And  
3 that one incident made me realize that they were absolutely  
4 going to do nothing to inform us, and we would have to inform  
5 ourselves, that they were going to do nothing to protect  
6 the public, and that we were going to have to protect our-  
7 selves.

8 During that election another thing that a great  
9 many people relied on, and still do rely on is, they say,  
10 Well if it wasn't safe the government would not let be in  
11 operation; that there are rules the Trojan plant has to  
12 abide by, and, if they don't, well the NRC is going to get  
13 them.

14 But now it seems like just to consider changing  
15 those rules, lowering the safety margins to fit the Trojan  
16 plant, would really be violating the trust that the people  
17 have put in the NRC.

18 And I think that when considering whether to  
19 allow interim operation, that the safety of the-- the general  
20 safety of the plant, the accuracy of the present condition of  
21 the plant, and then also just the responsibility, which isn't  
22 really a safety question, but the responsibility that the  
23 people have put their trust in the government agency to  
24 regulate the nuclear industry, I think it's pretty obvious  
25 that the nuclear industry isn't going to regulate itself. I

wb8

1 know many people did not support Ballot Measure No. 9, and  
2 the reasons given to me were that, you know, that the NRC  
3 will make sure that it's safe.

4 And so you have to fulfill your responsibility  
5 and your obligation to the people, and not any-- The  
6 Government agency has no obligation or responsibility to PGE  
7 as far as I can see.

8 To change the regulations to fit the Trojan  
9 plant would be obviously, you know, violating the trust of  
10 the people.

11 Well I don't think you should reopen the plant  
12 for interim operation. And I think that probably, just speaking  
13 as a Columbia County resident especially, I'd really lose a  
14 lot of faith in government if it is allowed interim operation.  
15 I've already lost a lot of faith just by attending the NRC  
16 hearings in the first place. I had pictured something much,  
17 much different. I had pictured government by the people and  
18 for the people that I had heard about in grade school. I had  
19 thought it really existed. But I found that it's a little  
20 more complicated and a little more detailed than that.

21 But I'm really expecting that you will uphold the  
22 regulations and that you will not allow PGE to start operating  
23 during the interim.

24 Also I have the point that if they do, and if  
25 there is an earthquake, that they have absolutely no evacuation

wb9 1 plans whatsoever for Columbia County. Apparently there are  
2 evacuation plans for two miles around the plant.

3 So if you let it go, and if there's an earthquake,  
4 and if it has a meltdown or has a steam release or has any-  
5 thing, and you're in Washington, you'll know that I'm dead  
6 in Columbia County.

7 (Applause)

8 CHAIRMAN MILLER: Thank you.

9 Who wishes to be heard next?

End 1P

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## LIMITED APPEARANCE STATEMENT OF MARJORIE

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KUNDIGER, ST. HELENS, OREGON

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MS. KUNDIGER: I am Marjorie Kundiger. I'm a

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resident and property owner in Columbia County. I moved into

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the county with a certain quality of life and life style in

6

mind. I feel that the startup of Trojan would interfere with

7

my rights to that quality of life.

8

There are three main concerns I have. Number

9

one, the safety of the construction of the plant and the

10

safety of the operation of the plant itself.

11

Number two, the storage of waste that is being

12

planned at the plant.

13

And three, the fact that there is no evacuation

14

plan for the area that I live in.

15

I feel a legacy of a clean, healthy environment

16

should be left to the children of Columbia County.

17

I would also like to say some of the feelings

18

that Linda said about the government, and having an effective

19

government organization are also something I feel very

20

strongly about. Otherwise I wouldn't be here, trying to

21

appeal to you to make the place that I live safe.

22

(Applause.)

23

CHAIRMAN MILLER: Thank you.

24

Does anyone else wish to be heard?

25

Very well.

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LIMITED APPEARANCE STATEMENT OF DARLENE BURKHEAD,  
RESIDENT, COLUMBIA COUNTY, OREGON

MS. BURKHEAD: I'm a resident of Columbia County living 12 miles from Trojan. I'm concerned with the quality of life for myself as well as for my neighbors. The things that concern me most are the effects of low-level radiation and the transport and storage of waste, as well as the structural reliability of the plant.

I believe these things should be looked into very carefully as they affect thousands of people.

Thank you.

(Applause.)

CHAIRMAN MILLER: Thank you.

Anyone else?

Does anyone else wish to heard?

VOICE: Mr. Chairman, there were people coming from Eugene at this time who haven't arrived yet. I wonder, if nobody else wants to speak now, if we could adjourn for lunch and hear them later?

CHAIRMAN MILLER: Yes, we can do that. Do you know who they are?

VOICE: Tom Lynch, Don Nelson, Skeeter Duke, and I think maybe Sandy Pitler, and possibly others.

CHAIRMAN MILLER: All right. Is there anyone else who you believe will be coming in? Is there anyone

eb3

1 else here who would like to be heard at this time?

2 (No response.)

3 CHAIRMAN MILLER: All right. Then we will take  
4 our lunch recess, and we'll reconvene at one o'clock.

5 We stand in recess.

6 (Whereupon, at 11:35 a.m., the hearing in the  
7 above-entitled matter was recessed to reconvene at  
8 1:00 p.m. the same day.)  
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## AFTERNOON SESSION

(1:00 p.m.)

CHAIRMAN MILLER: We will resume the limited appearance statements.

Who wishes to be next?

(No response.)

Calling for statements?

Come forward.

Would you spell your name please?

MR. NELSON: Donald Nelson.

LIMITED APPEARANCE STATEMENT OF DONALD NELSON  
RESIDENT, EUGENE, OREGON

MR. NELSON: My name is Donald Nelson. I reside at 2625 Belforn, Eugene, Oregon.

CHAIRMAN MILLER: You may proceed.

MR. NELSON: Occupation: teacher; but irrelevant.

CHAIRMAN MILLER: Perhaps not.

MR. NELSON: First I have a statement I would like to read, please, from another individual named Annalisa Kennedy.

CHAIRMAN MILLER: Who? Would you spell it?

MR. NELSON: A-n-n-a-l-i-s-a, Kennedy, like the big boy in Washington, 1370 East 25th Street, Eugene, Oregon, 97403.

I have two copies.

mpb2

1 CHAIRMAN MILLER: They will be received. Thank  
2 you.

3 MR. NELSON: This is Annalisa's statement:

4 "I am well aware of the various assurances  
5 that have been presented by the engineers brought  
6 in by Bechtel and Portland General Electric,  
7 specialists that speak of STARDYNE tests, opera-  
8 tional basis and safe shutdown earthquake ratings  
9 measured in G-forces, spalling that won't occur,  
10 et cetera. I don't want to quibble with their  
11 statistics and technical jargon. To use these  
12 facts alone to justify the operation of the Trojan  
13 plant during reconstruction of the control room  
14 is not valid. The concerns of this hearing are  
15 health and safety, which cannot be measured only  
16 by STARDYNE tests and G-forces.

17 "Health is measured by the wholeness, the  
18 soundness of something. How secure, or free  
19 from danger something is, reflects its safety.  
20 The Trojan Plant is not in good health at this  
21 time; in fact, it has a record of poor operating  
22 health. The control Room at Trojan needs to be  
23 made whole, or be made secure, so that it will  
24 be able to perform its vital functions under  
25 environmental stress that is known to be present.

mpb3

1 "I do not agree with the prognosis of Drs.  
2 PGE and Bechtel that their patient should be able  
3 to function while they perform an operation on  
4 its brain. If they had acted more responsibly  
5 to begin with, practiced preventive medicine, we  
6 would not now be faced with this task. The care  
7 and responsibility that should have guided their  
8 actions from the beginning need to be reinstituted  
9 to guarantee the wholeness of the Trojan Plant.

10 "If error is to continue to be tolerated,  
11 let us err on the side of forbearance. Work now  
12 with care and skill to secure the control room;  
13 take the time and effort necessary to instill the  
14 quality that has been lacking; then with assurance  
15 of work well done, allow the plant to function.

16 "I ask that this be done, so that all the  
17 people concerned may have some peace of mind in  
18 knowing that your best effort was made to guarantee  
19 our health and safety.

20 "Annalisa Kennedy."

21 CHAIRMAN MILLER: That will be received and be  
22 put in the file.

23 MR. NELSON: First of all, I'd like to speak to a  
24 rumor that's been going around as of late. I do not receive  
25 \$500 to appear here and give testimony. I think someone has



mpb4

1 me confused with some other experts.

2 CHAIRMAN MILLER: I hadn't heard the rumor, but  
3 we'll entertain it now.

4 (Laughter.)

5 MR. NELSON: But I'm accepting contributions.

6 (Laughter.)

7 MR. NELSON: What compelled me to be here today  
8 was not money, but fear; fear that the decision that is  
9 going to be made by this Board is going to be based on poli-  
10 tics and economics. Lots of money is involved here, tremen-  
11 dous amounts of money.

12 And if history is going to repeat itself, then the  
13 decision will be based on money.

14 It's curious that PGE wants us to tolerate an  
15 unsafe condition while they repair the building. Other  
16 corporations don't do that. They call in the cars. They  
17 don't ask -- General Motors calls in the vehicles, and they  
18 don't ask people to drive them in unsafe conditions. PGE  
19 wants us to derive our electricity needs -- if there are such  
20 needs -- from a faulty facility.

21 I think there are enough risks inherent in the  
22 operation of nuclear power plants. I think people take  
23 enough risks living by them, downwind from them, not to be  
24 expected to carry additional risks by having workers tromp  
25 around the plant while they're trying to rectify all of the

mphs

1 numerous deficiencies of that plant.

2 Trojan has been shoddy. The work in Trojan has  
3 been shoddy. It's been shutdown; it's had more problems  
4 from that facility than we should expect. There has been a  
5 lot of money and time put into that facility, and we keep  
6 uncovering little things under the rugs. These are serious  
7 things. We're talking about the health and safety of all  
8 people in the Pacific Northwest. And I'm concerned that  
9 they're going to be starting up soon.

10 I'm also concerned that the information that this  
11 Board is relying on comes predominantly from corporations  
12 that have a self-interest in the outcome of these hearings.  
13 Bechtel Corporation is providing a great deal of the informa-  
14 tion on which you are going to base your decisions. Bechtel  
15 Corporation has self-interests; that's obvious to anyone. I  
16 don't know if they should be trusted to provide adequate  
17 safe operation, or safe adequate information for you to make  
18 the decision.

19 We're looking at Trojan here as an isolated inci-  
20 dent. Trojan is not an isolated incident. This type of  
21 situation is pervasive throughout the nuclear industry. They  
22 deal in eternity in the waste they create. And we don't have  
23 any way of storing or of dealing with that waste as of yet.

24 So on another point, I'm in opposition to start-up  
25 of Trojan until they find out what they're going to do with

mpb6

1 this waste safely; but I guess you're not here to decide that  
2 issue.

3 And I have one more concern -- and I probably will  
4 be overruled on it, but I'm going to present it anyway.

5 I would like the Commissioners to identify what  
6 their particular backgrounds are, and what your particular  
7 education and past work histories are, so that the members  
8 of the general public can have a better view of the individ-  
9 uals who are going to make this decision.

10 CHAIRMAN MILLER: Are you referring to us?

11 MR. NELSON: Yes, you're the Commissioners.

12 CHAIRMAN MILLER: Well, since we're Commissioners,  
13 we thank you for the promotion.

14 (Laughter.)

15 CHAIRMAN MILLER: I hope it reflects in our next  
16 paychecks.

17 (Laughter.)

18 CHAIRMAN MILLER: I am a member of the NRC Atomic  
19 Safety and Licensing Board panel. I have been a lawyer; I've  
20 been in practice for a number of years. I practiced law  
21 in Illinois; I practiced law in Washington, D.C. Four years  
22 ago I joined the NRC Federal Government. I've been conducting  
23 trial-type hearings and proceedings for them since.

24 That's probably enough background.

25 I've handled a number of cases, I'm speaking of



mpb7

1 NRC type, antitrust, NEPA inquiries, health and safety,  
2 hearings in regard to the construction permit applications,  
3 operating licenses, and the like.

4 I'll ask Dr. Paxton if he'll be good enough to give  
5 us his background.

6 DR. PAXTON: Yes. It goes back quite a ways.

7 I'm called a nuclear physicist, now retired. And  
8 for the last almost three decades I've worked at the Los Alamos  
9 Scientific Laboratory. My field has been critical experiments  
10 and nuclear criticality safety.

11 I'm presently just a consultant to the NRC.

12 MR. NELSON: Thank you very much.

13 That's all I have to say, other than that I hope  
14 you make safety the primary issue in this hearing, not money.

15 Thank you very, very much.

16 CHAIRMAN MILLER: Thank you.

17 (Applause.)

18 CHAIRMAN MILLER: Who wishes to go next?

19 Come forward, please.

20 Spell your name, please?

21 LIMITED APPEARANCE STATEMENT OF JAMES DUMITRU,  
22 RESIDENT, GLENDALE, OREGON

23 MR. DUMITRU: My name is James Dumitru; the last  
24 name is D-u-m-i-t-r-u. And I live in southern Oregon,  
25 Glendale.

mpb8

1 Do I understand then that you are not Commissioners  
2 of the Nuclear Regulatory Commission?

3 CHAIRMAN MILLER: That's correct.

4 There are five Commissioners who are Presidential  
5 appointees, subject to confirmation by the Senate. Their  
6 offices are in Washington, D.C. And we are members of the  
7 Atomic Safety and Licensing Board panel, of which there are  
8 lawyers and scientists. The panel members are drawn there-  
9 from.

10 An attorney, called the Attorney-Chairman -- I'm  
11 also an administrative law judge -- presides and makes rulings  
12 and the other two members are technical personnel, either  
13 engineering -- as in this case a physicist and an engineer.

14 MR. DUMITRU: Thank you.

15 Living out in the hills in southern Oregon, I  
16 was aware that hearings were trying to be scheduled; but the  
17 last I heard they were going to be in Salem at a time when I  
18 was attending something else here in Portland.

19 I came here to attend the Bioconversion Conferences  
20 which were at the Sheraton in the last few days, and I just  
21 heard about this.

22 I have been concerned about nuclear power for  
23 several years now, so I came right over.

24 CHAIRMAN MILLER: Glad to have you.

25 MR. DUMITRU: I'll be straight with you: my feeling

mpb9

1 is that I would like all of them to be shut down. I feel  
2 that they are a terrific gamble on the safety of our whole  
3 race for future generations, you know, longer forward than  
4 civilization has even been recorded.

5 So any move that you can make which would slow  
6 down, give the public an opportunity to see it for what it is  
7 and not push the risks any farther than they already are  
8 being pushed, I would urge you to do so.

9 I would urge you to make sure that it can be as  
10 safe as it can, because my fear is that -- well, to start  
11 from another place, I believe nuclear power will be stopped.  
12 I think that if we are not able to stop it in time with our  
13 demonstrations or education or votes, whatever, you know,  
14 coming from that angle, eventually there is going to be a  
15 mistake that is going to cost so many lives that it's going  
16 to be obvious.

17 The public is going to rise all over the world  
18 and demand that they be shut down. And I hope we can stop  
19 it before that happens.

20 So I'm asking you to be as cautious as you can  
21 with it so that it doesn't have to come to that.

22 Thank you.

23 CHAIRMAN MILLER: Thank you.

24 (Applause.)

25 CHAIRMAN MILLER: Who wishes to go next?



mpb10

1 Please come forward.

2 LIMITED APPEARANCE STATEMENT OF TOM LYNCH,

3 1134 W. 2ND STREET, EUGENE, OREGON, 97402

4 MR. LYNCH: My name is Tom Lynch, and I live at  
5 1134 W. 2nd Street in Eugene, Oregon.

6 To begin with it disturbs me somewhat that these  
7 limited appearances have been separated from the ongoing  
8 proceedings and placed, you know, like after the first three  
9 days, because there's a lot of people who I wanted to talk  
10 to who would have been there had they been held at the beginning of the hearings but who are not here now because they  
11 knew that all they'd have to sit through was limited appearances, and people like Bart Withers and Steve Loy from PGE,  
12 and people from Bechtel who I would have liked to have spoken  
13 to, but who are not here. So I think that's one of the  
14 important reasons for putting the limited appearances at  
15 the beginning, so that everybody's there to hear it rather  
16 than just a few people who feel like they have to be.

17 I also think that there should be accommodation  
18 made for people who work regular hours so that there should  
19 be time set aside in an evening for working people to make  
20 testimony. A lot of the rhetoric that's directed against  
21 the anti-nuclear movement has to do with people being unemployed and on welfare and food stamps and all that kind of  
22 stuff, and that probably it's the indication that the hearings

mpb11

1 were only held in the day and people show up must mean that  
2 they must not be working. And I think if you have hearings  
3 in the evening for working people to attend that you'd get  
4 a different perspective.

5 I also would like to extend my thanks to the  
6 people who are being Intervenorers because I realize that  
7 they are doing so without any kind of payment whatsoever.  
8 And it's quite a considerable task. And I wonder how many  
9 of the people who are here defending the Trojan Plant would  
10 be here defending the Trojan Plant were they not being paid  
11 to do so.

12 I think that would be very interesting to see. I  
13 wonder if you gentlemen would be here if you were not paid  
14 to be here, as many other people are.

15 Okay. I'll start on my statement here.

16 On February 2, 1976, three scientists, Dale  
17 Bridgnbaugh, Richard Hubbard and Gregory Minor resigned  
18 from their positions with General Electric Company. In  
19 testimony before the Joint Committee on Atomic Energy they  
20 listed among their reasons that, "The nuclear industry has  
21 developed to become an industry of narrow specialists, each  
22 promoting and refining a fragment of the technology with  
23 little comprehension of the total impact on our world system."

24 It is my feeling that one of the primary factors  
25 for the continued expansion of the nuclear power industry in

mpb12

1 light of the many and serious questions of health, safety,  
2 economics and jobs which have been raised against it is the  
3 fact that western technological society, of which the nuclear  
4 industry is no doubt near the leading edge, has succumbed to  
5 the cult of specialization.

6 I hope that during the present proceedings you  
7 three men of the Atomic Safety and Licensing Board will not  
8 succumb to this cult. Unfortunately it seems that the very  
9 nature of the position in which you now sit dictates that  
10 you view only one narrow band in the vast spectrum of this  
11 situation.

12 I am not sure if you are required, or merely find  
13 it convenient to limit the scope of your inquiry to one  
14 specific topic. That is, the interim operation of the  
15 Trojan Plant prior to repairs which would return it to com-  
16 pliance with the law.

17 I am going to ask you to attempt to view this issue  
18 from a wider perspective than that. I would like you to try  
19 to see it from the viewpoint of those of us who have watched  
20 PGE operate the Trojan Plant for several years now.

21 I would also say I would like to, in light of the  
22 recent political campaigns and the absolutely blatant lies  
23 which PGE has been perpetrating against several of the ballot  
24 measures, I would like you to view it also from that point of  
25 view.



mpb13

1 If this violation of the law were the first for  
2 PGE it might be reasonable for you to view the request for  
3 interim operation in a favorable manner. I have placed into  
4 the record a number of news clippings and reports which I  
5 have been able to collect in the past few days. I'm sure a  
6 more thorough list of Trojan mishaps can be obtained from  
7 the Oregon Department of Energy, if you're interested.

8 As an indication of my point I'd like to quote  
9 from a letter written by Fred Miller, Director of the Oregon  
10 Department of Energy which was sent to PGE following an  
11 incident last spring in which two workers at Trojan received  
12 the highest exposure to radiation ever at a commercial U.S.  
13 reactor:

14 "This incident raises questions about safety  
15 of plant operations and, in conjunction with other  
16 similar incidents, about PGE's mismanagement of  
17 Trojan.

18 "The Department of Energy believes that the  
19 high radiation dose to Trojan personnel on April 5,  
20 1978, resulted from some of the same factors that  
21 have contributed to previous incidents at the  
22 plant."

23 Further:

24 "The Department of Energy has previously  
25 discussed with Portland General Electric the

mpb14

1 importance of thorough corrective action for even  
2 small problems before larger problems develop. In  
3 September, 1976, the Department of Energy expressed  
4 its concern about Portland General Electric's appar-  
5 ant lack of aggressive action to identify the root  
6 cause of personnel contaminations. The importance  
7 of this philosophy was demonstrated in February,  
8 1977, when personnel contaminations provided early  
9 warning of a liquid hold up tank failure. PGE  
10 failed to identify the underlying cause of the con-  
11 tamination incident and as a result the tank leaked  
12 for several days before the problem was identified."

13 Also:

14 "Trojan personnel were responsible for iden-  
15 tifying the need for and designing an adequate  
16 radiation survey. If an adequate survey had been  
17 performed, the April 5th incident probably would  
18 not have occurred. Similarly in November, 1977,  
19 all four containment pressure detectors were found  
20 to be capped for six months.

21 "Trojan has experienced chronic design basis  
22 accident sequencer failures. On September 16, 1977,  
23 the Department of Energy expressed its concern that  
24 PGE's corrective action was not successful in re-  
25 solving this problem. Despite PGE's assurance, on

mpb13

1           October 16, 1977, that no further design evalua-  
2           tion was necessary, another DBA sequencer fail-  
3           ure occurred on January 30, 1978."

4           PGE's operation of Trojan was also evaluated by  
5           various other organizations following the April 5th exposure  
6           incident. In addition to numerous criticisms from medical  
7           scientists around the country of statements issued by PGE's  
8           former health physicist, Ron Kathren, which dealt lightly  
9           with the serious exposure of the workers, PGE was also  
10          severely criticized by Dr. Sidney Wolfe of the Health Research  
11          Group and Richard Pollack of Critical Mass Energy Project.

12          end  
13          MADELOON  
14          WROLOOM  
15          Flws



lh ebl

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A letter sent by these two men to the NRC stated

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that:

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7

"The April 5 incident is the latest of a series of system-wide accidents that have taken place at the Trojan plant. As such, it raises profound questions about the adequacy of PGE's operations and procedures....

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"A review of the operation of the Trojan facility reveals that this type of accident fits a recurring pattern that is emerging at the plant. NRC reporting documents from the period of the last twelve months disclose that the Trojan plant has experienced at least 30 mishaps. Several of these acts of non-compliance with federal safety requirements appear to have been caused by systematic procedural error or defective monitoring procedures."

c2

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22

These criticisms follow what is only the most recent accident at Trojan. The subject of these hearings notwithstanding, one wonders how many other incidents would have occurred between April 5th and now had the plant not been closed during that period.

23

24

25

And of course there are other problems with Trojan. Prior to Trojan's going critical, the reactor vessel was subjected to a 600 percent overpressurization as a result

eb2

1 of operator error and equipment malfunction. Comments made  
2 by Karl Morgan suggest that this combination of low tempera-  
3 ture/high pressure conditions may be the worst metallurgical  
4 case to which a reactor vessel can be subjected.

5 Between July 1975 and June 1977, there were 91 report-  
6 able occurrences reported to the NRC. Between December 1975  
7 and June 1977, Trojan experienced 40 unplanned shutdowns.  
8 On August 21, 1977, 13 of Trojan's 53 control rods failed to  
9 respond to operator commands.

10 I'm sure the list of Trojan foulups could go on,  
11 but that's what I've been able to dig up in the last few  
12 days.

13 Some reasons for these problems with Trojan may  
14 be explained by an article published in January of 1975 by  
15 Oregon Times. A few excerpts from the article may illustrate  
16 its profoundly prophetic insights.

17 Under the heading of "Bechtel's Bungles":

18 "Criticism centers around Bechtel  
19 Corporation. Hired by PGE as architect-engineer  
20 for Trojan, Bechtel has a cost-plus contract  
21 with PGE; that is, a profit is guaranteed on top  
22 of whatever it costs to put up the plant. As for  
23 quality, whatever passes PGE's muster is good  
24 enough for Bechtel.

25 "Bechtel Corporation is a giant in the

eb3

1 field with thousands of nuclear contracts running  
2 concurrently and many more signed. Critics of  
3 Bechtel's performance at Trojan say that the com-  
4 pany is overextended and arrogant, that it is a  
5 prodigal spender of PGE's money but parsimonious  
6 with its own. 'Cost is simply not a factor out  
7 there,' said a field inspector."

8 If you notice, none of these people's names are  
9 given because they asked that their name not be revealed  
10 when they talked to the reporter here, to protect their own  
11 safety.

12 "'Cost is simply not a factor out  
13 there,' said a field inspector. 'We needed a  
14 small drainage ditch to catch surface water coming  
15 off a hill next to the fuel and storage building.  
16 They put in a canal with cement reinforcing.  
17 An expensive concrete and brick plaza for the  
18 Administration Building was no sooner completed  
19 than it was torn up to run some pipe over to the  
20 Dechlorinization Building.'

21 "On the other hand, Bechtel field in-  
22 spectors are among the worst-paid workers on the  
23 job. You see Bechtel ads all over the country.  
24 You wouldn't see so many ads if they were paid a  
25 decent wage. Low wages mean marginal personnel.



eb4

1 "One welder said the inspectors won't  
2 make the controversial decision. They follow the  
3 plan long after it is obvious that it won't work.  
4 When everything is hung wrong and everyone can  
5 see it won't work, it goes back up through the  
6 chain of command until it reaches someone who will  
7 do something about it.

8 "The absence of competent field in-  
9 spectors is doubly significant as Bechtel designs  
10 have been riddled with flaws. An engineer from a  
11 subcontracting unit said, 'I can't count the number  
12 of detailed errors on working plans I've found.'  
13 He cited work he had just completed on reposition-  
14 ing a transfer tube used in moving fuel in and out  
15 of the reactor. The tube had been placed in accord-  
16 ance with designs but its collar would not marry  
17 with previously installed racks, it was three inches  
18 off.

19 "A surveyor said some of the equip-  
20 ment isn't even referenced according to the grid  
21 system. There is no way to properly site it be-  
22 cause there is no specified position on the plans.

23 "If Trojan flops it will not be Bechtel's  
24 first fiasco. According to The Wall Street Journal  
25 on October 8th, Consumers Power Company of Michigan

eb5

1 is suing Bechtel as the principal defendant in  
2 a \$300 million suit for damages resulting from  
3 alleged faulty work at its Palisades Nuclear Power  
4 Plant. This plant, designed to produce 821 mega-  
5 watts, has operated at 35 percent capacity since  
6 going commercial in December of 1971."

7 He further goes on to discuss the labor situa-  
8 tion.

9 "Labor trouble has further contributed  
10 to cost overruns. Wildcat strikes have been a regu-  
11 lar feature, with safety the most frequently cited  
12 reason for walkouts. Said one old hand, 'You fear  
13 the constant call of the wobble bird out there.'  
14 Pipefitters in particular are fairly militant.  
15 The largest portion of the work force comes from  
16 the electrical and pipefitting unions. Independent  
17 sources report that both unions took adversary  
18 positions from the beginning.

19 "According to PGE's Manager of Nuclear  
20 Construction, Mr. Steiner, the unions obliged  
21 them to hire dregs before sending out reliable,  
22 worthwhile, energetic workers. Steiner said the  
23 unions forced PGE to hire not only unproductive  
24 workers from the immediate area but also imported  
25 rejects and picked up travelers that nobody else

eb6

1 wanted.

2 "Consequently, Steiner says, the  
3 Trojan project has been noticeably worse for  
4 labor productivity in comparison to any other  
5 West Coast job he has seen. Massive feather-  
6 bedding has had an interesting side effect on  
7 Trojan, the development of a new art form among  
8 the workers. For pipefitters and welders, hand-  
9 crafted stainless steel jewelry is all the rage.  
10 Workers do incredibly intricate and finely  
11 wrought pieces: belt buckles, medallions, brace-  
12 lets, and compare results among friends.

13 "Evidently Trojan welders are not too  
14 much different from Saturday market craftsmen,  
15 except that they are paid \$12 an hour, but not to  
16 make buckles.

17 "Worker disenchantment is reflected  
18 in small things. Walls inside the plant are  
19 spiced with graffiti, most of it unprintable but  
20 directed as possible liaisons between PGE liaisons  
21 and goats. With little esprit de corps, quality  
22 of craftsmanship inevitably suffers. Outright  
23 vandalism has been a problem.

24 "In one case, an intricate web of hand-  
25 shaped copper tubes, representing months of work,



eb7

1 was destroyed during a night shift by someone  
2 wielding a sledge hammer.

3 "One subject of frequent speculation  
4 concerned the pressure resistances Bechtel would  
5 discover when they flushed the miles of pipes in  
6 the plant prior to activating the reactor. Workers  
7 talk about obstructions having been welded inside  
8 the pipes. It may just be talk but the fact that  
9 this kind of speculation doesn't raise eyebrows  
10 among laborers says something about the extent of  
11 their alienation."

12 The conclusion of the article contains a con-  
13 siderably prophetic statement I think.

14 "Meanwhile the work drags on at Trojan  
15 as the Columbia flows by full of its winter burden.  
16 Looking over the maze of unconnected wire and  
17 stainless pipe dripping in the rain, one worker  
18 scratched his head and shrugged, 'I don't think  
19 this thing will ever start up.' An older man, a  
20 pipe springer, as the pipefitters call themselves,  
21 looked up. 'The problem is, what if it does?'"

22 There's a copy of this article among these  
23 documents.

24 If the recent Trojan problems with failure of  
25 the control room and other safety related equipment to

eb8

1 comply with NRC regulations were an isolated incident, one  
2 might be justified in allowing the plant to continue interim  
3 operation and granting that degree of trust to PGE and  
4 Bechtel. But it is my contention that neither PGE nor  
5 Bechtel have shown by their past record that they are de-  
6 serving of such trust.

7 I hope that the members of the Atomic Safety and  
8 Licensing Board do not succumb, as so many other NRC and  
9 nuclear industry people have, to the cult of specialization.  
10 As Wendell Berry puts it in his newest book, The Unsettling  
11 of America, "The disease of the modern character is  
12 specialization."

13 I hope that the members of the Atomic Safety and  
14 Licensing Board have the wisdom to view this issue of interim  
15 operation in a broad manner, noting the full implications of  
16 the decision which you have been entrusted to make. This  
17 decision involves tens of millions of dollars and consider-  
18 able corporate prestige.

19 However, if the members of the Atomic Safety and  
20 Licensing Board choose to refuse PGE permission for interim  
21 operation of Trojan, this decision will be viewed as one  
22 with broad ramifications extending well beyond the scope of  
23 this particular hearing. And if the Atomic Safety and  
24 Licensing Board chooses to do, as I feel is the only wise  
25 decision they can make, to demand a complete and independent

eb9

1 safety review of the entire Trojan complex by a group of  
2 competent people with no monetary or ego attachments to the  
3 outcome of their findings, then we may yet have reason to  
4 believe that we will survive this very serious and real  
5 nuclear threat to our survival.

6 I hope that you recognize the importance of the  
7 decision before you. I wish that I had the power to make  
8 such a decision. I hope and trust that you will use that  
9 power wisely and to the benefit of all of us, not merely to  
10 the monetary benefit of a few.

11 I would further like to say that I've been hear-  
12 ing that the only issue that these hearings are to deal with  
13 is health and safety, that need for power is not to be con-  
14 sidered as an issue and cost is not to be considered as an  
15 issue, but I think it's obvious that even the most staunchly  
16 pronuclear supporter would have to agree that a nuclear  
17 plant that is not operating is, marginally at least, safer  
18 than a nuclear plant which is operating. And therefore,  
19 the need for power, or supposed need for power, and the  
20 cost factor must be incorporated into there somewhere or  
21 the plants would not be licensed to operate in the first  
22 place, and it would just be obvious that you would keep the  
23 plant closed down until at least it was brought up to the  
24 standards.

25 So I think that need for power and cost are



eb10

1 being considered but they aren't being discussed. I think  
2 the reason for that is that there is no need for Trojan's  
3 power. The plant has been shut down since last March, and  
4 we've had absolutely no brownouts, nobody's light has gone  
5 out, and there has been no economic catastrophe. All the  
6 things they predicted would happen have not happened.

7 The only reason PGE wants the plant turned on  
8 is because their stockholders are beginning to get edgy,  
9 they've got this investment, they've got their prestige on  
10 the line, they've got this second largest nuclear plant in  
11 the western world and it's not running. And I think they are  
12 considering those issues in coming and asking you gentlemen  
13 to be allowed to operate the plant.

14 They are considering the cost to them and yet  
15 we're not allowed to discuss those kinds of costs and get  
16 those on the record and get documentation on the costs and  
17 need for power. And I think if you're only going to con-  
18 sider health and safety, then there is absolutely no reason  
19 for the plant to be turned on because if only health and  
20 safety is considered, you have to agree that it's safer  
21 shut.

22 Thank you.

23 (Applause.)

24 CHAIRMAN MILLER: Thank you.

25 Who wishes to go next?

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11 agbl

C3

## LIMITED APPEARANCE STATEMENT OF PAT SITTON

105 N.W. 21st STREET, CORVALLIS, OREGON

MR. SITTON: My name is Pat Sitton. I live at 105 N.W. 21st Street in Corvallis. I have a degree in Physical Chemistry from Oregon State University, with considerable studies in physics attached to this, and I'm also close to a B.S. in Math at Oregon State.

As far as the question of whether or not I'm paid by the state to be unemployed, I quit a job so that I could attend these hearings and put my time and energy into them because I consider this a very important thing to do, of such importance that it outweighs any temporary concerns of my own about my own career or wages.

Now, as far as what I've seen here so far, I have to commend the Board on the objectivity and interest that they seem to be showing. I hate to sound at all -- I hate to sound patronizing, it's hard to say this without sounding patronizing, but I notice as time's gone by the people I've been working with and talking to out in the audience seem to be becoming more open to what the Board is doing and seem to feel there's more communication going on. And I think this is largely because of the response that we seem to be getting from you, and I commend you on that. Thank you.

It was brought up in the first day of the hearing

agb2

1 by the NRC Staff that the purpose of these hearings was to  
2 deal with the integrity, the structural integrity of the  
3 control room and not to get into issues of seismic siting  
4 safety or the need for power from Trojan.

5 And so I will try to be as factual and brief  
6 as possible and deal with those issues rather than anything  
7 philosophical or emotional since, as I understand it, you  
8 gentlemen have limited empowerment to deal with the  
9 specific issue in this case, this is the waive of the  
10 specific regulation of the NRC and federal regulations that  
11 will allow interim operation of this plant while these repairs  
12 are being made.

13 After saying I'm going to deal with the issue  
14 I am going to rather paradoxically tell a story. And that  
15 is a very old story commonly used as a teaching story about  
16 seven men who are sightless and a rather large gray  
17 elephant.

18 And I'm sure we're all familiar with the story  
19 so I won't go into it, but it illustrates that, if we do not  
20 have complete factual data and the means to analyze it and  
21 look at it, that we really have a great deal of understanding  
22 any situation.

23 And I think we could analogously say in this  
24 situation that these seven blind men did not have proper  
25 engineering surveys and proper unbiased experts brought in.



agb3

1 And, hence, when it came time for them to make  
2 their judgment, it could be seen by people on the outside  
3 looking at it that perhaps they tended to be rather ludicrous  
4 and fragmented.

5 What I intend to address myself here today is  
6 the uncertainty of the design information of the Trojan  
7 plant, the uncertainty of all the information that Bechtel  
8 and PGE and other people have been bringing forward simply  
9 because of issues that are not being considered but which,  
10 I believe, are pertinent to what's going on.

11 Now the Bechtel people, as I understand it,  
12 claim that their plant according to their mathematical  
13 approximations will not meet the operating basis earthquake  
14 level of 0.15g, as they originally claimed it would, and  
15 they now claim it will meet an OBE of 0.08 or 0.11g,  
16 depending upon what part of the discussion we are into.

17 However, they do claim that it will meet the SSE,  
18 or safe shutdown earthquake level of 0.25g, as originally  
19 specified and derived from the seismic siting surveys.

20 The seismic siting surveys, I've been told, are  
21 not supposed to be considered in this hearing. However, it  
22 seems to be essential that they should be because we're  
23 holding up a golden calf, essentially, of this SSE level which  
24 is derived from these surveys and we're spending days and  
25 hours and thousands of dollars discussing whether or not

agb4

1 this plant can meet that SSE level where, as far as I can  
2 tell from my analysis -- well, excuse me, analysis is a bad  
3 word -- my survey of the geological studies that have been  
4 done in the area that this SSE is not based on complete or,  
5 for that matter, legal data. It is not based on surveys  
6 which satisfy the current NRC regulations for seismic siting.

7 And, hence, I feel that this really does need  
8 to be brought in and discussed on a very extensive level and  
9 I think it should be addressed by the Board.

10 In addition -- well, perhaps I should just say  
11 that I am tendering you with the formal request to approach  
12 the NRC -- I'm not certain how your administrative structure  
13 works and how your information transfer operates within the  
14 NRC, but I would like to ask you to specifically consult  
15 whatever branches of the NRC are necessary and ask them  
16 if there is currently doubt within the NRC about this data  
17 and if there are any further studies planned.

18 And, if there are, it seems to me that this,  
19 perhaps, should be taken as a tacit admission by whoever  
20 is planning these studies that they have some doubt of this  
21 safe shutdown earthquake level and the siting criteria.

22 And I would like perhaps to go so far as to say  
23 that if there is some doubt of this safe shutdown earthquake  
24 level, that until that can be completely taken care of and  
25 set on a firmer engineering basis, that we're faced with

agb5

1 the situation where we really cannot safely let this plant  
2 operate at all until that is done with.

3 It's not just a question of whether or not this  
4 plant can operate with a substandard OBE level for a year  
5 with guarantees that it will meet the SSE level, but if  
6 there are any doubts of that SSE level, that needs to be  
7 looked at too. And I will submit a formal written question  
8 on that issue.

9 Also, I have some documents here which deal with  
10 this and the derivation of that figure.

11 CHAIRMAN MILLER: Deal with what?

12 MR. SITTON: Deal with the SSE level and the  
13 seismic siting level. And I will read from them in a  
14 few minutes. I would like to submit them for the record.

15 The other question that I would like to go into  
16 deals with uncertainty of data, it's the question of the  
17 construction procedures that Mr. Lynch just went into.

18 I've attended two of the three days of evidentiary  
19 hearings so far, and I've listened to many hours of cross-  
20 examination and read some of the studies of the Bechtel  
21 witnesses, specifically their STARDYNE studies.

22 I'm impressed at the STARDYNE study. This is a  
23 very advanced analysis of a building, breaking it up into  
24 finite elements. And it is probably very good within its  
25 own limits of approximation taking into account all the



agb6

080

1 necessary justifications and qualifications which they probably  
2 take care of very well by making conservative estimates.

3       However, it is a mathematical model and it is  
4 also based entirely, as far as I know, on the design criteria  
5 that were originally drawn into the blueprints, and secondly,  
6 upon specific engineering tests conducted upon model walls  
7 and model blocks.

8       Now, it's fairly well known among construction  
9 workers in Oregon, as has been brought forward in this article  
10 and with several people that I've talked to, that there were  
11 some very strange things going on during the construction  
12 of that site.

13       And it has come out, just from the Bechtel  
14 testimony itself, that we have some uncertainty as to exactly  
15 what is in those walls, what the rebar construction was in  
16 those walls -- for one wall of the control room, I should  
17 say.

18       And in addition to that, from the testimony of  
19 these workers, we can see that perhaps there's a great deal  
20 more question than that as to what was left out of the site,  
21 what was put into the site and their reasons for doing so.  
22 Perhaps it was not simply just oversight on the part of the  
23 designers or mistakes on the part of the workers, perhaps  
24 there's something far more serious and that we should deal  
25 with.

13 agb7  
C4

1 In addition to my previous request to the Board,  
2 I would also like to make a very serious plea that you should  
3 do whatever possible to get testimony from these worker sto  
4 see what, indeed, is sitting out there at the site rather  
5 than what we have here as a piece of paperwork.

6 We're sitting here discussing design criteria,  
7 blueprints, paperwork, test models and we have evidence  
8 that this may not pertain to what's out there at all.

9 And I have to admit that the evidence on the legal  
10 and professional level is slightly questionable, to the  
11 extent that it is anonymous testimony collected from con-  
12 struction workers.

13 However, the people who have talked to these  
14 workers and the people I've talked to who know them say  
15 that these men are indeed very concerned about their careers  
16 and their actual physical safety when they do testify on  
17 this.

18 Because they're involved in fairly serious --  
19 they could be involved in fairly serious union arbitrations  
20 and things like this as well as, perhaps, retaliation from  
21 PGE or somebody like this.

22 Whether or not this is possible or potential  
23 or whether I share that feeling or not, these workers do.  
24 And I would like to see some way to guarantee them some  
25 measure of safety or some encouragement to come forward and

agb8

1 speak.

2 I don't know if there's any way that this could  
3 be done, but I think it should be investigated.

4 I'm also submitting the formal written question  
5 on that.

6 I'd like to get back to the siting questions.

7 As has been said before, and I believe that  
8 intervenors have actually been overruled. Because of this,  
9 we're not allowed to discuss --- I shouldn't say allowed,  
10 but siting questions are not considered to be pertinent to  
11 this hearing.

12 And on an official level, this may be true. However,  
13 I'd like to point out that we're discussing siting criteria  
14 every time we say OBE or SSE. These are criteria coming  
15 specifically out of siting surveys and so I think we are  
16 discussing these surveys, whether we admit it or not, and  
17 I think they should be brought in in full and given a re-  
18 evaluation if necessary.

19 The nuclear industry has enjoyed, for quite a  
20 few years, a sort of a prima donna position as a crowning  
21 achievement of modern western technology. We have something  
22 that has been sold as, or at least initially was sold, as  
23 pollution-free, it doesn't smoke, it doesn't make a lot  
24 of noise, it's very pristine, it has a lot of white lab  
25 coats, it has a lot of dials, it's very flashy.



agb9

1           And when doubts were brought about the safety  
2 of this industry, it was answered that indeed technology  
3 had reached such a point that, even though we had to maintain  
4 incredible levels of redundant double-checking and incredible  
5 levels of performance, that this could be done because we  
6 had reached a level where this was possible.

7           And so what we have is something that's approaching  
8 a heirarchical priesthood of technology, approaching the  
9 pinnacle of perfection. This is the claim we have.

10          And I see that -- I've always felt this was very  
11 hard to do, and now that I'm getting into these things --  
12 this is the first hearing I've attended -- I'm learning that,  
13 indeed, my fears were justified that this is very hard to  
14 do.

15          I see that the NRCs role in this, if there is  
16 to be any credibility for the nuclear industry at all, or  
17 for the NRC -- and I've heard this said many times in  
18 the past few days and it tends to sound almost like a threat,  
19 and I don't mean it that way at all, it's more like a plea --  
20 and that is, to the extent that there is possibility for  
21 objectivity in this and to the extent that there is a  
22 possibility for safe use of nuclear power, the only way to  
23 guarantee this is for completely objective and truly  
24 honest and straightforward analysis by the regulatory industry  
25 -- regulatory commissions.

agbl0

1 And that is that I believe PGE themselves should,  
2 perhaps, be up here pleading with you to shut the plant down  
3 in the interim, because I do not think it is in their best  
4 interest either to be getting waivers on assurances that  
5 were given to the public in the first place of the safety  
6 of this plant.

7 There were these stringent regulations set down  
8 to assure the safety of this operation and to -- I believe  
9 also agreed to by the plants for public relation measures  
10 and some other reasons and I think now there's a tremendous  
11 potential for bad press here when these people find themselves  
12 coming back now and asking for a loophole.

13 It's a little bit of a slipshod way to slip  
14 through and yet get by. This is definitely counter to what  
15 they have claimed in the past about their ability to carry  
16 on at such fantastically credible levels.

17 Now, in relation to the siting of this plant,  
18 I've been looking over documents that have been put forward  
19 in the past eight years, or actually, the past 10 years  
20 starting in '68 with preliminary studies.

21 And it was looking at these documents that actually  
22 caused me to turn down an offer I had for a job starting  
23 this week in a couple of these hearings, because I was quite  
24 literally terrified by what I saw in these documents.

25 This is a discussion of the oversight and

agb11

1 coverups that went on during the geological siting of this  
2 place. And I think I can, perhaps --- well, I can say that  
3 what I've read of the documents submitted by Ms. Susan  
4 Garrett to the fuel siting hearings in which she summarizes  
5 some of these concerns --- I've also read the most recent  
6 report of the Oregon Department of Geology and Mineral  
7 Industries submitted in March, this year, which is a review  
8 of all siting, geological siting that has been done on the  
9 Trojan site done by the state geologist.

10 And he was requested by a Mr. Hunt, I believe,  
11 --- well, I won't say --- But he was requested by the Oregon  
12 Department of Energy to prepare this study.

13 And he sent out requests for papers to 33 people  
14 as well as an unspecified --- well, a memo to an unspecified  
15 number of his staff.

16 He received back 22 replies from professional  
17 people qualified to speak on this subject from around the  
18 state. Any my concerns in this matter are summarized by  
19 quotes from a specific letter that came back in response to  
20 his request.

21 CHAIRMAN MILLER: Are you planning on filing  
22 those documents with the Board?

23 MR. SITTON: Yes, however, I would like to make  
24 brief quotes.

25 CHAIRMAN MILLER: Certainly. I wasn't trying to



agbl2

1 cut you off.

2 MR. SITTON: This is a letter back to Mr. Donald  
3 Hull, the State Geologist, written by Professor Leonard  
4 Palmer, who's an Associate Professor of Geology at Portland  
5 State. This was written February 7, 1978, which is at  
6 least eight years after the beginning of formal studies of  
7 this site. And he begins the letter:

8 "Dear Mr. Hull,

9 "In response to your certified letter  
10 requesting factual data for a review of the Trojan  
11 Nuclear Power Plant site, I must first emphasize  
12 that the site is best known for its lack of  
13 factual data on geology."

14 CHAIRMAN MILLER: Who is this letter from, by  
15 the way?

16 MR. SITTON: This is from Dr. Leonard Palmer,  
17 an Associate Professor of Geology at Portland State University.

18 CHAIRMAN MILLER: Thank you.

19 MR. SITTON: The letter contains 25 points of  
20 information which he thinks Mr. Hull should be considering,  
21 in addition to conclusions and discussion of that data.

22 He then says:

23 "Specifically, no mapping of any  
24 surficial units of an age which could define  
25 recent faulting or tectonic deformation is known

agb13

1 to be in that area. Low stream terrace and channel  
2 deposits and soil units exist all around the site.

3 "The faults which underlie the  
4 reactor and power plant have apparently not  
5 been mapped to determine their extent or their  
6 relation to younger geologic units or other  
7 necessary characteristics to verify their  
8 relative activity."

9 He concludes by saying that:

10 "The incomplete and scattered evi-  
11 dence is not consistent, as one might expect,  
12 with the incomplete studies in an area so  
13 covered with so much mud and brush.

14 "The Trojan site study, however, is  
15 most blatantly lacking in any of the normal  
16 geological information, no pretext was ever  
17 made that any geological criteria for siting  
18 was followed (1970 hearing records, I have  
19 a copy)."

20 I would like to comment on what he's talking about  
21 here. What he's talking about is that when the official  
22 siting survey was made, the AEC had not yet as I understand  
23 it -- and this is put forward in these documents here --  
24 had not yet established formal criteria for how such a  
25 seismic survey should be conducted. And the requirements

agbl4

1 were not explicit enough to detail exactly what had to be  
2 determined.

3 What was done on the site was primarily a visual  
4 survey which is done from the air using areal photographs  
5 and on the ground, walking around looking at things,  
6 searching for evidence of faulting or geological activity.

7 Now from the air, these show up as what they  
8 call lineaments, any linear feature stretching across the  
9 environment that might be -- environment, God, what a word --  
10 the surface which might be considered to be evidence of  
11 movement of the earth or a fault.

12 A historical survey involves going back and  
13 checking through the areas on the record, looking for any  
14 records of recent earthquakes.

15 It should be noted, as pointed out in these  
16 reviews, that this area has been inhabited for, at most,  
17 150 years by people who could give distinct historical  
18 records of earthquakes with any way to measure them.

19 And 150 years, as any geologist will tell you,  
20 is not worth considering, that they would rather have  
21 records going back several thousand years, if possible,  
22 just for a start.

23 Now the OBE itself is set directly from this  
24 historical survey. The operating basis earthquake, as I  
25 understand it from one of these documents, is set forward as



agb15

1 the largest earthquake recorded in recent history, and this  
2 is what is expected to happen in the future.

3 The SSE is taken from the siting surveys as  
4 the largest earthquake expected to happen at that place,  
5 according to the geological observations made.

6 And these observations, as set forward by the  
7 present NRC regulations on this, are quite explicit and  
8 they are actually quite extensive. And I quote here now  
9 from Volume 10, CFR Part 100, Appendix A. This is Section  
10 Four:

11 "(a) Investigations shall....," and I will  
12 emphasize "shall" --- "...include the following:

13 "One, determination of the structural  
14 geologic conditions of the site and the region  
15 surrounding the site, include its geologic  
16 history."

17 And I will comment that this would include ---  
18 this would take care of the historical survey which was  
19 done.

20 "Part two, identification and evalua-  
21 tion of tectonic structures underlying the site  
22 and the region surrounding the site, whether  
23 buried or expressed on the surface."

24 Commenting again, that the original visual survey  
25 would certainly not guarantee this.

agbl6

1 "Part three, evaluation of physical  
2 evidence concerning the behavior during prior  
3 earthquakes of the surficial geologic materials  
4 and the substrata underlying the site.

5 "Part four, determination of pro-  
6 perties needed to determine the behavior of the  
7 underlying material during earthquakes and  
8 the characteristics of the quake-induced motions  
9 to the foundations of the plant, such as seismic  
10 wave velocities, density, water content, porosity  
11 and strength.

12 "Five, listing of all historical  
13 reported earthquakes which have affected or  
14 which can reasonably expect to have affected  
15 the site."

16 Again, this historical survey.

17 "Six, correlation of epicenters of  
18 historical reported earthquakes where possible  
19 with tectonic structures, any part of which is  
20 located within 200 miles of the site.

21 "Seven, for faults, any part of  
22 which is within 200 miles of the site and which  
23 may be of significance in establishing the safe  
24 shutdown earthquake, determination of whether  
25 these faults are to be considered as capable faults.

agbl7

1 "As set forward in Appendix A,  
2 Section 3, a capable fault is defined as a  
3 fault for which, (1), movement at or near the  
4 ground surface at least once within the past  
5 35,000 years or movement of a recurring nature  
6 within the past 500,000 years; (2), micro-  
7 seismicity instrumentally determined with  
8 records of sufficient precision to demonstrate  
9 a direct relationship with the fault; and (3),  
10 the structural relationship to a capable fault."

11 At the time the site was excavated -- the founda-  
12 tions were excavated for the site, Mr. Corcoran who was, at  
13 that time, the state geologist, was quite concerned -- and I  
14 have literature to that effect -- about a lot of fractures  
15 found in the bedrock under the excavation.

16 And, in general, it has been shown that many of  
17 the fault-like features in this site are very old. And they  
18 are sufficiently old and sufficiently well-cemented, or  
19 haven't moved in such a sufficiently long time that they're  
20 not considered grounds for concern.

21 And I will grant this may well be true. However,  
22 when it came to consider the faults -- not the faults, but  
23 rather the fissures under the plant, Mr. Corcoran requested  
24 specifically that these should be examined, that there should  
25 be microseismic tests performed on these fissures. This was



agbl8

1 never done.

2 And I have a letter here from PGE responding to  
3 this question, saying that this was not done because  
4 by the time the excavation was made, the site had been dis-  
5 turbed to such an extent that any readings would be  
6 disturbed by settling in the bedrock from the construction.

7 And I have not been able to do any checking on  
8 this, but I notice in writing Mr. Corcoran specifically  
9 says these tests should be done after the construction is  
10 finished, so I would assume that, as a geologist, he might  
11 well understand these things well enough to understand that  
12 tests could be made of those conditions.

13 I don't know whether this is true or not. I do  
14 know they were not made, whatever the reasons were, these  
15 tests were not performed.

16 In 1972, this matter was brought up by Inter-  
17 venors for discussion. And there was something of a compro-  
18 mise worked out in which the Intervenor dropped the case  
19 in exchange for getting a survey of a more extensive nature  
20 done, which has been referred to ever since then as the  
21 Dodds survey.

22 And I would like to say that the Dodd survey  
23 took advantage of many of the presently available and more  
24 advanced geophysical surveying methods which are becoming  
25 available now.

agb19

1 It was set forward by the Board at that time ---  
2 Let me see, let me get this straight here. I'll quote:

3 "On May 2, 1972, Intervenor against  
4 the construction of the Trojan Plant before the  
5 NRC signed a 'memorandum of agreement' with PGE  
6 in exchange for a promise to never again challenge  
7 the construction or operation of the Trojan Plant.

8 "The Intervenor, in turn, received  
9 certain concessions from PGE. One of these  
10 concessions was that a 'geophysical advisory  
11 board' of three persons chosen by the parties  
12 and paid by PGE, would prepare certain seismic  
13 studies notably absent from the initial PGE-  
14 Bechtel evaluation of the site."

15 I can vote outside of this that, outside of this  
16 point, most of the evaluations had, indeed, been performed  
17 by Bechtel.

18 "The Board was to arrange for, one, a  
19 seismic refraction test; two, a resistivity  
20 sounding; three, an aeromagnetic study and, four,  
21 and gravity profile."

22 "Unfortunately, the Memorandum of  
23 Agreement was prepared primarily by representa-  
24 tives of the Intervenor who were not professionally  
25 trained in geology, and the requirements

agb20

1 the study was to meet were somewhat loosely drawn.

2 "Although the report of the Geophysical  
3 Advisory Board was meant to resolve many of the  
4 issues that had initially caused many Portland  
5 area geologists concern, in point of fact, the  
6 study was very limited in scope and effect, and  
7 responded to those issues only within the very  
8 narrow scope of its inquiry."

9 This paper goes forward to point out that while  
10 these tests were performed, they were often performed to a  
11 very, very limited extent and whereas something might be  
12 normally -- a test might normally be required to cover an  
13 area or the whole area of the site, they were sometimes  
14 done as only single-line studies, or line of sight studies.

15 For instance here, the seismic refraction test,  
16 "intended to probe beneath the bedrock under the Columbia  
17 River for evidence of faulting, in fact involved only one  
18 linear profile across the river itself."

19 This was done to a depth of only 500 feet,  
20 although such studies are known to be able to penetrate  
21 to several thousand feet.

22

23

24

25



3a ebl

c5

1 A phrase that comes up in these documents all the  
2 time, that comes too frequently, is that -- and I'll quote  
3 a specific case here. This is coming out of the seismic  
4 refraction test. There's a quote here in this paper by  
5 Ms. Garrett that says:

6 "Within the limits of the method, no  
7 evidence of a major shear zone was discovered,  
8 according to the Board."

9 Now what we have here is something that says  
10 "within the limits of the method." I have spoken to geo-  
11 physicists about this sort of thing within the past week and  
12 they have assured me that geophysics is a very uncertain  
13 science, that it's very new, and that it deals with activi-  
14 ties which go on over a time scale of millions of years  
15 whereas something may lie dormant for millions of years and  
16 then suddenly jump, or it may be active for a long time and  
17 then it stops, and we have no assurance of this.

18 And so these people assure me that they can  
19 never possibly give a clean bill of health to any site any  
20 place in the world, and I understand that. However, what  
21 they say is what we're trying to do is a probabilistic  
22 thing, we're trying to give some assurance by doing a full  
23 and thorough search of all the available data -- I shouldn't  
24 say "available data," but by doing as many studies as possi-  
25 ble, we're trying to get as much information as we can about

eb2 1 a place to try and give the best assurance possible that such  
2 a thing won't happen.

3 And I asked some of these people to come here and  
4 speak in the limited appearances before the Board and the  
5 man I spoke to was a graduate student and he was sufficiently  
6 professional about this that he did not want to come and  
7 speak on the grounds that the information from these studies  
8 was sufficiently scanty that he didn't think either way.

9 He felt that he would be-- He felt that the  
10 people who had put forward any contention that the site was  
11 safe were being dishonest, and he did tell me this. He told  
12 me this was definitely dishonest. However, he felt that if  
13 he were to come and say that, that there would be some  
14 possibility of him being determined as going on record that  
15 the site was unsafe, and he was sufficiently professional  
16 that he did not want that misinterpretation to come up.

17 However, what he did say was that from the data  
18 available, we can't say anything. We cannot say either  
19 thing. We cannot say it is safe nor that it is unsafe. And  
20 this goes beyond his former statement that there is no  
21 possibility of a clean bill of safety ever.

22 What he was saying was that this study is suffi-  
23 ciently scant that it's a travesty.

24 Going on a little bit more about the limited  
25 nature of these tests performed under the Dadds Survey

eb3

1 performed in '72, they then performed a resistivity sounding  
2 which is again another geophysical characteristic of the rock  
3 at that point, and I'll quote again.

4 "Only two points were sounded, one west  
5 of the Trojan Ridge, and one west of a similar  
6 rock mound on the opposite side of the river."

7 And once again, this revealed no new information  
8 but again it was a very limited test.

9 The aeromagnetic survey is also covered here.

10 "Again, the area covered by this par-  
11 ticular survey was extremely limited, and covered  
12 a quadrangle 5-1/2 miles to the north of the site,  
13 1-1/2 miles to the west, 2-1/2 miles to the east,  
14 and 1 mile to the south. The results within this  
15 narrow range did not indicate changes such as  
16 might accompany a major fault coincident with  
17 the river bottom."

18 Now I would like to point out again that accord-  
19 ing to the NRC siting regulations that I just read, there is  
20 reference in there to checking faults as far away as several  
21 hundred miles. Anything that is remotely within the region  
22 needs to be considered. An areal survey a few miles around  
23 the site doesn't strike me as sufficient.

24 The gravity profiling.

25 "The Board concluded from this test that



eb4

1 the Trojan Ridge was a 'rigid and competent body.'  
2 At no time, however, did the Board address the  
3 possibility, expressed by Corcoran and other  
4 local geologists, that the entire Trojan Ridge  
5 might be a large landslide block that had slid  
6 from the higher terrain to the west of the Ridge  
7 and stabilized at a lower level nearer the river.  
8 Corcoran expresses this concern at length in his  
9 May 21, 1970 memo to the (Department of Geology  
10 and Mineral Industry's) Governing Board."

11 Quoting Mr. Corcoran now:

12 "The question has been raised as to  
13 whether the basaltic 'bedrock' that comprises the  
14 Trojan site may not be a large slide block which  
15 broke away from the main mass to the west at a  
16 time when the river was considerably lower than  
17 its present level. This possibility does not  
18 seem to have been seriously considered by the  
19 Bechtel geologists because they do not mention it  
20 anywhere in their reports.

21 "It is a well known fact that land-  
22 sliding is common along the Columbia River and in  
23 some places fairly large-sized blocks have been  
24 involved. Even though the island may be  
25 stabilized at the present time, there is always

eb5

1 the possibility that another earthquake could  
2 trigger movement of the block if it is lying on  
3 softer sediments."

4 This paper by Ms. Garrett also points out that  
5 there is an extremely wide and unusual U-shaped gap between  
6 the Trojan Ridge and the higher hill to the west of the  
7 ridge which might, by some stretch of the imagination, sug-  
8 gest that something once filled that gap and might perhaps  
9 be the Deer Island block that is being referred to.

10 The Board in this case concluded that:

11 "....with the submission of this re-  
12 port, geophysical tools have been applied to the  
13 development of the geologic settings for the  
14 Trojan Nuclear Plant to the most practical extent  
15 and no further work is warranted."

16 However, this paper by Ms. Garrett points out  
17 that at the time the Memorandum of Agreement was signed in  
18 May of 1972, the study was scheduled to be completed by  
19 August, a period of about four months. By this time the  
20 basic foundation excavations at the site had been completed.  
21 All foundations for the plant and the cooling tower had been  
22 poured. The frames of buildings were in place and approxi-  
23 mately \$20 million had already been spent on the Trojan  
24 construction.

25 It is within this context that the Geophysical

eb6

1 Advisory Board's conclusions to its study must be evaluated,  
2 and also I think within the context of the points brought  
3 up earlier about the limited nature of the tests conducted.

4 And it's with reference to the limited nature of  
5 these tests and the doubts expressed about them that I'm  
6 asking you gentlemen to make inquiries within the structure  
7 of the NRC and see if there is further study planned at this  
8 site. And I would be very interested if that could be  
9 brought forward during the evidentiary hearing. I don't  
10 know if that's possible; if it is merely in-house informa-  
11 tion which cannot be revealed, I just ask you gentlemen  
12 to consider it yourselves.

13 It is also brought forward in this paper quite  
14 a few times that while the NRC regulations for siting  
15 studies tend to be of a very regional nature, encouraging  
16 the body conducting the survey to look outward from the  
17 site and detect faults which might be connected to it, the  
18 studies conducted so far all seem to be somewhat the con-  
19 verse of that with the studies beginning in the Trojan site  
20 and attention being given only where essentially necessary  
21 to faults that people seem to trip over.

22 Again here when the Department of Geology and  
23 Mineral Industries published the report in 1973, titled  
24 "Geologic Criteria for Siting Nuclear Power Plants in Oregon,"  
25 by Sylvester V. C. Newton, who also authored criticisms of



eb7 1 the 1972 Geophysical Advisory Board study -- that's the DO  
2 Dodds study -- and also a Mr. N. V. Peterson, authoring this  
3 article, this document prepared for the State NTEC, and I  
4 believe that is -- what? -- Nuclear and Thermal Engineering  
5 Council? I'm not certain -- further emphasize the importance  
6 of regional study, and they quote, saying:

7 "Board regional evaluations must be  
8 followed by detailed studies for specific loca-  
9 tions. Such work will involve a complete array  
10 of geologic, hydrologic, and seismologic inves-  
11 tigation besides including data from other dis-  
12 ciplines."

13 I have looked at the most recent survey titled  
14 "The Geologic Hazard Review of the Trojan Nuclear Power  
15 Plant Site, Columbia County, Oregon," filed by the State of  
16 Oregon Department of Geology and Mineral Industries, March 4,  
17 1978. This is a survey prepared by Mr. Hull as a result of  
18 the 33 requests he put out for any data available on the  
19 site. And he writes about ten pages of conclusions here,  
20 and then has an addition cen to fifteen pages of biblio-  
21 graphy, citing references.

22 It was my observation from looking at this that  
23 this study also brings up again the phraseology that I was  
24 objecting to before, that the data as seen does not reveal  
25 any cause for alarm, making no mention of the fact that there

ab8

1 is great question placed upon the sufficiency of that data.

2 Mr. Hull in this paper says:

3 "No new seismic data are available  
4 to change the conclusion in the Trojan PSAR that  
5 potential seismicity of the site area as indicated  
6 in the historic record and in the regional dis-  
7 tribution of seismic events is adequately por-  
8 trayed in site design."

9 In other words he's saying that the historic  
10 survey of earthquakes on record, and the historic survey of  
11 regional distribution of earthquakes is what we have based  
12 this conclusion on, and we have no new data to change that  
13 conclusion, and that is the most direct thing that I see him  
14 saying in here about the actual safety of the site.

15 And I don't consider that what I would call a  
16 clean bill of health. I think that's a pretty nebulous  
17 statement to make, and in some ways it can even be inter-  
18 preted more as a complaint and a criticism of the data than  
19 as an actual opinion giving the site a bill of health.

20 He says here, and I quote again:

21 "The most significant geologic data  
22 and information that we can foresee being developed  
23 within the earth sized community in the future in-  
24 clude (1) more precise data on laterite Pleisto-  
25 cene units...."

eb9 1 And I will say in the stuff I've read, the refer-  
2 ence here to laterite Pleistocene units refer to sediments  
5.130 3 and volcanic ash laid down in specific time periods which  
4 have been used in these faulting studies to establish the  
5 time line of activity in these areas.

6 If the laterites seem to be undisturbed, that  
7 means that there has been no movement in that area since  
8 they were laid down thousands of years ago. So he's saying  
9 here that we can get more precise data on laterite Pleisto-  
10 cene units to improve recognition and determination of  
11 lineaments and better definition of northwest and northeast  
12 trending structures that may exist.

13 Again to comment, there are references made  
14 throughout these documents to these lineaments, these linear  
15 visual structures and long lines of lineaments running  
16 northwest and northeast through Oregon and through this area  
17 which are open to debate as to exactly what they are and  
18 what their significance is.

19 He says:

20 "(3) A more complete seismic record  
21 for the state through the operation of the state-  
22 wide seismic net.

23 "(4) More complete information on land-  
24 slide dams along the Columbia River.

25 "(5) More precise province definition...."



eb10

1 That is more precise definition of the geologic  
2 structures, large-scale structures in this area and how they  
3 are broken up, which will allow us to interpret how seismic  
4 activity in one area might be expected to transfer to another  
5 area and to affect it.

6 "(6) More precise tectonic models...."

7 That is again more precise large-scale models  
8 of movements of plates on the surface of the earth.

9 "We respectfully request the opportunity  
10 to review our conclusions in the event that new  
11 information contradicts and/or necessitates addi-  
12 tional studies."

13 He finishes:

14 "In summary, we know of no geologic  
15 reason, based on presently available information,  
16 to reasonably question the geologic adequacy of  
17 the site for safe plant operation or for temporary  
18 storage of spent fuel."

19 I would say that in light of his statements in the  
20 paragraph just above that the he is contradicting himself.  
21 He's calling for more complete studies and then he says we  
22 know of no geologic reason to question our previous studies  
23 that were based on incomplete information.

24 This terrifies me.

25 "Recommendations...."

eb11

Again quoting from Mr. Hull:

"Due to the ever-increasing volume of pertinent geologic data in Oregon, it is recommended that the Energy Facility Siting Council consider the systematic and periodic review of the geology of the Trojan site on regular intervals of possibly ten years or more frequently if significant new data so require, or if licensing procedures so require.

"Clear definition of agency responsibility for requesting and initiating such reviews of available new data and a clear definition of the means of financing such periodic reviews is needed."

I think this is the question that we find ourselves dealing with by force of necessity in these hearings when we come up with the question of whether or not the plant is safe. In facing earthquakes that are predicted on the site, we come up with the question of how we're going to predict those earthquakes.

Whether or not we want to deal with it or whether or not you're empowered to deal with it, it exists. It's a physical fact, and it has to be dealt with somehow, somehow through the organization of the NRC. I don't know how it can be done.

3B wbl

1                   These reports are saying quite factually that  
2 it needs to be done.

3                   This question of "clear definition of agency  
4 responsibility for requesting and initiating such reviews"  
5 seems to be what I'm facing here today in speaking with some  
6 doubt as to how this can be implemented, whether you gentle-  
7 men want to do it or not. And I assume that you will take  
8 interest in these things. You seem to be responding. But  
9 you may have no way to do anything about this. I can easily  
10 see how that could happen.

11                   Again, the "clear definition of the means of  
12 financing such periodic reviews" is what people have been  
13 bringing up here for several days now. I've heard innumer-  
14 able requests for independent studies conducted by people  
15 who are not working for Bechtel or PGE, and even some people  
16 requesting studies being done by people who are not employed  
17 by the NRC. I personally would not be too concerned about  
18 the employees of the NRC. But, again, we have a question  
19 here of financing of such periodic reviews.

20                   I've been told there's no money for financing  
21 independent surveys of power plants, or at least that such  
22 money is hard to come by, and that generally people don't  
23 cough it up because they don't believe it's needed.

24                   We might have a similar situation here of problems  
25 of finding where such grants might be available.

C-6



wb2

1           The reference to Mr. Hull's sentence about requir-  
2   ing site review on regular intervals of possibly ten years  
3   or more frequently if significant new data so require, or if  
4   licensing procedures so require: it could possibly be inter-  
5   preted that licensing procedures require this evaluation now .  
6   Considering that the licensing procedures set forth at the  
7   construction of the Trojan plant were never met, it could be  
8   argued that; this is a chronological thing; that they fulfilled  
9   the criteria at the time it was built, but they certainly  
10   don't meet the studies that are required now by the  
11   licensing procedures.

12           The question also here: he says, Do these reviews  
13   more frequently if new significant data requires this. Well,  
14   significant new data to the extent that the geophysical  
15   sciences are progressing exceedingly rapidly these days, they  
16   are one of the areas of fastest and most exciting growth in  
17   any of the sciences these days. And I get this feeling from  
18   the geophysicists th I've talked to, very competent, very  
19   eager, excited people. But what's coming out of this is that  
20   there are new methods and refinements of methods coming about  
21   very rapidly at this time in the past few years since these  
22   most recent tests were performed. Their methods are far more  
23   refined now than they were at that time. And the methods  
24   themselves are practically calling for re-evaluation of the  
25   site, simply because we can now do it far better than we

wb3 1 could at the time. Even if the information had not been  
2 inadequate by the standard of that time, we could certainly  
3 do far better now.

4 And when he talks about doing studies in regular  
5 intervals of ten years, well, we're --- what? -- six years  
6 beyond the Dodds survey now, which was the most recent geo-  
7 physical survey of any sort done. We're pushing that ten-  
8 year interval.

9 I've heard some people describe this document  
10 from Mr. Hull as being in favor of the present levels  
11 classifying present licensing of the Trojan plant and the  
12 present SSE criteria and OEE criteria as set, and I suppose  
13 they could be interpreted that way. However, in looking at  
14 it myself, I was quite interested to discover that it could  
15 also be interpreted other ways, and that it could be inter-  
16 preted, if looked at carefully, as pointing out that indeed  
17 we are short information, and that perhaps more needed to be  
18 done. And it could well be that Mr. Hull was in such a  
19 political position that he could not state this explicitly.  
20 I wouldn't want to speculate on that.

21 DR. PAXTON: Would you give us Mr. Hull's full  
22 name?

23 MR. SITTON: Yes. Mr. Hull's name is Donald A.  
24 Hull. His title in the paper is State Geologist. This is how  
25 he signs his letters: Donald A. Hull, State Geologist. However

wb4

1 his name is not attached to the front of this report. It  
2 is specifically referenced to the State of Oregon Department  
3 of Geology and Mineral Industry. However, in the attachments  
4 at the back of the report we have letters specifically from  
5 Mr. Donald A. Hull signing himself as State Geologist on  
6 Department of Geology and Mineral Industry stationery dated  
7 at the time immediately prior to the report, calling for  
8 the information that he used to write the report.

9 CHAIRMAN MILLER: About how much longer do you  
10 have?

11 MR. SITTON: I'm just going to go a few moments  
12 longer, with a few brief remarks.

13 CHAIRMAN MILLER: I was going to say we can recess  
14 now if you have more.

15 MR. SITTON: I'm about at my conclusion.

16 CHAIRMAN MILLER: Very well. I don't intend to  
17 cut you off. Please proceed.

18 MR. SITTON: I believe the Department of Geology  
19 and Mineral Industry is right here in Portland. Their  
20 offices are over in Southwest Portland, and Mr. Hull is  
21 available.

22 I have not spoken to him myself, I have not asked  
23 him for any personal interpretations of this document or  
24 anything on or off the record, so I don't know how he feels  
25 about my interpretations of his work.



wb5

1 But I would like to, once again, go back to  
2 my previous, more philosophical justifications for what I've  
3 said here today, dealing with the general uncertainties of  
4 this information. And this is almost similar to many of the  
5 things that were said yesterday by people who are students  
6 of the philosophy of science, and things like this.

7 We're dealing with the philosophy of information  
8 and the nature of engineering studies, and things like this.  
9 I've had two years of training as an electrical engineer at  
10 Cal Tech. I understand a little bit at least of how  
11 engineers work, and making models and approximations does not  
12 frighten me in the least. I enjoy mathematics and applied  
13 mathematics very much.

14 However I've also learned through these studies  
15 that what becomes very crucial is a clear understanding of  
16 the nature of reality and how to base your studies on  
17 reality as it exists. And I see here something happening  
18 that is, well, perhaps not professional for the people involved  
19 but it is -- it disturbs me. That is, that we have informa-  
20 tion taken from a wide range of sources in several different  
21 scientific and engineering disciplines, where people are  
22 perhaps thinking in different ways. And over the course of  
23 many years we are now referring back to studies conducted  
24 ten years ago. And these studies seem to be more and more  
25 approaching the nature of Old Testament gospel. And I think

wb6

1 that perhaps as they get older and older they should be  
2 questioned more because of the better nature of materials  
3 and studies available to us now, or equipment and possibili-  
4 ties for studies, I should say.

5 The geophysicist tells me that indeed he can  
6 never give a clean bill of health to any site. He gives  
7 this report to an engineer who looks at it and says -- well,  
8 excuse me; the geophysicist will say he cannot give 100 per-  
9 cent clearance to any site, but that there's a very good  
10 chance that this site is safe. And I will agree with that  
11 and I will accept that as a reasonable basis for proceeding.

12 However he then gives this to an engineer who  
13 looks at it and says: This man has given me quantitative  
14 figures; he's given me .25g SSE and .15g OBE, and we will  
15 now deal with these as structural engineering criteria.  
16 And perhaps not intentionally, but at least by the nature  
17 of the way things seem to be going, it seems that the origins  
18 of these criteria are being forgotten that are being paraded  
19 around as accepted facts, whereas they're not.

20 I think when we talk about expensive mathematical  
21 approximations, studies and models done using UC Berkeley's  
22 Stardyne programs by competent experts -- and I don't question  
23 their competency -- we begin to realize these people are  
24 competent structural engineers, and they themselves may have  
25 very little understanding of where those design criteria that

wb7 1 they were handed came from; they have no idea there are any  
2 questions surrounding those criteria. And this I think would  
3 also influence strongly any of their margins of error that  
4 they build into their programs, what they call their  
5 conservative estimates.

6 And I think we have here an excellent opportunity  
7 for pulling all this data together. We have an overall  
8 review board sitting here on a specific limited topic of the  
9 structural integrity of the control room. However I think  
10 it's essential that the structural integrity of that control  
11 room should be evaluated in terms of physical reality, and  
12 physical reality in this case includes where the control  
13 room is sitting, and the fact that we are unfortunately short  
14 of information on where it is sitting, and what's likely to  
15 happen to it when it sits there longer.

16 Also, as I said before, I have personal questions  
17 shared by a lot of people about the actual physical nature  
18 of that control room as constructed, as specifically  
19 separated from that control room as designed and as considered  
20 on paper, that control room as it exists, made out of sand  
21 and cement and rock and steel. --or the lack thereof. And  
22 I'd appreciate the most objective study that you gentlemen  
23 can give to these issues and the other issues brought up  
24 here by other people. And I think that in the long run this  
25 would also be for the benefit of the nuclear industry, whatever



wb8

1 that might be; that these studies be done, and that the  
2 Trojan plant be given once and for all an analysis on these  
3 grounds, and perhaps a general safety analysis also, which  
4 would give it a clean bill of health, or find whatever  
5 problems need to be corrected.

6 This has just reminded me of what was mentioned  
7 by the Bechtel panel in the hearing on their cross-examination  
8 that this design error was found eight years after the  
9 design by somebody who was making the modification of the  
10 wall, when they consulted the blueprints and the design  
11 calculations, and they could not say if these designs had  
12 been reviewed by the NRC or PGE; they couldn't say they had  
13 not been but they had no personal knowledge that they had  
14 ever been checked.

15 I find it rather disturbing that there's any  
16 possibility that these might never have been reviewed, that  
17 the safety of the plant might never have been examined  
18 thoroughly by qualified people. And I'd like to see that done.

19 Thank you.

20 (Applause)

21 CHAIRMAN MILLER: Thank you.

22 Do you wish to submit the documents you referred  
23 to for the record?

24 MR. SITTON: Yes.

25 CHAIRMAN MILLER: You may do so.

wb9 1

We'll have our afternoon recess at this time.

2

(Recess)

ERIC WRB

MADELON fls 3

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MADELON/  
c7 mptl

1 CHAIRMAN MILLER: We'll resume the limited  
2 appearance hearing.

3 I think we had a request from Steve Tygart

4 LIMITED APPEARANCE STATEMENT OF STEVE TYGART

5 MR. TYGART: I didn't come prepared with a tablet  
6 and format and everything; I just wanted to reply to an  
7 accusation that was made yesterday by some of the people in  
8 the Decommissioning Alliance.

9 The point has been brought out that Trojan isn't  
10 as sound as it should be, and that maybe there haven't been  
11 enough steps taken as far as the regulating of the piping,  
12 and inspection. And as a pipefitter down there for over two  
13 years, a lot of people I don't think understand how involved  
14 piping of this nature is. And it is followed all the way  
15 from the foundry to the installation through serial numbers  
16 and heat numbers; and it's X-rayed and it's lasered before  
17 it's ever even put in use.

18 It's pressure tested. The seismic restraints,  
19 hangers, are of the best steel that can be made. And they're  
20 also X-rayed if need be.

21 And I just heard a lot in the past. Every time  
22 something happens somebody jumps on us.

23 As a taxpayer, I just thought it was time somebody  
24 got up and spoke. I feel that it should be reopened. And,  
25 I don't know, that's about my point. I feel that as far as



mph2

1 the structure and the building of the plant -- I don't know  
2 what, as far as the level, is good. I mean, you can go and  
3 go and go.

4 And as far as I'm concerned, it's as sound as  
5 humanly possible. There are mistakes every day as far as  
6 the way something is built. But, you know -- I don't think  
7 the research has been done on the people's part as far as  
8 the involvement on knowing and making accusations on state-  
9 ments that they're really not as in-depthly researched as  
10 they may think they are.

11 That's about all I have to say.

12 Thank you.

13 CHAIRMAN MILLER: Thank you.

14 Is there anyone else who wishes to be heard?

15 By the way, how many more people who have not  
16 had the opportunity yet to speak and present written statements  
17 wish to be heard this afternoon?

18 (Show of hands.)

19 All right.

20 I think that we don't like to impose time limits  
21 and we scarcely ever do, but I think in order for each of you  
22 to be heard you should sort of decide among yourselves.

23 We're going to have to -- well, we don't have to,  
24 but I think we should recess at five, and this would conclude  
25 the opportunity at this time for limited appearances because

mpb3

1 we will resume then a full week of evidentiary hearings  
2 of which we've had three days, as you know. We want, as  
3 early as seems reasonable to the Board, to have the input  
4 that comes from these limited appearance statements.

5 There will in the future be more evidentiary  
6 hearings, whatever the decision that is made on the interim  
7 operation inasmuch as the second issue relates to the nature  
8 of the modifications, the studies and the proposals with  
9 reference thereto, and their adequacy from the safety stand-  
10 point, which is the second major issue for this Board to  
11 determine.

12 We will provide opportunities. It won't be the  
13 first day of evidentiary hearings, but we will try to make  
14 it in a reasonable relationship to whatever evidentiary  
15 hearings there are in the future on that aspect. But since  
16 this is the last opportunity in connection with the trial-  
17 type proceedings we are conducting on the interim operation,  
18 we'd like to have everyone have an opportunity.

19 We have suggested before and we suggest again  
20 that more use could be made of written questions or state-  
21 ments, and they can be presented now or at any time. But  
22 nonetheless as there is a number, as you've seen by the  
23 show of hands, that wish to be heard between now and approx-  
24 imately five o'clock, you should sort of decide among your-  
25 selves how much time it takes so that in fairness everyone

mpb4

1 has an opportunity.

2 You may proceed.

3 MR. STACHON: Thank you, Mr. Chairman.

4 LIMITED APPEARANCE STATEMENT OF ERIC STACHON

5 MR. STACHON: My name is Eric Stachon. With me  
6 here today is Shanda.

7 I'm a member of three safe energy organizations,  
8 the Coalition for Safe Power, Forelaws on Board, and the  
9 Trojan Decommissioning Alliance. I've been a member repre-  
10 senting the Coalition and Forelaws on Board in the Skagit  
11 Plant licensing hearings since March of '77. I have also  
12 observed the Pebble Springs licensing hearings, the Trojan  
13 spent fuel pool expansion hearings before their respective  
14 ASLBs, and I have to say that my personal experience of  
15 witnessing the NRC in action over these past few years has  
16 been a little bit frustrating.

17 I have organized my thoughts as a relationship  
18 between four entities and the interaction between them. These  
19 would be Bechtel, PGE, the NRC, and the public.

20 As a member of the fourth group, I'll provide  
21 illustrations as to why I feel my interests will not be  
22 represented by the other three groups.

23 First we have Bechtel, the largest engineering and  
24 construction firm in the world, with an obvious priority of  
25 creating profits. There could never be a strong concern on



mpb5

1 their part for the safety of the public, for these interests  
2 contradict one another.

3 I also have a hard time believing that the NRC  
4 can adequately regulate Bechtel since Bechtel is an old  
5 bedfellow from the old days of the Atomic Energy Commission.

6 I'd like to lay a little ground, a little history  
7 in that by relating the story of a man named John McCone,  
8 who is an old college buddy of Steve Bechtel, Sr., who,  
9 incidentally, is one of the five richest men in the country.

10 Anyway, it seems that Steve and Mr. McCone formed  
11 themselves a business partnership and profited some \$44  
12 million building warships during World War II. And after  
13 this "Corporation" dissolved, McCone found his way into the  
14 Defense Department, and from there he became the chairman of  
15 the Atomic Energy Commission. He was responsible for  
16 Bechtel's landing the contract for the first commercial  
17 nuclear plant in the country, which is the infamous Dresden 1  
18 in Illinois.

19 I think that sort of lays a little bit of premise  
20 as to the partnership that Bechtel has experienced with  
21 first the AEC and now the NRC.

22 Dresden was never without its problems, but it was  
23 not Bechtel's only nuclear lemon. There's the Palisades  
24 Plant in Michigan, whose nuclear generator broke down short-  
25 ly after opening.

mpb6

1 And I think Mr. Lynch elaborated a little on that  
2 a little while ago.

3 There is also the Terraper Plant in India which  
4 has suffered from numerous leaks and breakdowns, and I'm  
5 sure that there are many more with problems I'm not aware  
6 of.

7 Bechtel's flaws are not limited to the construc-  
8 tion of plants. Their preparatory work is deficient also.  
9 And a case in point is the proposed Skagit Plant which I have  
10 some familiarity with. The geology and seismology are the  
11 overriding concerns with the Skagit site.

12 Now Bechtel's geologists tell us that .35g is a  
13 conservative SSE design for the plant. However this spring  
14 a USGS geologist discovered that Bechtel's geologist had  
15 made serious errors in their field mapping and two potential  
16 fault lines had been overlooked. It's sort of a situation  
17 where you have the fault lines here, and you look over here  
18 and you don't see them.

19 (Indicating.)

20 Anyway, Bechtel has been ordered to do more field  
21 work. And once again the project is in limbo. It's indica-  
22 tive of the situation.

23 To bring to your attention how many hours Bechtel  
24 has spent field mapping in and around the Skagit site since  
25 1972, from 1972 through 1975 Bechtel spent 3300 hours mapping,

mpb7

1 drilling, and trenching. In 1976 they spent 1400 hours on  
2 mapping alone. In 1977 that jumped to 1700 hours of mapping  
3 -- or possibly napping, I could be wrong.

4 (Laughter.)

5 But here comes the big illustration:

6 Through June of '78 Bechtel has spent approximately  
7 4500 hours mapping. That's 4500 hours in six months' time,  
8 nearly three times any previous 12 month figure.

9 Keep in mind that the figures for the last six  
10 months of this year will no doubt be greater. And I under-  
11 stand that on November 6 there is going to be a meeting  
12 between Bechtel geologists, representatives from Puget Sound  
13 Power and Light, and the NRC and the USGS, to talk about  
14 still another possible fault line that USGS geologists have  
15 found that Bechtel seemed to neglect.

16 And so still more field work is going to have to  
17 be done. And all of this coming about after we've been  
18 assured time and time again that there were no geologic  
19 problems at the Skagit site.

20 So I think this is a clear example that raises  
21 questions with Bechtel's credibility.

22 That's enough for Bechtel. Now we come to PGE.  
23 And I wouldn't trust them to operate their office building  
24 safely, let alone Trojan.

25 (Laughter.)



mpb8

Trojan seems to have had problems from the start. First there were the feedwater pump problems, then the DBA sequencer problem, and, of course, the incident with the two workers being exposed to the highest amounts of radiation of any workers at any plant site here in the country as of yet.

I'd like to enter into the record a letter from Fred Miller, the Director of the State Department of Energy to the NRC Staff, dated September 16, 1977, and this letter talks about the sequence of problems and the DOE's concern over their reoccurrences.

And I have a few copies that I'll submit.

(Handing documents to the Board.)

Time and again PGE has just not demonstrated that it has the ability to safely operate the Trojan Plant, and now they want to eliminate the little conservatism that we now have there, and operate the plant under substandard conditions. And I consider this action inexcusable.

And finally I come to the Nuclear Regulatory Commission. And I stated earlier that I had little confidence in the NRC's protecting our health and safety. I'd like to bring to the Board's attention a recent GAO report entitled The Nuclear Regulatory Commission Needs to Aggressively Monitor and Independently Evaluate Nuclear Power Plant Construction.

mpb9

1 The report criticizes the NRC for almost exclusive  
2 reliance on atomic plant builders of monitoring. The report  
3 also states that the NRC's construction inspections are in-  
4 adequate because the inspectors spend too little time at the  
5 building site and do too little independent testing.

6 Now it seems some of the criticisms in this report  
7 almost sound like a site-specific analysis of the Trojan  
8 situation. It goes without saying that a thorough NRC in-  
9 spection during construction should have prevented the  
10 travesty that we now find ourselves in. And now the same  
11 problem exists: no independent evaluations, but almost  
12 exclusive reliance on Bechtel's analysis, and I'm speaking  
13 of these control room hearings.

14 Now I may not be a nuclear engineer or a physics  
15 major, but one needs nothing but common sense to determine  
16 that something is seriously wrong here.

17 I maintain that startup cannot possibly be consider-  
18 ed by this Board until an independent analysis is completed  
19 by the Staff. This means no reliance on Bechtel's assump-  
20 tions.

21 Now I've seen the Board in the Skagit proceeding  
22 a time or two tell the NRC Staff, Look, your work is inadequate,  
23 you're going to have to go out and bring us some more data and  
24 some more figures. I think the work in this situation on the  
25 part of the Staff is deficient, and I think it's serious

mpb10

1 enough to require the same reanalysis and an independent  
2 evaluation.

3 The NRC is responsible for regulating the nuclear  
4 industry and protecting our health and safety. For once I'd  
5 like to see some action on its behalf that would restore my  
6 confidence in its performing its function.

7 I would close by saying I'll be watching the pro-  
8 ceedings carefully, and that I would hope that possibly  
9 we'd be afforded the opportunity to make limited appearances  
10 after the testimony comes in on the safety-related equipment  
11 because I think there's a possibility that some concerns may  
12 be brought out in that testimony that we would like the Board  
13 to address.

14 CHAIRMAN MILLER: Thank you.

15 MR. STACHON: Do you have anything to say, Shanda?

16 (No response.)

17 CHAIRMAN MILLER: She's the tersest witness we've  
18 had.

19 (Laughter and applause.)

20 Thank you.

21 Who would like to go next?

22 LIMITED APPEARANCE STATEMENT OF PETER BERGEL

23 RESIDENT, SHERIDAN, OREGON

24 MR. BERGEL: Peter Bergel, I live at 7560 Harmony  
25 Road in Sheridan, Oregon. I'm a PGE ratepayer.



mph11

1 I would like to ask that this Board summarily dis-  
2 miss PGE's request for permission to operate Trojan on an  
3 interim basis pending repairs on the control building for the  
4 following reasons:

5 First, Trojan received a license from the NRC to  
6 operate within certain safety guidelines. Now what use are  
7 these guidelines and with what confidence can the public view  
8 such guidelines in the future if they are simply waived as  
9 soon as they become a serious problem to a reactor operator?

10 Secondly, There has been question at these hearings  
11 as to whether need for power was a pertinent topic for  
12 Intervenor's to explore. Yet PGE's alleged need for Trojan's  
13 output has been a pressuring factor causing the bifurcation  
14 of these hearings and generating an unnecessary sense of  
15 urgency in all these proceedings. And I urge the Board to  
16 make up its mind whether or not this topic is relevant.

17 And if it is relevant then it seems like both sides  
18 ought to be able to address it directly.

19 Thirdly, the PGE-Bechtel contract which was re-  
20 leased earlier this week reads like an agreement between a  
21 thief and a fool. Responsibility for public safety and  
22 welfare should not be in the hands of either. Bechtel has  
23 built a tremendously complex facility and then has sought to  
24 exonerate itself from any possible liability if that facility  
25 is deficient, which of course we know now is the case.

mpb12 1 And I'm real glad that Eric Stachon went ahead of  
2 me and presented more background on the unacceptability of  
3 Bechtel's performance on other contracts.

4 Assessing the seriousness of the deficiency and  
5 correcting it cannot be reasonably left up to such a corpora-  
6 tion, and yet that is what we are seeing. We are seeing  
7 Bechtel making the error in the first place, attempting to  
8 weasel out of any liability for it by the contract that it  
9 involved itself with with PGE, and now is doing the studies  
10 to find out just what the situation really is, and we're  
11 supposed to rely on that and then rely on Bechtel to correct  
12 the mistakes that it finds in its own studies on the situa-  
13 tion.

14 This is not acceptable.

15 On the other hand, PGE allowed Bechtel to hood-  
16 wink it into signing this absurd contract, counting, no doubt,  
17 on the ratepayers to bail it out if necessary. And obviously  
18 the public interest cannot be trusted in the hands of PGE  
19 either.

20 Also, as Eric was saying a moment ago.

21 So I request that the members of the Board review  
22 the contract and ask themselves whether they would be happy  
23 with this kind of a liability agreement if Bechtel were  
24 building a house for them.

25 Fourth, PGE's financial situation is desperate.

mpbl3

1 Its bond rating is -BBB. On a decision between profits and  
2 safety, safety is certain to take second place. This also  
3 prejudices me against granting PGE responsibility to protect  
4 my safety.

5 On account of all of these points, I ask that the  
6 Board permit no interim operation of Trojan, and further,  
7 that the NRC be asked to send in a team of inspectors -- not  
8 just one or two, but a team -- to comb the plant from top to  
9 bottom in an attempt to identify all the other problems that  
10 may exist there at this time and to see that they, as well  
11 as this problem of the control building, are adequately  
12 dealt with before any question of restarting the plant is even  
13 entertained.

14 Thank you.

15 CHAIRMAN MILLER: Thank you.

16 (Applause.)

17 Who wishes to go next?

18 LIMITED APPEARANCE STATEMENT OF ELEANOR GUNN

19 MS. GUNN: Members of the Board, I hope that you  
20 will both listen with open hearts and consider what I have  
21 to say in the spirit of concern and compassion with which  
22 I ask it.

23 Who is powerful enough to force a Federal Nuclear  
24 Regulatory Agency to lower by almost one-half its earthquake  
25 safety standards to operate a nuclear power plant. I have a



mpbl4

1 question too that other people have been saying that it is  
2 your job; but I'd like to have a yes or no answer from you  
3 before I go on, which is:

4 Is it your job to make sure that nuclear plants  
5 are operating safely?

6 CHAIRMAN MILLER: I think we've explained before  
7 that this is your opportunity, and that we should not  
8 appropriately engage in debates and answer questions and the  
9 like. These have been the ground rules throughout, so please  
10 don't ask us questions; but please tell us what you wish for  
11 us to know or hear.

12 MS. GUNN: Well, I have to assume that that is your  
13 job, then.

14 If the Atomic Safety and Licensing Board has  
15 determined that the control room walls need to have an OBE  
16 of .15, what could possibly convince you to operate the  
17 Trojan Nuclear Power Plant when the OBE, according to the  
18 latest study, is .08?

19 And I'd like these questions -- if you can't  
20 answer them right now, I'd like them to be part of the record  
21 and to be answered at some point.

22 I wonder if the request for Trojan to be opened  
23 from Governor Straub was part of the pressure that led you  
24 to hold these meetings and decide to consider this issue.  
25 I would like to say that Governor Straub is trying to win an

mpbl5

1 election and his opinions do not represent the people of  
2 Oregon, as far as I and most other people that I know are  
3 concerned.

4 I am in touch with both a large number and a large  
5 cross-section of people in Oregon. I've lived here almost  
6 20 years, and I'm involved in both alternative energy measures  
7 and my community as a midwife, and working as a farmer too.

8 I'd like to tell you from all the people who  
9 can't be here today who I know are very concerned about this  
10 issue, and for myself, that we do not want Trojan operating,  
11 especially with the control room walls not up to safety  
12 standards. I think this is just ridiculous, to put it mildly.

13 My wish is that it never be reopened and no more  
14 plutonium would be made.

15 To give an example of the cross-section of people  
16 that I am in contact with, I was hitch-hiking here today and  
17 the four rides that I got, the first was two women and a small  
18 child. Each person asked me where I was going and I said I  
19 was coming to testify here, and their comment, before I asked  
20 them any questions about what they thought was, "I hope that  
21 thing is never reopened. We don't need it and we don't want  
22 it."

23 I got the same answer from a 50-year-old painter,  
24 and I got the same answer from a log truck driver, and the  
25 same from a person who had just had a child and wondered if

mpb16

1 he did the right thing by bringing another child into this  
2 world.

3 A lot of people are of a different opinion. They  
4 know nuclear power is dangerous, but they're misled by propa-  
5 ganda put out by PGE saying that we need nuclear power. The  
6 propaganda also says that if we don't have nuclear power, we  
7 don't have electricity, which is an assumption that I can't  
8 buy. We have dams on almost all the big rivers in Oregon;  
9 we have plenty of electricity.

10 In fact, the only forecast of a higher projected  
11 energy demand that I've read -- and I've read a lot of them --  
12 are the ones done by the utilities. And in fact, independent  
13 agencies who make forecasts on energy demands show the demands  
14 for electricity going down and not up.

15 The number of people using alternative energy  
16 grows daily. And there are literally thousands of people  
17 involved in this process and involved in educating others  
18 about how we can bring about the changes so that we can have  
19 more decentralized energy. This sort of thing takes a lot  
20 of time, but it's happening now. And I think we should have  
21 the chance to do it and not have this -- have Trojan reopened  
22 just in a panic situation by PGE.

23 Oregonians are different from Washington, D.C.  
24 We still have some land that can support our existence and  
25 we have people that come and go who are willing to work



mph17 1 together to survive. If you both live in Washington, D.C.  
2 --- I'm not sure where you live, but I imagine the atmosphere  
3 is a lot different there, and people are more dependent on  
4 the utilities.

5 We are more independent here and would like the  
6 chance to have our own destiny to fulfill. There's lots of  
7 talk these days about world destruction. The air, the water,  
8 the earth, and the upper atmosphere are being poisoned daily  
9 by our way of life. Those things are our support systems.  
10 When they are gone, we're gone.

11 This link between the earth system and human  
12 beings seems to be one people forget easily in this world  
13 of business and money. I believe the continuation of life  
14 on this planet to be more important than money, and I would  
15 ask the Board if they believe that same thing.

16 It is known that the continental plates are  
17 shifting, that the surface of the earth is having increasing  
18 earthquakes, and that the whole West Coast could be in a  
19 precarious position at some point in the near future. If  
20 you would allow not only Trojan, but Skagit and Satsop, and  
21 other nuclear plants to be operated when there is no guarantee  
22 that the control room of Trojan or others could withstand  
23 this kind of quake. In fact, Bechtel does not guarantee  
24 much of anything.

25 Yet the testimony of Bechtel engineers is being

mpb18

1 taken as evidence in this hearing. If they can't build a  
2 nuclear plant and be responsible for their errors, how can  
3 their judgment about the control room walls even be consider-  
4 ed? That's another question that I would like an answer to.

5 And why are the highly-paid consulting engineers  
6 who will testify Monday, why are they hired and paid for by  
7 PGE? The quotations from the testimony that appeared in the  
8 Oregon Journal state:

9 "There would be no threat to public health  
10 or safety if Trojan is allowed to generate power  
11 while the building is strengthened."

12 It is known that no level of radiation is safe  
13 and that Trojan's normal operation and release of radiation  
14 is a threat to the public safety and health. And yet they  
15 can make a statement like that, that it's no threat to the  
16 public's safety and health, I don't understand.

17 There will be an even bigger threat if Trojan  
18 operates before the control room is repaired.

19 I'd like to say something about people's energy  
20 and motives for speaking on this issue. At the hearing  
21 Monday I would guess that half of the people in the room  
22 were paid, and probably pretty well paid, for being there  
23 and sitting there, and either giving their opinions or just  
24 watching.

25 The other half of the people are people who were

mpb19 1 there because they care enough about having some say about  
2 what happens in their lives to make the time to go there, to  
3 take off from work, to get someone else to do their job, to  
4 pay, in fact, to go to these hearings through the expense of  
5 gas or bus, or however they get here.

6 I wonder what motives are more inclined to bringing  
7 truthful responses, one who is being paid or someone who goes  
8 because they care?

9 I'd like to respond to the person that spoke first  
10 after the recess who says he's worked on Trojan and on the  
11 control rooms. One statement he made was that mistakes are  
12 made every day. And I don't know if he is referring to Trojan  
13 mistakes are made every day, or just general technology. And  
14 he said it was done as well as humans can make it.

15 I can't really accept that, and I wonder if just  
16 the whole question of human error in itself is enough not to  
17 have a nuclear plant operating. You know, if it's up to a  
18 person to push the right button, and that's all it's up to,  
19 is that worth running the risk of having this whole area  
20 polluted, and very badly polluted.

21 He also said that the pipes that are used are  
22 always carefully monitored and X-rayed and done over and all  
23 of this and that. And I was talking to a person who works at  
24 a steel company in McMinnville and he told me that a shipment  
25 of pipes that was bound for Hanford to be used in a nuclear



mpb20

1 plant were sitting around and waiting for the NRC, or who-  
2 ever is supposed to inspect them to come and inspect them,  
3 and they never came, so they just sent them out without  
4 being inspected.

5 I don't know if that's ever happened at Trojan,  
6 but if it happened there, then it's happening at Hanford  
7 right now. That means that there's a lot more errors than  
8 anyone even knows. But you both probably are more aware of  
9 all the mistakes and all the errors than I am. And I hope  
10 you will consider these things.

11 The last thing I would like to say is repeating  
12 my own question: Who is powerful enough to convince you  
13 to reopen Trojan when it does not meet the earthquake standards?  
14 Are you going to be convinced by Bechtel and by PGE because of  
15 their interests, or are you going to be convinced by the  
16 people who don't have a moneyed interest in this plant re-  
17 opening but who want to live a good life?

18 (Applause.)

19 CHAIRMAN MILLER: Thank you.  
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Who is next?

LIMITED APPEARANCE STATEMENT OF SANDY PITLER

938 W. Fourth Street, Eugene, Oregon

MR. PITLER: My name is Sandy Pitler. I live at  
938 W. Fourth Street in Eugene, Oregon.

Before getting into my own comments I have two  
statements that two working people from Eugene have asked me  
to bring and read into the record for them.

CHAIRMAN MILLER: Very well.

MR. PITLER: The first is by George F. Laird, of  
253 West D Street, Springfield, Oregon.

"To those interested:

"I am but a concerned citizen. I cannot  
attend these hearings because of commitments to my  
work.

"I want to point out that I consider it  
a contradictory move to establish justified safety  
measures and then, after they are appropriately  
enforced, to rescind that enforcement, risking the  
safety of masses of people and the environment for  
the benefit of a private organization. It is not  
correct to reopen Trojan.

"Please try to think clearly."

And he has a postscript at the bottom:

"Even if you can live with contradiction,

eb2 1 it beats me how you could live with your con-  
2 science if you reopen Trojan, if you have any  
3 sensitivity for the co-members of your society."

4 The second statement is from a gentleman by the  
5 name of Bruce Bowers who lives at 2190-2 Patterson Street,  
6 in Eugene, Oregon.

7 "I have no technical expertise on the  
8 matter now before the Commission, but I speak as  
9 a resident of Oregon, someone whose life may depend  
10 upon the so-called experts, who are deciding whether  
11 or not to restart Trojan.

12 "I know the experts say that we are  
13 dealing with minute probabilities when we speak  
14 of a serious accident resulting from the restart-  
15 ing of Trojan while repairs are being made. I  
16 don't question these assertions. Neither would I  
17 question someone who attached minute probabilities  
18 to the collision of the Jumbo jets in France,  
19 killing over 500, or to the recent earthquake in  
20 Iran, killing thousands, or to the monstrous pre-  
21 meditated murder of millions of Jews in gas ovens  
22 at the whim of a few insane racists.

23 "There is something strange about terri-  
24 ble events like these. They always, prior to their  
25 occurrence, seem exceedingly unlikely to occur.



eb3

1 "As I say, I have no expertise on this  
2 matter you are considering. But I do have common  
3 sense. And my common sense suggests that even  
4 if restarting is highly unlikely to cause a serious  
5 accident, such an accident is even less likely if  
6 Trojan remains shut down.

7 "I think you owe it to me and to the  
8 other citizens of Oregon and Washington not to  
9 force us to live under any greater risk than  
10 which already faces us. I say Trojan should re-  
11 main shut down.

12 "Sincerely,

13 "Bruce Bowers

14 "Eugene, Oregon."

15 I have prepared a written statement and I have  
16 some other things to read into the record as well, so I  
17 hope you'll bear with me.

18 I'm a pre-school teacher in Eugene, Oregon. I  
19 work with children ages 2 to 5 years old, and as a working  
20 person I would really like to seriously register my objections  
21 to the time and place of these hearings.

22 When an issue which concerns the safety of all  
23 the citizens of our state is the subject of hearings, I feel  
24 it is incumbent upon you to select a time and place for  
25 the hearings based upon the needs of the people rather than

eb4 1 the needs of a corporation.

2 Working people are being denied the right to  
3 speak by the scheduling of hearings during working hours.  
4 How can you expect workers from Salem or Eugene or other  
5 areas of the state to get to Portland between 9:00 and 5:00  
6 on a working day?

7 Personally I'm fortunate enough to have an under-  
8 standing employer who allowed me time off to drive up here  
9 to give this testimony. If you had had a day like I did  
10 with the kids this morning, you'd understand what a real  
11 burden that was on the people who I work with.

12 Other concerned citizens were not as fortunate  
13 and their opinions will go unheard. Therefore, I urge, and  
14 I am to the point that I would like to demand, although I  
15 don't know whether I have any presence here to demand, that  
16 you schedule further time for citizens to appear before you.  
17 This time must be according to the people's necessity and  
18 be in the evening at a more central location such as Salem  
19 or Eugene.

20 The reopening of the Trojan Nuclear Plant in its  
21 present unsafe condition concerns all citizens and they must  
22 have a chance to express their views. And I really seriously  
23 want to put that in your brains if I can, that there are  
24 people who would like to get here to talk to you, working  
25 people who don't have a chance because of the time of the

eb5

1 hearings.

2 Before I get into some of the technical things  
3 I've got in my testimony, I would like to read into the  
4 record a letter written by I assume a gentleman that you  
5 know, Dr. Samuel W. Jensch, Chairman, Atomic Safety and  
6 Licensing Board, U. S. Nuclear Regulatory Commission,  
7 Washington, D. C. This is a letter that was written to  
8 Governor Ray of Washington concerning the Skagit Plant hear-  
9 ings and dealing with earthquake possibilities and faults,  
10 and I quote from the letter:

11 "I think it is fortunate that you have  
12 read or have been informed about the references  
13 to the Diablo Canyon proceeding at the January  
14 24th prehearing conference in the Skagit case.  
15 I am sure that the Pacific Gas and Electric Com-  
16 pany concluded that adequate data had been col-  
17 lected to warrant a construction permit.

18 "Unfortunately, the PG&E consultants  
19 failed in their investigation and even rejected  
20 as 'speculative'...."

21 And that's in quotes --

22 "....a suggestion that any earthquake fault was  
23 sufficiently adjacent to be a problem. Those  
24 consultants appeared to take the view that a  
25 lone intervenor witness should be required to



eb6

1 'prove'...."

2 in quotes --

3 "....his suggestion of the existence of a fault.

4 "Fortunately for that witness, an oil  
5 company, in an investigation in the area nearby  
6 the PG&E nuclear plant, found a fault, and the  
7 tragedy of incomplete investigation must now be  
8 weighing heavily on PG&E and may be one of the  
9 reasons for the proposed reduction of \$89 million  
10 in rates. If the ratepayers are paying for  
11 construction-work-in-progress rates, the weight  
12 must be nigh unto unbearable.

13 "As you perhaps noted in the January  
14 24th Skagit prehearing, some intervenors have  
15 made some similar suggestions of earthquake faults  
16 as were made in the Diablo Canyon case. While  
17 other proceedings both at the state level and  
18 also at perhaps the incomplete Advisory Committee  
19 on Reactor Safeguards meetings have considered  
20 seismic and geologic matters, the NRC Licensing  
21 Board proceeding is the only one governed by the  
22 Federal Administrative Procedures Act which  
23 provides for cross-examination and full exploration  
24 of the issues before a federal agency.

25 "Neither the state nor ACRS determinations

eb7

1 are compelling to the federal proceedings. To be  
2 sure, the Skagit case will be decided on its  
3 merits and the facts related solely to it, but I  
4 would expect the Licensing Board to note that the  
5 director of the consultants for the Applicants is  
6 both the same for Diablo Canyon as it is for  
7 Skagit."

8 I wanted that in the record to put forth to you  
9 the idea that, as the woman who talked before me, I really  
10 feel it is important that you listen to these things with  
11 open ears in terms of expert witnesses versus people, working  
12 people.

13 The purpose of these hearings, as I understand  
14 it, is to determine whether it be safe and in the best  
15 interests of the citizens to allow PGE to restart Trojan  
16 even though sections of the plant have been found by you,  
17 the Nuclear Regulatory Commission, to be below standards  
18 concerning the impact of earthquakes.

19 If your real concern is safety, then it is my  
20 contention that these hearings shouldn't even be taking place  
21 for how in good conscience -- and this is something that I  
22 really can't understand -- can you even contemplate reopening  
23 a substandard nuclear power plant?

24 The fact that such plants produce extremely high  
25 levels of radiation and irradiated isotopes is beyond

eb8 1 question. Any breach in the containment vessel which would  
2 lead to an atmospheric release of this radioactivity would  
3 have catastrophic effects on human beings and their environ-  
4 ment.

5 The present situation, a plant known to be sus-  
6 ceptible to earthquakes, is an accident waiting to happen.

7 The fact that you have placed standards on  
8 earthquake resistance indicates you know how catastrophic  
9 such an accident could be. I assume that your earthquake  
10 standards have been set after careful research of all the  
11 possibilities.

12 A plant which is as below standard as Trojan is,  
13 I contend, would never be granted a license today on its  
14 present site. We're dealing here with a plant which is almost  
15 50 percent below the standards. Information has  
16 come out to show that the standards Trojan is.

17 That is, that Trojan has an OBE  
18 rating of .15. GE and Bechtel  
19 claimed that this was far below the .15 which  
20 makes Trojan a

21 Furthermore, it was found that the primary  
22 cooling pipes themselves are also susceptible to earthquakes  
23 as well, a fact that Trojan and Bechtel failed to turn up in  
24 their own safety study.

25 The ludicrousness of this situation would be



eb9

1 laughable truly if it weren't -- if we weren't talking about  
2 an accident possibility which, according to Dr. Richard Webb  
3 in his book, Accident Hazards of Nuclear Power Plants, which,  
4 if you haven't read, makes for very interesting late-night  
5 reading, almost as good as a murder mystery.

6 According to Dr. Webb the following results  
7 would happen from the worst possible accident.

8 One, release a lethal cloud of radiation with  
9 a range of 75 miles and a width of one mile;

10 Two, cause the evacuation or severe living  
11 restrictions for a land area the size of Illinois, Indiana,  
12 and Ohio combined, 120,000 square miles.

13 Three, cause severe, long-term restrictions on  
14 agriculture due to strontium-90 fallout over a land area  
15 the size of about one-half the land east of the Mississippi  
16 River, 500,000 square miles.

17 The nuclear industry argues that such a possi-  
18 bility is remote. To them I say I will not allow you to take  
19 that gamble.

20 And I say to you who I assume are people who  
21 want to do the right thing, are you willing to take that  
22 gamble and be responsible for what may result? Are you ready  
23 to gamble on a plant that you have found to be unsafe? If  
24 this was an isolated incident, maybe you would consider it  
25 but PGE has a history of miscalculations and mistakes.

eb10

1 Time and time again since Trojan came on line,  
2 there have been shutdowns, accidents, safety problems. The  
3 best one can say is that Trojan construction was ill-advised  
4 and a technological nightmare. The worst is that it was  
5 criminal, criminal in the sense that the lives and property  
6 of so many people have depended on a plant that is unsafe  
7 if an earthquake of a sufficient magnitude was to strike,  
8 criminal in that there is no automatic shutdown in case of  
9 earthquakes but, rather, our lives depend upon a small light  
10 lighting up on a control board when the ground shakes, this  
11 in a \$450 million nuclear power plant. Plus an operator has  
12 to recognize that a light has come on. He has to manually  
13 shut down the plant.

14 Such an earthquake warning system is a joke, but  
15 coupled with the fact that Trojan is built upon an earth-  
16 quake fault makes it no laughing matter, a plant built  
17 upon an earthquake fault with a Rube Goldberg style shutdown  
18 system, with a control room wall and primary cooling pipes  
19 not able to withstand an earthquake less than half -- strong  
20 as it's supposed to.

21 The reopening of this plant would be a crime and  
22 pure folly.

23 The question we have here is not just a techno-  
24 logical one but a moral one as well. How many citizens must  
25 come before you, pleading that the dangers inherent in this

eb11 1 situation are too great to be ignored, before you will hear  
2 their pleas.

3 Is your faith in technocrats and machinery so  
4 unshakable that you cannot recognize that it would be more  
5 prudent to keep Trojan shut down at this time? There's no  
6 rush. PGE has supplied the power that's necessary.

7 I demand and I plead that you order a complete  
8 safety audit of this plant by an uninvolved third party, one  
9 who is not ego-involved with its findings. Are you prepared  
10 to place your trust in PGE, a company which has constructed  
11 a plant notorious for its poor safety record? Are you pre-  
12 pared to shoulder the burden of responsibility you would have  
13 to bear should the unthinkable earthquake strike a plant  
14 you rushed to reopen?

15 The technological data you now have points to  
16 the only decision you can morally make, to keep it closed  
17 pending a full study and repairs. A decision to reopen this  
18 plant would tell the people of Oregon that the fortunes of  
19 a corporation outweigh considerations of their safety.

20 As servants of the people you are charged with  
21 protecting our interests. If you have but a glimmer of  
22 doubt, just a glimmer of doubt, about the safety of reopening  
23 Trojan in its present condition, then you must not, you dare  
24 not reopen it.

25 Please, open your hearts and your ears to hear



eb12

1 what I and others are saying. For once your hearts are open,  
2 your ears must follow, and Trojan will stay shut until it  
3 is proven that it offers no threat to the health and safety  
4 of us all.

5 Thank you.

6 (Applause.)

7 CHAIRMAN MILLER: Thank you.

8 Who wishes to go next?

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3D wbl 1 LIMITED APPEARANCE STATEMENT OF SKEETER DUKE,  
2 41 WEST 25th AVENUE, EUGENE, OREGON

3 MR. DUKE: My name is Skeeter Duke. I live at  
4 41 West 25th Avenue in Eugene. I'm a self-employed artist  
5 and teacher and community organizer.

C9 6 I'm really shocked that we're even here. Now  
7 it's obvious that PGE is breaking the law right now by  
8 not allowing, by not having its control room walls up to  
9 federal standards.

10 For Governor Straub to call in President Carter  
11 and urge President Carter to tell you to let the plant  
12 re-open seems like a conspiracy to sort of forget the fact  
13 that the law is being broken if the Trojan plant is turned  
14 on.

15 To have that plant turned on for the last couple  
16 of years with the walls insufficient is criminal. And I'm  
17 amazed that we're sitting here talking about whether or not  
18 to open it and let it be turned on line while the walls are  
19 still insufficiently strong to withstand earthquakes.

20 Many people in the last couple of days have re-  
21 counted over and over again into the record the many incidents  
22 over the last couple of years of leakages, of accidents, very  
23 serious problems, and dangerous problems as the Trojan plant.  
24 I won't go into a lot of detail about this, but it includes  
25 such things as cobalt-58 being in the moss downstream from the

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1 plant, it being directly attributable to the plant. The  
2 fact that for two years in a row, in 1976 and 1977, the  
3 Oregon Department -- the Environmental Protection Agency  
4 released statistics showing that the incidence of strontium-90  
5 in cows' milk was extremely high closer and closer to the  
6 plant; that it was above the legally allowed level;

7 the fact that on April 5th of this year that  
8 two technicians in the plant were severely irradiated;

9 the fact that in April of this year the disclosure  
10 was made by Bechtel that, Oh, yes, the walls aren't strong  
11 enough. And now a little bit later we find that we're really  
12 worse off than we thought. And then the recent revelations  
13 that the primary cooling pipes are probably insufficient as  
14 well.

15 All this points up to the fact that PGE and  
16 Bechtel are very much guilty of keeping things quiet unless  
17 they finally were going to be found out and then they finally  
18 admitted it.

19 They have a history of waiting hours and days  
20 before announcing serious infractions that NRC regulations  
21 insist that they have to divulge.

22 We can't trust Bechtel Corporation, we can't  
23 trust PGE. We do have to have an immediate neutral body  
24 safety audit of this plant. We can't turn this plant back on  
25 now: it's too dangerous. And to do so I believe would be



wb3 1 putting the people who make these decisions -- you.... I hate  
2 to say it, but I think you'd be breaking the law.

3 If the plant is not up to NRC regulations, then  
4 what in the world would you be opening it for while they make  
5 these necessary repairs?

6 I would hope that really the NRC would take away  
7 PGE's license to operate Trojan and would begin decommission-  
8 ing immediately. But I seriously doubt that that would  
9 happen.

10 So at the very least I wish that automatic  
11 systems will be set up so that at the first instance of any  
12 kind of earthquake that has any seriousness to it at all  
13 the Trojan plant would be turned off.

14 We need to have a complete safety audit of the  
15 plant. It's obvious there's a lot of things wrong there.  
16 And for us to even be discussing the matter whether to turn  
17 it on until the walls and the pipes are safe enough I think  
18 is ridiculous.

19 Before I close I would like to read one brief  
20 bit of material that was in a newspaper, The Eugene Register  
21 Guard, of Sunday April 16th. It has some fairly significant  
22 quotations in here from Fred Miller who is the Department  
23 of Energy Chairperson in the State of Oregon.

24 "The exposure of two Trojan Nuclear  
25 Power plant workers to unusually high radiation

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1 levels earlier this month raises 'questions' about  
2 the safety of Trojan Plant operations," a State  
3 Department of Energy official said Saturday. Fred  
4 Miller, Department Director said his agency's in-  
5 vestigation has concluded that the plant operator,  
6 Portland General Electric Company, could have pre-  
7 vented the incident if company officials had pur-  
8 sued early danger warnings.

9 "This incident raises questions about  
10 safety of plant operations and, in conjunction with  
11 other similar incidents, about PGE's management  
12 of Trojan," Miller wrote PGE officials in a letter  
13 dated April 13th.

14 "During the plant's initial refueling  
15 operations, April 5th, two plant workers were  
16 exposed to radiation levels up to three times  
17 higher than annual limits established by the  
18 Federal Nuclear Regulatory Commission. The  
19 radiation levels were not enough--" Well it goes on  
20 to say that they weren't high enough to hurt people. But  
21 Dr. John Goffman and Dr. Helen Coldicott would dispute these  
22 findings; that indeed low levels of radiation are dangerous.  
23 And that ten or fifteen years later cancer will result from  
24 perhaps just a minute amount of plutonium being inhaled into  
25 the lungs.

The paper goes on:

"In his letter Miller criticized plant supervisors for apparently ignoring three early warnings that radiation levels were higher than expected near a transfer tube connecting the plant's reactor containment building with the spent fuel pool where waste fuel assemblies were being moved for storage.

"Miller said the Department warned PGE in September 1976 that the utility was not 'aggressively' attempting to identify the root causes of personnel contaminations. 'Lack of an adequate radiation survey at the first Trojan spent fuel movement is a prime example of how insufficient planning has contributed to incidents at Trojan.'"

This is the Department of Energy Chairperson saying this.

"'Because this was the first refueling at Trojan the Department expected increased precautions to be taken by PGE.' Instead of increased precautions Miller accused the utility of failing to implement a systematic search for the cause of radiation problems. He criticized utility officials for not recognizing the seriousness of the exposure and for allowing the refueling to continue



wb6

1 for twelve hours after the incident. He said the  
2 utility failed to promptly notify the Department  
3 and did not file the required reports until they  
4 were requested by the Department officials."

5 It seems obvious to me and to a lot of people I've  
6 spoken to that you can't trust PGE. They're a private utility  
7 whose main focus I believe is profits and not people's lives  
8 and well being.

9 Now we're talking about safety and health and  
10 people's well being here. We're not talking about whether  
11 or not PGE is going to have a hard time if they don't get  
12 to open their plant right away. People's lives are more  
13 important.

14 I appreciate your consideration.

15 (Applause)

16 CHAIRMAN MILLER: Thankyou.

17 Who's next, please?

18 LIMITED APPEARANCE STATEMENT OF TOM ROSS,  
19 EUGENE, OREGON

20 MR. ROSS: My name is Tom Ross. I live in  
21 Eugene. I'm a carpenter and self-employed entrepreneur.

22 I've heard a lot of statistics one way or another  
23 shuffled around this whole problem. I'm not going to deal  
24 with statistics; I'm going to more try to deal with a  
25 synthesis of ideas and why I feel what I feel.

wb7

1 No one can successfully predict when a earthquake  
2 is coming. We have signs that sometimes give us hints of  
3 imminent seismic activity, such as changes in Mt. Adams and  
4 Mt. St. Helens' geological formations. --which, by the way,  
5 has happened recently. But there's no way to predict for  
6 sure.

7 There are too many variables.

8 There are also a great many variables in the  
9 design and operation of a nuclear power plant. Although  
10 lots of people think there isn't any comparison between the  
11 earth and something man has made, I differ with that. I  
12 think the reason that these hearings -- the reason for  
13 these hearings is the appearance of an unforeseen variable.  
14 And, of course, after the hearings had been slated another  
15 variable appeared, which appears to have equal, if not more  
16 severe safety ramifications.

17 You people have the power to potentially render  
18 life or death decisions concerning the residents of northern  
19 Oregon and southern Washington. In light of the recent  
20 findings with regard to the primary cooling system I feel  
21 that this committee has the responsibility to suspend these  
22 hearings until such time as an independent study of the safety  
23 of this plant is completed.

24 By "independent" I mean not PGE, not Bechtel and  
25 not the NRC or any agency employed by PGE or Bechtel.

wb8

1 In view of the many problems already encountered  
2 with the operation of the Trojan nuclear power plant, which  
3 I won't go into because I'm sure that you know a lot more  
4 about it than I do, although I've done a good deal of  
5 research on the other possible complications occurring at  
6 similar light water reactors that could happen at Trojan,  
7 I feel, and I'm sure other reasonable people will feel, that  
8 a full study is warranted.

9 I think if the concerns of PGE are entirely  
10 with safety, and if they have very little concern with the  
11 monetary value of opening the plant now, that they'll agree  
12 too that there should be an independent safety investigation.

13 The issue in the hearings is not economics or  
14 energy supply, but it's the lives of millions of people.

15 I also feel -- I really want to stress this --  
16 that a prerequisite to reopening the plant is a full-scale,  
17 full-blown test of the emergency core cooling system, the  
18 ECCS. We need to ascertain the effect of this untested system.  
19 Tests need to be conducted with the presence of nuclear fuel  
20 in the core, and considerations need to be made for the  
21 effect of a year's dormancy of the ECCS at Trojan.

22 Other considerations need to be taken into  
23 account such as whether the ECCS will withstand an earthquake  
24 that the primary cooling system will not withstand.

25 The expense of these modifications, proposed



wb9

1 modifications, should not have any bearing on their feasibil-  
2 ity. If the plant cannot be made safe for reasons of  
3 economics or physical impossibility, or just lack of informa-  
4 tion on possible problems, it should be decommissioned.

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1 I feel from all the information I've seen that  
2 it cannot be made safe to the satisfaction of everyone whose  
3 life depends on it. Regardless of the cost, the plant  
4 should never again be opened.

5 Some of my reasons for this conclusion are the  
6 aforementioned problems, the problems which are the subject  
7 of this hearing. Other health and safety problems with the  
8 plant include: irradiation of workers; routine release of  
9 low-level radiation; the lack of any acceptable permanent  
10 storage site for nuclear wastes; the unreliability of all  
11 transport systems for high-level wastes; the instability  
12 of plutonium in the environment.

13 The very idea of keeping anything isolated for a  
14 quarter of a million years is unrealistic. It may be un-  
15 realistic in your eyes for me to ask that this plant be  
16 decommissioned, and I can understand that because nobody  
17 really knows how to decommission a plant yet.

18 But I find it unrealistic and possibly irresponsible  
19 to even consider opening the plant if these problems aren't  
20 taken care of. And as I said before, I don't really think  
21 there's any way we can take care of the problems of human  
22 fallibility and the problem of predicting geologic stability  
23 for 250,000 years, et cetera, et cetera.

24 The inadequacy of the agency in responding, the  
25 NRC, that is, in responding to the needs of humanity for

agb2

1 the future will once again be demonstrated if this plant is  
2 allowed to open.

3 It's my feeling that every responsible and well-  
4 informed citizen should do everything humanly possible to  
5 make the world a better place for himself, herself and  
6 their children.

7 Therefore, if this plant is allowed to re-open  
8 I feel a responsibility to continue to use whatever non-  
9 violent means that I can to see that this plant is never  
10 again opened, legal or extra-legal.

11 Thank you.

12 (Applause.)

13 CHAIRMAN MILLER: Thank you.

14 Who wishes to be heard?

15 (No response.)

16 Anyone?

17 (No response.)

18 CHAIRMAN MILLER: Very well.

19 We've heard from a number of people. We appre-  
20 ciate your statements. The transcript will reflect we  
21 have made part of our record various presentations.

22 We wish to thank all of you who have attended  
23 or sent statements at this limited appearance hearing. And,  
24 as you know, the evidentiary portion of the trial-type  
25 hearing will resume Monday morning in Salem, Oregon, at



agb3

1 9:00 a.m.

2 Thank you.

3 MR. AXELRAD: Mr. Chairman, might I have just a  
4 minute?

5 I do not plan to make any evidentiary presentations,  
6 since I realize this is not an evidentiary session. However,  
7 we had promised the Board that we would make every effort  
8 to provide to the Board and the parties as quickly as possible,  
9 information with respect to the response spectra analysis  
10 we've been conducting and the information with respect to  
11 qualification of equipment.

12 We have some information we're providing to the  
13 NRC Staff today, and we have copies we'll provide today to  
14 the parties and to the Board.

15 CHAIRMAN MILLER: Oh, fine.

16 Anyone here who is a party to the evidentiary  
17 hearing, or if not a party, who can transmit the information,  
18 please clear with counsel. It was the desire of all of us,  
19 as you know, to get you the information -- to get all the  
20 information at the earliest possible time. It'll be  
21 transmitted, I take it, immediately.

22 MR. ROSOLIE: Maybe this doesn't have to be  
23 cleared up but you said "some." Is there more information  
24 coming besides what we have now?

25 MR. AXELRAD: This is the information we have

agb4 1 provided.

2 MR. ROSOLIE: It's all of it, as far as PGE is  
3 concerned at this point?

4 MR. AXELRAD: It's all of it at this point,  
5 that's correct.

6 CHAIRMAN MILLER: All right, we'll stand  
7 adjourned.

8 Thank you very much.

9 (Whereupon, at 4:10 p.m., the hearing in the  
10 above-entitled matter was recessed, to reconvene at  
11 9:00 a.m., Monday, October 30, 1978.)  
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