

NUCLEAR REGULATORY COMMISSION

ORIGINAL



ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:

PALO VERDE : DOCKET NOS. 50-528 OL  
50-529 OL  
50-530 OL

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AT: Phoenix, Arizona

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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 In the Matter of: :  
 :  
 ARIZONA PUBLIC SERVICE COMPANY, et al. : Docket Nos.  
 : 50-528 OL  
 (Palo Verde Nuclear Generating Station, : 50-529 OL  
 Units 1, 2 and 3) : 50-530 OL  
 :  
 -----X

Courtroom 2  
 U.S. Courthouse & Federal  
 Building  
 230 North First Avenue  
 Phoenix, Arizona

Tuesday, April 27, 1982

Evidentiary hearing in the above-entitled matter was resumed, pursuant to notice, at 10:01 a.m.

BEFORE:

DR. ROBERT M. LAZO, Esq., Chairman  
Atomic Safety and Licensing Board

DR. RICHARD F. COLE, Esq., Member

DR. DIXON CALLIHAN, Esq., Member

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## 1 APPEARANCES:

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P R O C E E D I N G S

(10:01 a.m.)

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2  
3 JUDGE LAZO: On the record. Good morning, ladies  
4 and gentlemen. Am I being heard in the back of the hearing  
5 room? Can anyone not hear me? Very well, thank you.

6 This is an administrative proceeding before an  
7 Atomic Safety and Licensing Board of the United States  
8 Nuclear Regulatory Commission, in the Matter of Arizona Public  
9 Service Company and four co-owners who we will be referring to  
10 as Joint Applicants, regarding Palo Verde Nuclear Generating  
11 Station Units 1, 2, and 3.

12 The proceeding is identified as Nuclear Regulatory  
13 Commission docket numbers STN-50-528, 529 and 530. The  
14 proposed administrative action is the issuance of facility  
15 operating licenses, which would authorize the Joint Applicants  
16 to possess, use and operate Palo Verde Nuclear Generating  
17 Station Units 1, 2, and 3, three pressurized water nuclear  
18 reactors located on the Applicants' site in Maricopa County,  
19 Arizona, approximately 36 miles from the City of Phoenix.

20 Each of the reactors is designed to operate at a  
21 core power level of 3800 megawatts thermal, with an equivalent  
22 net electrical output of approximately 1304 megawatts each.

23 Notice that the Applicants had filed an application  
24 for facility operating licenses for Palo Verde was published  
25 in the Federal Register on July 25, 1980. That notice was

1 given general public distribution, including the news media,  
2 and provided that a request that any person whose interest  
3 might be affected may request a hearing and file a Petition  
4 for Leave to Intervene in accordance with the Commission's  
5 rules of practice.

6 In response to that motion, Ms. Patricia Lee  
7 Hourihan submitted a Petition for Leave to Intervene and  
8 Request for a Hearing.

9 The petition was granted by the Licensing Board  
10 which then ordered that a hearing would be held. The matter  
11 came before the Board at the pre-hearing conferences held in  
12 Phoenix on December 2, 1980, and November 18, 1981. The  
13 Board on March 19, 1982 issued a Notice of Public Hearing  
14 scheduling the commencement of the evidentiary hearing for  
15 this date, here today.

16 That notice was also given general public  
17 distribution, including the news media, and was published in  
18 the Federal Register on March 25, 1982. Therefore, the  
19 parties to the proceeding are the Joint Applicants, Arizona  
20 Public Service Company and the other co-owners, the  
21 technical staff of the Nuclear Regulatory Commission, the  
22 Intervenor, and the State of New Mexico, who requested leave  
23 to participate as an interested state.

24 Now let me introduce the members of this Atomic  
25 Safety and Licensing Board. Judge Callihan, seated at my

1 right, is a part-time member of the Atomic Safety and  
2 Licensing Board panel from which individual licensing boards  
3 are designated. He is a physicist who received his PhD  
4 degree from New York University. Before his retirement,  
5 Dr. Callihan was employed for many years as a physicist by  
6 the Union Carbide Corporation, Oak Ridge, Tennessee.  
7 Judge Callihan has been a member of the Atomic Safety and  
8 Licensing Board panel since 1973.

9 Judge Richard F. Cole, seated at my left, received  
10 his PhD in environmental sciences and engineering from the  
11 University of North Carolina. He has been a permanent  
12 member of the panel since 1973.

13 My name is Robert M. Lazo. I am the lawyer  
14 member of this three-man board. I also received a PhD in  
15 radiation chemistry from the University of Notre Dame.

16 Now may we please have the appearances of the  
17 parties? And for the Joint Applicants?

18 MR. GEHR: Arthur C. Gehr and Charles Bischoff  
19 appearing on behalf of the Joint Applicants.

20 JUDGE COLE: I don't think that microphone  
21 amplifies in the room. It is just for the recording system,  
22 so you will have to speak up, Mr. Gehr. Sorry.

23 MR. GEHR: Very well. Did you hear me or should  
24 I repeat it?

25 JUDGE COLE: No No, I heard.



1 JUDGE LAZO: Mr. Gehr, let me just ask, in my  
2 opening remarks, I mentioned that there were four co-owners  
3 with Arizona Public Service Company. Those are the Salt  
4 River Project Agricultural Improvement and Power District,  
5 the Southern California Edison Company, El Paso Electric  
6 Company, and Public Service Company of New Mexico.

7 Has there been a recent transfer of ownership  
8 which would add additional co-owners to the application?

9 MR. GEHR: No, there has not been one  
10 consummated yet. You, however, omitted the fifth, and the  
11 most important, and the largest owner in Palo Verde, Arizona  
12 Public Service Company.

13 JUDGE LAZO: I am sorry if I misspoke. I  
14 thought I said Arizona Public Service Company and four co-  
15 owners.

16 MR. GEHR: Oh. If you did, I didn't need to  
17 correct you, because that was correct. To explain further,  
18 there are two transactions that are in some stages of process,  
19 one under which the Salt River Project proposes to sell a  
20 portion of its interest. I think it is about 5.95 percent,  
21 some such number like that, to a new agency called Southern  
22 California Public Power Authority. There is also another  
23 transaction that is in process, which has been initiated by  
24 El Paso Electric Company, in which they propose to sell a  
25 small interest, approximately 3.91 percent, to a new agency

1 in California called MSR Public Power Agency. Finally, there  
2 has been a transaction which has been partially consummated  
3 between the Salt River Project and the City of Los Angeles  
4 Department of Water and Power --

5 JUDGE LAZO: Very well.

6 MR. GEHR: -- which contemplates a transfer of  
7 ownership of an interest in the neighborhood of five percent  
8 at the time that Unit 1 goes into commercial operation.

9 JUDGE LAZO: Those were the organizations I was  
10 thinking about, and I guess we have picked that up from press  
11 releases. I wondered what the situation was.

12 I wonder if you ladies and gentlemen who are  
13 standing in the back would care to come up and -- beyond the  
14 bar, and sit in the jury box. There are some seats up here.  
15 We seem to have some more, if some of you would like to come  
16 forward. Is there still some room in the front bench?

17 Now, who is appearing for the Nuclear Regulatory  
18 Commission?

19 MR. DEWEY: My name is Lee Dewey, and I am  
20 representing the NRC Staff, and with me today is Mr. Edwin  
21 Reis, who is also representing the Staff.

22 JUDGE LAZO: Thank you, Mr. Dewey.

23 And for the Intervenor?

24 MS. BERNABEI: For the Intervenor, Lynne Bernabei.  
25 I entered an appearance last week for Intervenor Patricia Lee

1 Hourihan.

2 JUDGE LAZO: Ms. Bernabei, I guess that was in the  
3 mail when I left my office. We haven't seen it. You did  
4 file a notice of appearance, did you?

5 MS. BERNABEI: Yes, I did. Last Thursday.

6 JUDGE LAZO: Thank you. Now, when this  
7 commencement of the evidentiary session was scheduled, Mr.  
8 Greenfield, Assistant Attorney General of the State of New  
9 Mexico, indicated he might have difficulty attending the  
10 opening session. Is Mr. Greenfield here, or anyone else  
11 representing the State of New Mexico? The State did not  
12 file a Petition for Leave to Intervene as a party, but did  
13 file a request to appear as an interested state, and we did  
14 grant that petition, or request. Perhaps Mr. Greenfield will  
15 arrive at a later time.

16 We have received a large number of requests from  
17 members of the public to make a limited appearance statement.  
18 We would like to proceed with that at as early a time as  
19 possible. A lot of you are here, and it is a business day.  
20 I think, though, first, I will ask the parties just to make,  
21 if they wish, to make a brief opening statement. Perhaps  
22 five minutes or less, just so we all know where we are and  
23 why we are here, and let me ask Mr. Gehr, do you desire to  
24 make an opening statement at this time?

25 MR. GEHR: I would be pleased to. The sole issue

1 before this Board at this hearing is the availability of  
2 water for condenser cooling. This issue is related solely to  
3 the environmental cost-benefit analysis required under the  
4 National Environmental Policy Act. There is no safety issue  
5 before this Board. The effluent required for condenser  
6 cooling is not required for safe shutdown of the plant under  
7 either normal or emergency conditions.

8 The economic cost-benefit analysis was based upon  
9 an assumed capacity factor for three units, in the ranges  
10 from 63 percent to 75 percent. The analysis of the water  
11 requirements or water consumption which was used for  
12 determining the environmental impacts from the operation of a  
13 plant, including such things as the impacts of diversion of  
14 effluent from the Salt and Gila Rivers, the amount and  
15 quantity of drift from the cooling towers, assumed a capacity  
16 factor of 95 percent.

17 What this means is that even if there were a  
18 shortage of water at some particular point in time, and we  
19 think the evidence we will introduce will demonstrate that  
20 there is an extremely small risk of that event ever happening,  
21 but even if there were, there is a very substantial margin  
22 between 95 percent capacity factor and the 63 to 75 percent  
23 capacity factor.

24 And in fact, there would be a 25 percent -- there  
25 could be a 25 percent reduction in water availability and

1 there would be no impact on the cost-benefit analysis.

2 Most important, however, is the fact that the  
3 effluent discharged from the 91st and the 23rd avenue plants  
4 in 1981 were as follows: 115,000 acre-feet from 91st Avenue  
5 plant. 40,000 acre-feet from the 23rd Avenue Plant, making a  
6 total effluent discharge of 155,000 acre-feet. The Palo Verde  
7 Plant, through the contract with six cities and the municipal  
8 area that have ownership interests in the 91st Avenue plant,  
9 and the 23rd Avenue plant, have committed a contract amount  
10 of 140,000. This amount of 140 is junior to an amount of  
11 37,300 prior commitments to the Buckeye Irrigation District  
12 and the Arizona Game and Fish Department.

13 When we subtract the 37,300 acre-feet prior  
14 commitments from the total amount actually discharged from  
15 the 23rd and 91st Avenue plants in 1981, we find that there  
16 was still left over for use at Palo Verde 117,800 acre-feet.  
17 The requirements that we anticipate for operating those  
18 three units at a 95 percent capacity factor, assuming one  
19 month fuelling re-outage, is in the neighborhood of 64,000  
20 feet, and therefore you can see that there is almost twice as  
21 much effluent available to the plant for its condenser cooling  
22 as is required.

23 Under the very recent conservative projections  
24 of MAG, which like their prior 1979 plan including substantial  
25 provisions for conservation and water, the amount of effluent

1 from the 23rd and 91st Avenue plants and the Tolleson plant,  
2 which will be available to Palo Verde, will exceed 133,000  
3 acre-feet or 225 percent of the needs of Palo Verde for  
4 operation at that 95 percent capacity factor in 1986.

5 We propose to introduce testimony in response to  
6 the Board's order, dealing with contention number 5, by Mr.  
7 Russell Haltz, who will describe the contract and relevant  
8 provisions of the contract to the issues before this Board,  
9 that is, the contract for the purchase of effluent from the  
10 91st and the 23rd Avenue plants. He will also comment and  
11 testify about negotiations which have been taking place in  
12 the past several months regarding possible revisions in that  
13 contract. He will also testify respecting the projected needs  
14 and consumptions of effluent against those which are  
15 currently projected.

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1 MR. GEHR: (Continuing) We will also have  
2 since there is a provision in the contract which will  
3 permit an interruption, not a termination but an inter-  
4 ruption of the supply of effluent, we will have two  
5 witnesses to explain that the risk of interruption is  
6 indeed remote. That risk of interruption depends upon  
7 the critical needs for water by the municipalities who  
8 are parties to our contract. We will have the testimony  
9 of Mr. Richard Jettin of the Salt River Project to  
10 explain the short term water resources available to  
11 the cities. We will also have Mr. Wes Steiner who can  
12 explain the very complex CAP arrangements for water  
13 allocations which will demonstrate that there is a very  
14 significant quantity available to the valley, the  
15 Phoenix Valley in the years 1985 and thereafter.

16 Finally, we will have Mr. Van Brunt, Mr.  
17 Bingham who have given affidavits in support of our  
18 motion for summary disposition available for cross-  
19 examination in the matters set forth in those affidavits.  
20 There is one affidavit for whom I have a person on call,  
21 the person who signed one of the affidavits attached  
22 to the motion of summary disposition was Mr. Jack Muir  
23 of the city of Tolleson. He is on call in the event  
24 that cross-examination respecting the Tolleson contract  
25 is required. I have nothing further.

1 JUDGE LAZO: Thank you, sir. Mr. Dewey,  
2 does the staff wish to make an opening statement?

3 MR. DEWEY: Can we go last?

4 JUDGE LAZO: Ms. Bernabei?

5 MS. BERNABEI: Yes. Thank you, Judge Lazo.

6 I believe we take somewhat of a different  
7 perspective than the applicants do in this proceeding.  
8 We believe the focus of this board should be on the  
9 legal restrictions and possibly fatal legal restrictions  
10 of the contract for effluent that the applicants now  
11 have with the Arizona Municipal Users Association.

12 As this board knows and seems very interested  
13 in its ruling on the applicant's motion for summary  
14 disposition, that contract is presently a matter of some  
15 controversy. We spoke to Mr. Stephens who has written  
16 a letter and who I believe is going to make a limited  
17 appearance today. I understand from our conversation  
18 yesterday that he will testify as to a number of problems  
19 with that contract which includes the crucial Section  
20 21 which allows the city in a time of crucial need to  
21 pull back as much water as they require. There are  
22 limitations on that but I don't believe significant  
23 limitations for what we're talking about here.

24 As you may know that section was invoked  
25 last fall when the city of Phoenix believed that the



1 waters that were trapped at the Horseshoe Dam were  
2 running dangerously low and that the City of Phoenix  
3 would be out of water this summer. Now fortunately  
4 it started to rain and that it wasn't necessary to invoke  
5 that provision in terms of pulling back assured supplies  
6 to Palo Verde. However, Mr. Stephens has told us and  
7 I'm sure he'll tell the Board today or tomorrow whenever  
8 he testifies that this kind of problem is likely to  
9 arise in the future. Part of the problem about this  
10 contract is that there are as number of other things  
11 going on that I believe the applicants have not  
12 considered, and those include the effect of the Central  
13 Arizona Project which has either for good or for worse  
14 forced certain conservation measures on the State of  
15 Arizona which is usually encompassed within the ground  
16 water act.

17           Also at stake are certain Indian claims  
18 which I'll speak about somewhat at length in  
19 a few minutes which have to be satisfied, we believe,  
20 legally before any water can go to Palo Verde. There  
21 is also the fact that the cities have to provide a  
22 certain amount of water for projects, agricultural  
23 projects that are currently being served. There is  
24 also a problem of other water rights in the Special  
25 Master's reports that's coming down in this area of

1 flux. We believe -- a suit was recently filed by  
2 Phillip Shea on behalf of the Maricopa/Pima Indian  
3 community is crucial to this board's understanding of  
4 how good that contract is and how likely it is to provide  
5 assured adequate supply of water to the Palo Verde plant.

6 In that suit, the Indians are claiming that  
7 the Secretary of the Interior, James Watt, should assert  
8 jurisdiction over federal reclamation waters within  
9 the Salt River boundaries. They believe that if the  
10 Secretary is ordered by a federal court to do that that  
11 they will receive the water that has long been due them  
12 which they have not received from Salt River Project.

13 The grounds for that suit, they're quite  
14 hopeful about the resolution of the suit, the grounds  
15 for that suit is that the Interior Department itself  
16 both through a field solicitor and a lengthy legal memo-  
17 randum and the solicitor of the department has said  
18 that they believe that the Indians are on strong grounds  
19 legally; that the Secretary of the Interior, under the  
20 reclamation laws has a responsibility to ensure the  
21 distribution of federal reclamation waters within the  
22 district boundaries and that means that groups such  
23 as the Indians with prior claims on the water have a  
24 right to those waters before it is transported outside  
25 the Salt River Project boundaries.

1           The Supreme Court held in 1924 that effluent  
2 or return flows in the case of I.D. v. The United States,  
3 were waters under the jurisdiction of the Department  
4 of the Interior and federal reclamation waters controlled  
5 by its agent, the Salt River Project.

6           In addition to what we would call formidable  
7 legal problems that the applicants face in terms of  
8 enforcing their contract, we think that there are other  
9 issues that they have not been totally forthright with  
10 this board.

11           For instance, we believe that there have  
12 been varying estimates of how much these plants will  
13 need in the peak summer months. There is correspondence  
14 between members of the Army Corps of Engineers and  
15 Mr. Van Brunt and other members of APS about how much  
16 this plant will need and that has varied from the figures  
17 that we are given and that the applicant has given in  
18 the SSAR and in this most recent submission to this  
19 Board. We also believe that there are problems connected  
20 and we would consider them more minor problems than  
21 the first two I mentioned but there are problems with  
22 satellite treatment plants that may be built in the  
23 area.

24           Under the contract with Municipal Water  
25 Users Association there is a clause whereby the cities

1 cannot build plants which will cut back on the amount  
2 of effluent coming from the 91st Avenue Treatment Plant.  
3 However, this contract cannot put any restrictions on  
4 developments which are currently building their own  
5 treatment plant and may impair in some way the quantity  
6 of water coming from the 91st Avenue Treatment Plant.

7 In addition, we believe there may be problems  
8 with the quality of water that the applicants have not  
9 taken into account. If allowed, we would like to present  
10 testimony from our water resources engineer, Mr. Lorah  
11 who will testify as to the kind of calculations that  
12 have to be made in order to ensure that the quality  
13 of water is sufficient for Palo Verde and I would note  
14 that the quality of water is important not just because  
15 it has to be of a certain quality but also because the  
16 quality of the water affects the quantity of water which  
17 must be provided. The higher the TVS level, the more  
18 water which will be needed for Palo Verde.

19 As this board knows, we consider the water  
20 contention to be the most important thing that this  
21 board will address in terms of licensing these plants.  
22 We have submitted new contentions which will address  
23 the safety issues involved. I realize that this is  
24 late to bring up new contentions, however, we think  
25 it is of extreme importance that the board consider

1 not only does this plant have enough water to operate,  
2 but if in the case of an accident, it can be safely  
3 shut down.

4 We would note that the U.S. Geological Survey  
5 has recently drawn out a map of where nuclear plants  
6 are located in the United States and there is not one  
7 nuclear plant other than Palo Verde that is not sitting  
8 on an assured supply of water.

9 I believe before the board rules on our  
10 motion to amend our contention, I'm not quite sure how  
11 we would proceed.

12 In any case, whether or not that motion  
13 is granted, we would like to present direct testimony.  
14 It is my understanding that we have not filed direct  
15 testimony prior to the fifteen days, however, I would  
16 ask leave that we be allowed to produce as direct  
17 testimony the testimony of our water expert, Mr. Lorah,  
18 the testimony of Phillip Shea who is the attorney for  
19 the Maricopa/Pima Indian community and who has brought  
20 suit on behalf of the Indians in federal district court  
21 against the Department of the Interior.

22 We would also like to have to testify with  
23 direct testimony Mr. Bill Stephens. After speaking  
24 to him yesterday, I believe it is probably more  
25 appropriate for this board or perhaps the staff to call

1 him as a witness because I believe his testimony is  
2 crucial and he should be given an opportunity to be  
3 questioned by all the parties in a form more appropriate,  
4 that is outside of a limited appearance.

5 I think it is also appropriate that this  
6 board call as a direct witness, someone from the Depart-  
7 ment of the Interior, whether it be the solicitor, the  
8 Assistant Secretary of the Interior, someone who knows,  
9 what the position of the Department of the Interior  
10 is as to the rights to water within the Salt River  
11 Project boundaries.

12 I can understand this board's reluctance  
13 as expressed in the last order to litigate water rights,  
14 however, I believe that in this situation, it cannot  
15 avoid responsibility for that and I believe that either  
16 the staff or the board could call someone from Interior  
17 to give an opinion as to the legal rights to that water  
18 and seek help from a coordinate branch of the government  
19 that obviously has an expertise in this area which this  
20 board understandably would not possess. For all those  
21 reasons, that's how I would hope that this hearing could  
22 be shaped.

23 JUDGE LAZO: Thank you, Ms. Bernabei. Mr.  
24 Dewey, does the staff wish to make an opening -- ?

25 MR. DEWEY: Yes sir, we would. First, we'd

1 like to point out that there is only one issue for this  
2 board to consider, and that is whether there will be  
3 enough cooling water available in the first five years  
4 of the operation of the Palo Verde unit, to operate  
5 the third unit during the month of peak reactor needs.

6 Now, during the discovery phase of this  
7 proceeding, the Intervenor after having received  
8 Interrogatories stated the basis for her position in  
9 this proceeding. Now, those -- the bases that she pointed  
10 out were only based upon several EPA studies and  
11 comments. Based upon our discovery, we have prepared  
12 the testimony of Mr. Raymond Gonzales to address the  
13 points of this contention. At the 11th hour, however,  
14 the Intervenor is attempting to amend her contention  
15 and add all types of new things in this proceeding.

16 The staff feels that this is impermissible  
17 to do this. I would like to remind the board in this  
18 regard of the statement by the appeal board in the Virgil  
19 Sommer case where the board stated, the applicant quote,  
20 and I quote, "The applicants and the staff had every  
21 right to assume that both the issues to be litigated  
22 and the participants had been established with finality  
23 in simple fairness to them to say nothing of the public  
24 interest requirement that NRC licensing proceedings  
25 be conducted in an orderly fashion demanded that the

1 board be very chary in allowing one who had slept on  
2 its rights to inject itself in new claims into the case  
3 as last minute trial preparations were under way and  
4 I would like to point out to the board that in the Sommer  
5 case, the appeal board was making a statement with  
6 respect to new contentions two months before the hearing.

7 In this case, we're having all kinds of new contentions  
8 several weeks before the hearing.

9 Now, staff believes further that the types  
10 of contentions that the Intervenor is trying to inject  
11 at this time are actually inappropriate subjects for  
12 this board to consider.

13 The first example I will give is the Pima/  
14 Maricopa Indian lawsuit. Now, that lawsuit is as I  
15 pointed out in a previous brief is a subject of  
16 litigation in the District Court. This agency has held  
17 in the past that we will not take cognizance of actions  
18 before other legal tribunals especially where the outcome  
19 in such actions is extremely speculative and  
20 conjectural. I'd like to give the board some cases  
21 here that they might wish to refer to. The first case,  
22 I've quoted some in the brief, but these are some  
23 additional cases in point.

24 JUDGE LAZO: I think we're going to get  
25 to oral argument on these motions later. I think as



1 far as an opening statement is concerned, we'd just  
2 like a view of how you view the proceeding at this time.

3 MR. DEWEY: All right, sir, I'll be briefer  
4 and simply state that we are prepared to go forward  
5 with the contention as it was presently framed. We  
6 believe that these new contentions that the Intervenor  
7 is trying to interject at this time are impermissible.  
8 We also believe that we will discuss it at greater length  
9 with respect to each specific contention if you wish  
10 us to do so.

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crl1                    One further thing I wish to point out is that  
2                    there is no real safety issue involved here.  If any of  
3                    the contingencies which the Intervenor is referring to  
4                    come to for issue and there is less water effluent  
5                    available for the Palo Verde units, there is no safety  
6                    problem because the units can be shut down by the use of  
7                    onsite wells.  These onsite wells are what furnish the  
8                    water for the safe shutdown of this unit.  So at any time  
9                    it looks as if there is effluent, the unit can be safely shut  
10                    down.  For that reason, these contentions are very  
11                    inappropriate.  There is no safety concern here.  
12                    evidentiary As I said, we are prepared to offer the  
13                    testimony of Mr. Gonzales regarding the contention.

14                    JUDGE LAZO:  Thank you, Mr. Dewey.

15                    Just briefly let me explain that a public  
16                    hearing at a operating licensing stage is not  
17                    required under the Atomic Energy Act as it is at the  
18                    construction period stage.  Under the Act, any time an  
19                    applicant files an application to construct a nuclear  
20                    power plant, there must be a public hearing.  Such a public  
21                    hearing was held in the case of Palo Verde a number of  
22                    years ago, following which construction permits were  
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1 issued for units 1, 2 and 3.

2 Now, a second hearing is not mandatory, as I  
3 said; however the Commission does offer an opportunity for  
4 a hearing to any member of the public whose interest  
5 might be affected. At the construction permit stage,  
6 almost all of the issues which relate to the ultimate  
7 findings that the Commission must make regarding health  
8 and safety and environmental values are considered.  
9  
10 However, at the operating stage, where a hearing is not  
11 mandated by the Atomic Energy Act, the Licensing Board  
12 is established for the sole purpose of resolving the  
13 issues which have been placed into controversy by the  
14 parties.

15  
16 There are many other matters that have not been  
17 placed into issue by any of the parties, which the  
18 Nuclear Regulatory Commission technical staff must resolve  
19 before a final decision is made on the issuance or the  
20 denial or a license or the conditioning of the license.  
21 Therefore our role in this proceeding at this time is to  
22 resolve issues that have been placed into controversy.  
23 Many issues have been resolved, some by stipulation, some  
24 by summary disposition, and we're down to one major water  
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1 issue that has been placed into controversy by the  
2 Intervenor. They petitioned and became a party to the  
3 proceeding and therefore there will be an evidentiary  
4 hearing and we will make a decision based on evidence that  
5 we hear from witnesses in this proceeding.

6  
7 Now, there's another way in which members of  
8 the public can participate in these proceedings and that  
9 is by way of a limited appearance statement, either oral  
10 or in writing. Those statements are not sworn testimony,  
11 they're not part of the evidence on which a finding can  
12 be made by the Licensing Board, but they do serve a very  
13 useful purpose and that is to permit members of the public  
14 to participate to express their opinion, whether it's  
15 favorable or whether they have concerns. Very often after  
16 hearing limited appearance statements, the Board will  
17 determine that there are concerns that have not; but  
18 probably should've been brought up and the Board can make  
19 those issues Board issues and insist that the parties,  
20 the staff or the applicant present witnesses so that those  
21 concerns can be addressed.

22  
23 Now, with that preamble, we should get on.  
24 I'm very sorry that there's still some of you standing.  
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1 This is about the largest courtroom in the building.

2           Could I ask please, is Congressman Bob Stump  
3 present? Mr. Bob Stump had made a request to make a limited  
4 appearance. Is there anyone from Mr. Stump's office in  
5 the courtroom? Very well, Thank you.

6           We have received a number of written requests  
7 and today a number of you have signed up to make limited  
8 appearance statements. There are quite a few of you  
9 I think in order to not inconvenience a lot of people who  
10 are here, if you could keep your statements down to about  
11 five minutes, it would accommodate everyone else. And if  
12 what you have to say appears to be repetitious or cumulative  
13 of what some others who went before you have said, you  
14 might wish to simply hand the statement to the court  
15 reporter who will transcribe it into the transcript. I  
16 think we'll just take them in the order that they first  
17 came in in writing. And let me ask, is Timothy A. Barrow  
18 of the Arizona Corporation Commission present?

19           (No response.)

20           JUDGE LAZO: Hearing no response, I assume Mr.  
21 Barrow is not in the hearing room.

22           Bill Stephens of the Arizona Municipal Water  
23 Users Association. Is Mr. Bill Stephens present?

24           MR. STEPHENS: Yes. I'm present.

25           JUDGE LAZO: Mr. Stephens, if you would, I think

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1 we would all hear you better if you could come to the  
2 podium where we have a microphone. Good morning, sir.

3 MR. STEPHENS: Good morning, Mr. Hearing  
4 Officer. How are you?

5 JUDGE LAZO: Just fine. Thank you. And your-  
6 self?

7 MR. STEPHENS: Fine. Thank you. May I proceed,  
8 sir?

9 JUDGE LAZO: Please proceed.

10 MR. STEPHENS: Mr. Hearing Officer, my name is  
11 Bill Stephens, S-t-e-p-h-e-n-s. I serve as executive  
12 director in the Arizona Municipal Water Users Association.  
13 We have prepared a rather lengthy statement. I will  
14 excerpt from that statement for purposes of an oral  
15 presentation and ask your permission to make available to  
16 your court reporter and to the public copies of the written  
17 statement.

18 JUDGE LAZO: That would be just fine, sir.

19 MR. STEPHENS: Fine. With your permission then,  
20 I'd ask Mr. McCain to give a copy -- he's staff director  
21 with our organization -- ask him to give a copy to your  
22 clerk and then perhaps make the other copies available  
23 somewhere up here to be picked up by the public.

24 JUDGE LAZO: Pardon me. If you have enough  
25 copies available for the court reporter to simply bind them

cr6 1 them into the transcript -- how many would you need, Mr.  
2 Briggs, about 20?

3 COURT REPORTER: At the present time, eight,  
4 but it could go up to 10 or 12.

5 MR. STEPHENS: Mr. Hearing Officer, with your  
6 permission, perhaps we can give your court reporter one  
7 copy at this time and sometime during the course of either  
8 today or tomorrow, before the proceedings terminate, we  
9 will give him an additional number of copies and that way  
10 there will be some copies available for Counsel and the  
11 general public.

12 JUDGE LAZO: That sounds like a good way to  
13 resolve the problem. Fine.

14 MR. STEPHENS: With your permission, sir.

15 Mr. Hearing Officer, the Arizona Municipal  
16 Water Users Association is a voluntary, non-profit  
17 corporation established by the Maricopa County cities of  
18 Glendale, Mesa, Phoenix, Scottsdale and Tempe to promote  
19 the development of the unified water policy and provide for  
20 integrated water resource management among member cities.  
21 As such, we have a direct and vital interest in the  
22 proceedings at hand. Our member cities produce and own  
23 the effluent to be utilized as the source of cooling water  
24 for the Palo Verde Nuclear Generating Station.

25 Arizona Municipal Water Users Association

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1 member cities will provide effluent to the Applicant for use  
2 as cooling water at the Palo Verde pursuant to Agreement  
3 No. 13904, which was a contract signed in 1973. As the  
4 Atomic Safety and Licensing Board is well aware, concerted  
5 efforts were undertaken as of November, 1981 to renegotiate  
6 certain provisions of this Agreement. Unfortunately, we  
7 must report to you today that efforts at renegotiation were  
8 unsuccessful. Thus, our appearance before this Board takes  
9 on added significance.

10           Prior to the recent negotiations, the Applicant  
11 met with representatives of various municipalities in the  
12 late fall -- or the early fall of 1978 to explore the  
13 possibilities of modifying the Agreement in order to remove  
14 restrictions that hindered the rational and efficient manage-  
15 ment of municipal water resources. The Applicant's  
16 response made it clear that any action they interpreted as  
17 contrary to the Agreement would be vigorously opposed.  
18 At that time, the matter was not pursued.

19           By 1981, however, the climate had changed  
20 considerably. Not only was the Applicant's request for  
21 facility operating licenses for Palo Verde Nuclear  
22 Generating Station being challenged on the basis of an  
23 inadequate water supply, at least one of the member cities  
24 of our organization faced the very real possibility of  
25 sever water shortages by the summer of 1982. Those



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1 shortages would occur within part of the part of the City  
2 of Phoenix's water service area. It appeared a common  
3 interest existed between the Applicant and the Municipal  
4 Water Users Association. When the Applicant indicated a  
5 willingness to open discussions, leading, our association,  
6 at least we hoped, to serious efforts of renegotiation, it  
7 seemed that mutual interests had triumphed over parochial  
8 concerns.

9           Indeed, serious efforts at renegotiations were  
10 undertaken during the latter part of 1981 and the first  
11 two months of 1982. We feel the mutual understanding was  
12 enhanced as well as a greater sensitivity to the particular  
13 concern of all parties. Nevertheless, the renegotiations  
14 were unsuccessful. As to the reason or reasons for their  
15 failure, we are still puzzled. We do not feel that the  
16 abundant rainfall in the early part of this year, which  
17 solved the threat of an immediate water supply problem,  
18 played any significant role. Nor is there any evidence  
19 that would question anyone's good faith. We felt that the  
20 parties were very close to agreement, literally minutes  
21 apart. The differences that remained were minor and  
22 amenable to solution. Any objective analysis would, we think,  
23 validate that assertion.

24           In any event, it is Agreement 13904 which at  
25 this time is the operative instrument under which the

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Applicant expects to receive effluent for cooling purposes at Palo Verde. In this regard, we are ethically obligated to draw the attention of the Board to a certain provision of the Agreement. The Municipal Water User Association believes that the potential impact of this provision could have serious consequences which should be considered by the Board in making its determination of the Applicant's request.

Section 21 of the Agreement, entitled, Interruption of the Delivery of Effluent, grants the member cities of the Arizona Municipal Water Users Association the right to refuse to deliver effluent when there exists in the cities a critical need for water to be used for domestic purposes, where there is no other reasonable source of water, where the cities have taken reasonable steps to conserve the water supply to the cities, and reasonable notice has been given to the Participants, who in this case is the Applicant. When Section 21 is activated, the cities are to use their best efforts to resume delivery of the effluent at the earliest practical time.

After examining the language of Section 21, one is left with an inescapable conclusion. Section 21 means that the Applicant does not have a right to an assured supply of effluent for cooling water at Palo Verde. In other words,

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1 the Applicant is not legally guaranteed an uninterrupted flow  
2 of effluent for the operating life of Palo Verde. This is  
3 a subtle but significant difference from concerns about  
4 whether effluent is or is not available in an amount adequate  
5 for Palo Verde requirements, be it in the winter or summer  
6 or for use in Unit 1 or Unit 3. We do not contest figures  
7 demonstrating that there is currently enough effluent available.  
8 Nor, for that matter, do we contest speculative figures  
9 demonstrating that there is insufficient effluent available.  
10 A concern over whether effluent will always be available is  
11 quite different from concerns about whether the effluent is  
12 or is not an inadequate supply absolutely. Section 21, we  
13 feel, precludes, an assured, guaranteed water supply for  
14 Palo Verde because we can recall during times of water  
15 crisis.

16           The critical question then concerns the likeli-  
17 hood of Arizona Municipal Water Users Association cities  
18 ever invoking Section 21. Recently, we thought the probabili-  
19 ty high and so informed the Applicant. When the recent  
20 rainfall and run-off, however, occurred, the probability  
21 as a result of that -- the probability is currently low.  
22 But we doubt if that will always be the case. Nevertheless,  
23 the Arizona Municipal Water Users Association is prepared  
24 to invoke Section 21 if necessary. We know full well what  
25 that would mean for the financial well-being of the

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1 Participants in Palo Verde and the burden it would place on  
2 their customers. While we will do everything possible to  
3 preclude invoking Section 21, as the Section requires, if  
4 it ever comes down to the question of water for people or  
5 water for power, then our responsibility is predetermined.

6 The remainder of this statement, which I will not  
7 take the Board's time reading, discusses the use of  
8 municipal effluent within the wider context of water resource  
9 management in Arizona and the Colorado River Basin. The  
10 long-range Municipal Water Users Association water resource  
11 planning and management goals are set forth as well as  
12 specific Association principles for the management of  
13 municipal effluent. An understanding of these goals and  
14 principles and their relationships to the water supply and  
15 water management problems facing municipalities demonstrate  
16 the member cities determination that they will and must use  
17 their effluent to increase their domestic water supply. For  
18 too long, the permanency and adequacy of everyone's water  
19 supplies were taken for granted. A simple turn of the tap  
20 or the opening of an irrigation gate would provide more than  
21 enough of a precious resource than actually needed, at a  
22 cost literally cheaper than dirt. Those days, we contend,  
23 are over. So, too, is viewing effluent as a liability  
24 rather than an asset. Effluent is a water resource degraded,  
25 but nonetheless a water resource. And to reiterate, effluent

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1 is a water resource that will and must be used to increase  
2 the domestic supply especially since future importations of  
3 water on the scale of the Central Arizona Project are  
4 extremely unlikely.

5 Mr. Chairman, I have concluded my oral presenta-  
6 tion in the interest of brevity. We have indicated to your  
7 court reporter that we will provide a sufficient number of  
8 copies to him during the course of the afternoon and will  
9 do so, sir.

10 (Whereupon, the statement of Bill Stephens  
11 was bound into the record.)  
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ATOMIC SAFETY AND LICENSING BOARD

of the

United States of America

Nuclear Regulatory Commission

In the Matter of

ARIZONA PUBLIC SERVICE COMPANY,  
et al., Facility Operating License  
Proceeding for Palo Verde Nuclear  
Generating Station, Units 1, 2 and 3

Limited Appearance

Statement

of

ARIZONA MUNICIPAL WATER USERS ASSOCIATION

Bill Stephens, Executive Director

April 27, 1982

Phoenix, Arizona

## INTRODUCTION

The Arizona Municipal Water Users Association (AMWUA) is a voluntary, non-profit corporation established by the Maricopa County cities of Glendale, Mesa, Phoenix, Scottsdale and Tempe to promote the development of unified municipal water policies and provide for integrated water resources management amongst member cities. As such, the AMWUA has a direct and vital interest in the proceeding at hand. AMWUA member cities produce and own the effluent to be utilized as the source of cooling water for the Palo Verde Nuclear Generating Station (PVNGS).

## AGREEMENT NO. 13904

### Renegotiations

AMWUA member cities are to provide effluent to the Applicant for use as cooling water at PVNGS pursuant to Agreement No. 13904 (hereinafter "Agreement"), a contract signed in 1973. As the Atomic Safety and Licensing Board (hereinafter "Board") is well aware, concerted efforts were undertaken as of November, 1981 to renegotiate certain provisions of this Agreement. Unfortunately, the AMWUA must report that efforts at renegotiation were unsuccessful. Thus, the AMWUA appearance before the Board takes on added significance.

Prior to the recent negotiations, the Applicant met with representatives of various municipalities in August of 1978 to explore the possibility of modifying the Agreement in order to remove restrictions hindering the rational and efficient management of municipal water resources. The Applicant's response made it clear that any action they interpreted as contrary to the Agreement would be vigorously opposed. The matter was not pursued.

By 1981, however, the climate had changed considerably. Not only was the Applicant's request for facility operating licenses for PVNGS being challenged on the basis of an inadequate water supply, at least one of the member cities of the AMWUA faced the very real possibility of severe water shortages by the summer of 1982 within part of its water service area and corporate limits. It appeared a common interest existed between the Applicant and the AMWUA. When the Applicant indicated a willingness to open discussions, leading, AMWUA hoped, to serious efforts at renegotiation, it seemed that mutual interests had triumphed over parochial concerns.

Indeed, these discussions did lead to serious efforts at renegotiation during the latter part of 1981 and the first two months of 1982. Mutual understanding was enhanced as well as a greater sensitivity to the particular concerns of all parties. Nevertheless, as indicated, renegotiations were unsuccessful. As to the reason(s) for their failure, the AMWUA is still puzzled. We do not feel the



abundant rainfall in the early part of this year, which "solved" the threat of an immediate water supply problem, played any significant role. Nor is there any evidence that would question anyone's "good faith." The parties were very close to agreement, literally "minutes" apart. The differences that remained were minor and amenable to solution. Any objective analysis would, we think, validate that assertion.

In any event, it is Agreement No. 13904 which is, at this time, the operative instrument under which the Applicant expects to receive effluent for cooling purposes at Palo Verde. In this regard, the AMWUA is obliged to draw the attention of the Board to a certain provision of the Agreement. The AMWUA believes that the potential impact of this provision could have serious consequences which should be considered by the Board in making its determination on the Applicant's request for facility operating licenses for PVNGS.

#### Section 21 -- Interruption of the Delivery of Effluent

Section 21 of the Agreement entitled, "Interruption of the Delivery of Effluent," grants AMWUA member cities the right to refuse to deliver effluent when there exists in the cities a critical need for water to be used for domestic purposes, there is no other reasonable source of water, reasonable steps have been taken to conserve the water

supply in the cities, and reasonable notice has been given to the Participants. When Section 21 is activated, the cities are to use their best efforts to resume delivery of effluent at the earliest practical time.

After examining the language of Section 21, one is left with an inescapable conclusion. Section 21 means that the Applicant does not have a right to an assured supply of effluent for cooling water at PVNGS. In other words, the Applicant is not legally guaranteed an uninterrupted flow of effluent for the operating life of PVNGS. This is a subtle but significant difference from concerns about whether effluent is or is not available in an amount adequate for the requirements of PVNGS, be it in the winter or summer or for use in Unit 1 or Unit 3. We do not contest speculative figures demonstrating there is enough effluent available for PVNGS. Nor, for that matter, do we contest speculative figures demonstrating there is insufficient effluent available. A concern over whether effluent will always be available is quite different from concerns about whether the effluent is or is not an inadequate supply. Section 21, we feel, precludes, an assured, guaranteed water supply for Palo Verde.

The critical question then concerns the likelihood of AMWUA cities ever invoking Section 21. Recently, we thought the probability high and so informed the Applicant. With the recent rainfall and run-off, the probability is currently low. But we doubt if that will always be the case. Nevertheless, the AMWUA is prepared to invoke Section 21 if necessary. We know full well

what that would mean for the financial well-being of the Participants in PVNGS and the burden it would place on their customers. While we will do everything possible to preclude invoking Section 21 (as Section 21 so requires), if it ever comes down to water for people or water for power, then our responsibility is predetermined.

The remainder of this statement will discuss the use of municipal effluent within the wider context of water resources management in Arizona and the Colorado River Basin. The long-range AMWUA water resources planning and management goals will be set forth as well as specific AMWUA principles for the management of municipal effluent. An understanding of these goals and principles and their relationships to the water supply and water management problems facing municipalities will demonstrate that municipalities will and must use their effluent to increase their domestic water supply. For too long, the permanency and adequacy of everyone's water supplies were taken for granted. A simple turn of the tap or the opening of an irrigation gate would provide more than enough of a precious resource than actually needed, at a cost literally cheaper than dirt. Those days, we contend, are over. So, too, is the conception of effluent as a liability rather than an asset.

#### Long-range Planning & Management Goals

With the notable exception of the Salt River Project (SRP), long-range, comprehensive planning for water resources management is a recent phenomenon in Arizona. For example, it is only since June, 1980 that the State of Arizona, through

establishment of a potentially powerful Department of Water Resources, has been authorized to begin water planning and management in a meaningful fashion. Municipal efforts in these areas have been oriented primarily to the short-term. Municipalities have been content to let the federal government or SRP carry the long-range planning burden. No longer will that be the case. For example, the City of Phoenix recently approved the formation of a long-range water planning division within its Water and Sewers Department. Under study at this time, is a significant expansion of the AMWUA in order to take on the function of long-range planning for water resources and management on behalf of its member cities. It is, thus, instructive to explicate briefly the planning and management goals of the AMWUA within which specific policies are developed.

Specific AMWUA water resource policies are designed to be consistent with the eventual achievement of two, closely-related long-range planning and management goals. The long-range goals are to achieve maximum security for municipal water supplies and to achieve maximum flexibility in the management of those water supplies. Such are especially critical when dealing with a natural resource of a relatively finite nature.

The maximization of security demands policies that seek to lessen the physical and legal vulnerability of municipal water supplies. Thus, AMWUA policies are developed in an attempt to ensure that AMWUA water supplies will be sufficient, stable and dependable over time. To that end,

the AMWUA actively pursues the acquisition of additional water supplies for its member cities to provide for expected growth and development and to provide insurance for their current requirements. While it is impossible to protect oneself against the capricious acts of Mother Nature, one can achieve some security from the actions of others, i.e., legal vulnerability. Consequently, the AMWUA has and will continue to protect aggressively, to the fullest extent of the law, the water supplies and rights currently under the dominion and control of its member cities.

From a long-range perspective, the achievement of legal security is a dynamic, not a static, process. Any law, at its enactment, is usually a reflection of the current social, political and economic reality. It must not be forgotten that the passage of time modifies realities and thus changes the conditions of action. For example, Arizona's previous groundwater legislation, the Critical Groundwater Code of 1948, was a generally accurate picture of the prevailing social, political and economic realities within Arizona. By the late 1970's, however, the 1948 Code was clearly out of focus since Arizona's social, political and economic realities had evolved radically.

The lesson is that while Arizona's new groundwater law is a relatively accurate representation of current realities, that may not always be the case. Some provisions

of the Groundwater Management Act of 1980 will become increasingly irrelevant. The AMWUA believes irrelevancy will probably demand a change in what is meant legally by the concept of a water right.

In Arizona, a water right currently means a right to use a certain amount and type of water from a certain defined source. The AMWUA fully expects this conception of a water right to be modified by the turn of the century. Rational, efficient and comprehensive water resources management will demand that a water right be a priority right to call upon a specific amount of water from the total water supply--surface water and groundwater--available to a geo-hydrological unit or area. In other words, a water right will become independent of the source and type of water. As a result, AMWUA directs its efforts towards dominion over and control of water supplies of superior priority and of an assured nature.

Security, however, does not by itself, provide the necessary and sufficient conditions for rational and efficient water resources management. Security must be accompanied by management flexibility. AMWUA policies are designed to allow the eventual achievement of maximum flexibility in the management of our water supplies because it is management flexibility that makes possible shifts in development, delivery and patterns of water use made imperative by evolving natural conditions, institutions, and technology. The AMWUA supports policies

which, for example, allow for the exchange of water supplies between users so that the quality of the water is matched with its most appropriate use, consistent with the necessity to provide potable water for municipal purposes. Likewise, AMWUA will continue to oppose and work for the eventual abolishment of any and all restrictions on the movement of water when such restrictions are based upon the existence of artificial, non-hydrological barriers. The right to transport water to where it is most needed is critical to rational and efficient water resources management.

The achievement of maximum security and management flexibility will not happen immediately. It will be a long, evolutionary process susceptible to temporary derailment. In any event, with the goals of security and management flexibility in mind, it will be helpful to examine the AMWUA principles for the management of effluent and the relationship of effluent to the water supply problems and water management constraints confronting AMWUA member cities.

#### Management of Effluent

Effluent is a water resource--degraded, but nonetheless a water resource. As such, effluent has value, and the AMWUA believes it to be of considerable value since effluent is a dependable water supply not prey to severe shortage. Value and especially dependability largely explain why the use and

management of municipal effluent has become so significant an issue within the overall context of water resources management in central Arizona.

AMWUA policies for the management of effluent are developed on the basis of the following principles:

1. Effluent is the property of the municipalities that collect and treat raw sewage to produce the effluent.

2. Municipalities have authority over the use, management and disposition of their effluent so long as the effluent remains under their dominion and control.

3. Municipalities will seek to maximize the reuse of their effluent and to maximize their net gains from such reuse.

4. Generally, due to the need for and value of potable water, municipalities will use, manage and dispose of their effluent so as to increase their supply of potable water to the fullest extent possible. To the extent such is impracticable, municipalities will market their effluent for reuse by others.

Effluent can be managed to increase the potable water supply in at least two ways. First, effluent can be substituted for potable water used to irrigate, for example, golf courses and parks. Member cities of the AMWUA recognize this elemental fact and are attempting to substitute effluent for potable water wherever possible. Furthermore, we recognize the



probability that future residential and commercial developments may find it necessary to make use of dual water delivery systems--potable water for inside uses and effluent for outside uses. Indeed, it is even possible that the time may come when drinking water will have to be partly effluent in source, either directly through advanced treatment or indirectly by using effluent to recharge the groundwater aquifer. Technical and economic considerations dictate that such be implemented by locating treatment plants as close to the site of reuse as possible. Thus, small, self-contained or satellite treatment plants, instead of channelling flows to large, regional plants like the 91st Avenue facility, are likely to become the rule rather than the exception.

Second, and far more preferable, is the direct exchange of municipal effluent from regional treatment plants for potable water under the dominion and control of other water users. Not only are the amounts exchangeable large, the probability of utilizing existing distribution systems promises considerable economic savings. In addition, effluent produced today meets the quality standards required for most agricultural uses--an additional argument, besides dependability, for a one-to-one exchange ratio. Since agriculture, Indian and non-Indian, uses nearly 90% of the water in Arizona, and will continue to use the largest share, it is the most obvious candidate for exchange. To a lesser degree, industry may

also offer opportunities. Because of the large quantities of water involved and the resultant economics of scale, it is not as critical that new regional plants be constructed as close to the site of reuse as possible (on-site reuse would, of course, be preferable). In fact, existing regional plants offer opportunities for exchange. For example, the City of Phoenix is actively pursuing the exchange of effluent from their 23rd Avenue Wastewater Treatment Plant for agricultural surface water and/or groundwater. As much as 40,000 acre-feet could be involved. Exchange possibilities from the 91st Avenue facility also are being investigated.

While the exchange of effluent for potable water is the preferred course of action, the AMWUA recognizes that for a variety of reasons exchanges will not always be feasible. Marketing our effluent for reuse by others will be necessary. In those situations, we expect that a portion of the payment received for our effluent will be earmarked for a Wastewater Reclamation Program. The AMWUA Wastewater Reclamation Program will develop and implement projects designed to increase the quality and quantity of effluent reclaimed by municipalities.

Recognizing the dependable nature of effluent, so long as one has maximum security, it is worthwhile to set forth some of the critical water and management problems facing municipalities-- problems that are likely to demand the use of effluent to increase domestic supplies. We recognize that to a large extent some of these water problems are speculative and

conjectural in nature. Furthermore, some are examples of what has been labelled, the "worst possible case." So be it. It is long past time that we plan for the worst possible case in the context of water supplies. The end of the era of crisis management is long overdue.

### CENTRAL ARIZONA PROJECT

#### Delivery Shortages

The Central Arizona Project (CAP) is a multi-purpose water project which will deliver Colorado River water for Indian and non-Indian irrigation, municipal and industrial uses in central and southern Arizona. Since the CAP is in the construction phase and eventual delivery of Colorado River water almost certain, the critical questions become when can deliveries be expected and how much water will, in fact, be delivered?

Deliveries of CAP water are expected, in the Phoenix area, sometime soon after 1985. However, federal sources have indicated that budgetary constraints are likely to force the CAP to be "stretched-out." Congressional and environmental antipathy to Western water development also should serve to heighten everyone's concern. It is possible that CAP deliveries could be delayed past 1985. To the extent delays are encountered, the necessity to use our effluent to augment domestic supplies is increased. Regardless of any possible delay, what the amount of delivery will be in any one year has

been and will continue to be in dispute.

Strictly speaking, the CAP is not guaranteed any specific amount of Colorado River water. Instead, the CAP is the claimant to the amount of water left over after other higher priority claims are satisfied. Indeed, no uses have a lower priority than CAP. The legislation which authorizes the CAP (Colorado River Basin Project Act Public Law 90-537) contains a provision granting priority to existing entitlements in the lower basin, including the lower basin's obligation to deliver 750,000 acre-feet to Mexico. In other words, the entire CAP supply is legally vulnerable.

Depending upon the natural supply of the Colorado River and the eventual development of the Upper Basin's entitlement of 7.5 million acre-feet, the amount of CAP water available for use will range from zero to about 1.6 million acre-feet with an estimated average delivery of 1.2 million acre-feet. However, the amount that water resource management experts estimate can be counted upon to be available every year is the amount most significant in terms of water resources management during periods of CAP shortage. This amount is known as the "dependable" or "firm" supply--the amount most physically secure. Estimates of the dependable supply vary from 380,000 acre-feet to 630,000 acre-feet. Assuming a dependable supply of 630,000 acre-feet, the

Arizona Department of Water Resources (DWR) estimates that amount will be available about one of every three years on the average, with more than that available two out of every three years. However, since a total of nearly 800,000 acre-feet was allocated for first priority uses, DWR estimates that these uses will be subject to a 20% shortage in supply 36% of the time. It should also be recognized that shortages could occur over extended periods of time. Colorado River studies have shown evidence of 10 to 15 consecutive dry years. Moreover, assumptions about and calculations of the dependable supply and the extent and duration of CAP shortages have been brought into question by the recent recommendation of the new special master in Arizona v. California.

Arizona v. California: Special Master's Decision

The initial decision in Arizona v. California (1963) was widely heralded as a victory for Arizona in that it removed one of the last legal obstacles to the passage of legislation authorizing the CAP. As part of the decision several Indian communities located along the mainstream of the Colorado River in Arizona and California were allocated significant amounts of Colorado River water for use on their reservations. Some Indian communities, however, were dissatisfied and petitioned the Supreme Court to appoint a special master to review the previous decision in order to rule whether additional Indian claims were justified.

About six weeks ago, a recommendation was offered. The special master concluded that five Indian communities should receive an additional 316,988 acre-feet of Colorado River water of which 194,000 acre-feet would come from Arizona's entitlement. If the Supreme Court accepts the special master's recommendation (the Court routinely does so 80% to 85% of the time), then the CAP supply will be reduced by about 120,000 acre-feet of water per year. In other words, the dependable supply for the CAP could be reduced to somewhere between 260,000 acre-feet and 510,000 acre-feet. CAP shortages, therefore, are likely to be larger than anticipated, arrive earlier and be of longer duration than expected. Consequently, the greater the likelihood and duration of CAP shortages, the greater the probability and necessity of using effluent to increase domestic supplies.

#### Effluent Exchanges with Indians

The principle of management of effluent to increase the potable water supply has been adopted by DWR in their allocation of CAP water. The CAP municipal and industrial (M & I) allocation of 640,000 acre-feet includes and assumes that 100,000 acre-feet of municipal effluent will be exchanged for 100,000 acre-feet of the Indian CAP supply. It has been estimated that CAP shortages will necessitate the first implementation of this exchange sometime between 1992

and 2005. These dates could be advanced if the special master's decision granting an additional 192,000 acre-feet to the Indians is upheld by the Supreme Court.

Regardless of the date such exchanges are implemented, the method by which the exchanged potable water would be distributed results in an absolute loss of water for the municipalities producing the effluent for exchange-- primarily the AMWUA member cities. The AMWUA will furnish anywhere from 75,000 to 100,000 acre-feet of effluent for the exchange. However, AMWUA member cities will receive only about 30,000 acre-feet of potable water in return. DWR has proposed to "pool" the potable water received in the exchange and distribute it to all M & I users, not just those furnishing effluent. DWR's proposal could reduce the AMWUA total water supply by as much as 70,000 acre-feet per year. On the other hand, all other M & I users of CAP water, including the Applicant for Palo Verde's operating licenses, would have their total water supply increased.

The AMWUA has argued that in addition to the "pooling" option, municipalities should have the option of exchanging effluent with the Indians privately and, thus, receive all the water in return. DWR has agreed a municipality could do that, but indicated the Secretary of Interior, James G. Watt, would be urged to penalize that municipality by reducing its CAP allocation by the amount of Indian CAP water gained from the exchange.

Regardless of the justifications DWR has offered, all options for exchanging effluent for Indian CAP water would penalize the producer of effluent by reducing its total water supply. The physical and legal security of a large portion of municipal effluent is threatened. Such only serves to make the remaining portion of our effluent more significant and valuable and, thus, increases the probability effluent will be used to enlarge the potable supply rather than sold to others for reuse.

#### CAP Delivery Contracts

In addition to CAP shortages and the loss of water as a result of effluent exchanges with Indians, the CAP delivery contracts, which must be signed before CAP water can be taken, contain provisions which severely restrict management flexibility and which increase the probability of municipalities using their effluent to increase their potable water supply. For example, the contracts require that all users of CAP water shall not pump or, within their legal authority, permit others to pump groundwater from within the exterior boundaries of their service area for any use outside the user's service area. Users would not be able to supply groundwater to other users even during times of minimal delivery of CAP water. Furthermore, it appears the use of exchange or replacement wells would be prohibited. AMWUA cities



exchange water with SRP and replace water temporarily borrowed from them. Generally, a municipality accomplishes this by pumping groundwater from non-SRP lands and depositing it into the SRP canal system. Once in the SRP canal system, the groundwater is transported out of that municipality's service area.

The provision restricting transportation of groundwater also fails to distinguish between potable and non-potable groundwater. Consequently, the opportunity to exchange non-potable water is severely circumscribed. Artful drafting during negotiations over the exact wording of the delivery contracts will not be able to lessen the negative impact of this restriction on the movement of groundwater because virtually identical language appears in the federal legislation authorizing the CAP.

Another provision in the proposed contract grants the Secretary of the Interior control over CAP return flow, which is defined to include effluent and groundwater traceable to the use of CAP water. How that portion of municipal return flow which is CAP related will be determined is unknown but the real possibility exists that municipal effluent could be demanded to satisfy Winters Rights claims of Indians. At various times in the past, representatives of the Department of Interior have discussed utilizing municipal effluent to resolve Indian water claims. As the Board is undoubtedly

aware, the Salt River Pima-Maricopa Indian Community has filed a lawsuit which argues they have rights to a large portion of our effluent, based on the doctrine of secretarial control of return flow from reclamation projects. In this case, it is SRP not CAP. However, it should be noted that the Indian CAP contracts define any exchangeable effluent as "non-project" water. Therefore, any exchanges with Indians would be with effluent that is not CAP return flow, meaning that the Secretary may have the right to exert control over an even larger portion of AMWUA effluent.

#### SURFACE WATER

##### Salt and Verde River Water

Salt and Verde River water is delivered to AMWUA member cities by the Salt River Project (SRP). Generally, the average supply has been adequate for those lands which have the right to receive such water. SRP contends (a contention with which we do not agree) that their organization's by-laws and federal reclamation law require that except under exceptional circumstances, surface water delivered by SRP or groundwater withdrawn from lands within the exterior boundaries of SRP are restricted for use only upon member lands within the exterior boundaries of SRP. Municipal water service area lands outside the exterior boundaries of SRP or non-member lands within the exterior boundaries are not entitled to water from SRP. As a result of this inflexibility, residents of AMWUA member cities face more or less severe water supply

problems depending upon where they live.

As previously mentioned, the City of Phoenix found itself late last year facing the possibility of severe water shortages on non-SRP lands located primarily north of the Arizona Canal. (The Arizona Canal forms the northern boundary of SRP.) Traditionally, Phoenix has partially supplied these lands with surface water, the right to which was obtained when Phoenix financed the construction of large spillway gates at Horseshoe Dam on the Verde River. To the extent the reservoir behind the dam is filled by run-off, Phoenix gains what are known as "gateway credits." During the almost 30 years since construction of the gates on Horseshoe Dam, the City has accumulated credits averaging approximately 12,000 acre-feet per year. These credits have tended to accumulate in rather large amounts interspersed with little or no gain. Even though these credits can carry over from year to year, there have been periods when the credits became nearly exhausted because rainfall on the Verde Watershed was minimal. To a very large extent, Phoenix faced the possibility of total exhaustion of gateway credits by the summer of 1982.

The City of Phoenix entered into discussion with SRP to see if something could be arranged to ameliorate the impact of the expected shortage. Additional groundwater withdrawals, stringent conservation measures and borrowing against future gateway credits and even future CAP deliveries

were discussed. Fortunately, the rains came and run-off from the Verde Watershed timed with an appropriate schedule of releases from the dams allowed the accumulation of considerable credits. However, the City cannot always expect such fortuitous circumstances. The City of Phoenix cannot always count upon SRP's generous assistance. After all, SRP's first responsibility is currently to their member lands. Severe droughts of extended duration on the Salt and Verde Rivers must be anticipated.

While the above discussion concerns problems primarily of physical security and management flexibility, AMWUA member cities recognize that a problem about legal security also exists. At this time, the legal security of the existing allocation between users of Salt and Verde River water is in question and is being challenged in court.

#### Winters or Reserved Rights Doctrine

In the Salt River Valley, perhaps the most salient and potentially significant legal issue involves the relative rights to use the waters of the Salt and Verde Rivers, particularly the nature and quantity of reserved water rights or Winters Rights of the various Indian communities. For example, the adjudication of the Gila River and its tributaries (Salt and Verde) is in the judicial system, although whether it will be adjudicated in state or federal court remains to be seen. Regardless, the adjudication

should determine the extent and nature of the Winters or "reserved rights" for most Indian communities within central Arizona.

It is generally accepted that Indian Winters or reserved rights:

- Date from the time the reservation was established;
- Continue to exist whether used or not;
- Are applicable to all reservations whether created by treaty, executive order or act of Congress; and,
- Will be quantified as the amount sufficient to accomplish the purposes for which reservations were created.

It can be seen that under Winters rights, Indian communities have a potential superior claim to significant amounts of water from the Salt and Verde Rivers, even though this water is presently being used by others, particularly SRP and AMWUA member cities. An adjudication and determination of the extent of Winters Rights could, therefore, reduce the amount of water available for all non-Indian uses. As the SRP becomes increasingly urbanized, it is the water supplies of municipalities that are most threatened.

In addition, Indians feel that Winters Rights apply to groundwater as well. The courts have yet to rule directly on the issue. In any event, Indians will likely claim that

all groundwater in the Salt River Valley is "hydrologically" connected to the Salt or Verde River and, therefore, groundwater is actually surface water subject to claims based upon Winters.

Furthermore, the Navajo Indians are once again indicating they will soon push for a greater share of the Colorado River water. Currently, they have rights to 50,000 acre-feet of water, of which 35,000 acre-feet is under contract for use at the Navajo Power Plant. (About 24% of the power from the plant will be needed to transport CAP water.) Assuming the Colorado River Compact of 1922 remains valid, then more water for the Navajos will come from the Upper Basin's share of the Colorado. To the extent Navajos are entitled to additional Upper Basin water, then we can expect accelerated development of the unused portion of the Upper Basin's entitlement. Thus, CAP shortages could arrive sooner and be of longer duration than expected.

To reiterate, it must not be forgotten that the Courts are and will be dealing with water that is or soon will be primarily municipal in nature. It is the municipal supply that is threatened. Thus, it is incumbent upon municipalities to plan for the possibility that determinations of Winters and federal reserved rights will severely impair domestic supplies. Municipalities are examining water supplies under their dominion and control in order to determine how they can be more efficiently managed to increase the availability of potable water. One such supply is, of course, effluent.

## GROUNDWATER

### Quality Problems

Traditionally, municipal concern has focused upon the problem of water supply; but, increasingly, attention is being paid to the problem of water quality. Water from the CAP, for example, will be of relatively poor quality, with an acre-foot containing as much as a ton of salt. More troublesome is that hydrological studies indicate that groundwater pollution may become the most serious physical water problem in Arizona.

In the Salt River Valley alone, 30% of the groundwater may be non-potable. In many areas, the concentration of salts, nitrates, fluoride, chromium and DBCP exceed safe drinking water standards. The recent discovery of four AMWUA municipal wells contaminated by trichloroethylene (TCE) points to potential supply problems. While such may not present an immediate supply problem, one must assume that additional wells could be contaminated with TCE and that where TCE is found, other exotic pollutants are likely. Indeed, follow-up testing of a Phoenix well has detected three toxic organic compounds in addition to TCE--chloroform, tetrachloroethylene, and 1,1-dichloroethylene.

Currently, most groundwater can be treated, if necessary, by chlorination. Treatment of contaminated groundwater is possible, but the cost is tremendous, due to the

considerable amounts of energy and/or sophisticated facilities required. Significantly, a contaminant that reaches groundwater tends to form a "plume" of highly polluted water that generally moves slowly through the aquifer for years, posing a chronic threat. The process of restoring its quality could either take years or be impossible to achieve.

These are facts central to the efforts of the Arizona Department of Health Services to establish a groundwater quality protection program. It is unknown, at this time, what affect groundwater quality protection programs will have on the ability of municipalities to withdraw groundwater for drinking purposes.

#### Arizona Groundwater Management Act of 1980

The Arizona Groundwater Management Act is the most comprehensive piece of water legislation ever enacted in Arizona. Indeed, many commentators consider it to have placed Arizona on the leading edge of groundwater management in the entire United States. Not only does the new law quantify rights to groundwater (never before done in Arizona), it, through the implementation of ever more stringent management plans, sets out to systematically reduce the amount of groundwater that can be withdrawn in respect to groundwater rights. That is a novel, if not radical, concept in traditional water resources management. Critical to the success of the new law are two requirements directly



affecting municipalities, both of which have implications concerning effluent. They are mandatory municipal conservation programs and the achievement of the hydrological goal of safe yield.

#### Conservation Programs

Each groundwater management plan will contain a municipal conservation program. The lynchpin is a systematic reduction in the per capita use of water. Currently, the average within AMWUA member cities is well over 200 gallons per capita per day. We anticipate that the use rate will decline steadily as AMWUA member cities and DWR implement their coordinated programs. While successful conservation programs provide more water for growth and development due to demand reduction, and thus lessen the need to use effluent to increase supplies, it must also be remembered that success means diminished wastewater flows to treatment plants.

#### Safe Yield

Arizona's major water problem has been defined as an imbalance between the consumption of water and the dependable supply available for use. In terms of groundwater, the State relies on it for over 60% of its supplies but since the rate and amount of replenishment is so limited in

arid regions, groundwater is literally "mined" to provide for growth and development. It has been estimated that 300,000 acre-feet represents the approximate amount of natural recharge or, in other words, the dependable groundwater supply. Indeed, in Maricopa County the amount of groundwater withdrawn is about 30 times the amount naturally recharged. The CAP, to the extent it both substitutes for groundwater and is at full delivery, will reduce the overdraft, at best, by two-thirds. Clearly, balancing the amount withdrawn with the amount recharged to halt the overdraft is a formidable management task, but it is just this task that the Arizona Groundwater Management Act requires.

The Groundwater Management Act mandates the achievement of safe yield in the Phoenix area no later than 2025. Safe yield is a hydrological management goal that attempts to maintain a balance between the annual amount of groundwater withdrawn from a geo-hydrological area and the annual amount of natural and artificial groundwater recharge in that area. Considering that CAP shortages are a certainty, that people and industry will continue to locate in this area and that natural recharge is so limited, the key to achieving safe yield becomes artificial recharge. Artificial recharge projects while non-existent in Arizona, are not uncommon elsewhere. In addition to recharge with surplus waters, which are rare in Arizona, highly treated effluent has been found acceptable, especially in Southern California. It is more than likely municipal effluent will become

the primary source of recharge water. Even though AMWUA member cities are beginning to investigate recharge projects for purposes other than safe yield, it is still recognized that artificial recharge with effluent may be the only way to increase withdrawals of groundwater so that new growth can be served while the goal of safe-yield is still achieved.

#### CONCLUSION

The Arizona Municipal Water Users Association, being responsible for the development of unified water policies and the promotion of integrated water resources management for urban areas in the Salt River Valley seeks to achieve as much physical and legal security as possible for the water supplies of valley cities and strives to obtain a maximum degree of flexibility in the management of those water supplies.

Physical vulnerability as evidenced by probable CAP shortages, legal uncertainties such as the impact of Winters Rights and management constraints exemplified by restrictions on the movement of water demand management of municipal water supplies in a more efficient and rational manner in order to avert serious crises in the future. Since we believe the chance of any future importation of water on the scale of the CAP to be remote, at best, we are required to examine local water supplies which are relatively underutilized or utilized inefficiently. This statement has focused upon one such water

supply, effluent, and its rational management so as to increase the domestic potable water supply.

To the extent a critical need for water occurs as a result of one or more supply problems and/or the management constraints set forth in this statement, then the likelihood of using effluent to increase the supply rises as does the likelihood of invoking Section 21 of Agreement No. 13904. Consequently, it is argued that the Applicant lacks the legal security necessary to have an assured water supply for PVNGS.

1 JUDGE LAZO: Thank you, sir. Mr. Stephens, as  
2 you probably were aware or may have just heard this morning,  
3 one of the parties has expressed an interest in having you  
4 appear as a witness in this proceeding or perhaps having  
5 the Board call you as a Board witness. We are going to hear  
6 oral argument on those requests later on in the day when  
7 the limited appearance statements have been concluded. May  
8 I ask as to your availability to return to this proceeding?

9 MR. STEPHENS: Mr. Hearing Officer, let me  
10 address the question in a broader scope if I may.

11 JUDGE LAZO: Please do.

12 MR. STEPHENS: In addition to serving as  
13 executive director of the Water Users, I serve as legal  
14 counsel to all of the cities, and I would consider it  
15 inappropriate, as counsel, to become a witness in these  
16 proceedings. I would respectfully ask that the Hearing  
17 Officer respect that position.

18 JUDGE LAZO: All right. That's your position.  
19 at this time.

20 MR. STEPHENS: Yes, sir. With respect to my  
21 schedule, I have a terribly difficult one. If the decision  
22 is contrary to what I think is appropriate with respect to  
23 my appearing, I would have to have some notice. Regarding  
24 witnesses, may I also address another question. We were  
25 requested by the Applicant to have present a witness, which

1 we have done and he's present in the hearing room this  
2 morning. If there's any possibility at all that there  
3 could be some indication of when these witnesses or the  
4 witness will be needed, we'd appreciate it because he is  
5 an official of the city, and it's very difficult to be away  
6 from his job too long.

7 JUDGE LAZO: We understand. Thank you, sir.

8 MR. STEPHENS: Thank you, sir.

9 JUDGE LAZO: Is Mr. Charles Wright present in  
10 the hearing room? Charles Wright who has requested to make  
11 a limited appearance.

12 Mr. J. Hawley, Mayor of the town of Buckeye, is  
13 Mayor Hawley present?

14 Hearing no response, let's try Mr. James R.  
15 Newberry of Tempe, Arizona. Is Mr. Newberry present?  
16 Thank you, sir. Would you come forward?

17 MR. NEWBERRY: I must ask what issues, if any,  
18 we're limited to in this discussion?

19 JUDGE LAZO: Well, as we said earlier, our  
20 principal responsibility in this proceeding is to resolve  
21 the issue that has been placed into controversy by the  
22 Intervenor, and that relates to the adequacy of the water  
23 supply for cooling the condenser. The specific intention  
24 was somewhat more limited than that and related to Unit 3.  
25 But in our interest in hearing from the members of the

crl5

1 public, that's why the Commission holds its hearings in  
2 close proximity to the plant or to the proposed site where  
3 a construction permit is applied for rather than holding the  
4 hearings in Washington. We prefer to come out close to the  
5 plant and listen to members of the public who may have some-  
6 thing to say.

7 MR. NEWBERRY: Then I would like to take the  
8 five minutes I have to address other issues besides the  
9 water issue if I may.

10 JUDGE LAZO: Yes. Please do.

11 MR. NEWBERRY: I'd like to begin by saying that  
12 the recent decision by the NRC not to include the issue of  
13 decommissioning as a safety issue I feel is a mistake. I'd  
14 like to say that over 50 percent of the plant ownership is  
15 presently out of state. What is presently owned in state,  
16 I feel is excessive and unnecessary. It appears that the  
17 costs accounted for in the determination of the economic  
18 justification for Palo Verde are indeed smaller than the  
19 expanding external costs. Palo Verde therefore makes a  
20 mockery of the free market economic system.

21 Some of these external costs are reserve margin  
22 excesses that I've mentioned due to over-estimation of  
23 electric needs; mill tailing waste disposal; high level  
24 waste disposal; health costs from radiation exposure;  
25 public personal safety as in evacuation planning and

crl6

1 construction programs; the TMI \$100 million plus clean-up  
2 costs; insurance costs, such as the Price Anderson Act,  
3 which is a limitation of liability; decommissioning costs.  
4 The DOE and the Virginia Electric Power and Detroit Edison  
5 have estimated decommissioning costs at 10 percent or more.  
6 APS has stated to me that they are allowing one percent.  
7 This is a difference of hundreds of millions dollars  
8 presently in actual dollar costs in the future that may be  
9 off by billions of dollars.

10 Also issues of -- and costs of regional and  
11 national security. Palo Verde represents the most frail  
12 energy system that may not only be interrupted by a few  
13 saboteurs or terrorists, but which represents a large  
14 jeopardy in the event of attack. Even one reactor is  
15 containing many tons more radiation than the bomb that was  
16 used at Hiroshima, perhaps as much as a thousand times as  
17 much radiation claimed by Dr. Carl Johnson of Colorado.

18 Tens of billions of dollars so far have been  
19 spent on promoting the nuclear fuel cycle, the use of  
20 nuclear reactors in this country so far. And we are left  
21 with a disgraceful construction program now, with more  
22 reactors being cancelled than ordered. In fact no new  
23 orders in recent years.

24 I'd like also to say, as far as the figures on  
25 municipal effluent production stated earlier, I'd like to



crl7

1 remind you that we are in one of the great deserts of the  
2 world and the precipitation that occurs during one year is  
3 not necessarily what may occur years in the future. Palo  
4 Verde, I feel, is a backwards technology. We are producing  
5 heat to create steam to make the electricity and we are  
6 doing this in the desert where there's an abundance of heat  
7 and a lack of water. And as the nuclear fuel cycle requires  
8 about 40 percent more water to expel waste heat than even  
9 the fossil fuel production, we are putting an intensive  
10 water user here in the desert. And I feel that the issue  
11 being contended today in relation to the plant is very  
12 important and should not be looked at lightly.

13           Three quotes from people who have been involved  
14 with safety of nuclear energy sums up some of the feelings  
15 I have about nuclear power. "I had had the attitude that  
16 reactors were forgiving in the sense that they could with-  
17 stand a lot of problems without having those problems turn  
18 into serious accidents. I don't feel that way anymore."  
19 Quote from Denward Ross, former assistant director of  
20 Division of System Safety, U.S. Nuclear Regulatory Commission.  
21 "It has been tacit NRC policy not to aggressively pursue  
22 safety questions that could have a major adverse economic  
23 impact on the nuclear power industry," from James E.  
24 Cresswell, reactor inspector in the Midwest Regional Office,  
25 Nuclear Regulatory Commission, Glenellen, Illinois. And

crl8

1 "The frequency of serious and potentially catastrophic  
2 incidents supports the conclusion that sooner or later a  
3 major disaster will occur at a nuclear generating facility,"  
4 from Dr. John F. O'Leary, former U.S. Deputy Secretary of  
5 Energy, former director of Licensing, U.S. Atomic Energy  
6 Commission.

7 As someone who has been educated in engineering  
8 and who has recently completed a Masters study in solar  
9 energy technology, I've become well aware of the natural  
10 energy flows that are available to us here in the desert  
11 and I feel that the use of nuclear power to produce  
12 electricity that is in somewhat question of our future  
13 needs, I think is a disgrace and perhaps the most inappro-  
14 priate use of technology I could think of.

15 And finally, I'd like to say that I think, Dr.  
16 Barry Commener, Amery Lovins, Dennis Hayes have indicated  
17 the kind of energy future we so should proceed with. And  
18 here in the Sonoran Desert, we have the most abundant  
19 sunshine of the country. The alternatives, I believe, are  
20 far more economical than proceeding with this plant. And  
21 I ask your very serious consideration in relation to the  
22 water issue and all these issues. Thank you.

23 JUDGE LAZO: Thank you, Mr. Newberry.

24 (Applause.)

25 JUDGE LAZO: I will ask you not to cause such

1 disruptions. This is a formal proceeding before a federal  
2 body and we're in a federal courtroom. It takes time and  
3 unduly disrupts the proceedings.

4 Is Mr. Phillip Shea present?

5 MR. SHEA: Good morning, Judge Lazo, Members  
6 of the Board.

7 JUDGE LAZO: Good morning, Mr. Shea.

8 MR. SHEA: I have a map which is used for  
9 illustrative purposes and I wonder if I may display it?

10 JUDGE LAZO: Surely. I see we have a board  
11 over here at the side.

12 MR. SHEA: My name is Phillip J. Shea, and I'm  
13 here as the attorney for the Salt River Pima Maricopa  
14 Indian Community. The Salt River Pima Maricopa Indian  
15 Community opposes the proposed sale of Salt River Valley  
16 water to the Palo Verde Nuclear Generating Station. It  
17 opposes the sale because the delivery of water to the  
18 nuclear generating plant constitutes an illegal diversion  
19 of a scarce resource in this Valley. And the Salt River  
20 Pima Maricopa Indian Community is particularly victimized  
21 by the illegality.

22 The purpose of our appearance here is to advise  
23 the Commission that we are opposing -- while not a party  
24 to this proceeding, that we are opposing this contract and  
25

1 other forum, and shall continue to oppose this arrangement  
2 until our position is vindicated. Now, I have examined the  
3 documents that are on file in this Commission in the  
4 Phoenix Public Library, which is a reception center for this  
5 Board. And I particularly searched those records for  
6 information regarding this water delivery contract. And I  
7 find that on the basis of those documents, the Commission  
8 has not been advised of very substantial and serious problems  
9 affecting the legality of the arrangement, facts which the  
10 Joint Applicants are very well aware of.

11 I would like to state or summarize what those  
12 facts are. The source of water proposed for cooling these  
13 reactors is the effluent production of the 91st Avenue  
14 Waste Water Treatment Plant, which is operated by the six  
15 municipalities in the Salt River Valley. The water is almost  
16 entirely derived from the Salt River Project as either  
17 surface deliveries amounting to approximately 200 thousand  
18 acre feet per year, or deliveries to the cities of surface  
19 water, and water which is pumped from the ground water  
20 underlying in the lands of the Salt River Project. And all  
21 of this water is Project water and is subject to the  
22 Reclamation Act of 1902 as amended.

23 The rule is firmly established that Reclamation  
24 Project water continues to be subject to the Reclamation  
25 laws after its first use, if it is subject to being

cr21 1 recaptured for a second use purpose consistent with the  
2 Reclamation laws. This is the holding of the case of Ide  
3 against the United States Supreme Court in 1924, which  
4 upheld an injunction issued in favor of the United States  
5 against the interference with the Government's rights to  
6 capture reclamation water for second use.

7 The United States Congress in 1968 passed the  
8 Colorado River Basin Act, which gave to the citizens of  
9 the State of Arizona the Central Arizona Project. This is  
10 a multi-billion dollar project which is funded with tax  
11 money from the people of the United States. And as a  
12 condition for the enactment of this law, it was made  
13 specifically and emphatically clear that the Interior  
14 Department had to use the authority, the local authority,  
15 that it had to require conservation of existing water  
16 supplies. I refer particularly to Senate Report Number 408  
17 on the Colorado River Basin Act, dated July 26, 1967, in  
18 which the Secretary of the Interior was expressly and  
19 specifically instructed to capture return flow effluent  
20 for Project purposes.

21 The Bureau of Reclamation, which is the  
22 Interior Department agency having direct responsibility  
23 for administering the Reclamation laws, has taken the  
24 position, formally taken the position that the water from  
25 the -- the effluent from the 91st Avenue Waste Water

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1 Treatment Plant is Reclamation water for which the United  
2 States is required to recapture for reclamation purposes  
3 within the boundaries of the Project. A memorandum, dated  
4 January 22, 1971, from the director of the Bureau of  
5 Reclamation from this region to the Commissioner of  
6 Reclamation, states in part, and I quote, "The Committee --  
7 referring to the Senate Committee -- clearly states in  
8 Senate Report Number 408 that the United States should not  
9 abandon its rights to return flows from the Central Arizona  
10 Project or from any water stored or developed by any  
11 Reclamation Project."

12           Concerning these waters, the report states  
13 in part, "It is the intention of the Committee that all  
14 rights of the United States be reserved and protected and  
15 the Secretaries are expressly instructed to contract so  
16 that this is done." Continuing in the Reclamation Report,  
17 "If the Bureau were to concur with the proposal of the  
18 Project to dilute or forego its right to this effluent, the  
19 91st Avenue effluent, it would appear to be inconsistent  
20 with Reclamation policy as related to return flows from  
21 federal reclamation projects."

22           Now, the contract for the sale of the Salt  
23 River Project effluent to the Palo Verde Plant was a subject  
24 of a litigation report dated February 25, 1980, from the  
25 Solicitor of the Department of the Interior to the Assistant

cr23

1 Attorney General, Lands and Natural Resources Division.  
2 This report states in part, quote, "The proposal to use  
3 water for cooling the proposed Palo Verde Power Plant will  
4 be reviewed to see if this water, developed at the  
5 Government's expense, can be used to fulfil existing Project  
6 needs. If the water does appear to be surplus to Project  
7 needs, then our overriding trust responsibility requires  
8 that we determine whether that water can be delivered  
9 directly or by means of exchanges to meet the unfulfilled  
10 water rights of Indian Tribes in the Salt and Verde River  
11 watersheds."

12 The Salt River Pima Maricopa Indian Community  
13 is painfully aware that there is not sufficient water in  
14 the Salt River Project to satisfy its water rights given  
15 the present and proposed future dispositions of Project  
16 water. The Salt River Indian lands within the Salt River  
17 Project are excluded, by order of the Interior Department,  
18 from the water service area of the Salt River Project.  
19 These Salt River Indian lands are the only lands within  
20 the boundaries of the Project that are so excluded.  
21  
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T5-1g I 1           While the Salt River project has undertaken to use  
2   140,000 acre-feet of water per year to generate power for  
3   California and other states, it tells the Salt River Indian  
4   community that there is not one additional drop of water for  
5   Indian lands within the project boundaries, the lands which  
6   are excluded from project participation.

7           The Salt River project, which is one of the Joint  
8   Applicants in these proceedings, is perfectly knowledgeable  
9   of the reclamation character of the effluent that it proposes  
10  to use for off-project and non-project purposes. On May 24,  
11  1967, it filed an action in the Superior Court of Maricopa  
12  County, a few blocks from here, against the City of Phoenix,  
13  number 200640, alleging that the City had no property interest  
14  in the effluent from the 91st Avenue Plant, and therefore could  
15  not legally sell it to users outside of project boundaries.

16           On September 5, 1967, the Salt River project filed  
17  a memorandum of law in that case in support of the proposition  
18  that sewage effluent was reclamation project return flow, and  
19  was not the property of the City of Phoenix, and the City of  
20  Phoenix could not deal with it, could not bargain with it,  
21  and could not sell it. This memorandum of law supports the  
22  exact legal proposition that the Salt River Pima Maricopa  
23  Indian Community asserts here today.

24           The Salt River Project voluntarily dismissed its  
25  suit against the City of Phoenix, with prejudice, before it



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1 contracted to purchase the effluents for its power plant,  
2 outside of the project, for non-project purposes.

3 Our review of the documents on file in this case  
4 shows that none of these facts has been disclosed to the  
5 Commission by the Joint Applicants. The Salt River Pima  
6 Maricopa Indian community will continue in every appropriate  
7 forum to bring about compliance with the reclamation laws.  
8 In the meantime, we urge the Commission to deny any effort by  
9 the Joint Applicants to preclude the introduction of evidence  
10 in this proceeding that may bear upon this aspect of the  
11 question, of whether the Palo Verde Plant has an adequate and  
12 reliable source of water. Thank you.

13 JUDGE LAZO: Thank you, Mr. Shay.

14 MR. SHAY: I have copies. May I submit them  
15 for the Board?

16 JUDGE LAZO: Yes, that would be very convenient.

17 We received an earlier request in writing from  
18 Mr. Carl A. Meyers of Tucson. Is Mr. Meyers present at this  
19 point? Mr. G.E. Saunders, Principal of Ruth Fisher School  
20 number 90, is Mr. Saunders present?

21 MR. GEHRS: I think I may be responsible for the  
22 absence of three of the people you have called, Mr. Stump,  
23 Mr. Hawley, and now Mr. Saunders. I did not do it out of any  
24 disrespect for the Board, but I anticipated that we would have  
25 a few legal arguments on motions, and through intermediaries

1 I advised several of these people, including Mr. Saunders and  
2 Mr. Stump and Mr. Hawley, and also Mr. Mauney (ph) and Mr.  
3 Troost (ph) and Mr. Jacklin, that they probably would not be --  
4 could not be called before one o'clock, and so I expect them  
5 to be here about that time. I am sorry for that interruption.

6 JUDGE LAZO: Well, there are many others here  
7 who have signed up for requests this morning. I think for  
8 their convenience we should proceed.

9 Is Edwina Volgan (ph) of Tucson present?

10 Eve Forest, also of Tucson?

11 Nancy Gray, of Mesa? Are you Ms. Gray? Thank  
12 you.

13 MS. GRAY: In the event of a minor nuclear  
14 accident at Palo Verde, it could result in 3,300 immediate  
15 deaths, 45,000 cancer fatalities during the 30 years follow-  
16 ing the accident, \$14 billion in property damage, and the  
17 total abandonment of 290 square miles surrounding the  
18 installation. Palo Verde is 45 miles from Phoenix.

19 A major nuclear accident could kill two to ten  
20 times as many people, causing from 66,000 to 330,000 delayed  
21 cancer deaths, leukemia deaths, genetic damage and deaths.  
22 Palo Verde is the largest nuclear power plant in the United  
23 States, will contain as much radioactivity as we would get  
24 from the fallout from 1,000 Hiroshima-sized atomic bombs.  
25 Plutonium is one by-product in nuclear energy production which

1 can be converted to make nuclear bombs. Plutonium has a  
2 mandatory 250,000-year life, and is the most toxic substance  
3 known to humankind. We do not know how to keep it out of  
4 our environment or where to put it.

5           Provided we can escape a minor or major nuclear  
6 accident at the plant, we can look forward to the problem  
7 of decommissioning it in 40 years, while it remains in a  
8 radioactively hot condition. This problem would rest with you  
9 and I as residents of this state, as the nuclear industry  
10 will not be responsible.

11           Do we of this generation want to leave a legacy of  
12 non-disposable lethal radioactive waste and to deliberately  
13 develop an energy strategy which includes death and pollution  
14 for all future generations?

15           Thank you.

16           JUDGE LAZO: Thank you, Ms. Gray. Is John  
17 Fraser present, Mr. John Fraser of Tempe? Mr. Myron L.  
18 Scott of Scottsdale has filed a written request.

19           MR. SCOTT: I suppose, with all due respect, the  
20 first thing I must say to you is that I feel none of you  
21 really have any right to be here doing what you are doing  
22 today. Of course, you have your legal authorization to do so,  
23 but that is not the same as genuine right.

24           By what right does any small group of people from  
25 one region say to all the people living in another region

1 this is the one dominant mode of energy production that you  
2 will have to live with that will shape your economy and your  
3 lives for years to come, that this technology which is  
4 extremely complex and therefore exceptionally vulnerable to  
5 human error and systems failures will be yours for years to  
6 come, or you will accept these reactors, which routinely emit  
7 low-level radiation, the effect of which is disputed by  
8 scientists, and any of you who develop cancer as a result will  
9 pay your own medical bills and die your own deaths.

10 By what right does any small group of experts and  
11 bureaucrats say to all the people who live in a region, we  
12 give you this problem, now you live with it? I say that you  
13 have no such right. Now, you have allowed us, who will have  
14 to live with it, to come before you today to make what you  
15 call limited appearances. I simply want to observe that our  
16 share in the risks of Palo Verde will be unlimited.

17 Some of you have been, and I thank you, most  
18 courteous in dealing with my requests for information  
19 regarding these hearings, and regarding your studies of Palo  
20 Verde. I am sure some of you want to do all you can to make  
21 these proceedings as fair as possible within the established  
22 rules, but I feel that the system that has been designed for  
23 deciding these questions is inherently undemocratic.

24 That system, for example, does allow for citizen  
25 intervenors, but with the administrative promulgation of a

1 single rule, the Nuclear Regulatory Commission can destroy  
2 months of an intervenor's hard work. Twice, our Intervenor  
3 has labored on our behalf to raise serious questions  
4 regarding Palo Verde. Twice the Commission has ruled her  
5 contentions irrelevant or out of order.

6           Neither of these contentions, one regarding  
7 emergency procedures, the other the financial ability of  
8 Arizona Public Service to operate and decommission the  
9 Palo Verde reactors, will be irrelevant to the future we  
10 will have to live if you grant an operating license to the  
11 Palo Verde reactors.

12           In one case, the contention was ruled out because  
13 the problem was held to be generic to nuclear reactors  
14 rather than specific to Palo Verde. By ruling out generic  
15 problems, the Commission rules out many of the most serious  
16 questions regarding health and safety hazards of nuclear  
17 reactors.

18           For example, the Commission recently released the  
19 information that approximately 75 percent of the reactors of  
20 the type at Palo Verde have developed serious corrosion  
21 problems in their cooling water tubes, but this is a generic  
22 problem, so we can't talk about it here.

23           In the other case, our Intervenor lost a very  
24 important contention, only a few weeks before the commencement  
25 of these hearings. I have heard reference made to attempts at

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1 11th-hour changes, and this was certainly an 11th-hour change.  
2 It was a contention in which she had expended money and  
3 worked diligently, and which I assure you is of major concern  
4 to most Arizonans.

5 Under the broad discretion administrative law  
6 grants, a proposed rule change prior to its final approval  
7 was made in effect retroactive and applied to all  
8 intervenors who had raised financial contentions under the  
9 older rules.

10 The proposed but still currently effective rule  
11 change disallows contentions regarding a utility's financial  
12 ability to safely operate a nuclear plant. The rationale  
13 for that ruling was that financial ability is not a safety  
14 issue, but we know that Unit 2 at Three Mile Island was  
15 rushed through its licensing process because the utility  
16 there wished to take advantage of tax benefits that it could  
17 derive from early licensing.

18 Ironically, one of the proceedings affected by  
19 the March 31st proposed rule change affects Three Mile Island  
20 Unit 1. Another intervention thus affected was ours here,  
21 over Palo Verde. Because it is my understanding that limited  
22 appearances by citizens are not governed by the stringent  
23 rules that affect intervenors, I wish to say something about  
24 the financial state of Arizona Public Service and Arizona  
25 Nuclear Power Project, and urge this board to consider these

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1 matters.

2           Shortly before the proposed rule change, a study  
3 was conducted by Energy Systems Research Group, Boston,  
4 Massachusetts, at the instigation of the Palo Verde Intervenor.  
5 Energy Systems Research Group estimated the total Palo Verde  
6 costs to be \$7.6 billion, or 32 percent higher than the cost  
7 estimate of Arizona Public Service for the construction of  
8 all three units.

9           Energy Systems Research Group also stated in this  
10 study, and I quote, "From a purely economic point of view,  
11 investment in a comprehensive conservation investment program  
12 is more beneficial to the customers of APS than is  
13 investment in Palo Verde or other new power plants, and should  
14 precede such investment."

15           I think we have already seen, in the history of  
16 the Arizona Nuclear Power Project, with its exceptionally  
17 fluid ownership patterns, some of the financial difficulties  
18 that many of us expect will continue to plague Palo Verde  
19 during its operating phase, and which we feel are likely to  
20 contribute to cutting of corners by the plant operator that  
21 could prove disastrous, as was the case at Three Mile Island.

22           Both of the major and originally equal owners in  
23 Palo Verde, Salt River Project and plant manager Arizona  
24 Public Service, have shown evidence of these financial  
25 difficulties. Although Salt River Project claims its main

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1 reason for selling off roughly one-third of its share in  
2 Palo Verde prior to the current sales under consideration  
3 was failure of expected demand, Salt River Project now  
4 estimates it will not need Palo Verde power until 1990, Salt,  
5 River Project's initial sale was at least partially a response  
6 to construction delays. These delays forced Salt River  
7 Project to speed up the construction work on its coal-fired  
8 Coronado Generating Station in 1979.

9 For its part, Arizona Public Service has  
10 periodically claimed it would have to sell part of its share  
11 in Palo Verde or face bankruptcy if it were not given rate  
12 hikes requested of the Arizona Corporation Commission.

13 In 1981, after a four-year hiatus, in corporation\_  
14 commission-granted rate hikes, during which rates were raised  
15 no more than six percent annually, Arizona Public Service  
16 sought and obtained from the Corporation Commission a series  
17 of rate increases totalling .24.4 percent in 1981, the  
18 largest single rate increase came in September, 1981. It was  
19 a rate increase of 10.4 percent. Also in 1981, in efforts  
20 to relieve itself of some of its indebtedness due to  
21 construction costs, primarily at Palo Verde, Arizona Public  
22 Service entered the Eurodollar market with the incorporation  
23 of APS Finance Company in the Netherlands Antilles, being  
24 unable to refinance its loans locally.

25 That same year, APS took advantage of new tax



1 laws to sell investment tax credits worth \$50 million to  
2 General Electric Credit Corporation, sales proceeds going to  
3 offset short-term construction indebtedness.

4           The situation goes on and on, and includes, as  
5 already mentioned, the sale of a large proportion of the  
6 energy from Palo Verde out of state, an ironic situation given  
7 the intense battle that this state fought for many decades to  
8 keep water in this state. Now we are using water to produce  
9 energy to sell to California, and we Arizonans have never  
10 really had a chance to vote on Palo Verde, and these hearings  
11 are not the equivalent of a free election, although we are  
12 grateful for the chance to appear here.

13           A few years ago, a group of foresighted citizens  
14 did place something called Proposition 200 on the ballot in  
15 this state. It was one of those indirect, obscurely worded  
16 initiatives that often confuse the voter. Moreover, that  
17 was before Three Mile Island and the lessons it taught us,  
18 and Arizona Public Service outspent the opposition by a large  
19 amount.

20           I suspect that if such a measure, more directly  
21 worded, were put on the ballot today, it would shock Arizona  
22 Public Service, Salt River Project, the Governor, and  
23 certain Corporation Commissioners out of their smugness. I  
24 suspect the voters of Arizona today would vote against Palo  
25 Verde, but I do not think that we or you, or anyone else

1 really has the right to vote on nuclear power. The financial  
2 costs of Palo Verde will cover too many decades, and the  
3 health and safety burdens of radioactive waste cover far too  
4 many generations for any of us to impose them on the future.  
5 Our children's children cannot vote on Palo Verde, and  
6 therefore, we have no right really to take such a vote.

7           There is one other aspect of Palo Verde that  
8 will affect the future of this valley for generations to come,  
9 and that is the use it will make of our scarce reserves of  
10 water.

11           Given the uncertainty over the final adjudication  
12 of these issues in other forums, this Board could reasonable  
13 rule one of two ways. It could grant a license to Palo  
14 Verde subject to revocation, if, as it appears likely, an  
15 assured supply of water is not coming.

16           Or, it could act now to forestall further  
17 expenses on the part of Arizona ratepayers and to delay or  
18 to refuse the issuance of that license due to this  
19 uncertainty and until that uncertainty is resolved. Given  
20 the impact your decisions will have on future generations, I  
21 suggest that the only moral course is that latter course. I  
22 suggest you have no right to do otherwise.

23           Thank you.

24           JUDGE LAZO: Thank you, Mr. Scott.

25           Is Sharon Harrington present? Good morning, Ms.

1 Harrington.

2 MS. HARRINGTON: I just felt that this was a time  
3 when I could voice my opinion on this power plant. I have  
4 done everything possible in the past to try to voice my  
5 opinion on it. I realize all the statements that we make here  
6 today are going to be considered technical and thrown right  
7 out anyway, but it is still important to say what we feel.

8 In the past, I have been told that these are  
9 technical issues, not human issues, but I feel that when it  
10 is a matter of our children and our future generations, we  
11 have got to point out the connections between the whole fuel  
12 process involved in a nuclear plant, uranium mining to nuclear  
13 waste.

14 Some of the things that have been overlooked in  
15 the past are just absurd. We are told to trust an industry  
16 which regulates itself, who has no consideration of the  
17 accidents that occurred, like in Church Rock, New Mexico in  
18 1979, said to be worse than Three Mile Island, uranium  
19 contamination got into our water, it is still in our water,  
20 we haven't even begun to feel the effects of that one  
21 accident.

22 Three Mile Island, Browns Ferry, Fermi 2,  
23 Midland, Michigan, Diablo Canyon -- Bechtel is not a company  
24 that I trust, and I am tired of being told trust us, we are  
25 the experts, we know, because you are not. APS is no expert

1 on human life, and I am tired of the little schemes that they  
2 keep pulling to help the poor -- the utility is now proposing  
3 that we give a dollar of our utility bill so that they can  
4 put it in the bank and collect interest on it, and pay their  
5 big nukes instead of lowering their rates to begin with, and  
6 we are told that we can't bring up alternatives that we  
7 have available to us, and to educate -- if we spent one-  
8 fourth of the money that APS uses on their propoganda that  
9 tells us that they are going to ensure our tomorrow by  
10 ruining our today, it makes no sense to think like that.

11 We can't look at profits. We have to look at  
12 our future, and our children's rights. Our children are  
13 too little to get up here and speak for themselves. Somebody  
14 has to. Palo Verde -- we are in a bowl here in Phoenix, and  
15 the Union of Concerned Scientists knows that there is  
16 constant emissions from nuclear power plants, strontium,  
17 cesium, all kinds of radiation. APS will say no, that there  
18 isn't, but we know that there is. The public is not as  
19 uninformed as the utility thinks. We know what kind of  
20 contamination is taking place. We know what leukemias have  
21 been caused on Indian lands in the reservation, which is  
22 really an absurdity, and most any reporter that has gone up  
23 to help us to get the facts out in northern Arizona, there is  
24 a reporter that lost his job because of a lot of political  
25 reasons. He went up and took a Geiger counter in some of the

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1 hogans that the people live with uranium tailings, and showed  
2 how radioactive their homes are. These people had no idea  
3 that they were building their homes with uranium  
4 contaminated tailings. Nobody told them. There is never ever  
5 any kind of concern for human life involved in the fuel  
6 process, and we are told that that is not relevant, that there  
7 is no safety problem here, but we are not allowed to talk  
8 about it, and somebody has to talk about it, and professional  
9 people know --

10 I know APS knows what they are doing, but it is  
11 not convenient for them to talk about the whole fuel process  
12 and what it involves, and we have to, and we also have to look  
13 at other things.

14 The nuclear industry -- it is an absurdity that  
15 you regulate yourselves. Someone other than you should be  
16 able to regulate you, and I don't know who, if not for the  
17 citizens, which we are told that we are not experts, that  
18 we don't have the right to voice our opinion. Well, we do,  
19 and this is one opportunity for us to do that, and I hope  
20 that maybe instead of being told that it is always technical,  
21 that we are going to look at our children and observe that  
22 we have alternatives that haven't even begun to be attacked,  
23 and that we should employ even ten percent of what we are  
24 putting into nuclear proliferation in those alternatives, and  
25 it is a joke when we think of some of the things that the

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1 government has proposed as far as weapons, because if one  
2 bomb hit one power plant, it would do such uncomprehensible  
3 damage to each city that we can't even imagine it.

4 The bomb that dropped on Hiroshima was one-  
5 eightieth of one megaton. How many megatons are at Palo  
6 Verde? What would happen if a bomb hit that? The concrete  
7 walls are supposed to protect it from a bomb? I mean, we  
8 have to start to look at what we are putting for our children's  
9 future into the hands of people who have intellect, but no  
10 morality, and that is just nothing but total evil.

11 Thank you.

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1 JUDGE LAZO: Thank you, Ms. Harrington.  
2 I've been handed a note that states that Mr. Gary  
3 Lodmel would like to speak before 12 o'clock. Let me  
4 ask, are there any others who have signed up to make  
5 a limited appearance statement who are being pressed  
6 by time? Quite a number. Well, why don't we try to  
7 take those people as quickly as we can. Instead of  
8 me calling out names from the list in the order that  
9 they've been signed up, if the others are agreeable,  
10 we'll try to -- we want to hear you all. Ma'am?

11 VOICE: I'd like to say I have to drive  
12 back to Southern California this afternoon and I'd  
13 certainly like to get a chance to be heard.

14 JUDGE LAZO: We'll certainly accomodate  
15 you. I'm sure we can. Meanwhile, why don't we ask  
16 Mr. Gary Lodmel to come forward?

17 MR. LODMEL: Commission members, thank you  
18 very much. I'm hear as an Arizona resident and a parent  
19 of as future generation, a citizen of the United States  
20 and as a spokesperson for an organism called the  
21 Planetary Initiative for the World We Choose which has  
22 approximately 200,000 members internationally and a  
23 few hundred here in Arizona.

24 The Planetary Initiative is a grass roots  
25 organism and you can't even really call it an organization

1 because we haven't really followed the paradigm of other  
2 activities in other organizations and that is setting  
3 up a bureaucratic superstructure. It has grown and  
4 continues to grow merely on the word of mouth and the  
5 activities of concerned citizens throughout the world  
6 that really do believe that they have impact, that their  
7 energy, their views, their thoughts do count.

8           The inception of this, I certainly  
9 acknowledge the difficult and onerous task that you  
10 members have and I appreciate the energy, the caring  
11 and openness with which I'm sure you're undertaking  
12 this project. It is not an easy one or a light one.  
13 In our view, appropriately this hearing and this activity  
14 is taking place in the 80's. We've let go and we're  
15 completely capable of letting go of approaches and  
16 patterns we took in the 60's and the 70's of revolt,  
17 of trying to make things happen. I think in the 80's,  
18 many of us acknowledge and understand that we are under  
19 a different approach. It's more positive, certainly  
20 an activity such as being in opposition to say the Palo  
21 Verde Nuclear Plant or any other activity is appropriate,  
22 however, many of us feel it is now time to take a  
23 positive approach to be for more things than against.  
24 It doesn't mean that we won't take a stand or a position  
25 on things that we feel are inappropriate, harmful or



1 not in the best interests of the health, safety, welfare  
2 of all of our citizens. In that sense, we feel that  
3 there is so much documentation, so much evidence to  
4 support the inappropriateness of nuclear energy and  
5 in particular the Palo Verde nuclear plant and this  
6 morning already and for the remainder of the time I'm  
7 sure you'll hear a great deal of technological data  
8 and information to support that. I won't go over that  
9 or review it. Suffice it to say that we do believe that  
10 the activities of the 80's, the courage of people like  
11 yourselves, of people that will be coming up here and  
12 addressing you is such that we can change. The fact  
13 that we have a plant out there that may be 80% complete  
14 does not mean that we have to accept it as such. It  
15 is something that we are willing to let go. That is  
16 another aspect of the 80's, the willingness on the part  
17 of so many people to let go of something they thought  
18 may have been good, to do what we now know is right.

19           There is so much information come out to  
20 support the fact that we do not need to undertake the  
21 project of the Palo Verde Nuclear Plant. It is time  
22 to regroup, redirect our energies to other forms of  
23 energy. We have enormous activities that are starting  
24 in the way of energy from the sun and other resources,  
25 thermal energy. I think we have to look at that to

1 tell the institutions, direct the institutions that  
2 are wedded to nuclear energy, that there are options,  
3 explore those options before you lay out to us that  
4 this is the only alternative. One of the things that  
5 I remember from John Gardner when he was Secretary of  
6 Health, Education and Welfare a few years back, he was  
7 asked to philosophize on what would happen to the United  
8 States in the year 2000 A.D. and he said well, it's  
9 possible in the year 2050 A.D., if historians look back,  
10 and have to analyze the rise and fall or the rise and  
11 decline of the American empire, they will probably  
12 attribute it to two factors, institutions, too many  
13 unloving critics and too many uncritical lovers and  
14 that's kind of the area that we find ourselves here.

15 On the one hand, so many people that are uncritically  
16 in love with their institution, with their particular  
17 project and then on the other hand, so many people that  
18 are condemning and want to break down and destroy the  
19 whole thing, somewhere inbetween is as ground, an area  
20 of accomodation that we can work for. I think that  
21 the denial of Palo Verde nuclear plant which seems very  
22 appropriate will command and demand both sides to find  
23 that middle ground, to find that area of accomodation  
24 that is right, that is more appropriate.

25 Finally, it reminds me of one of Goethe's

1 couplets that is appropriate right now and that is we  
2 have to have dreamers, people that are willing to get  
3 out and work and undertake the project. If we abandon  
4 or let go of Palo Verde because it is not right, then  
5 we have to have a project that is right and that's where  
6 people come in, Goethe's quote, whatever you can do  
7 or dream that you can, begin it. Boldness has genius,  
8 power and magic in it and now it's time for us to begin  
9 an approach other than nuclear energy and let go of  
10 something that is not appropriate and not right for  
11 our times. Thank you, gentlemen.

12 (Pause)

13 JUDGE LAZO: Is Representative Ronda Thomas  
14 present in the hearing room?

15 REP. THOMAS: Good morning. Thank you for  
16 the opportunity to speak to you. My name is Ronda Thomas  
17 and I'm a member of the State House of Representatives  
18 and to give you a preface to my remarks in the past  
19 six months, I have been working and am the prime sponsor  
20 of House Bill 2357 which was responsible for the emergency  
21 reponse plan for the Palo Verde Nuclear Plant.

22 I asked to speak because in my brief legisla-  
23 tive career, one of the most important things to me  
24 has been liberty and I don't want everybody to cringe  
25 when I say that word. That's most important to me and

1 most important to me along with liberty is the safety  
2 of the public, but the safety of the public also includes  
3 freedom of choice and those things that are in the best  
4 interest of the public. As I have been working on this  
5 bill for the emergency response plan, I have had the  
6 opportunity to go to the plant, to go throughout the  
7 plant, to go into the reactor, to talk to those people  
8 that are in the construction of the plant and to talk  
9 to the people that are technologically, know what they're  
10 doing in that field.

11 I have had a chance to travel in other states  
12 to talk to other people in this related field. I feel  
13 that I have spent a great deal of time on this particular  
14 subject although I am not an expert in the field but  
15 would like to become eventually. The thing that I have  
16 a great concern about is that sometimes we hear from  
17 only special interest groups who oppose certain ideas  
18 and I think that's well and good and we should always  
19 be able to do that but as a representative of district  
20 16 which is the northwest Phoenix and Glendale area,  
21 I have walked that district quite often and quite well,  
22 door to door and spoken very often with my people and  
23 I have spoken to them many times about the issue of  
24 nuclear energy and I would say to you today that my  
25 people in my district support nuclear energy. They

1 support the theory that we need to continue forward  
2 in our progress for the good of the people, for the  
3 good of energy and economically. Now, they also support  
4 the ideal that public safety should be utmost in our  
5 minds. As we put together this bill, that was the  
6 priority for me, was making sure the public safety at  
7 all times was the number one issue. I understand that  
8 there are a great many people here today that don't  
9 think some of those who are responsible for this plant  
10 have thought about that carefully.

11 In my opinion, this plant, of all the plants  
12 in the United States has been erected with that thought  
13 first in mind. I was extremely impressed with the kind  
14 of measures that have been taken at the plant, the safety  
15 factor and I can say to you that I would have no concern  
16 with living within a few miles to that plant, other  
17 than I don't like the landscaping out there but I have  
18 no concern for my personal safety or those of my children  
19 or my family to live out there.

20 I am rather proud of having been a part  
21 of the legislation that might allow this plant to come  
22 on line. I'm very proud of the part that the state  
23 of Arizona has played and the people of Arizona have  
24 played in the progress of our future, but what I am  
25 more proud of is that there have been many voice heard,

1 not only those that are dissenting voices, but those  
2 who are supportive voices and I just would like for  
3 you to know today that you are hearing from a great  
4 many dissenting voices, that there are I think many  
5 many more who are supportive and I know there are in  
6 my district and that's just about what I wanted to let  
7 you know.

8 JUDGE LAZO: Thank you, Ms. Thomas. Could  
9 we ask the lady who has to drive back to California  
10 to have her come forward, please?

11 MS. THURSTON: I would like to give you  
12 a sheet of information that I will not go into verbally  
13 but which spells out some of the reasons why I represent  
14 a great deal of opposition. I've been interested to  
15 hear the comments of those in Arizona who object to  
16 sending, using your water to send energy to Southern  
17 California.

18 JUDGE LAZO: Excuse me, ma'am, could you  
19 identify yourself?

20 MS. THURSTON: Yes, my name is Elizabeth  
21 Thurston and I am representing the Southern California  
22 Alliance for Survival and in particular the Diablo Canyon  
23 Task Force which sent a large contingent to the Diablo  
24 Canyon Blockade last summer. I am now the coordinator  
25 of the Alliances to Stop Palo Verde Project in charge

1 of the effort to inform the citizens of Los Angeles  
2 and other participants in the Southern California Public  
3 Power Authority of what has gotten to be one of the  
4 best kept billion dollar secrets ever to have been put  
5 over anywhere. The investment of this amount of money  
6 in Palo Verde. As I said, just parenthetically I want  
7 to say that I represent people in Southern California  
8 who don't want your energy from Palo Verde, I assure  
9 you.

10                   Quite flatly I want to say right now I believe  
11 there is no excuse for licensing this plant and that  
12 the procedures under which it is being constructed should  
13 be stopped immediately in order to avoid any further  
14 waste, but in the long run it will not be operable.

15       We are going to do everything to see it that that never  
16 happens.

17                   Let me say, first of all I want to make  
18 three points. For one I'm grateful to a nuclear engineer  
19 friend of mine for making very simply and clear why  
20 nuclear power after 40 billion dollars of subsidies  
21 and thirty years of experience is still a flop, a  
22 financial flop, a social flop, an ecological flop and  
23 an energy flop. What he says is that nuclear power  
24 is by its nature a completely inappropriate technology  
25 in that a fuel of enormous potency far beyond present

1 capacities for full utilization has been wedded to an  
2 18th century steam boiler in effect and the colossal  
3 expense and continual failures result from the effort  
4 to make this impossible combination work. The extent  
5 of the error may not appear fully for decades or  
6 generations and one of the tragic things is that  
7 somewhere down the line in history, a technology, methods  
8 and materials may be developed which would make it  
9 possible to use uranium successfully and to have it  
10 use its full potential as fuel, burn itself up, not  
11 leave the poisonous residues which now it leaves and  
12 at that point if we don't stop now using it, there may  
13 not be the uranium with which to provide future  
14 generations with what might then be a very important  
15 use of fuel.

16 Secondly, as to the 2 billion dollars that  
17 has already been spent on Palo Verde, I just would make  
18 an analogy. I am old enough to remember the time when  
19 France was pouring her treasure into the Maginot (ph)  
20 line before World War II and which of course, proved  
21 within a week of the time that the war started to have  
22 been obsolete even before it was built and I contend  
23 that Palo Verde is in the same category. It is already  
24 obsolete before it is even built. Some people were pre-  
25 dicting at the time the Maginot (ph) line would be



1 obsolete before it was finished and they were, of course,  
2 tossed of as crack-pots, but Palo Verde is already obso-  
3 lete and that is already being overtaken by more appropri-  
4 ate and workable technologies which are rapidly coming  
5 on scene for the utilization of the renewable energies  
6 with which this region is so abundantly supplied and  
7 our region I also might say in Southern California,  
8 sun, wind, biomass as well as conservation, cogeneration  
9 and so forth and I ask you in case you say that these  
10 are not yet ready to ask yourselves where would they  
11 have been now if 40 billion dollars of subsidies had  
12 been given to them over the last 30 years for their  
13 development. In that case, I think you might agree  
14 that the whole idea of nuclear power would be utterly  
15 ridiculous.

16           And thirdly, with respect to Southern Califor-  
17 nia and in particular Los Angeles, we have already in  
18 place something called the Energy Los Angeles Action  
19 Plan. This is a plan as it was worked out over a period  
20 of three years and \$600,000 of city money has gone into  
21 it and technical advice and overseeing by the Argon  
22 National Laboratories and the Department of Energy.  
23 This is a plan for utilizing the renewable resources  
24 of our own area. It is splendid plan, we are 100% for  
25 it. If fully implemented, by 1990, this plan could

1 result in at least 20 times more available energy for  
2 the use of the people for considerably less money than  
3 the Palo Verde investment which we are now fighting  
4 to prevent. I recently met with the Social Justice  
5 Fellowship of the First Unitarian Church of Los Angeles.

6 Always among the best informed citizens where the public  
7 welfare is concerned -- of the 15 members present, not  
8 one had even heard of this billion dollar squandering  
9 of our city's scarce funds on an unneeded, extravagant,  
10 unreliable, ill-advised investment in Palo Verde. They  
11 were openly appalled. I have a letter here from them  
12 stating their opposition and their support of our effort  
13 to stop this investment. Similarly, I met last week  
14 with the program group on social relations of the  
15 Episcopal diocese of Los Angeles. 40 of the diocese's  
16 activists members from nearly 40 churches -- again these  
17 people were appalled at this billion dollar boondoggle  
18 of which only two had ever heard and then only slightly  
19 and I have a statement from their group. I won't read  
20 the whole thing -- it is several "whereas's" and finally  
21 therefore be it resolved that the Program Group on Social  
22 Relations of Episcopal Diocese of Los Angeles  
23 hereby states its opposition to the continued construc-  
24 tion and building of the Palo Verde Plant and of any  
25 investment by Los Angeles in it. We direct our secretary

1 that a copy of this resolution be sent to the City  
2 Council of Los Angeles and to the appropriate public  
3 hearing to be held in Phoenix on April 27th which is  
4 of course, this hearing.

5 I also have letters from the Campaign for  
6 Economic Democracy. I will not ready the whole letter  
7 but here is a part of it. I said this letter is an  
8 expression of the opposition of --

9 JUDGE LAZO: Ms. Thurston, I wonder, could  
10 you leave those letters with the clerk?

11 MS. THURSTON: Yes, I'll just briefly --  
12 his is an expression of opposition from the 10,000  
13 members of the CED to investment in the Palo Verde  
14 Project by Southern California and reasons why. Also,  
15 the Women's Strike for Peace have given me a letter.

16 I could have had many more letters. Everyone I have  
17 talked to was willing, sometimes some cases with church  
18 organizations and so forth, their boards were not meeting  
19 at the right time to be able to officially take an  
20 action, but I am here probably representing 50,000 people  
21 and I'm sure we could have easily tripled that in a  
22 few days. I have personal expressions, I've got 400  
23 signatures over last weekend only against the Palo Verde  
24 and another 250 which were obtained in one day about  
25 a month ago. There is very much opposition from anyone

1 who knows about it. Our biggest problem there has been  
2 to get everybody and anybody to know about it because  
3 there has been an active black-out on the part of the  
4 media to letting us let the world know in Los Angeles  
5 what is happening.

6 Let me see, just a moment. Okay. As fast  
7 as we can get the word to the people against the diffi-  
8 cult obstacle of nearly total media black-out on this  
9 issue, we are gaining support for a political demand  
10 that the L.A. City Council reverse its hasty authoriza-  
11 tion of Palo Verde as of last September 1st. One more  
12 vote against Palo Verde investment in the council at  
13 that time would have defeated it. And we now know of  
14 at least one councilman who says he knew almost nothing  
15 about the matter at the time and now is seriously reconsi-  
16 dering his vote. Naturally, it is difficult to get  
17 politicians to admit to having made a very big mistake  
18 but we're sure that as fast as we can get the information  
19 on what a bad deal the Palo Verde investment is for  
20 Southern California, we will find the pressure on the  
21 City Council mounting.

22 In short, our world is beginning to open  
23 its eyes and see that this nuclear emperor has no clothes.  
24 Meanwhile, we also have a team of attorneyes exploring  
25 the legal technicalities of a suit against the Department

1 of Water and Power of Los Angeles' participation in  
2 the Palo Verde Project on the grounds that the Depart-  
3 ment's only function is to serve the best interests  
4 of the people of Los Angeles with regard to their water  
5 and electrical power needs and that in making this invest-  
6 ment in Palo Verde, it is not serving those interests.

7 We base this claim on such facts as these.

8 One, a very responsible and accurate researcher in  
9 energy economics, Hunter Lubbins has ascertained that  
10 even according to the Department of Water and Power,  
11 which I will call it DWP for brevity, extremely opti-  
12 mistic estimates, electrical power from Palo Verde,  
13 if indeed there ever is any which is not at all assured,  
14 will cost at least 6¢ per kilowatt hour in today's  
15 dollars, no telling how much more. This amounts to the  
16 equivalent of buying oil at \$97 a barrel. This contrasts  
17 with a cost of 1.3¢ per kilowatt hour which the L.A.  
18 Energy Action Plan says would be the cost if that plan  
19 were fully implemented towards the use of renewable  
20 resources.

21 Two, even at that price, there's no  
22 reliability to be expected from Palo Verde, any more  
23 than from any other nuclear power plant so we are left  
24 with the worst of both worlds, colossal capital costs  
25 and consequent debt to be carried over many, many years

1 and at the same time the strong probability of having  
2 to buy oil at whatever cost for replacement of fuel  
3 when the nuke is down, in all probability, at least  
4 one third of the time.

5 Three, even by the DWP's own very optimistic  
6 estimates, the alleged savings in the cost of electricity  
7 by 1990 as against the price of electrical generation  
8 by oil and gas will be only about 50 million dollars  
9 at the best.

10 While a careful study of the potential for  
11 energy cost reduction through conservation and the devel-  
12 opment of our renewable energies by the L.A. Energy  
13 Action Plan show that by 1990, there will be an overall  
14 energy cost saving of nearly \$800 million in that one  
15 year, that is from 16 to 20 times more savings with  
16 less investment than if we go into the Palo Verde situa-  
17 tion.

18 JUDGE LAZO: Mrs. Thurston, I'm afraid you  
19 are exceeding your time and it is not quite fair to  
20 some of the others who still wish to speak.

21 MS. THURSTON: I'll try to be a little bit  
22 more brief. Well, I'll eliminate -- I could go on and  
23 on with this sort of thing, and you have there a summary  
24 of fifteen items on which we find the Palo Verde  
25 investment to be extremely ill-advised relative to our

1 putting our money into our own renewable energies.

2           When colossal errors have been made as have  
3 been proven to be the case with nuclear power and in  
4 this case with Palo Verde in particular, and the only  
5 wise course is that recommended by all by great religions,  
6 the process of repentance, confession and amendment  
7 of life. We urge this board to recognize that Palo  
8 Verde was obsolete before it was even begun and certainly  
9 before it is completed and to stop any further waste  
10 of funds in this time of tight money by denying the  
11 licensing immediately. Would it not feel good for once  
12 to do something because it is wise and realistic rather  
13 than to wait until the people you allegedly serve  
14 have risen up in a rebellion against what government  
15 agencies have done to them and I have a couple of other  
16 things to say which I will omit.

17           JUDGE LAZO: Do you have any statement that  
18 you wish to leave with the Court Reporter?

19           MS. THURSTON: I don't have a -- I can send  
20 a copy back. I don't have a copy now.

21           JUDGE LAZO: If you do send one back then  
22 we'll have it included in the record.

23           MS. THURSTON: Fine, thank you.

24           JUDGE LAZO: Thank you, Mrs. Thurston.

25        ///

1 MS. KADISH: Thank you. I am asking for a  
2 special privilege, because I had an abcessed tooth removed,  
3 and I an medication, I am overdue on my medication, so I  
4 felt it was so important to come out today that I did.

5 I am Lorraine Kadish, a co-convenor of the Valley  
6 of the Sun Grey Panthers, and I speak on behalf of the Grey  
7 Panthers. I do have a prepared statement that I will leave.  
8 I would like to add a couple more little things before I come  
9 to my statement.

10 I want to say that I concur very much with so  
11 many speakers before me. We are terribly concerned about  
12 leaving the terrible dangers of nuclear waste to our children  
13 and our grandchildren, and children for many generations after  
14 us.

15 We are concerned that the usefulness of this  
16 plant will be only about 30 years, but still will be  
17 radioactive for thousands of years, and we don't know what we  
18 are going to do with the waste yet. This is one of our big  
19 concerns.

20 Another concern is that this plant is being built  
21 by the same Bechtel Corporation that put the Diablo Canyon  
22 reactor together backwards. We don't know if this one is  
23 going to work until it goes on line. I don't want to find  
24 out. I don't want it to go on line and find out that we are  
25 going to be faced with all this pollution and radioactive



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1 waste, but I will come to my statement, which is very short,  
2 to the Atomic Safety and Licensing Board,

3 Dear Sirs: The Valley of the Sun Grey Panthers  
4 wish to go on record opposing the licensing of Palo Verde  
5 Nuclear Plant. We believe a serious error has been committed  
6 in locating the plant in a desert area, especially in this  
7 area where we have a very real shortage of water.

8 It is our understanding that the plant will need  
9 as much water as the City of Tucson uses every day to cool  
10 it. This water, be it sewage effluent, or whatever, will be  
11 needed to grow food for more and more people who are  
12 compelled to grow gardens to feed their families in these  
13 times of unemployment, and more water will be needed for our  
14 ever-increasing population, as people flock to our mild  
15 climate.

16 For instance, coal-generated plants, and there are  
17 many other alternatives that we know of, will not use water  
18 for cooling as do nuclear plants. We therefore urge you to  
19 withhold licensing of the Palo Verde Nuclear Plant.

20 JUDGE LAZO: Thank you, Ms. Kadish. Why don't  
21 you come forward, ma'am. I was going to say the lady in the  
22 brown dress, but you can take turns.

23 MS. SMITH: Thank you. Mr. Chairman and members  
24 of the Board, my name is Alice Smith, and I am the first vice-  
25 president of a group of 130 members called Arizonans for

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1 National Security, and we too are concerned about atomic  
2 energy, and our concern has taken the form of inviting a man  
3 who is an expert to come and speak to us last -- just last  
4 week. His name is Dr. Peter Beckman, and I appreciate this  
5 concern of you other people, and I would highly recommend his  
6 book, the Health Hazards of Not Going Nuclear for your  
7 attention.

8 I would like now to read a statement from our  
9 group, and I have copies to give you.

10 Arizonans for National Security support the  
11 completion of the Palo Verde Generation Stations Numbers 1, 2  
12 and 3 as planned. This includes purchase from the City of  
13 Phoenix of 140,000 acre-feet per year of water for the  
14 effluent cooling system.

15 Arizona has enjoyed a tremendous growth in recent  
16 years, a growth which has been very beneficial to its citizens.  
17 Without a cheap and plentiful source of energy, this growth  
18 cannot be sustained. Economic decline and a lowered standard  
19 of living will be the inevitable results of the failure to  
20 recognize this need and to provide for it. We favor production  
21 of all forms of power in the quantities necessary to maintain  
22 our industrialized society, with its energy-intensive economy.

23 We encourage the use of fossil and hydropower  
24 fuels as well as such supplementary sources as sun and wind,  
25 but studies in the United States and Canada have conclusively

1 shown that nuclear power is by far the safest, cheapest, and  
2 most environmentally benign form of large-scale energy  
3 conversion.

4 In a series of talks advocating nuclear energy,  
5 Dr. D. Allen Bromley, Professor of Physics at Yale University,  
6 said the real question is the ultimate survival of free  
7 enterprise and the American way of life for which generations  
8 long gone worked so long, so hard, and so successfully. We  
9 agree with this statement.

10 Members of Arizonans for National Security have  
11 visited the Palo Verde Plant. We are impressed with the  
12 planning that has gone into it. We favor its early  
13 completion.

14 JUDGE LAZO: Thank you, Ms. Smith. We had a lady  
15 in the second row that wanted to speak. Ma'am? I am sorry,  
16 the lady in the brown dress in the second row, did you -- you  
17 had your hand up before.

18 VOICE: I do not have time. I am overparked now.

19 JUDGE LAZO: I am sorry. Yes, sir? Surely.

20 MR. ERLICK: My name is Dwight Erlick, and I am  
21 coming here as a private citizen, and I hope I am not a voice  
22 in the wilderness, but --

23 JUDGE LAZO: I am sorry, how do you spell your  
24 name, sir?

25 MR. ERLICK: Erlick, E-r-l-i-c-k. I would like

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1 to get personal in a very impersonal hearing. I know that we  
2 are dealing with lots of facts and figures, but I come here  
3 first as an expert in fail-safe systems. I worked for many  
4 years for the U.S. Government in dealing with fail-safe  
5 systems, whatever we mean by that, and as a psychologist also,  
6 a clinical psychologist concerned with people's feelings,  
7 fears, motivations, but most important, I am coming represent-  
8 ing two people, my nine-year-old little girl, and my 12-year-  
9 old son, who I love very much.

10 I don't have a lot of statistics, although they  
11 are available, but I want to talk something else about an  
12 environment, the psychological environment, what some of us  
13 call the quality of life.

14 How does one put a value on the cloud of fear and  
15 depression that hangs over one, that comes about from some  
16 potential phenomenon, that may all of a sudden vaporize you,  
17 or at least lead to a slow death through some type of nuclear  
18 accident, but you answer there is nothing to be afraid of,  
19 the risks are very small, if not infinitesimal. It can't  
20 happen. I try to tell that to my children. Try to tell that  
21 to the children at Jonestown, or the children of the  
22 Holocaust, that it can't happen.

23 You say that we have an almost perfect safety  
24 system, with backup, after backup, after backup, after  
25 backup, and you have been out there to look at it. It looks

1 good, the things look good, but look at the humans behind it.

2 As a life-long student of human nature, as an  
3 expert on the design of fail-safe systems, I can say with  
4 confidence that "almost" will always be with us.

5 One of the unique universal characteristics of  
6 the human condition is imperfection, error, mistakes, no matter  
7 how we try it, no matter how many backups, our systems  
8 programmed with infinite attention to safety, our safety, our  
9 space program lost men on the takeoff pad, with all the safety  
10 that we had, that would never happen, we thought.

11 We spend a lot of time trying to fix blame, but  
12 human error will always be with us, so the question is, are  
13 we willing to accept the risk, what is the real risk?

14 It is a fact, as a psychologist, we all have --  
15 I can tell you we all have different levels of risk taking,  
16 and I am sure some of us here have different levels than I  
17 do. Some people like to flirt with danger and disaster. It  
18 is a way of bringing excitement to their lives. Society  
19 allows the individual to do this to himself, with certain  
20 limits, but for all of us to be caught, to be put in such a  
21 position, is another question, where I have to accept the  
22 risks that you put on me, and I don't like that. I want my  
23 risks, my freedom from fear respected. That is why I am here,  
24 because I am afraid.

25 The consequences of what you are doing creates an

1 environment of fear and depression in my family. It creates  
2 an unacceptable risk for us, and I sincerely want to remove  
3 this sense of futility, hopelessness and helplessness that  
4 pervades because of this nuclear facility.

5 I want the cloud of fear dissipated. I beseech  
6 you to put a stop to the Palo Verde thing for Benjamin and  
7 Sarah, and all the other kids who want to grow up, and if you  
8 have any children of your own, you know the fear you must  
9 have when you love somebody very dearly, and you don't want  
10 to see anything happen to them, and I am very protective, and  
11 thank you for the opportunity.

12 JUDGE LAZO: Yes, anyone else who is suffering  
13 from the press of time?

14 MR. MURPHY: My name is Alan Murphy. I am not a  
15 public speaker, but I am a very concerned citizen. About a  
16 year ago, I was very pro-nuclear, thinking it was a very clean  
17 and reliable source of energy in today's economy, as I was  
18 told, it could help me save on money. I am a little upset.

19 I think about nuclear power now, since I have done  
20 a lot of research. I found it fascinating. I said, my God,  
21 the future has come. Now I will be living in the future. I  
22 will be living with free, clean energy. Well, the research  
23 revealed to me that we have waste with these nuclear power  
24 plants that we don't know what to do with.

25 Already in San Francisco, and I am from Fresno,

1 California, they are pulling up seafood, lobsters, that are  
2 distorted from the dumping of these contaminants into the  
3 water, and they have radioactive traces in the food, which is  
4 shelved, and people are eating.

5 In Three Mile Island, there is a huge nuclear  
6 power plant sitting there that the utilities can't afford to  
7 clean it up, let alone decommission it. They can't afford to  
8 clean it up, the government hasn't the money to help them  
9 clean it up, and it is sitting there, and they are saying to  
10 the people in the area, you have to pay for this.

11 I am not a man of financial means, and I am having  
12 difficulty paying my utility bills as it is today, and the  
13 last rate increase just about did me in, and I conserve, and  
14 what is going to happen when you open the power plant? How  
15 am I going to keep the heat on in my house for my children?  
16 How? What can I do? You are placing me and a lot of my  
17 friends, we have nowhere to go, and I am a homeowner, and I  
18 worked hard for my house, and I run an honest business, and  
19 you are forcing me out. I can't afford for this nuclear power  
20 plant to go into effect. And I know a lot of people that  
21 can't afford it, and I am begging you, please look closely.  
22 Read the facts: Where are you going to put the nuclear  
23 waste? The Indians are being poisoned in New Mexico. Their  
24 children are being killed by cancers because of these tailings.  
25 Please understand what you are dealing with. 25,000 years

1 for these materials. The pyramids haven't been around that  
2 long. What building will hold nuclear waste for 25,000 years?  
3 And then another 25,000 years for the other half of its life?  
4 Please, gentlemen, consider carefully, and let us put nuclear  
5 war out of our minds. Let us put nuclear power out of our  
6 minds, and think about renewable, safe, efficient energy.  
7 Palo Verde is inefficient. Palo Verde is impractical.  
8 Please, let us think carefully. Thank you.

9 JUDGE LAZO: Thank you.

10 MS. KERN: My name is Janine Kern, and I am a  
11 student. As concerns the issue of nuclear power in Arizona,  
12 we are made to believe that the only opinions which have  
13 weight are those of the scientists, engineers, and others  
14 with economic considerations.

15 Of course, this is a somewhat dangerous  
16 situation, simply because these experts do have economic  
17 considerations.

18 Nuclear power in the community is an issue for  
19 every citizen to be concerned with because of its economic  
20 and health implications. We are dealing with a silent killer  
21 which invades our very bodies. Plutonium, the most toxic  
22 substance known to man, is a byproduct of the production of  
23 electricity from a nuclear power plant. Theoretically, it  
24 was toxic that if one pound of plutonium was equally disposed  
25 into the atmosphere, it could give every human being on the



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1 planet a lung cancer. There is no safe threshold when dealing  
2 with plutonium. As little as one-millionth of a gram will  
3 produce a lung cancer. Plutonium particles will never be  
4 released from the body, but will be stored there until  
5 death.

6 When the contaminated body dies and deteriorates,  
7 the plutonium particles will still not have lost their kill  
8 capacity, for plutonium is deadly for at least a quarter of a  
9 million years.

10 Palo Verde Nuclear Generating Station will  
11 produce from three to four hundred pounds of this  
12 incredibly toxic substance a year, when operating at full  
13 capacity. Other power plants have had gaseous emissions of  
14 radionucleides, 262 of them is usually the number that is  
15 released.

16 Including plutonium, who is to say that Palo Verde  
17 will not be any different, and will have emissions of these  
18 nucleides? As if the plutonium problem was not enough,  
19 Palo Verde will produce 193,000 cubic feet of low-level waste  
20 each year, and contribute to the use of Arizona as a dumping  
21 ground for hazardous waste from six other states. Clearly,  
22 Palo Verde will be a tremendous health hazard to all those  
23 involved with the uranium production cycle, including the  
24 uranium miners, the plant workers and operators, and the  
25 citizens living in the vicinity. The final irony is that our

T7-11 1 children, because their cells are dividing at a far greater  
2 rate than those of adults, are at least 15 times more  
3 susceptible to radiation.

4 As if the health hazards were not enough, there  
5 is a crucial issue of water consumption. The chief source  
6 of cooling water for the plant is a sewage station located  
7 at 91st Avenue in Phoenix. The Army Corps of Engineers has  
8 determined that there is not enough water at this site to  
9 sufficiently supply all three reactors during peak summer  
10 months. Each unit at the plant will use millions and millions  
11 and millions of gallons of water each day. Furthermore, this  
12 water supposedly will not be contaminated directly by the  
13 fuel rods, but it may be contaminated by subtle neutronal  
14 transfers of dangerous elements which can never be removed  
15 through any type of purification process.

16 We are living in the desert. Man in this valley  
17 has made few attempts to live harmoniously with the desert  
18 environment, instead preferring to create an artificially  
19 maintained ecosystem. The results of this type of planning  
20 can only be disastrous.

21 Here in the desert, we cannot afford to have a  
22 health-threatening, economic white elephant guzzling billions  
23 of gallons of our most precious resource, water, and for  
24 what? To boil water to produce electricity, electricity  
25 Arizonans don't even need, and will have to finance in the

1 form of higher utility bills. Palo Verde must be stopped.

2           Clearly a large amount of capital has already been  
3 invested. To close the plant down would mean a tremendous  
4 loss of capital at this point. Perhaps APS could get a  
5 federal bailout now rather than after an accident has  
6 occurred. In the long run, it would certainly be cheaper  
7 to stop construction at the plant now. For we have handed  
8 APS a blank check which we will be forced to honor, through  
9 the payment of higher bills.

10           You gentlemen of the Commission have before you  
11 a tremendously important decision. It is a decision  
12 literally of life and death. The health and safety of  
13 Arizonans living today and those of generations to come are  
14 dependent on you to decide if their health and environment  
15 will be protected or if it will be completely contaminated  
16 for generations to come.

17           Perhaps what it all boils down to in the final  
18 analysis, is can the citizens of Arizona still triumph over a  
19 large, socially and environmentally irresponsible industry,  
20 especially when their lives are at stake. Thank you.

21           JUDGE LAZO: Thank you.

22           I think we will have time for one more, and then  
23 we will have to take a luncheon recess. Yes, sir.

24           MR. ROPER: Yes, my name is Rob Roper, and I am  
25 the Socialist Workers' Party candidate for the United States

1 Senate from Arizona this year. I am a foundry worker at  
2 Capital Castings Foundry in Tempe, and a member of United  
3 Steelworkers Local 4102. My statement will be very brief,  
4 and I will not reiterate the important points other speakers  
5 have already made today.

6           However, before I read it, I would just like to  
7 comment on the amazing comments made by the state legislator  
8 from the Glendale area, who said that all of her constituents  
9 were in favor of nuclear power, and I find this hard to  
10 believe, since I myself have gone door to door in Glendale,  
11 and found the opposite to be the case, but perhaps it was  
12 because I went to the working class communities and the  
13 Chicano communities, and perhaps she went to the more  
14 wealthier communities.

15           I also note that representative Stump is  
16 scheduled to appear today, and I am sure that when he does  
17 find it convenient for himself to arrive, everybody else will  
18 have to wait for him to come and give us his words of wisdom.

19           However, perhaps someone could question  
20 Representative Stump as to how he could possibly be objective  
21 on this issue, since two years ago in his last campaign he  
22 received a sizeable contribution from Arizona Public Service.

23           Now, since I am not a Democrat or a Republican  
24 and will receive no corporate money in my campaign this  
25 year, I can speak in the interest of Arizona's workers and

1 their families, in the interests of the working farmers, of  
2 the blacks, Chicanos and Indians of this state, and I ask  
3 that you deny a license to the Palo Verde Nuclear Generating  
4 Station.

5           The Palo Verde Nuclear Power Plant will not be  
6 beneficial to the workers and common people of this state,  
7 because all nuclear power plants are inherently unsafe. Dr.  
8 Carl Johnson, former county medical director in Denver,  
9 Colorado, has documented the fact that even while functioning  
10 normally, nuclear power plants emit low level radiation  
11 which causes an increase in the cancer rate in the  
12 surrounding communities, and wreaks havoc on the crops and  
13 livestock of farmers.

14           In addition, as has been pointed out, no  
15 solution has been found to the problem of the highly  
16 radioactive waste created by the nuclear plants. Finally, as  
17 with all nuclear power plants, there exists the possibility  
18 of a meltdown or catastrophic accident in which tens of  
19 thousands of people would die, and the fact that we have a  
20 water problem here merely increases that risk for the Palo  
21 Verde Plant.

22           I also oppose licensing of the Palo Verde plant,  
23 because as a previous speaker alluded, the mining of uranium  
24 has caused high cancer rates among the predominantly Indian  
25 miner of northeastern Arizona and northwestern New Mexico.

1           In addition to my opposition to a license for the  
2 Palo Verde Plant, I demand that Arizona Public Service  
3 convert the plant to a coal-fired plant. Proper equipment  
4 can be installed to make a coal-fired plant non-polluting.  
5 This would mean that none of my union brothers and sisters  
6 working at the plant would lose their jobs. So it is clear to  
7 me that Arizona's working people have nothing to gain, and  
8 everything to lose by the licensing of Palo Verde.

9           The only ones who stand to gain are the millionaire  
10 investors who seek to impose nuclear power on the people of  
11 this state.

12           It is for that reason that the Socialist Workers'  
13 campaign calls for the nationalization of the oil companies  
14 and the entire energy industry. Energy policy should be  
15 decided by a publicly elected board so that the needs of the  
16 people are the priority and not corporate profits. Last  
17 Saturday, on April 24, I am my campaign supporters joined  
18 with hundreds of other Arizonans at the state capital to  
19 protest nuclear power in Arizona, and regardless of the  
20 decision, gentlemen, of your body, I and my campaign  
21 supporters will continue to be at every anti-nuclear protest  
22 such as the June 12 disarmament rally, and we will not rest  
23 until all nuclear power plants and all nuclear weapons  
24 facilities are forever eliminated from this country.

25           Thank you.

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JUDGE LAZO: All right.

MR. PONTON: My name is Steve Ponton. I come here as a private citizen also. I have been involved with the nuclear issue for about eight months now. I used to think that it was probably a pretty good idea, to break the OPEC cartel, that type of mentality, and then I looked into the subject, I have researched it, and I see how false that thinking was. I think that there is just so many problems associated with this technology that no one person certainly can go into them today. Certainly many have been articulated, and I agree with the majority of them.

Humankind has learned how to develop exotic, dangerous, very hazardous technologies, but the wisdom to use control, utilize those technologies has not grown commensurately.

1 MR.PONTON: (Continuing) I think we owe  
2 it to our children and their children to very carefully  
3 consider any nuclear plant in any country anywhere in  
4 the world. I myself am dismayed at the commercial  
5 nuclear industry. A woman spoke a minute ago about  
6 national security. She talked about free enterprise.  
7 Is subsidizing the nuclear industry to the tune of  
8 40 billion dollars in 30 decades free enterprise? Is  
9 that the free market operating, gentlemen? I would  
10 like to ask the representative who spoke about her  
11 district 16 if her constituents know who is paying for  
12 the clean up of Three Mile Island. I wonder if her  
13 constituents know about the subsidies to the atomic  
14 industry over the last thirty years, where their tax  
15 dollars have been going. I wonder if her constituents  
16 know what plutonium is, what cesium is, what iodine  
17 is? I wonder if she knows. I wonder if the technical  
18 people that she so glowingly spoke about when she went  
19 to her plant tours know what they're going to do with  
20 the plutonium and the rest of the atomic waste. I  
21 toured the plant several months ago. One of the first  
22 statements they made was no member of the general public  
23 has ever been killed by a commercial nuclear reactor.  
24 That just isn't true, ladies and gentlemen. I wonder  
25 if the three technicians in Idaho Falls, Idaho in January,



1 1961, I wonder if their families didn't consider them  
2 members of the general public. The truth of the matter  
3 is, a broad range of experts in a wide variety of fields,  
4 scientists, epidemiologists, biologists, geneticists,  
5 disagree over how many leukemias, cancers, diseases  
6 have been caused by this technology? The fact is they  
7 don't know. Why is it that biologists, scientists,  
8 geneticists, lawyers, doctors, judges, citizens, a whole  
9 cross-section of people across the planet, why is it  
10 that they've come down against nuclear power? Have  
11 you ever seen anyone that's been against nuclear power  
12 and then changed their mind and decided to be for it?

13 No. I don't think such an animal exists but there  
14 is literally millions of people around the world who  
15 as their data base increased and learned more about  
16 this technology, who came down conclusively against  
17 it. I would just like to say also that I appreciate  
18 the opportunity to speak but I really think we need  
19 a wider scope of participation in what is going on here  
20 today. The citizens -- I think if there was a vote  
21 held today clearly, however, they would not be rejected.

22 The first study of accident risks was under-  
23 taken by the Atomic Energy Commission in 1956, this  
24 was document Wash 740. It was updated. The study was  
25 based on a hypothetical accident at a 200 megawatt

1 reactor 30 miles from a major city. The three reactors  
2 45 miles west of Phoenix are 1,270 megawatts. According  
3 to my research, Palo Verde will be the third largest  
4 nuclear facility in the entire world. Now, this update  
5 of the Brookhaven report was prepared when the Price-  
6 Anderson Act came up for renewal in 1965 but it was  
7 never allowed to be completed. The AEC refused to  
8 release it and even denied its existence. Finally the  
9 contents became public in 1973 when the Union of  
10 Concerned Scientists, Friends of the Earth and Business-  
11 men for a Better Environment used the Freedom of In-  
12 formation Act to force the AEC, now NRC to release its  
13 files. The updated report calculated that the worst  
14 possible accident could kill 45,000 people almost  
15 immediately, injure 100,000, do 17 billion dollars worth  
16 of property damage and contaminate an area the size  
17 of Pennsylvania.

18           Gentlemen, you are faced with tremendous  
19 responsibilities. I think not just the people of Arizona  
20 or the people of the United States, but people all  
21 over this planet are hoping that you don't look at parts  
22 but look at the whole. Hegel once said, "Truth is the  
23 whole." I think we have to look at the whole situation  
24 and not just look at things like corporate profits,  
25 not just look at things like energy demand. The fact

1 of the matter is, nuclear power is irrelevant to our  
2 energy demands and our energy needs. Conservation is  
3 not a dirty word, it simply means more efficient use  
4 of current energy supplies and it does not imply a  
5 degradation of lifestyle. I simply urge you to carefully  
6 consider it and in closing I would like to mention a  
7 study by the American Institute of Architects in 1975.

8 Their final report estimated that a commitment to  
9 developing energy efficient buildings, could by 1990  
10 alone save more energy than nuclear power is projected  
11 to supply even at historical growth rates. Moreover,  
12 the pay back time for the capital investment for more  
13 energy efficient buildings would be much shorter than  
14 for nuclear plants. Without question, conservation  
15 should be viewed as the country's, the world's most  
16 viable energy source. Thank you.

17 JUDGE LAZO: Thank you, Mr. Ponton. The  
18 hearing will stand in recess now until 2:00 P.M. this  
19 afternoon.

20 (Whereupon, at 12:39 p.m., the hearing was recessed,  
21 to reconvene at 2:00 p.m., this same day, Tuesday, April  
22 27th, 1982, in the same place.)  
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2:00 p.m.

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JUDGE LAZO: Will the hearing come to order, please.

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5

Mr. Gehr, you indicated this morning that two or three, perhaps it was four, people who had requested the permission to make a limited appearance would be coming in this afternoon. Are those people here now? Do you know?

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MR. GEHR: Yes. At least four of them are.

10

JUDGE LAZO: Very well.

11

MR. GEHR: There's a Ms. McDonald appearing on behalf of Representative Stump; Mr. Terry Trust; Mr. Mullenix appearing on behalf of the Mayor of the town of Buckeye; and Mr. Bill Jacquelin, president of the Arizona State Chamber of Commerce.

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JUDGE LAZO: Why don't we proceed with these people. You say, Congressman Stump is not here, but he has a representative present?

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MR. GEHR: That's correct.

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JUDGE LAZO: Could we begin the afternoon session then -- I'm sorry, I didn't get her name.

21

22

MR. GEHR: Ms. McDonald.

23

JUDGE LAZO: Ms. McDonald. Thank you. Ms. McDonald, would you come forward please? Good afternoon.

24

25

MS. McDONALD: Good afternoon, gentlemen.

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1 My name is Edna McDonald and I'm representing Congressman  
2 Bob Stump who represents the Third District of Arizona.  
3 I would like to read into the record for the record a very  
4 short statement if I may.

5 I support the licensing of the three units of  
6 the Palo Verde Nuclear Generating Station being completed  
7 west of Phoenix, Arizona. This station is an investment,  
8 both in Arizona's future and in the entire nation.  
9 Approximately half of all U.S. energy needs are supplied by  
10 oil. This country is presently too dependent on foreign  
11 oil that could be cut off at any time by a whim, which could  
12 plunge this country into an energy and economic chaos. A  
13 seven percent reduction in imported oil in 1973 almost  
14 brought us to our knees at that time.

15 Production of energy with nuclear fuel will help  
16 America reduce its dependence on foreign oil. That protects  
17 our national security and our economy. More oil is critical  
18 for other pressing needs as well, such as, transportation,  
19 textiles, pharmaceutical drugs. Nuclear generation frees  
20 oil for those uses.

21 Nuclear energy also costs less to produce for  
22 consumers. In 1980, nuclear energy was 2.3 cents per  
23 kilowatt hour; coal fired energy was 2.5 cents and electricity  
24 from oil cost a budget busting 5.4 cents per kilowatt hour.

25 Nuclear power is economically sound and

1 environmentally clean.

2 As a member of Congress, I strive to act to  
3 protect the best interests of my state and my country.  
4 This Palo Verde Nuclear Generating Station is in the best  
5 interest of both. Thank you.

6 JUDGE LAZO: Thank you.

7 Now, we've really got out of order here a little  
8 bit and I've got four separate lists. Is Leo Joe Hesting  
9 still here? Mr. Hesting. Lin?

10 MR. HESTING: Leo.

11 JUDGE LAZO: Leo. I'm sorry. Well, it's your  
12 writing.

13 MR. HESTING: Leo, the terrible handwriter.

14 JUDGE LAZO: I apologize.

15 MR. HESTING: You mentioned that the license to  
16 begin construction was given in 1973 and that all issues,  
17 safety, water, I presume, and every other issue was  
18 considered at that time. And you also mentioned that all  
19 objections were resolved except for the issue of cooling  
20 effluent and that now we're here to give input on whether  
21 or not we should grant -- whether or not you should grant  
22 the operating license, and that we only have to base our  
23 decision on that one unresolved issue of cooling effluent.

24 There are a lot of people here today that don't  
25 feel that all those objections have been resolved. They're

1 still concerned about all those other things that supposedly  
2 were taken care of. And we've learned a lot too since 1973.  
3 It's not like only the problems that came up in 1973 and  
4 were disposed of then need to be addressed. We've had a  
5 lot happen since 1973. It's been nine years and we're  
6 learning. We're getting more information all the time.

7           What's happening here is that we're having a  
8 conflict between two different ways of thinking and looking  
9 at issues. I went out there and I worked for a year and a  
10 half in the semi-conductor industry, which is just a real  
11 good example of the attitude that has caused this country  
12 to be rich and that has caused nuclear power to start  
13 happening and all kinds of things. And that attitude is  
14 an attitude of making it happen, getting the job done and  
15 just going ahead and doing it. And it's a great attitude.  
16 It applies to a lot of wonderful things, gets a lot of good  
17 work done. Make it happen. We're not sure how the details  
18 are going to work. I don't care if you're not sure. Make  
19 it happen. There are going to be some obstacles in the way.  
20 Well, get rid of the obstacles and make it happen. Maybe  
21 we start the project and we might be reconsidering the  
22 wisdom of it. We don't have time to reconsider the wisdom;  
23 get the project done; make it happen.

24           That works really great for building bridges  
25 and building semi-conductor plants and a lot of other things.

1 but that attitude breaks down. Any attitude is only<sup>229</sup>  
2 appropriate within certain limits. And the attitude of just  
3 making it happen and damn the torpedos and full speed ahead  
4 only breaks down in several areas. It breaks down when  
5 you've got a long-term project, like one that's been taking  
6 nine years. And a lot of people are around the outskirts  
7 asking questions, asking, asking, asking. You just can't  
8 continue to ignore all those people that say, I've got a  
9 question here. I don't care about your question; we've  
10 got to make this project happen.

11 The make it happen attitude does not work when  
12 the obstacles that you're trying to get rid of are people  
13 because people don't go away. You say, well, I don't care  
14 about the obstacles; I'm just going to go ahead. Well,  
15 the people are going to stay there. And you can get rid  
16 of them temporarily, but they just keep coming back and  
17 coming back.

18 But the biggest obstacle to the make it happen  
19 attitude is when you get disturbing facts coming up that  
20 are unanswered. We've had people here today that don't feel  
21 that those old issues have been resolved. People are  
22 talking about nuclear waste. People were talking about  
23 concentration of power in people's hands. People were  
24 talking about alternative sources. People were talking  
25 about the cost to us as APS customers for decommissioning the



1 thing, running the thing, building the thing, and on and on.  
2 People were talking about water being short. People were  
3 talking about leaving this legacy for our kids to inherit.

4           There's a lot of questions out there right now.  
5 And what's happening is a second attitude is setting in  
6 where people are saying, the only intelligent attitude is  
7 not make it happen, but let's sit back for a moment and  
8 see; let's get some answers to these questions; I want to  
9 know more before this thing goes on line. We didn't know  
10 as much in 1973. Personally, speaking from a personal point  
11 of view, in 1973, my father hadn't been burned to death  
12 by radiation.

13           Maintaining the make it happen attitude in the  
14 face of an intelligent group of people sitting around and  
15 asking some questions, leads to fanaticism and hysteria  
16 because you start saying, make it happen, make it happen,  
17 make it happen until you're going crazy with make 't happen.  
18 It's what made this country great, but it's only appropriate  
19 within certain limits.

20           There are a couple of ways this conflict can  
21 end. The questioners that are saying, let's take a  
22 reasonable attitude and ask some questions can go away.  
23 We're not going to go away. The people that are saying,  
24 make it happen; let's build this project; we've committed  
25 to it; let's drive it to completion, they can get reasonable

1 and sit down and say, okay, we're going to wait; we're not  
2 going to drive it to completion yet; we're going to answer  
3 some of your concerns first. The people that are asking  
4 the questions can overrule the people that are saying, let's  
5 make it happen, or the people that are saying, let's get  
6 this project done and to heck with everything can get what  
7 they want.

8           It's up to you folks at this point to make the  
9 choice to just hand those people that are obsessed with  
10 this attitude, which sometimes is correct and sometimes is  
11 not -- it's up to you to just hand them what they want.  
12 But it's up to us to live with the consequences of such a  
13 decision.

14           JUDGE LAZO: Thank you, Mr. Hesting.

15           Now, is Mr. Hawley here from Buckeye?

16           MR. MULLENIX: Gentlemen, my name is Paul  
17 Mullenix and I'm the city manager for Buckeye and I'm  
18 representing Mayor Hawley who couldn't be here today.

19           MR. LAZO: Would you spell your name please, sir?

20           MR. MULLENIX: M-u-l-l-e-n-i-x, Paul.

21           MR. LAZO: Thank you.

22           MR. MULLENIX: I'd like to read a statement that  
23 Mayor Hawley asked me to read. He was called away to  
24 California.

25           Buckeye, Arizona is the nearest incorporated

1 municipality to the Palo Verde Nuclear Generating Station.  
2 Buckeye is a dynamic growing community of four thousand  
3 Arizonans, and a service community to approximately 18  
4 thousand citizens within our school district boundaries.  
5 As a neighbor of this plant, we have had a positive relation-  
6 ship with the management and workforce building and  
7 preparing to operate this facility since ground-breaking  
8 ceremonies in 1976.

9           As an expanding city, we support the efforts  
10 of APS to continue to provide for our growth with the  
11 required supply of electrical energy. We are well aware  
12 of the high cost of energy and as long as this country is  
13 dependent upon importation of oil shipped from insecure  
14 sources, the high cost of energy will continue to be a  
15 problem for the state and the nation. Therefore, it is  
16 imperative that the nation and the State of Arizona take  
17 steps to develop and fully utilize their own natural  
18 resources.

19           We support the development of the nuclear  
20 power in Arizona as a dependable, sufficient supply of fuel  
21 and energy to provide for our communities' and state's  
22 future. Additionally, as neighbors to this facility, we  
23 recognize the positive benefits generating electricity  
24 through clean, economical generating facilities like Palo  
25 Verde. In conclusion, we support the licensing of these

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three units. Thank you.

JUDGE LAZO: Thank you, sir.

1 JUDGE LAZO: Is Edwina Vogand here? Do you wish  
2 to come forward, ma'am, and make a statement? Why don't you  
3 identify yourself for the court reporter, please?

4 MS. VOGAND: My name is Edwina Vogand, and I am  
5 from Tucson, Arizona. You will have to excuse me. I am a  
6 little bit nervous and intimidated by this process, but I  
7 think I can carry on.

8 JUDGE LAZO: I hope we can make you comfortable.

9 MS. VOGAND: It is a particularly uncomfortable  
10 situation when you have so much despair about a process that  
11 may or may not go in the direction that you would like it to.

12 Although I am from Tucson, over 100 miles from  
13 the site of Palo Verde, I feel that it is my obligation and  
14 duty as a resident of Arizona, not just Tucson, to state my  
15 opinions on the operating license being considered for Palo  
16 Verde. My concern about nuclear power is the continued  
17 spreading of the technology that we as its human counterparts  
18 have lost control over its existence.

19 Throughout atomic power's history, we have seen a  
20 series of mishaps and a continuing ignorance over its  
21 ramifications in our society, and enough to demonstrate that  
22 point clearly.

23 What particularly concerns me is the introduction  
24 of a technology that adds to the increasing destabilization  
25 of our society, as well as that of the international

1 community. With the present operating nuclear reactors, and  
2 the continued sale of nuclear reactors overseas to unstable  
3 governments, as well as the current stockpiled plutonium, we  
4 are making the world we live in a time bomb. As you well may  
5 know, one of the byproducts of nuclear reactors is plutonium.

6 Plutonium, besides being a highly toxic substance,  
7 is the ingredient for making nuclear bombs. At a time when  
8 world tensions are great, particularly between the United  
9 States and the Soviet Union, we would do well to control and  
10 reduce our stockpiles of plutonium. Plutonium is used for  
11 little else besides nuclear bombs.

12 The current administration proposal for the use  
13 of nuclear waste is to separate the plutonium from the rest of  
14 the byproducts. Since the nuclear waste problem has not been  
15 solved, the Reagan administration is using an opportunity to  
16 deal with the nuclear waste problem, while also providing  
17 materials for the 17,000 new nuclear weapons which we are  
18 being proposed to add to our new nuclear arsenal.

19 Why contribute to this possible extinction of  
20 our species? What can we possibly gain from helping ourselves  
21 down the road of destruction? Palo Verde will produce tons  
22 of plutonium each year that it operates. Palo Verde is part  
23 of an ever-increasing threat of horizontal nuclear prolifera-  
24 tion. At a time of economic crisis around the world, and the  
25 rise of third world countries to achieve progress, quote, and

1 superpower capability, unquote, through nuclear technology,  
2 the United States should take a responsible lead in trying to  
3 stop the spread of nuclear power within its own borders, as  
4 well as the sale to other countries.

5 Third world countries must be shown clearly that  
6 nuclear technology is not a gateway to progress, but a  
7 confused, complex and dangerous way into the future. It  
8 should be clear that people like Idi Amin with nuclear power,  
9 or others like him, should be discouraged and prevented from  
10 getting this technology, that not only will the people of  
11 third world countries be threatened, but the entire world  
12 community becomes much more unstable and a step closer to  
13 nuclear holocaust.

14 More and more arms can be built and more and more  
15 tensions will rise, leaving us on a precarious road.  
16 Possible sabotage and theft of nuclear materials from Palo  
17 Verde could present problems for local residents as well as  
18 peoples in other countries. What nuclear materials that  
19 cannot be bought legally on the market may be taken from any  
20 one of our nuclear plants, including Palo Verde.

21 Then who knows what problems could arise from  
22 theft of plutonium, accidental spills, sales to belligerent  
23 countries, use of nuclear materials for specific bomb makings,  
24 bomb making, all of these options lead us further to  
25 instability, and the possibility of nuclear exchange, even

1 between two smaller countries, causing death and destruction.

2 What I am trying to say is that the connections  
3 between nuclear power and the threat of nuclear proliferation,  
4 i.e., the bomb, are clear. You must take every opportunity  
5 to stop this insanity, you, as judges over this operating  
6 license for Palo Verde, have a supreme obligation, not only  
7 to our present generation, but to future generations, not  
8 only in Arizona, but the entire world community. What you  
9 decide in the following weeks may determine our future, as  
10 well as those that follow. I urge you to consider the  
11 alternatives when licensing Palo Verde, increased nuclear  
12 proliferation, a possible rise in the arms race, and a world  
13 made less secure by more bombs. Do you think that we as  
14 Arizonans want to be a party to that situation?

15 I know I do not, and I am here as well represent-  
16 ing other people from Tucson who do not also.

17 Lastly, I would like to make a comment, a personal  
18 comment, regarding the presence of an operating nuclear plant  
19 in our state. I came to Arizona six years ago from another  
20 part of this beautiful country, New York State, but  
21 unfortunately, many things were going wrong, at least as I  
22 could see them.

23 I saw the eastern part of this country being  
24 plagued by chemical dumps and other pollution through  
25 mismanagement of industry, and in general, from my point of



T10-5 1 view, I could observe a general downward trend in our  
2 standard of living there. Even within the past several years,  
3 the community I used to live in, in beautiful upstate New  
4 York has been plagued by chemical pollution of its water  
5 sources.

6           When I first came here, I looked at this area,  
7 and I said to myself, this is a beautiful place, and it seems  
8 to be less cluttered, and the possibilities for having a  
9 better style of life for me, and for other people, seemed to  
10 be a great possibility, and I didn't think that I would be  
11 up against the same kind of problems that I had already  
12 experienced, when I lived in the east, and particularly in  
13 New York State, so I think that my own personal feelings are  
14 is that you have an obligation to me, as well as other  
15 Arizonans, to provide a good style of life, in an area of the  
16 country that is still somewhat pristine. We have our problems,  
17 it is true, but I think that somehow or other we have to  
18 recognize that if there are increasing possibilities of  
19 nowhere to go, where can we enjoy a good style of life, then  
20 what are the options, what life do we have to look forward  
21 to, and I guess that is the question that I want to ask you,  
22 is what do you think you are providing us with?

23           I mean, I know I understand that you believe you  
24 are providing us with progress, or you may be providing us  
25 with progress with your decision if you license Palo Verde,

1 but I think the question is, what are you really providing  
2 us with, what is the future that you are leaving us with, not  
3 only right now, but again, as many people have mentioned,  
4 the legacy to the children in this state, as well as in the  
5 international community. Thank you.

6 JUDGE LAZO: Thank you. Is Mr. James J.  
7 Mulcahey present? He had written in earlier, and I didn't  
8 get to call his name this morning. I wanted to be sure he  
9 was not still here. Patricia Nichols?

10 MS. NICHOLS: My name is Patricia Nichols. I am  
11 a Phoenix resident, and I would like to very quickly  
12 respond to the statement by Mr. Stubb, of the third district,  
13 if I may. He said that Palo Verde was an investment. The  
14 only investment that I see will be in the medical field as  
15 they attempt to deal with the cancers and leukemias in the  
16 future generations. I have a short statement, addressed  
17 mainly to the NRC.

18 I just want them to know that I personally am  
19 appalled at something they are doing regarding Palo Verde  
20 and other plants. Until very recently, the cost factor  
21 was a legitimate contention. Why has this changed in mid-  
22 stream? Where are the representatives from the NRC, just so  
23 I will know who they are?

24 I understand that you can't answer me as I stand  
25 here, but that is something I really would like to know. Why

T10- / 1 was that changed at all?

2 Independent studies show that the Palo Verde  
3 Nuclear Plant far exceeds the costs set down by the utility,  
4 APS, by 32 percent. Until a few months ago, that alone would  
5 have been a contention, and a good reason to shut the plant  
6 down, but the NRC says we cannot use that any more. Is it  
7 because it doesn't suit the vested interest? It certainly  
8 is a concern to the public, we who have to pay those  
9 utility bills, and I just want to say that I certainly hope  
10 that all the information that is taken in today, even though  
11 it is not, as I understand it, part of the legitimate record  
12 I am sure you gentlemen are listening very carefully to what  
13 is being said today, and I thank you for the opportunity to  
14 speak.

15 JUDGE LAZO: Thank you, Ms. Nichols.

16 Dr. Mark Reeder, is Dr. Reeder here?

17 DR. REEDER: I have just arrived, but I have  
18 been informed that these have been very well-attended hearings  
19 today. My name is Mark Reeder. I am the author of Atom's  
20 Eve Ending the Nuclear Age, but I am here today to represent  
21 myself, my wife, and my youngest child. For the last six  
22 years in Arizona, there have been a number of us who have  
23 been speaking publicly where we can as we can about what we  
24 perceive the evils of the Palo Verde Nuclear Generating  
25 Station to be. These evils I think are twofold. We have come

1 to think about them carefully. They are firstly those evils  
2 associated with the environmental setting in which this plant  
3 finds itself. I will not speak about those issues today,  
4 because the water issue is one of the major environmental  
5 questions that needs to be dealt with within the environmental  
6 setting.

7 But I would point out to the Commissioners and  
8 to the Members of the Board that the Palo Verde reactor finds  
9 itself in a unique desert setting, and that there are many of  
10 us who are persuaded that inadequate attention has been given  
11 to the unique properties of a desert region in terms of  
12 operating a nuclear reactor.

13 The second problem, though, is one which I will  
14 address a very brief set of remarks to. It is the problem of  
15 the unique social climate in which the Palo Verde Nuclear  
16 Reactor is being set, and it is the social climate, I think,  
17 and the demands that that reactor makes upon the social  
18 climate, that has persuaded people like myself from the  
19 first, that nuclear power is an inappropriate energy source  
20 for Arizona.

21 I think what one really ought to understand about  
22 Arizona is that it is filled with migrant people who as a  
23 rule do not understand and have not had yet the time to  
24 learn the intricacies of living in a desert region, that  
25 Arizona has a very high crime rate, that Arizona has never

1    been known for its perfect information system, that  
2    distortion of information, I think, is a regular pattern in  
3    this state, and where information is distorted, I think you  
4    have difficulties in running any high technology, that the  
5    state has a very high accident rate in terms of the highways,  
6    in terms of the railways, and that in introducing a high  
7    technology into this state, what one has to consider the  
8    skill level, or the lack of skill level of the people who  
9    will come in contact with that technology.

10            But more broadly speaking, I think there is a  
11    fundamental social problem that the Palo Verde reactor has  
12    posed, not only for the people of this state, but I think  
13    for the people of the country and the people of the world,  
14    and the problem is a neglected problem. It is the problem  
15    of what kind of lives do we ordinary people have to lead to  
16    support the Palo Verde reactor or any other reactor?

17            And some of us have been able to identify halting-  
18    ly on the basis of experience and on the basis of imperfect  
19    information eight basic problems that I think you will deed  
20    to us in this state and around the world if you should decide  
21    to license the Palo Verde reactor.

22            That reactor, firstly, will constitute a  
23    permanent threat to the peace for ourselves and for our  
24    children. What we do understand, and I think you gentlemen  
25    understand, is that the reactor is subject to bombing in the

T10-10

1 event of nuclear war, and that reactors of all kinds can be  
2 used to produce materials out of which nuclear weapons are  
3 made, so what you are in a sense deeding to us is the  
4 incessant threat of nuclear war as you introduce this  
5 technology into our community.

6 Secondly, there are those of us who believe that  
7 we cannot teach our children or ourselves democratic  
8 liberties with a technology which requires such an  
9 inordinate amount of security, and there are people like  
10 myself who do not find it to be accidental that since the  
11 first day of licensing the construction of this plant, there  
12 has been reported in the press an attempt to spy on those  
13 people who have opposed the plant. I am interested that in  
14 May of 1976, the Arizona Republic carried two stories, number  
15 one, a story on the licensing of the construction of the  
16 plant, and number two, claims being made that police were  
17 spying on nuclear protestors.

18 There are those of us, then, who seriously doubt  
19 whether nuclear power and democracy are compatible. Number  
20 three, I think what one ought to understand is happening  
21 here and elsewhere, is that one is making permanent  
22 inequalities which already exist in this and other communities.

23 You are making us all increasingly dependent upon  
24 a more and more limited elite which will govern our energy  
25 source, and the problem with inequality, I think, as we all

1 understand, as James Madison argued, is that it is the most  
2 durable source of conflict between and among human beings,  
3 and the one thing that the nuclear fuel cycle requires, in  
4 order to be run without accident, is stability, and we have  
5 here what I have termed the nuclear paradox.

6 On the one hand, nuclear power requires total  
7 social stability, on the other hand by dividing people and  
8 by dividing nations into unequal parts, in guarantees the very  
9 inequalities that it must avoid if it is to function without  
10 accident or without incident.

11 There is, fourthly, the environmental problems  
12 which will be touched upon in this state.

13 There is, fifthly, those problems associated with  
14 the physical health of citizens of the community, but as a  
15 father, and as a functioning and alert human being, I think  
16 there are also those problems associated with the psychic  
17 difficulties that one will experience as that reactor goes  
18 on line.

19 The question that one has here, is what are we  
20 to teach our children about those reactors? Are we to teach  
21 them that there is no risk involved? Are we to teach them  
22 that there is some risk involved, and what is the impact on  
23 our children of those reactors, the Palo Verde reactors,  
24 after we have had Three Mile Island, after we have had other  
25 accidents around the country and around the world?

1 MR. REEDER: (Continuing) Equally, I think  
2 sixthly, what one needs to understand is that you are  
3 effectively pinning down our futures in this state and  
4 in other parts of the world as you make your move in  
5 the direction of nuclear energy. We cannot imagine  
6 in this part of the world or in any other part of the  
7 world to detour our future's, any civilization that  
8 is substantively different than our own in order to  
9 take care of nuclear wastes and other long lasting  
10 problems, that the reactor itself produces. In a sense  
11 you've closed the openness of the future to ourselves  
12 and to our children.

13 Seventhly, there are serious ethical ques-  
14 tions arising on the basis of the reactor but quite  
15 simply there is the serious question of whether or not  
16 it is ethical to export death randomly through the ages  
17 even though it involves only a single person. The Confucian  
18 (ph) view of life and I think the Judeo-Christian view  
19 of life has always said that each life is equally prized  
20 and no life is to be forfeited on the basis of any  
21 ideology, energy ideology or otherwise.

22 And lastly, in terms of problems that you  
23 have already decided to us, I think you have begun to compro-  
24 mise our ability to function as full and dimensional  
25 human beings when we have to deal with an energy source



1 against whom none of our human senses will defend us.

2 What we need to understand and I think we all understand  
3 this is that radioactivity is immune to our sense of  
4 smell, touch, sight sound and the like. It tends in  
5 a sense to demean and diminish us. It tends to make  
6 us people who cannot be light and happy people if we  
7 need to worry about the energy source that is going  
8 to govern us.

9 Now, I can go on for a long time in this  
10 regard. I don't intend to. I do really intend to say  
11 two things. I think it is rather late in the game for  
12 us now to be disputing whether or not the reactor is  
13 safe, whether or not we should have it. That discussion  
14 should have happened in 1976 in this community. It  
15 did not happen in this community and as a consequence  
16 I think what we are about to experience is the legacy  
17 of our ignorance and the legacy of really the breakdown  
18 of the democratic process in terms of talking about  
19 the impact of this energy source on the lives of  
20 Arizonans.

21 And lastly and in conclusion, what I do  
22 want to say and I have said this elsewhere in this part  
23 of the world, I am a non-nuclear person. I do believe  
24 that we have to bring an end to the nuclear age. I  
25 do believe we have to close the nuclear fuel cycle in

1 this country and globally if we are to avoid untolled  
2 human tragedy. It would seem to me to be the brave  
3 and courageous thing for those people who are listening  
4 to be me to come to an understanding that it is here  
5 in the deserts of the southwest where the nuclear age  
6 was born and perhaps it is here in the deserts of the  
7 southwest where the nuclear age must be brought to an  
8 end. Thank you.

9 JUDGE LAZO: Is Kevin Scott in the hearing  
10 room?

11 MR. SCOTT: My name is Kevin Scott and I'm  
12 just a private citizen and I'd like to start out by  
13 quoting Richard Eudell (ph) who works for the Critical  
14 Mass Energy Project. He says nuclear power requires  
15 perfection and people aren't perfect. This is not a  
16 technology worth pursuing and this seems to really tell  
17 the story of what's happening in the nuclear industry.

18 I can cite three examples, one, the Ginay (ph) plant  
19 in Rochester, a ruptured steam generator tube, they  
20 put a remote control television camera into it and found  
21 a piece of steel plate, two small pieces of steel, four  
22 pieces of broken tube and a length of wire. This is  
23 -- you know, people aren't perfect and this is as tech-  
24 nology that requires perfection and another case at  
25 the Prairie Island Station No. 1 in Minnesota, a piece

1 of discarded wire ruptured a steam generator, too.  
2 The workers -- we'd like to think that they're perfect  
3 and they can handle this and that we aren't going to  
4 have any problems with it but that's just not the way  
5 it is. The Zion I Nuclear Power Station in Illinois  
6 a loose 24 inch hinge was floating around in a steam  
7 generator. This isn't where it's going to end. These  
8 are small incidences, maybe not that dangerous but if  
9 something -- you know, one of these something big is  
10 going to happen and it just seems ridiculous for us  
11 to wait around for something like that to happen when  
12 we see these small things continuously occurring. We  
13 have to look at this and say, let's stop this before  
14 we do see a major catastrophe.

15 I'd just like to end by saying what do you  
16 people think motivates Lee Hourihan, myself, and the  
17 rest of these anti-nuclear protestors? We're not in  
18 it for money, we care about people, we care about our-  
19 selves, we care about our children, we'd like to raise  
20 our children in a nuclear free state. We don't want  
21 our kids growing up with birth defects, leukemia, is  
22 that what's going to happen? Some day APS is going  
23 to say well, oops, somebody left this piece of machinery  
24 in the reactor and one out of four of your kids are  
25 going to have birth defects, half of you are going to

1 die of leukemia, you know, we're sorry, but people aren't  
2 perfect. Just think about that. What really motivates  
3 us to protest this? We're not in it for money. We  
4 really care about people and our children.

5 JUDGE LAZO: Thank you. We have Bob and  
6 Heather Larson on the list. Ms. Hourihan?

7 MS. HOURIHAN: Bob and Heather are out of  
8 town and are wondering if they could speak tomorrow  
9 morning? Would that be possible?

10 JUDGE LAZO: I think that might be possible.  
11 Or they could submit a written statement if they prefer.

12 MS. HOURIHAN: Okay.

13 JUDGE LAZO: And Steve Cochran?

14 MR. COCHRAN: Good afternoon, my name is  
15 Steve Cochran and I'm a resident of Chandler, Arizona.

16 My testimony today basically stems from my professional  
17 concerns in the area of public sector resource manage-  
18 ment and financial management, particularly as they  
19 relate to energy issues and policies. On a personal  
20 level, I'm very concerned with the viability of both  
21 the concept and the practice of generating electricity  
22 via nuclear power.

23 The topic of my testimony is the proper  
24 role of energy conservation and solar energy in the  
25 energy policies of Arizona. Clearly, their potential

1 role is poorly understood even after better than seven  
2 years of intense debate. By placing too much attention,  
3 the program is designed to encourage investment in non-  
4 renewable energy production and too little intelligent  
5 investments in energy efficiency that can save energy  
6 at a low cost. State programs have contributed to  
7 inflation and robbed the state economy of capital badly  
8 needed elsewhere, for example, the housing industry.

9 Investments in energy supply in 1980  
10 accounted for nearly 40% of all capital available for  
11 new plants and equipment in the United States. This  
12 fraction nearly doubled over the past decade, coming  
13 up to 40%. Recent forecasts estimate that electric  
14 utilities alone may try to invest roughly 500 billion  
15 dollars in the 1980's. Quite obviously, the citizens  
16 of this nation cannot afford an energy policy that  
17 clearly overrides the economic logic of the marketplace  
18 and encourages inefficiency in investments of this magni-  
19 tude.

20 Arizona's energy picture tends to mirror  
21 this national trend. The state's major utilities are  
22 beginning to face financial difficulties in their attempt  
23 to build more electrical capacity than they have ever  
24 built before. This is at a time when state government  
25 is becoming increasingly aware of the potential of

1 conservation and solar energy and at a time when solar  
2 energy and energy conservation technologies are now  
3 beginning to be understood and adopted by the general  
4 public.

5           Even more important in my view are the many  
6 studies that indicate that this economy of continuing  
7 to build large inefficient power plants which absorb  
8 a substantial portion of needed capital for investing  
9 in conservation and solar energy alternatives. In fact,  
10 Arizona presents an even more extreme case because our  
11 summer peak energy usage is over 4 times as high as  
12 the yearly low energy use. Because Arizona's major  
13 utilities base their new power plant construction pro-  
14 grams on peak usage, they must build a large number  
15 of additional power plants in order to accomodate these  
16 summer usage peaks. Taken in concert with the ever  
17 escalating power plant construction, fueling and opera-  
18 tion maintenance cost, the average price for electricity  
19 to consumers in Arizona is high and without a sharp  
20 reordering of energy priorities will continue to rise  
21 in the foreseeable future. A negative impact on overall  
22 economic growth in the state will no doubt result.

23           A study done by the government accounting  
24 officer, GAO in 1979 entitled Electrical Energy Develop-  
25 ment in the Pacific Southwest very aptly captures the

1 crucial issues of my testimony. The study considers  
2 two alternative electrical energy policy sets for the  
3 Pacific Southwest as it approaches the year 2000 A.D.

4 One set of policies labeled Scenario I  
5 assumes electrical energy management as suggested by  
6 state and/or utility companies. The other set, Scenario  
7 II encourages more conservation and development of renew-  
8 able resources. Scenario I policies in essence restate  
9 current state utility energy policies. As we near the  
10 year 2000 A.D., these policies contemplate heavy reliance  
11 on coal and nuclear resources. There would also be  
12 efforts, in Scenario I, now, there would also be efforts  
13 to conserve energy and develop minimal amounts of alterna-  
14 tive solar and wind resources.

15 Scenario II encourages more aggressive  
16 conservation and development of renewable resources.  
17 It assumes there will be a conscientious effort by the  
18 public, private industry and government to foster more  
19 aggressive energy conservation and develop more alterna-  
20 tive renewable sources of energy. GAO's analysis demon-  
21 strated that an aggressive conservation and renewable  
22 resource program provides greater benefits in terms  
23 of equity, risk and environmental impact. These benefits  
24 could be obtained at a lower cost to the consumer than  
25 under the coal and nuclear policies and without

1 substantial change in current policies by the local,  
2 state and federal utility levels and it would require  
3 little change in the lifestyle for the general public.

4 The total cost of meeting electricity needs  
5 in 2000 A.D. under Scenario II are estimated at 11.4  
6 billion in supply system costs and 2.8 billion for addi-  
7 tional conservation measures not yet included in Scenario  
8 I.

9 In contrast, total electricity supply system  
10 costs in Scenario I, business as usual are estimated  
11 to be 20.4 billion dollars. Other studies along this  
12 same line have demonstrated similar savings and benefits  
13 associated with energy conservation and the development  
14 of renewable resources. Examples are in Ohio, in the  
15 Pacific Northwest and in California and New England.

16 In addition, some of these studies have  
17 analyzed regional employment and economic activity  
18 associated with Scenario II kinds of energy policies.

19 This is the conservation and the renewable energy  
20 resource emphasis.

21 These results clearly indicate that substan-  
22 tially more employment occurs in the conservation scenario  
23 than in the business as usual scenario. Furthermore,  
24 some studies have quantified the increases expected  
25 in discretionary spending -- this is the money that



1 you have left over because your utility bills are lower.  
2 And, I have concluded by itself this additional spending  
3 money will have tremendous overall positive economic  
4 impacts on both state and regional economic activity  
5 levels.

6 In sum, it would still appear to be cost  
7 effective to discontinue constructing of the nuclear  
8 plant, the Palo Verde Nuclear Plant and redirect our  
9 efforts in limited capital resources towards a more  
10 conservation and solar energy state oriented energy  
11 policy. The study of the Pacific Southwest by GAO  
12 indicated a potential savings of \$6.2 billion through  
13 the year 2000 A.D. if conservation and the use of alterna-  
14 tive energy sources are the priority. These savings  
15 does not address either increased employment nor increased  
16 state and regional economic activity associated with  
17 substantial increases in discretionary spending. Both  
18 of these represent substantial benefits to consumers  
19 of electricity. The current estimated cost of Palo  
20 Verde's three units is \$5.7 billion. There is little  
21 doubt in my mind that the interest of the citizens in  
22 this State as consumers of electricity is not best served  
23 by continuing with the construction and eventual operation  
24 of Palo Verde. Throwing good money after bad will not  
25 magically resolve in a good investment.

1 I strongly urge you to deny an operating  
2 license to APS on the grounds that nuclear power generated  
3 electricity represents a very poor investment of our  
4 rate payers dollars.

5 As you know, SRP has sold a large portion  
6 of its interest in Palo Verde presumably for either  
7 or both economic and erroneous usage projections.

8 In addition, two California cities via at  
9 large voting not to buy electricity generated by nuclear  
10 power as opposed to other sources. I only hope that  
11 Arizona is wise enough to see the writing on the wall  
12 and that this hearing will allow us as rate payers to  
13 avoid continuing to throw good money after bad. Again,  
14 thank you for this opportunity to speak.

15 JUDGE LAZO: Thank you, Mr. Cochran. Is  
16 Beth Hoffman present in the hearing room?

17 MS. HOFFMAN: Good afternoon.

18 JUDGE LAZO: Good afternoon.

19 MS. HOFFMAN: I'm Beth Hoffman. I live  
20 in the desert in Phoenix, Arizona and I've learned a  
21 lot about the desert. Maybe I can add to your knowledge  
22 of the southwest. Welcome to Phoenix and the desert.

23 We get seven inches of rain per year. You  
24 not being desert dwellers maybe don't understand that  
25 we need our water, even though it is effluent. Water

1 to us is a matter of survival. One government official  
2 has suggested we cut out agriculture in order to ensure  
3 our future water supply. So we have the option of fresh  
4 local produce or cooling for an extravagant electrical  
5 source, electricity that we don't need. In otherwords,  
6 during a statewide truck strike, we could starve while  
7 Palo Verde cranks out electricity to our empty refrigera-  
8 tors. Young people have oftend said to me, I'd like  
9 to buy a house but I can't until I know what will happen  
10 with the nuclear plant. These people are often easterners  
11 who come here to escape the shadow of nuclear power  
12 but learn that it is an ever spreading epidemic. We  
13 moved our family out here almost 15 years ago to the  
14 promised land where the sun always shines and now, you  
15 plan to blight everything we've nurtured for 15 years  
16 because you choose to ignore the sun and it's many by-  
17 products, wind, hydro-power, biomass, solar cells, etc.  
18 You discriminate against the sun in its own country.

19 Our second most marketable resource is copper.  
20 Copper miners have been laid off by the thousands. Sons  
21 of generations of miners who know one skill. Copper  
22 is the essential ingredient of solar water collectors.  
23 Surveys indicate that if only one-fourth of the homes  
24 in our valley utilize solar collectors, one reactor  
25 could already be eliminated. Perhaps, if I can't disturb

1 you about unemployed miners, would my message be more  
2 urgent if I spoke of dying miners? Indigent uranium  
3 mine workers have experienced an alarming rise in lung  
4 cancer over recent years and even though the industry  
5 proclaims that not one member of the public has ever  
6 died because of nuclear power, I dare to question your  
7 semantics. Perhaps no one of any public concern has  
8 ever died from nuclear power. Uranium miners like copper  
9 miners have no alternative occupation. Again, we hand  
10 them a dismal choice, starvation, or radiation.

11 As a cynical consumer, I have always been  
12 skeptical of second-hand goods. My first question to  
13 the original owner is always the same -- why are you  
14 getting rid of it? Salt River Project, why do you want  
15 to sell your portion of Palo Verde? Has it become an  
16 economic dinosaur? Is that why our utility rates have  
17 escalated approximately 30% in the past years? Well,  
18 SRP, if you can find a naive buyer, you'll be off the  
19 hook, but the rest of us will still be helplessly dangling  
20 like the people of Washington State who over-whelmingly  
21 passed an initiative banning waste deposits in their  
22 state only to find that a federal judge had the power  
23 to overturn their decision. It is the ultimate degrada-  
24 tion to be given the illusion that your opinion matters  
25 when in reality it will never be considered. How often

1 do we hear the screaming of an ambulance rushing to  
2 save one life? It is awesome to think of the snuffing  
3 of thousands of lives in a metropolitan area because  
4 a nearby nuclear power plant was the target of an ordinary  
5 bomb exploded by enemy or lunatic.

6           You commissioners are businessmen. When  
7 you talk of cost, you add up figures. I'm asking you  
8 today to add up human cost, the quality of our lives.

9       You don't live in the desert. You don't love Arizona.

10       To live in the desert, we must follow certain common  
11 sense rules. Small desert animals seek the shadow of  
12 a rock to defer the blaze of the noon day sun. Desert  
13 vegetation develops thorns to dissuade a predator.

14       We who learn here must come to terms with our environment.

15       We must respect it to survive. We are the prey of nuclear  
16 power. We have no thorns to protect us. You haven't

17 listened to the voice of the people. You believe in  
18 nuclear power. How can you place restraints on it? You're

19 like foxes guarding the chicken house. We believe in  
20 Arizona. We want to live in the sun and by the sun.

21       For us, the answer is clear, solar employs, nuclear  
22 destroys. Thank you.

23       ///

24       ///

25       ///

1 JUDGE LAZO: Thank you, Mrs. Hoffman.

2 Tom Broderson, is Mr. Broderson in the hearing  
3 room? The next name on our list is Bobbi Childs.

4 MS. CHILDS: Gentlemen, my name is Bobbi Childs.  
5 I am a Scottsdale resident, and Beth is a hard act to follow,  
6 but I will try. I came to Arizona nine years ago, and I  
7 wasn't here that long when the nuclear issue came up, the  
8 issue of building the Palo Verde site, and I wasn't that  
9 involved, I had a new baby at that time, and an older son,  
10 and I was back in school, and I was doing a lot of things,  
11 so I really didn't get involved to the degree that I under-  
12 stood what was going on.

13 I voted that year, and after it was all over, I  
14 realized that I had voted opposite of what I had thought I  
15 did, and my point is that it wasn't until a year after that  
16 that I learned that -- what the politics of the whole issue  
17 had been in the first place, and that was that there wasn't  
18 enough money spent to educate an average citizen like myself  
19 who really wasn't that involved at that time, and thought  
20 that we did indeed need a greater power source on the desert.

21 I had moved from a more arid desert location,  
22 the state of Nevada, so I am familiar with the ecology of  
23 the desert, and how one must respect the land on which you  
24 live, and I am asking you today to not license the plant,  
25 because I do feel that we do -- we should be heard, and I won't

T12 2 1 reiterate on what all the other witnesses have said. I have  
2 been here since ten o'clock in the morning, and I have heard  
3 everything that you gentlemen have heard, but I do feel that  
4 the issue of the water is just imperative to the survival of  
5 the people that are flocking into this area.

6 I sell real estate part time, so I know that  
7 people are coming in here in droves from the east and the  
8 middle west. I show them homes that are now being built with  
9 solar alternative apparatuses such as hot water. It is  
10 really hard to answer a question from a person who comes  
11 into this valley and says, the sun is shining, it is the  
12 middle of November, why isn't there more solar energy being  
13 developed here, and it is true what some of the other  
14 witnesses have said, I have experienced it first hand, when  
15 you have to answer a person's question as to why you people  
16 living in Arizona are not more further along developed with  
17 solar energy because you do have more sun than anyplace in  
18 the United States, and that is, you know, a question that  
19 I can't answer without going into an oration that the  
20 average home buyer doesn't want to hear at that time.

21 I think it is a moral issue. I would like to  
22 ask people who are in the audience that support nuclear power  
23 what are they doing here other than financial vested interest?  
24 I have no financial interest other than I do question every  
25 month when I get my power bill from APS, why when I try and

T12,3

1 conserve am I charged in a separate little category for not  
2 using so many kilowatt hours. I have always wanted to ask  
3 that. If anybody from APS has an answer for that, I would  
4 sure like to know about it, because I just paid my bill  
5 yesterday, but I think that it is a matter of financial and  
6 economic survival, and I think that, myself, I would rather  
7 pay for the next 20 years extra to know that my generation  
8 of children and their generation after them would have a  
9 place to live where they did not have to contend with the  
10 elephant out there at Buckeye, and I thank you, gentlemen,  
11 for hearing me, and I don't want to repeat what everyone  
12 else has said, but I thank you for the opportunity to speak  
13 before this commission.

14 JUDGE LAZO: Thank you, Mrs. Childs. Is Jill  
15 Morrison present?

16 MS. HOURIHAN: Jill had to go to the library, but  
17 she has a very well-prepared speech, and if she could make  
18 it when she got back, and I think she will be here before  
19 five o'clock.

20 JUDGE LAZO: Well, let us see where we are when  
21 she gets back. We seem to be getting near the end of the  
22 list, and let us just move ahead. John Stiegner?

23 MR. STEIGNER: Good afternoon, I would like to  
24 ask just one question today, and I would like to preface that  
25 question by reading a few entries from what I like to refer to



1 as the nukes and nukers do the darndest things file. I  
2 would like to preface my preface with a definition of a term  
3 which befits the atmosphere surrounding the inception, growth,  
4 and rapidly approaching death of the nuclear industry.

5 Atomic fairyland, definition one, a state of mind  
6 characterized by dauntless optimism in the face of bleakest  
7 reality, and populated by those whose duty is to solve on  
8 paper the many problems inherent in the generation of  
9 electricity and national security through the proliferation  
10 of nuclear power plants and weapons.

11 It was discovered that problems once considered  
12 grave could be resolved simply by A) adjusting figures to  
13 confirm predetermined desirable conclusions, B) disregarding  
14 often important but annoying factors such as human error,  
15 terrorist activities, civil unrest, and war, et cetera, and  
16 C), maintaining self-delusion, egomaniac self-confidence and  
17 blind faith in the reliability of appropriately adjusted  
18 figures.

19 Definition two, the primary informational source  
20 for government, industry, utility generated nuclear  
21 educational materials for the public.

22 In 1969, employees at the Genoa nuclear plant in  
23 Wisconsin became concerned about high levels of radioactivity  
24 in their drinking fountains. Investigations uncovered a  
25 hose connecting the drinking water system to a tank of

φ12, 5 1 radioactive waste. The Atomic Energy Commission concluded  
2 the coupling of the contamination system with a potable water  
3 system is considered poor practice in general.

4 In July, 1976, 83,000 gallons of radioactive water  
5 were spilled into the Connecticut River by the Vermont  
6 Yankee Plant due to a faulty valve.

7 19 November, 1971, the Northern States Power  
8 Company's Monticello Minnesota reactor, all the reactor's  
9 waste storage space was filled, and the company began spilling  
10 radioactive waste into the Mississippi River. By November  
11 19 -- 21st, about 50,000 gallons of wastes had been dumped  
12 into the river, and some were sucked into the domestic water  
13 intake for St. Paul before its gates could be closed.

14 5 June, 1970, Commonwealth Edison's Dresden 2  
15 nuclear plant in Morris, Illinois. The reactor went out of  
16 control for two hours after a meter gave a false signal, and  
17 according to people there, the monitor got its needle stuck.  
18 Radioactive iodine was released into the containment vessel  
19 at 100 times the permissible concentration. After the  
20 accident, the plant was closed for repairs, during which time  
21 it was discovered that there were problems with the emergency  
22 core cooling system.

23 The AEC's journal, Nuclear Safety, made this  
24 closing comment in its report of the accident. It is  
25 unfortunate that procedural, mechanical and control

T12,6  
1 inadequacies can be recognized only upon the occurrence of  
2 some incident that puts them to the real test.

3 15 November, 1981, Virginia Electric and Power  
4 Company's Surrey Nuclear Plant, an employee found a bag of  
5 marijuana on the Surrey control room floor. As many as 100  
6 workers had access to the control room and the company was not  
7 able to determine who was responsible for the marijuana.  
8 Guards complained that no control room workers were  
9 investigated during the probe.

10 The NRC also received reports that personnel have  
11 been drunk while on the premises.

12 19 March, 1982. The NRC declined to review a  
13 decision approving earthquake design standards for the  
14 Diablo Canyon plant in California. By a 3 to 2 vote the  
15 Commission left intact a ruling by the Atomic Safety and  
16 Licensing Board which approved seismic design alterations at  
17 the facility after a fault was discovered three miles offshore  
18 from the site. In a 10-page dissent Commissioners Golinsky  
19 and Bradford argued the NRC has allowed relaxations of  
20 earthquake standards at Diablo Canyon that come on top of a  
21 redesign that already has shaved safety margins to the extent  
22 permitted by the regulations. According to the dissent  
23 document, not only will questions remain about the seismic  
24 design, but the Board's decision will stand as an unfortunate  
25 precedent that will undermine application of the Commission's

1 regulations on seismic design.

2           During the year ending 30 June, 1974, the AEC  
3 found a total of 3,333 violations at the 1,288 nuclear  
4 facilities it inspected. The AEC imposed punishments for  
5 eight of these violations.

6           Recently, the NRC disclosed that 75 percent of the  
7 nation's steam generator nuclear plants are plagued with  
8 corroded tubing. On every occasion I have heard the problem  
9 discussed by the NRC director, Harold Denton, he has stated  
10 that a solution for the problem is being sought. Arizona  
11 Public Service Company is stating that Palo Verde will not  
12 have that problem because of the addition of a demineralization  
13 unit. I would like to suggest that APS let the rest of the  
14 industry in on its valuable discovery, or that the NRC look  
15 into the validity of APS' public statements.

16           With respect to APS's public statements, I  
17 attended last February a public seminar dealing with  
18 emergency procedures following a nuclear accident at Palo  
19 Verde. I listened unsurprised that APS's Gary Heffley told  
20 Buckeye residents they could drink primary coolant water.  
21 After all, Dixie Lee Ray apparently has acquired a taste for  
22 plutonium.

23           When he stated that anyone outside the ten-mile  
24 safety zone had nothing to worry about, I imagine signs  
25 tacked to posts all around that zone, by order of the NRC and

1 APS, radiation may not pass beyond this point. In case of  
2 any violation of this limit, the NRC, operating utilities, and  
3 anyone involved in the existence of Palo Verde will be  
4 protected to the fullest extent of the Price-Anderson Act.

5 The highest degree of APS BS surfaced as Mr.  
6 Heffley assured the audience of the unlikelihood of serious  
7 reactor accidents.

8 His staple public relations grin -- or with a  
9 staple public relations grin, he displayed slides of the  
10 refuted and worthless Rasmussen report, while declaring it  
11 to be officially sanctioned by the NRC. This was last  
12 February.

13 When I challenged the credibility of his figures,  
14 he readily admitted the source, but offered nothing more than  
15 the same grin, which brought to my mind the image of the  
16 often-referred to village idiot, a grin that told me that APS  
17 must stand for any profitable situation.

18 Arizona Public Service, along with all utilities  
19 involved in the construction of Palo Verde, and the Nuclear  
20 Regulatory Commission, acting in concern have conspired to  
21 circumvent the environmental impact statement requirements of  
22 42 USC 4332(2)(c) of the National Environmental Policy Act  
23 of 1969. The final environmental impact statement related to  
24 construction of Palo Verde Units 1, 2, and 3, in table 7.1,  
25 classification of postulated accidents and occurrences, states

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1 that hypothetical sequences of failures more severe than  
2 class eight are not considered, and reference is made to the  
3 refuted Rasmussen Report, Wash-1400, once again.

4 The Three Mile Island accident was more severe  
5 than Class Eight, and as a result thereof, its consequences  
6 must be considered as a condition precedent to the approval  
7 of the Environmental Impact Statement pertaining to Palo  
8 Verde. Such a review was not undertaken nor included.

9 Failure to comply with the requirements of NEPA is a major  
10 federal action significantly affecting the quality of the  
11 human environment within the meaning and prescription of the  
12 National Environmental Policy Act.

13 According to David Lilienthal, former chairman of  
14 the Atomic Energy Commission, quote, "Once a bright hope,  
15 shared by all mankind including myself, rash proliferation  
16 of atomic power plants has become one of the ugliest clouds  
17 overhanging America."

18 I would like to refer to here and just show you a  
19 copy of a collection of your computer printouts. These are  
20 printouts from four nuclear power plants in Illinois. This  
21 covers the year 1974 through April 23, 1979. This is 300  
22 pages, each page contains between four and six malfunctions.  
23 These are four nuclear power plants in Illinois, in one  
24 section of Illinois, this is region three.

25 In view of the preceding, and not to mention

1 Three Mile Island, West Valley, Rocky Flats, ad infinitum, my  
2 question is, why should we trust you and APS? I anticipated  
3 no answer, so may I submit that if I were in your position  
4 and I was asked that question, the only honest response I  
5 could make would be because I have no choice, because you  
6 have no choice, and thank you for this opportunity to speak,  
7 and regarding Palo Verde, no thank you.

8 JUDGE LAZO: Mr. Ron Hardert?

9 MR. HARDERT: I am Ron Hardert, and I wish to  
10 speak to the issue as a citizen. I hope I don't sound too  
11 tame after my friend John Steigner. I would like to put a  
12 little clout into what I have to say. I think part of the  
13 problem is I am suffering from what some of the others have  
14 suffered from, and that is that some of the things they wanted  
15 to say have been say, but there are a few things that have  
16 gone through my mind that possibly haven't been documented  
17 or said in quite the same way, or haven't been mentioned at  
18 all.

19 One with regard to nuclear economics, or the  
20 uneconomics of nuclear power, I don't know whether it has  
21 been mentioned today that the TMI plumbing problem so far is  
22 costing approximately \$1.3 billion, and it may go over \$2  
23 billion before it is completely cleaned up. At the same time,  
24 the Price-Anderson Act, which has been mentioned here, limits  
25 utility liability to \$560 per accident. I am sure the NRC

1 Commissioners know this, but maybe some of the people in the  
2 audience aren't completely aware of this.

3           Also, with regard to nuclear economics are going  
4 generally around the country, Amory Lovens, the Oxford-  
5 educated physicist who was in Phoenix recently said that  
6 because of the declining electrical usage demand around the  
7 country it might be -- it would be, not might be, it would be  
8 cheaper never to open Palo Verde at all, because it is going  
9 to cost more to keep it running and more to decommission it,  
10 than it is going to cost to build it, and the projections,  
11 the most recent projections for building the three units by  
12 1986, by the time the third one is completed, is something  
13 like \$4.3 billion, and with inflation, we know that it  
14 probably won't be \$4.3 billion. It might be more like five  
15 or six billion, with all the various cost overrides.

16           He suggests what some of the other people have  
17 mentioned, and that is just not opening Palo Verde at all,  
18 and switching over to renewable resources like solar and wind  
19 and biomass and some of these other things, which show a lot  
20 more promise in terms of health and getting around nuclear  
21 waste problems, and decommissioning problems, and all the rest.

22           With respect to decommissioning, I have some  
23 figures that suggest that the Elk River, Minnesota reactor,  
24 which as of January, 1982 was the only one in this country,  
25 the only nuclear plant completely dismantled, and it is a very



1 small one, cost for decommissioning something like \$6.15<sup>271</sup>  
2 million. The projections for Palo Verde 25 or 30 years down  
3 the line, in terms of costs of decommissioning, and this  
4 doesn't even take into account a relatively conservative  
5 inflation rate of seven percent, will be something between  
6 one and a half billion, possible and five to six billion  
7 dollars.

8 I wonder at that point in time, and those figures  
9 may be a little high, but I don't think so, because they come  
10 from several sources, at that point in time, I wonder if the  
11 utilities have in mind who intends to pay this four or five  
12 or however many billion dollars it is, and I have in mind  
13 that if the Commission decides to allow Palo Verde to be  
14 licensed, and to be built, that the people that are going to  
15 be paying that fortune for dismantling are going to be a lot  
16 of the people who are in this audience if we are still living  
17 here, in other words, the ratepayers, and as we find out more  
18 about decommissioning, we are learning that decommissioning  
19 is not going to be a simple matter.

20 For a while it was thought that these plants could  
21 be decommissioned by burying them and enshrouding them in  
22 concrete, and now what we are finding is, that is not the  
23 way it is going to be at all, because of some long-lived  
24 isotopes that are leaching through the concrete, and we are  
25 now told that decommissioning is going to involve a complete

1 dismantling of the plants, and burial, at a same time when  
2 we don't seem to even have permanent storage for low-level  
3 wastes in this country, much less permanent storage for high  
4 level wastes, and we have been working on this for 25 years,  
5 still no solution to that waste storage problem. I haven't  
6 heard that brought up too much since 2:00 o'clock this  
7 afternoon, and I thought that was worth throwing in.

8           A couple of other specific concerns, and then I  
9 will give someone else a chance. It is hard to put a price  
10 tag on human life, and I think a bigger concern, in spite of  
11 the fact that I have mentioned the rising economic costs of  
12 nuclear power plants, I think a bigger concern are these  
13 enduring medical questions about the rates of cancer above  
14 a normal background death rates for miners, due to inhaling  
15 radon gas and then dying of lung cancer 15 or 20 years down  
16 the line, some of the recent revelations about some kinds of  
17 biological disorders, defects among children who have played  
18 in mill talings and been in these mining areas, I think these  
19 long-range concerns about the medical consequences of the  
20 fuel cycle, and what this means to civilization, and our  
21 progeny, is something that we need to take into account, that  
22 we are not stressing nearly enough.

23           Along the lines of the business of having  
24 accidents and so forth, I don't think I have to remind too  
25 many people in the audience that there is no satisfactory

1 evacuation plans for the Phoenix metropolitan area in case of  
2 an accident along the lines of Three Mile Island, and I can't  
3 see how the NRC Commissioners will allow a plant to be  
4 licensed knowing that in the background we really don't have  
5 an adequate procedure for evacuating people in case of a  
6 partial meltdown or a total meltdown.

7           With respect to water, and I will wind it up, I  
8 guess, with water, because water has been stressed quite a bit  
9 here this afternoon, one thing that hasn't been mentioned is  
10 a study, recent study out of the University of Arizona, which  
11 suggests that when you divert sewer effluent in the Phoenix  
12 area, you are not only losing water per se. What you are  
13 losing is sewer effluent that can be used and has been used  
14 for fertilizing agriculture, for crops, and one of the things  
15 we know about that particular fertilized water is of course  
16 you get higher crop yields, so what happens is to make up  
17 for the loss in crop yields due to diverting the fertilized  
18 sewer effluent, and using water that is pumped out of the  
19 ground, regular ground water, is that you lose something  
20 like almost \$2 million a year in the Phoenix metropolitan  
21 area when you multiply 60,000 acre-feet, which is approximately  
22 what the three units at Palo Verde will use once they all get  
23 rolling -- if we had had the five units, it would have been  
24 105,000 acre-feet a year. Now it is going to be 60,000,  
25 roughly 60,000 acre-feet a year, when you multiply the 60,000

1 times 33 gallons of gasoline equivalent to do all that extra  
2 pumping to make up for the loss of nutrients that would be  
3 used on those crops as you shift that sewer effluent over to  
4 cooling Palo Verde, you are talking about a \$1.8 million loss  
5 just at that point, in terms of using sewer effluent.

6 So those are some of my specific concerns. All I  
7 can say is that I feel that the nuclearization of Arizona,  
8 in terms of what Palo Verde will mean to this valley in  
9 terms of possible health consequences and safety consequences  
10 and environmental consequences, are something that I hope you  
11 will take in mind when you make your very important decision.

12 JUDGE LAZO: Thank you. Now, we have Jay  
13 Cischke. Is Mr. Cischke present?

14 MR. CISCHKE: My name is JAY Cischke, and I am  
15 a student in Mesa. There has been a lot of things brought  
16 up about practically everything. I am going to try to cover  
17 the things that I feel are important that are kind of being  
18 passed over.

19 First off, there is a Mayor from Buckeye who came  
20 in, and was very interested in the nuclear plant being used  
21 by Arizona, when in fact, only about 20 percent is going to be  
22 used, he seemed like, this is the greatest thing that ever  
23 came to Arizona because now we have energy. It doesn't make  
24 sense.

25 Stump representative, who made the point that the

1 nuclear is going to take care of OPEC and this oil dependency  
2 that we are into, but the point that she kind of alluded  
3 around was, who is saying oil? Who is saying coal? You know,  
4 there is -- this alcohol that -- that we haven't even really  
5 studied for cars, hydrogen, which they have developed, but  
6 she seemed so -- either it is oil or coal, or it is nuclear,  
7 you know. That is pretty close-minded, I think.

8 Things I wanted to bring up were, because when  
9 Palo Verde goes on line, we are going to also be receiving  
10 waste from other states. That is nice. There is one thing  
11 that I have wroten (sic), and I would like to read it. To  
12 trust an energy that is proven to make mistakes, to trust  
13 energy built by hands that have been proven to make mistakes,  
14 is a mistake.

15 The men now around here are talking of remote  
16 possibility of accidents, or the remote possibility of not  
17 having enough water, or the remote possibility of when they  
18 have proven mistakes in other country, and other states,  
19 there is a time, you know, in Arizona, when they talked of  
20 very very remote possibility of growth, because it is too hot  
21 of a climate, people can't come here, because who can live in  
22 the desert? Well, now it is the fastest growing state, so it  
23 is pretty ironic that the remote possibility of nuclear  
24 accident could just be the day they open it up. They are not  
25 really too sure.

1                    Let us see, should we trust a big radiating <sup>276</sup> white  
2 elephant in the desert? Nuclear power doesn't supply our air,  
3 doesn't supply food, doesn't supply my friends or my family.  
4 Doesn't supply my life. How can I trust it? Our planet,  
5 without our sun, would not be a planet, we wouldn't be  
6 surviving. It seemed like everybody when they woke up  
7 trusted the sun to be there. They didn't wake up to think,  
8 well, maybe the sun is not going to be here today, because it  
9 was. We knew it was.

10                    The sun keeps our planet growing with food. It  
11 is basically -- in Arizona can't understand why we would go  
12 to any extreme of setting up a nuclear plant when the sun  
13 shines approximately 330 days, I have lived here most of my  
14 life, and it just doesn't make sense.

15                    The sun is -- keeps our planet growing, where  
16 nuclear power seems like it wants to get it glowing, and let  
17 us trust our sole thing that our planet really depends on,  
18 because, without the planet, or without the sun we wouldn't  
19 have all these nuclear propaganda things going on, because  
20 we wouldn't be around, so if we could put more of our energy,  
21 maybe a tenth of the money that they are putting into  
22 nuclear, if they put it into developing these alternatives,  
23 where they have got tax cuts now, because of what Reagan is  
24 setting up for solar, it is making it really hard for business  
25 people to get into it, and other people to try to develop

1 solar and other things, because there is no incentive. There  
2 is no real reason to want to go to alternative means. Thank  
3 you.

4 JUDGE LAZO: Thank you, Mr. Cischke. Deborah Getz,  
5 is Deborah --

6 MS. WILLIAMS: This morning I was number 13 on the  
7 list to speak.

8 JUDGE LAZO: I am sorry?

9 MS. WILLIAMS: This morning, I was number 13 on  
10 the list to speak, and I would like to know what number am I  
11 now?

12 JUDGE LAZO: You are Jerry Steigler?

13 MS. WILLIAMS: No, I am Elaine Williams.

14 JUDGE LAZO: You are number 14 on the list, and  
15 that looks like third. Do you have to leave?

16 MS. WILLIAMS: No.

17 JUDGE LAZO: No. Deborah Getz, please?

18 MS. GETZ: You know, it has been a long time, I  
19 just have a brief statement. Since you ask for opinions from  
20 the general public, and specifically people here in Phoenix,  
21 I just brought one more voice to say that I am not willing to  
22 take the risk of -- I don't want to take the risk of Palo  
23 Verde, of cancer, of radiation sickness, or genetic mutations.  
24 Thank you.

25 JUDGE LAZO: Thank you.

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1 JUDGE LAZO: Jerry Steigler, please. Is Jerry  
2 Steigler present in the courtroom? Well, then Elaine  
3 Williams, please.

4 MS. WILLIAMS: First, for the people who were  
5 worried about solar cells, they don't have to worry about  
6 those. They've already been invented. There's a company  
7 in Detroit, Michigan, called Energy Conversion Devices,  
8 who, in joint partnership with SOHIO and Arco Solo, which  
9 is a subsidiary of Atlantic Richfield are already spending  
10 \$50 to 100 million this year for the mass production of  
11 solar cells. The solar cells are one foot square. They  
12 look a lot like mirror tiles that you stick on the wall.  
13 They have already completed a machine which is capable of  
14 producing 350 megawatts of this material per year. That's  
15 only one machine. If they produce one machine that can do  
16 that, they can certainly produce a great many more. And  
17 that's 350 megawatts per year of permanent electricity,  
18 not electricity that we have to regenerate everyday,  
19 electricity from sunshine which strikes the cells and turns  
20 straight into electricity. So no need to worry about the  
21 solar cells. The oil companies are investing in those now.

22 Also, one thing that struck me today that's  
23 just a beside the point, but I can't help wondering what  
24 those video game machines are doing here.

25 JUDGE LAZO: I can only surmize that they are



1 exhibits in a federal court trial.

2 MS. WILLIAMS: Well, Pac Man, I know, has been  
3 guilty of a lot of crimes.

4 MR. REIS: Mr. Chairman, I think it was a  
5 patent infringement suit or a copywrite suit. They're suing  
6 a competing game.

7 JUDGE LAZO: Very likely.

8 MS. WILLIAMS: That would be interesting to  
9 watch that.

10 Another parenthetical remark I have before I  
11 get to my prepared statement is this remark made by Sir  
12 Josiah Stamp, tax collector, England, 18th Century. "The  
13 government is very fond of masking statistics, raising them  
14 to the nth power and taking the cube root. But you must  
15 never forget that these statistics were collected in the  
16 first instance by the village idiot. Now, I'm not sure  
17 if that's the same village idiot referred to earlier. I  
18 didn't collaborate on the village idiot remark.

19 Now, to my prepared statement. The State of  
20 Arizona now proposes to operate a nuclear dump in an  
21 inhabited area not far from Phoenix. Ironically, the name  
22 of the proposed site is Rainbow Valley. Over the past  
23 30 years, many men have chased the rainbow of promise,  
24 which nuclear power seemed to have. In the beginning,  
25 mainly scientists acting in good faith for the hope for a

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1 benefit of mankind. After awhile, businessmen were attracted  
2 to nuclear power, but for different reasons. At the end  
3 of their rainbow, they saw profits and power. The bank-  
4 ruptcy of both these fantasies is now in the public record  
5 in newspapers and magazines, books, films, and business  
6 and government filing cabinets all across the country.

7           Until today, beyond dispute by any reasonable  
8 human being, nuclear power has proved to be not a blessing,  
9 but a curse to humanity, while the businessman's dreams  
10 of profits and power diminish toward infinity into a  
11 bottomless pit of insolvency. We all know that most of  
12 the laws, rules, regulations and programs of the government  
13 are invented by businessmen and politicians for the  
14 benefit of businessmen and politicians. And for 30 years,  
15 the public treasury has supported nuclear power to the vast  
16 enrichment of a few.

17           We meet here today at what has been called.  
18 The word "hearing" means that at least two opposing sides  
19 to the question at hand shall be listened and judged  
20 impartially. The Nuclear Regulatory Commission has ruled  
21 out in advance any discussion of financial issues, saying  
22 that they can see no connection between financial issues  
23 and safety issues. A simple analogy will suffice to clear  
24 up this inability on the part of the NRC to see the  
25 connection and to dismiss this restriction from this

1 hearing.

2 If your car has faulty brakes and worn out  
3 tires and you have no money for repairs and replacements,  
4 then it is obvious that your risk in driving the car is  
5 substantially increased.

6 The NRC has also ruled that we must speak of  
7 Palo Verde in the particular and make no reference to the  
8 generic class, nuclear power plants. A simple analogy will  
9 also suffice here to show the suspiciousness of this  
10 argument and dismiss it from the consideration of any  
11 rational human. If we wish to define and understand what  
12 a dinosaur named Paul is and we are restricted to making  
13 such statements as, Paul is green, very large and has  
14 a long tail, but we are not allowed to make any reference  
15 to the fact that Paul is a dinosaur, then our definition  
16 and our understanding must be severely restricted. This  
17 restriction does not exist in any science. Reasoning  
18 proceeds from the general class to the specific and back.  
19 Given this restriction, the science of logic itself could  
20 not exist.

21 Since the Nuclear Regulatory Commission has,  
22 in advance of this hearing, repealed the laws of economics  
23 and the laws of reason itself, this is no hearing. This  
24 is a farce. The issues have all been debated in great  
25 detail and the records everywhere testify to the insanity

1 of operating a nuclear reactor anywhere on the face of the  
2 earth. How can we account for this insanity on so large of  
3 scale over so long a period of time by so many? Two  
4 quotations can account for it. "That which men hope for  
5 earnestly, they believe easily," and "He who will not reason  
6 is a bigot. He who cannot is a fool. And he who dares not  
7 is a slave."

8 Arizona Public Service and Salt River Project  
9 are currently resorting to desperation measures to stave  
10 off bankruptcy. After hearing workers at Palo Verde express  
11 their opinion that layoffs at the site were due to the  
12 fact that APS had no money to pay the workers, and after  
13 having a \$70 charge for a security deposit appear on my  
14 utility bill from SRP, called SRP and talked to a man in  
15 their financial department. Parenthetically here, I know  
16 people who work at Palo Verde, people in the unions who did  
17 the actual hands-on work on the metal and the concrete,  
18 and they think it is utterly atrocious and ridiculous to  
19 try to run Palo Verde 1. They said maybe Unit 2, once they  
20 get that done, because they've already made all the mistakes  
21 on 1. Also, very notoriously, a great percentage of  
22 construction workers do smoke marijuana and drink. And I  
23 have heard people who work at Palo Verde say that they have  
24 been stoned on the job.

25 Back to the SRP bill. This man in the financial

1 department told me that the security deposit had been  
2 instituted as a result of many people moving away without  
3 paying their utility bill. When I protested that security  
4 deposits had never before been required of people who owned  
5 their homes, he replied that a surprisingly large number  
6 of people who owned their own homes were also just moving  
7 away and leaving their utility bills unpaid due to the bad  
8 shape the economy is in. I asked him if he expected that  
9 charging more money would improve the situation any. I  
10 told him that I thought that APS and SRP must be in great  
11 need of money to pay for Palo Verde. He said that he had  
12 heard the same thing about APS, but that SRP wasn't having  
13 any cash flow problems.

14 A couple of weeks later, my sister told me that  
15 she had been charged a \$60 security deposit by SRP and  
16 that she had paid it. Only a few days ago, an SRP employee  
17 showed up at her house to collect an additional \$20 for  
18 security deposit, plus \$10 to pay for the privilege of  
19 having him come to the house to collect the \$20. When she  
20 called to protest that she had already paid the security  
21 deposit, she was told, well, that was last month when they  
22 had determined that the security deposit would be \$60,  
23 but now this month, they decided that it should've been  
24 \$80, so she had to pay \$20 more.

25 When SRP sends employees out to people's homes

t13-7

1 to collect as little as \$20 instead of waiting to put the  
2 charge on the next month's bill, then I think SRP must be  
3 desperate for cash. The SRP employee I spoke with told me  
4 that we were lucky here in Arizona since electricity rates  
5 were twice as high in the East, that while APS might be  
6 having trouble paying for the construction of Palo Verde,  
7 once Unit 1 went on line, they would be making all kinds of  
8 money since only a small amount of fuel produced such a  
9 large amount of electricity, that he in fact had some APS  
10 stock and was looking forward to making a lot of profit on  
11 it.

12 I said, you just told me that electricity rates  
13 were twice as high in the East; I have a question for  
14 you: Where are most of the nuclear reactors in the  
15 United States. After an uncomfortable silence, he implied,  
16 in the East. I assumed from this position that this man  
17 probably had degrees in accounting or economics, yet he  
18 had been incapable up to that point of adding up two and two  
19 for himself. His hope for profits blinded him to anything  
20 that did not add up to profits.

21 Earlier this year, the Tennessee Valley  
22 Authority abandoned a nuclear project of about the same  
23 size and stage of completion as the Palo Verde project,  
24 citing grossly greater costs than projected and far less  
25 growth in the use of electricity than projected. Evidently,

t13-8

1 APS and its partners believe they are exempt from the  
2 laws of economics and the law of supply and demand. In  
3 the face of overwhelming evidence that the best thing APS  
4 could do with Palo Verde is to abandon it, why haven't they.  
5 Taking a look at the history of one nuclear utility and  
6 quoting from a source of information which cannot be  
7 dismissed as antinuclear proganda, that is, the 1981 Report  
8 to the Stockholders of the General Public Utilities  
9 Corporation, we can see both here the futility of building  
10 nuclear reactors and also gain some insight into why some  
11 utilities persist in building them anyway.

12                   General Public Utilities Corporation owns  
13 Three Mile Island and a monopoly in the supply of electricity  
14 for half the State of Pennsylvania and half the State of  
15 New Jersey. Reading their 1981 annual report, we find  
16 that General Public Utilities owns three nuclear reactors,  
17 TMI 1, TMI 2, and Oyster Creek. TMI 2 has been shut down  
18 since the accident of '79.

19                   JUDGE LAZO: Ms. Williams, you're --

20                   MS. WILLIAMS: I'm getting too close?

21                   JUDGE LAZO: No, no. But you're overrunning  
22 your time quite a little bit.

23                   MS. WILLIAMS: I don't really think I'm running  
24 too much longer than a whole lot of other speakers. Okay.  
25 I will just get to the conclusion, the summary that I have

t13-9

1 on that. I could read you the quotes from the report, but  
2 you can get the report for yourself. Believe me, they're  
3 in there. I will get to the summary on TMI 3.

4 In summary of the three nuclear reactors owned  
5 by General Public Utilities, TMI 2 had an accident of  
6 monumental proportions and has been shut down for three  
7 years. TMI 1 has been shut down for three years. It has  
8 steam tube leaks and they don't know if they're ever going  
9 to be able to open it again. Oyster Creek was shut down  
10 for most of the year of 1981, and in the three-year period  
11 from 1982 to 1985. It will be operable for one year out of  
12 the three at best.

13 In addition to the three reactors completed by  
14 General Public Utilities, a fourth reactor called Forked  
15 River was under construction. Quoting from the annual  
16 report in November of 1980, they've abandoned it and they'd  
17 already spent \$413.7 billion on it. They are suing the  
18 NRC for \$4 billion for negligence, saying that it's the  
19 NRC's fault that TMI 2 happened. How much money has  
20 General Public Utilities on three and one half nuclear  
21 reactors? Two to three billion dollars. How much more  
22 money do they expect to spend on nuclear reactors? The  
23 bill for the cleanup of TMI 2 is estimated at \$1 billion  
24 and there are no estimates for the cost of modifying TMI 1  
25 and Oyster Creek.



1 I believe that General Public Utilities, after  
2 spending roughly \$4 billion on three and one half nuclear  
3 reactors will end up with three permanently shut down  
4 nuclear reactors worth nothing, worse than nothing since  
5 the reactors will remain a radioactive hazzard and a source  
6 of further expense. How does General Public Utilities  
7 expect to pay the \$4 billion bill for their monumental  
8 mistakes and worse than worthless purchases? They have  
9 several angles going on that. First, with past, current  
10 and future rate increases, they expect the citizens of  
11 Pennsylvania and New Jersey to pay part of the bill. The  
12 public treasuries of the States of Pennsylvania and New  
13 Jersey have been tapped to pay part of the bill. The public  
14 treasury of the federal government has been tapped to pay  
15 part of the bill. And all the members of the Nuclear  
16 Industry Trade Association, including APS and SRP, which  
17 means you and I, have been tapped to pay part of the bill.

18 Second, quoting from the 1981 Annual Report,  
19 General Public Utilities is moving forward with its law  
20 suits against the United States Government, the NRC, and  
21 Babcock and Wilcox, supplier of the nuclear steam system  
22 for \$4 billion against both of them. Unless J. Ray  
23 McDermotts, Babcock and Wilcox, pay the \$4 billion bill,  
24 all the citizens of the United States, through rate increases  
25 and taxes will. How did it happen that we must pay \$4

tl3-11

1 billion for purchases worth less than nothing? Who was  
2 responsible?

3 Quoting from General Public Utilities 1981  
4 Annual Report, under the heading "Investigations" on page 23,  
5 On October 30th, 1979, the President's Committee-Commission  
6 on the Accident at Three Mile Island issued it's report.  
7 The report states in part that its investigation has  
8 revealed problems with the system that manufacturers  
9 operates and regulates nuclear power plants. In the  
10 shortcomings which turned the accident into a serious  
11 accident -- incident into an accident -- are attributable  
12 to the utility, to suppliers of equipment and to the NRC.  
13 The NRC's special inquiry group, Rogovin, the United States  
14 Senate Subcommittee on Nuclear Regulation, the hard  
15 committee, issued the results of their investigation of the  
16 accident. Their conclusions with respect to these matters  
17 were similar to those of the Committee-Commission.

18 There we have it. The executive branch of  
19 the federal government, the legislative branch of the  
20 federal government, and the Nuclear Regulatory Commission  
21 itself unanimously found that the Nuclear Regulatory  
22 Commission, nuclear manufacturers and nuclear utilities  
23 to be at fault and responsible. Three unanimous verdicts  
24 that everything which goes to make up the nuclear, from  
25 the metal to the management, is faulty.

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We are here today ludicrously met before a self indicted member of this system so that the NRC may determine if it should provide for the continuation of that monstrous system of which it is a part. Why? Why does the NRC conduct this farce of holding a hearing? Why does APS, SRP persist in the desire to operate Palo Verde in the face of overwhelming evidence that there's no profit in it, that there are currently insurmountable problems with every aspect of running a nuclear power plant, and that it produces poisons deadly to all living things? A couple of more quotes from General Public Utilities Annual Report will give us the idea. On page 6, they say --

JUDGE LAZO: Ms. Williams, I must insist --

MS. WILLIAMS: That they think it is unfair to the stockholders -- I have -- that's all I have left.

JUDGE LAZO: If you can complete it in five minutes, you may.

MS. WILLIAMS: Excuse me.

JUDGE LAZO: If you can complete it in five minutes, you may.

MS. WILLIAMS: I can complete it in five minutes. They say that the regulatory treatment they have been given has placed an inordinate and unfair portion of the financial burden of the accident on General Public Utilities stockholders. And on page 20, management believes that any loss

t13-13 1 suffered for which they do not receive financial assistance  
2 or reimbursement from suppliers or others, should be  
3 recoverable in rates.

4           There we have it. Management believes that it  
5 is unfair to them and to their stockholders and investors  
6 to suffer any losses. They believe that all losses should  
7 be covered by customers and the public treasury. Management  
8 believes in welfare for the rich and free enterprise for the  
9 poor. Management believes that investors who have more than  
10 enough money to cover the necessities of life should have  
11 their gambling debts covered by those who have barely  
12 enough or less than enough to cover the necessities of life.  
13 This is robbery pure and simple.

14           Why has APS, SRP persisted in the construction  
15 and the desire to operate Palo Verde? Because it doesn't  
16 matter what they build and it doesn't matter what they  
17 operate. It doesn't even matter that generation of electri-  
18 city with nuclear reactors is not a money-making proposition.  
19 It doesn't matter what they sale if we have no choice but  
20 to buy it. It doesn't matter how they operate if we have  
21 to guarantee them a profit. If the government gave a local  
22 company a monopoly on the supply of food and in the  
23 beginning the local company simply supplied the food at  
24 a reasonable price, then after a number of years the new  
25 management of the company realized that the public would

1 have to buy anything the company wanted to sell, then that  
2 company could require any customer who wished to buy good  
3 food also to pay for an additional quantity of worthless  
4 magot meet fit only to contaminate garbage cans. APS, SRP's  
5 current generating capacity is the good electricity. Palo  
6 Verde is the worthless magot meet.

7           Senator Barry Goldwater has recently coined and  
8 circulated in the public realm an apt and straightforward  
9 phrase, "pigging out at the public trough," in reference to  
10 defense contractors. With the nuclear industry, the defense  
11 industry, indeed most of the large corporations and the  
12 federal bureaucracy all pigging out at the public trough  
13 for so many years, when does the public trough become empty?  
14 It should be obvious that it is empty now when the banquet  
15 is over. APS, SRP still believe that the public trough  
16 will pay for the farcical operation of Palo Verde. It won't.  
17 All the traffic will bear has borne all it can. It is  
18 only possible to rob money from people for as long as they  
19 have the money to rob.

20           To the management of APS, SRP, I say, it is not  
21 even in your own best interest to operate Palo Verde since  
22 the public cannot pay for it. And I have more respect for  
23 the prostitutes on East Van Buren Street in Phoenix,  
24 Arizona than I have for you. The prostitutes customers  
25 have at least chosen of their own free will to buy the

t13-15

1 commodity being sold. And the prostitutes at least give  
2 their customers something of value for their money.

3 To any remaining supporters of nuclear power,  
4 I say, does any human being really hope to find a nuclear  
5 dump at the end of the rainbow? It is the simple joys  
6 of life that last, rainbows, children playing, the feel of  
7 the wind against your face. If the day ever comes when the  
8 sight of a rainbow is to remind me of a nuclear waste dump  
9 or watching my children play, I must fear that the wind  
10 blowing against their faces come from Rainbow Valley, then  
11 I will have great cause to damn you for all that you have  
12 robbed me of. In the conditions here today, it is my place  
13 and my responsibility to damn you all for what you have  
14 already done. In the ultimate and universal sense, it is  
15 not my place to damn you to hell for all eternity, but I  
16 greatly fear that God will.

17 I ask the Nuclear Regulatory Commission Hearing  
18 Officers to deny the request for license to operate Palo  
19 Verde and to refuse to reconsider that decision for a  
20 minimum of 10 years, the very least amount of time in which  
21 it could be possible for the nuclear system to solve the  
22 problems and begin to clean up the mess it has made.

23 JUDGE LAZO: Thank you. We'll take our mid-  
24 afternoon recess at this time, 15 minutes please.

25 (Whereupon, a short recess was taken.)

1 JUDGE LAZO: The hearing will come to order,  
2 please. We have a few more names on the list, members  
3 of the public who have requested to make limited appear-  
4 ances. There may be others of you out there who have  
5 not signed up and we will want to check for that. The  
6 next time I have on our list is Nona Eldridge. How  
7 about John S. Shafer?

8 MR. GEHR: Mr. Chairman, Mr. Shafer told  
9 me during this recess that other commitments prevented  
10 him from staying past 4 o'clock. Mr. Shafer is counsel  
11 for the Buckeye irrigation district and the Buckeye  
12 Water and Conservation District Company, I believe it  
13 is, Buckeye Irrigation Company and the Buckeye Water  
14 and Conservation District.

15 JUDGE LAZO: Does he desire to return on  
16 another date?

17 MR. GEHR: He would like to return tomorrow  
18 morning and intends to return tomorrow morning and would  
19 like to make a statement at that time. It will be  
20 on the subject of the the hearing on water and effluent.

21 JUDGE LAZO: Mr. Harry Brown? Is Mr. Brown  
22 here? Hearing no response, I will assume that Mr. Brown  
23 had to leave. Yes, ma'am?

24 MS. MEYERS: My name is Carol Meyers. Three  
25 years ago I was living about 100 miles from the Three

1 Mile Island Plant. For the last year and a half I've  
2 lived in Arizona and am now living in Tucson, approxi-  
3 mately 100 miles from the Palo Verde Nuclear Power Plants.

4 Three years ago I had my bags packed and  
5 was planning evacuation with others. The accident at  
6 the Three Mile Island plant caused me to experience  
7 a fear unknown to me before that time. This fear hasn't  
8 left me. Rather it is a fear that has caused me to  
9 educate myself and others to ask questions and to organize  
10 with others rallying against nuclear power. My fears  
11 have only multiplied by what I've learned over the past  
12 three years.

13 Right now with others, I'm asking questions  
14 about the Palo Verde Nuclear Power Plants. We want  
15 to know how much money these nuclear power plants are  
16 really going to cost and who is going to pay for them.

17 We want to know if the construction has been and will  
18 be done adequately at those plants to provide safety  
19 for the workers there and for the people living in Arizona  
20 and if there is going to be enough money to decommission  
21 this plant in another 25 years or are we going to will  
22 this nuclear nightmare to our children. Will there  
23 be enough water to cool the plants when already we know  
24 that the Palo Verde power plants are supposed to be  
25 using as much water as the whole city of Tucson? What



1 will happen when the communities and the farmers in  
2 the Phoenix area demand their Salt River Project water  
3 back? Who is going to cool the soaring temperatures  
4 at the Palo Verde Nuclear Power Plants and what about  
5 the waste? None of the other 72 plants have found an  
6 answer to all the nuclear garbage that they've created  
7 over the past years. Does APS have a solution that  
8 we don't know about?

9           There is also the question of vandalism  
10 and terrorism. Are there evacuation plans for the local  
11 areas and for the Phoenix areas? We have so many ques-  
12 tions and yet there are no clear answers that we are  
13 getting back so right now on the part of myself and  
14 on the behalf of friends in Tucson and the Cortes Junction  
15 area and across the country, and is well on the behalf  
16 of all those who have never experienced the fear that  
17 pushed me to search out the facts about nuclear power  
18 and in not having known that fear and these facts are  
19 not here, I urge and demand you that the request for  
20 the licensing of the Palo Verde Nuclear Power Plants  
21 be refused. Thank you.

22           JUDGE LAZO: Thank you, Ms. Meyers. Are  
23 there any others, Mr. Gehr?

24           MR. GEHR: There are at least two others  
25 from the Phoenix Chamber of Commerce and the Arizona

1 Chamber of Commerce.

2 JUDGE LAZO: Who are present here now?

3 MR. GEHR: Yes, sir.

4 JUDGE LAZO: Yes, well, do you want -- let  
5 me call for these persons to come forward then, please  
6 and identify themselves to the Court Reporter.

7 MR. TROUST: My name is Terry Troust. I'm  
8 with the Phoenix Metropolitan Chamber of Commerce.  
9 And, I'd like to thank the Committee for allowing me  
10 this opportunity to make brief comments. As Chief Econo-  
11 mist for the Phoenix Chamber of Commerce I have watched  
12 with particular interest the economic benefits the Phoenix  
13 area has derived and will continue to derive from the  
14 Palo Verde Nuclear Generating Station. The hundreds  
15 of millions of dollars spent during the construction  
16 phase for the supplies, materials and payrolls have  
17 multiplied its way through the valley's economy. It  
18 has provided employment for literally thousands of skilled  
19 construction workers, persons who in a recession economy  
20 such as ours would have been hard pressed to find employ-  
21 ment. Today, the construction phase is winding down  
22 and the real benefits of Palo Verde are about to be  
23 realized. The Palo Verde Nuclear Generating Station  
24 will provide Phoenix and the valley with the energy  
25 we need to continue the kind of lifestyle we enjoy.

1       Its generating capacity is imperative to meet the in-  
2       creasing electricity requirements that a growth area  
3       such as Phoenix demands. In addition, Palo Verde will  
4       be the utilization of a resource that is currently being  
5       wasted, sewage effluent purchased from six valley commu-  
6       nities, the 20 to 30 dollar per acre foot contract price  
7       should help stabilize the waste water service fees levied  
8       in those communities. Your deliberations on the licensing  
9       of Palo Verde must be made with all due speed. Continuing  
10      high interest rates will inflate the generating station's  
11      capital investment price tags which will only translate  
12      itself into higher electric rates. However, all due  
13      speed must not be confused with rush. You gentlemen  
14      must weigh the economic factors with the equally important  
15      considerations of safety. However, I am confident the  
16      Palo Verde nuclear generating station will be a reliable  
17      source of reasonably priced electric energy for Phoenix  
18      and the valley. For these reasons, the Phoenix Chamber  
19      of Commerce supports the licensing of units 1, 2, and  
20      3 of the Palo Verde nuclear generating station. Thank  
21      you.

22                   JUDGE LAZO: Thank you, Mr. Troust.

23                   MR. JACQUIN: Members of the committee,  
24      I'm William C. Jacquin, president of the Arizona Chamber  
25      of Commerce. I'd like to thank you for the opportunity

1 to make a limited appearance and make a quick statement,  
2 hopefully not in repetition of other respondents to  
3 this hearing.

4 Arizona is one of the fastest growing states  
5 in this nation; more and more businesses are moving  
6 into the Phoenix area and they are bringing hundreds  
7 of families with them. In the last decade, this popula-  
8 tion has increased by approximately a million people.

9 The Arizona Chamber recognizes that the Palo Verde  
10 Nuclear Generating Station will help provide those busi-  
11 nesses with the energy they need and in keeping the  
12 Arizona business environment healthy and encourage a  
13 healthy economic climate. Such is mandatory in a growth  
14 state. It is mandatory that jobs in the marketplace  
15 be available for the many families and the key people  
16 moving to this state. To maintain also the revenue  
17 base of a state in a growth position for those services  
18 demanded by our population and our community at large  
19 as a state as a whole.

20 Certainly the Arizona Chamber and also a  
21 self-incorporated entity, the Small Business Council  
22 of Arizona have reviewed since the beginning of the  
23 Palo Verde Project that progress -- we have sponsored  
24 tours that had our members review and go to the site  
25 and look at this project which has employed in its peak

1 over 7800 workers, a payroll of some \$1.3 billion which  
2 I believe we can safely assume as large portion of those  
3 dollars were spent within the State. In addition, some  
4 765 million being spent for the purchase of materials  
5 and supplies. The assessed value of this property in  
6 itself is estimated at some 1.7 billion, approximately  
7 one-fifth of the total value of assessed valuation in  
8 the entire state.

9 The plant will be continued to be a vital  
10 contributor to our Arizona lifestyle and we view the  
11 facility as a sound investment for our future, a necessary  
12 viable alternative. I support the licensing of these  
13 three units, the Palo Verde west of Phoenix. The Arizona  
14 Chamber has a long history which I have noted and continues  
15 to support that and I urge your favorable consideration  
16 and approval for such licensing. Thank you for this  
17 appearance.

18 JUDGE LAZO: Thank you, Mr. Jacquin.

19 Yes, sir?

20 MR. STANLEY: My name is Lee Stanley and  
21 I've been a resident of this desert for over 30 years  
22 and I have prepared about ten minutes worth of speech  
23 here but I think it's all been said today, at least  
24 once or twice so I'd just like to make an observation.  
25 I'm wondering how many anti-nuclear people here were

1 paid to come with the exception possibly of the Interven-  
2 tion lawyer who was brought here by funds from a yard  
3 sale. I'm also wondering if there are any pro-nuclear  
4 people who are here without being paid for it or being  
5 paid by Palo Verde or have some financial interest in  
6 the nuclear issue?

7 It seems one side votes with the heart and  
8 the other side votes with the pocket book. I wonder  
9 if it's going to be a close race. Thank you.

10 JUDGE LAZO: Thank you, Mr. Stanley. Are  
11 there any other members of the public? Yes, sir?

12 MR. MARTIN: Good afternoon. My name is  
13 W.D. Martin.

14 JUDGE LAZO: Good afternoon, Mr. Martin.

15 MR. MARTIN: First off, I'd like to start  
16 off with asking a question. Why is it that you would  
17 rather use nuclear energy as opposed to magnetic energy  
18 when the latter is without a doubt the most abundant  
19 in the universe as well as a more domestic form. Can  
20 I get an answer to that, anybody? You don't seem to  
21 know about magnetics. Okay, well, I have here an article  
22 entitled -- where is it from -- technology Discover  
23 Magazine. Faster than a speeding bullet. Limited only  
24 by the speed of light this radical new gun has both  
25 applications for both war and peace. The fastest gun

1 in the West, in fact, the fastest gun anywhere is found  
2 at Los Alamos Scientific Laboratory in New Mexico.  
3 Researchers there working with colleagues from California's  
4 Lawrence Livermore Laboratory have fired plastic projectiles  
5 at velocities more than 23,000 mph. That is ten times  
6 as fast as the muzzled velocity of the Army's best rifle  
7 yet still far below the speeds of the rail gun as the  
8 new device is called can achieve eventually achieve.

9 The secret of the rail gun is electro-magnetism. Con-  
10 ventional guns which the rail gun may some day supplement  
11 depend on an exploding charge of gas to propel their  
12 shells. The hard-nosed laws of physics place severe  
13 restrictions, that's the same people who developed your  
14 power plant, place severe restrictions on the speed  
15 of any projectile that is propelled by a chemical explosion.  
16 It is theoretically impossible for an explosive to  
17 drive a shell faster than 45 miles per second but the  
18 rail gun depends on electro-magnetism to propel its  
19 shells and electro-magnetism as R. Hawk (ph) a researcher  
20 at Lawrence Livermore says is only limited by the speed  
21 of light. For all its promise, the rail gun is a very  
22 simply device, stripped of its housing and other non-  
23 operating features, it consists of two parallel rails  
24 of copper with a cubicle plastic projectile between  
25 them. Behind the projectile is a thin metal bridge

1 or fuse that connects one rail to the other forming  
2 an electric current circuit. That is about all there  
3 is to the rail gun except for the powerful surge of  
4 current needed to fire it. The underlying principal  
5 of the rail gun is demonstrated every time one motorist  
6 helps another motorist jump start his stalled automobile.  
7 The two jump starting cables that are attached to the  
8 dead battery in the stalled car are analogous to the  
9 copper rails of a rail gun. When the ignition key in  
10 the operating car is turned, a large surge of current  
11 races to the battery of the stalled vehicle. Three  
12 of these cables which leap apart -- the reason for the  
13 motion is that the current generates a strong magnetic  
14 field around each of the cables.

15           Because the magnetic field exerts a force  
16 on a wire carrying an electric current, the fuel generated  
17 by each of the parallel cables repulses the other and  
18 in a rail gun the effect is much the same except the  
19 rails are held tightly in place, thus the only part  
20 of the circuit that can move is the bridge behind the  
21 bullet and move it does. The firing cycle of the Los  
22 Alamos-Livermore rail gun begins with the charging of  
23 a bank of capacitors which in effect are electrical  
24 chinks that can be used to slowly collect a huge store  
25 of electrical charge and release it in a very short



1 time. The pulse generated by a capacitor could by itself  
2 drive a rail gun and at the Westinghouse Research and  
3 Development Center in Pittsburgh, there is a rail gun  
4 that is powered by a capacitor bank, but its projectile  
5 cannot achieve the high velocities, the hyper-velocities  
6 as they are called by scientists reached at Los Alamos.

7 To achieve such speeds a method to amplify even the  
8 most powerful electrical discharge is necessary and the  
9 one chosen by scientists at Los Alamos uses an explosive  
10 flux compression generator. This generator is similar  
11 to the rail gun itself, both copper rails of the rail  
12 gun extend outward behind the actual firing chamber  
13 and one is back with a strip of high explosive. As  
14 a capacitor bank sends a pulse of current through the  
15 rails creating a strong magnetic field in the gap between  
16 them the explosive is detonated. This slams one copper  
17 rail into the other with tremendous force but there  
18 is a magnetic field between these rails and as the  
19 explosive driven rail moves through the field, an addi-  
20 tional jolt of current is induced or generated in the  
21 rail, that's EMF, electro-motive force. The combined  
22 surge of current quickly vaporizes the most fragile  
23 part of the circuit. The fusible link, the metal bridge  
24 behind the projectile -- but the remnants of the bridge,  
25 a path of charged particles continues to conduct electric

1 current. It becomes a fat spark that is pushed forward  
2 at a velocity greater than 22,000 miles per hour. To  
3 interject real quick, how can your building stand up  
4 to a velocity of 22,000 mph? I can build one of these  
5 out of a car, out of the leaf springs slamming together  
6 and pop any dam or any nuclear power plant in this country.

7 Carrying cubicle lexon (ph) plastic projectile  
8 with it, hitting the air at the speed, at that speed  
9 is like hitting a stone wall and the cube is flattened  
10 as it emerges from the end of the gun. All in all,  
11 the device does not seem very practical. What is left  
12 is a flattened cube and a rail gun damage beyond repair  
13 by the explosion, but the Los Alamos test is what scientists  
14 call proof of principle. They acknowledge that many  
15 technical problems remain to be solved. It's kind of  
16 at the Wright Brothers stage. They've been surprisingly  
17 successful so far. The problems do not seem to be insur-  
18 mountable. Better materials must be developed for the  
19 gun barrel, the projectile and the propulsive lightning  
20 bolt and the experimental method badly damaged the rails  
21 during rapid passage and an alternative to the magnetic  
22 flux of compression generator, one that does not destroy  
23 itself with itself with a refiring must be perfected.  
24 Progress in this direction is being made at Westinghouse,  
25 by physicist Ian McNab and his collaborators working

1 under a two million dollar Department of Defense contract.  
2 They are developing a rail gun powered by huge homopolar  
3 generators which converts the energy stored in a massive  
4 rapidly spinning flywheel into an enormous burst of  
5 current. McNab expects eventually to fire a three-quarter  
6 pound projectile with his generator powered rail gun,  
7 the military would obviously have a keen interest in  
8 a gun -- in such a gun. A shell travelling at hyper-  
9 velocities obtainable with as rail gun could pierce  
10 any known armor and it might have applications as an  
11 anti-ballistic missile but the peaceful applications  
12 of the rail gun could even be more remarkable. Some  
13 scientists estimate that within a decade, the device  
14 will be capable of hurdling objects the size of a telephone  
15 pole into orbit around the earth. That's a tremendous  
16 amount of thrust. It could turn tons of generating  
17 equipment, and much more cheaply than rocket power.

18 As a research tool, it could help physicists  
19 determine how matters behave under the enormous pressures  
20 obtainable when a hyper-velocity shell hits a stationery  
21 wall. These studies could help scientists understand  
22 the processes that occur in the interiors of planets  
23 or stars. This is the clincher to the article.

24 And if the speed of impact can be substantially  
25 increased to say more than 300,000 mph, the rail gun

1 projectile could initiate fusion, making available huge  
2 amounts of clean, cheap energy. Why take all this  
3 magnetic energy which is pure in our universe and is  
4 the only energy that is completely from one end to the  
5 other, why take and waste it and turn it into a nuclear  
6 bomb?

7 My point here, part of my point is that  
8 unfortunately the boys at Los Alamos stole the design  
9 from me. My lawyer has it, it's the same damn thing.

10 They built it. I don't have the money. If I built  
11 one and I can build one, where am I going to fire it,  
12 in your back yard? I'm not going to fire it in mine.

13 It's just not going to stop.

14 I've also gone to both SRP and APS and this  
15 article was in the paper. Right on the top, it says  
16 I rarely get past the secretaries. People tell me it  
17 can't be done even before they try the device. Then  
18 it says genius, inventors gas savings box is much ignored.  
19 I can put this on any vehicle and we can go down to  
20 your inspection station, pollutants, if I turn my device  
21 on, the pollutant levels coming out of the tail pipe  
22 are dropped by half. I'm burning the fuel half more  
23 efficiently. I'm willing to take any one of you down  
24 to any inspection station and we'll try it on your car  
25 or on mine. The point is, I've been to APS, I've been

1 to the Salr River Project. They are not interested  
2 in saving money. They could save money on jus. the  
3 fuel they burn to create electricity. They could save  
4 money on the fuel they burn to run their vehicles all  
5 about the city. You could save money, everybody can  
6 save money, but you know, they get all the damn money  
7 that you take from the people and I get nothing. You  
8 think that Cornell and Harvard and Yale are going to  
9 save our country, but who invented the book and they  
10 only learn from the book? The inventor created the  
11 book, not the scholar, not the student, the inventory  
12 is responsible for our strengths and our freedoms and  
13 yet Johnson and Johnson steals from them gets fined  
14 \$170 million dollars and nobody gets them for slavery.

15 But yet, it is in the 13th amendment that unwilling  
16 servitude is slavery and when a man is profiting a corpora-  
17 tion and he makes no profit, he is unwillingly serving  
18 that corporation. Mostly, I would like to say that  
19 we can build this things. I can take that board right  
20 there and show you how to build your own rail gun.  
21 I can show you how to build a quill that you can fire  
22 the super-charged particles through the center of that  
23 uses stationary magnets, using a monopole or a single  
24 pole, magnetic field. As the initial charge fired from  
25 the rail gun expands down this cord, this coil cord,

1 it will compress the existing stationary magnetic fields  
2 generating power. And once it is fired, how long will  
3 it keep travelling around in a circle if you fire it  
4 into a circle? Or if you just fire it so it runs into  
5 a tube and off into space? Then you have to fire it  
6 again and they can be fired cheap and easily. You can  
7 take a condenser out of a car, take and charge it up,  
8 throw it to your friend, it will knock him down but  
9 if you take that same condenser once it is charged up  
10 and you crush it, you're going to get a huge development  
11 of current and energy. This is the same kind of current  
12 energy needed to fire a rail gun and you can charge  
13 a condenser from the coil discharge out of your car.

14 The laws of physics were written by people who make  
15 mistakes. Einstein is reputed to have just recently  
16 made a mistake or they found out that he made a mistake  
17 in his theory and law of relativity. Everybody makes  
18 mistakes. Let's get together with something that's  
19 going to produce power, ample needs, all the power we  
20 can use without blowing up and killing us. My device  
21 may damn well blow up as anything we can build will  
22 blow up or decay eventually, but if it does, we won't  
23 glow. I thank you.

24 JUDGE LAZO: Thank you, Mr. Martin.

25 ///

1 JUDGE LAZO: Now, are there any others who wish  
2 to make a limited appearance statement?

3 MS. MORRISON: My name is Jill Morrison. I  
4 would first like to thank the Board and the Staff and the  
5 Applicants for being respectfully listening to citizens today  
6 and being patient through some lengthy discussions. I know  
7 it is important for citizens to express their views at a hear-  
8 ing like this.

9 My views at this time of day would probably  
10 reiterate a lot of what has been said. I am dissatisfied with  
11 the new ruling which eliminated a review of financial  
12 qualifications. I don't know if the Board is aware yet at  
13 this time that the 3.9 percent of the power, or share that  
14 SRP is selling to Northern California, there is only one  
15 city left in MSR, MSR stands for Modesto, Santa Clara and  
16 Reading. Santa Clara pulled out. Reading had an initiative  
17 on the ballot to vote whether they wanted this power or not.  
18 They voted not to accept it, and Modesto has a similar  
19 initiative on their ballot which they will vote on June 1st,  
20 whether to accept that power or not.

21 JUDGE LAZO: Pardon me, did you say Modesto,  
22 Santa Clara, and Reading?

23 MS. MORRISON: Modesto, Santa Clara and Reading,  
24 yes.

25 JUDGE LAZO: Thank you.

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1 MS. MORRISON: And I just wanted to read a quote  
2 from the study that has been stated before by Energy Systems  
3 Research Group on the cost of Palo Verde, and it states that  
4 APS ratepayers will be contributing to the cost of  
5 financing all of the construction costs for the Palo Verde  
6 units, in a situation where not all of the capacity or power  
7 is needed by ratepayers until the late 1990s, and I would like  
8 to state then that we are paying for power to be sold to  
9 California, New Mexico and Texas.

10 I would also like to urge the Board, I have  
11 worked very closely with Lee over the past seven months  
12 researching the issues and working on educating on a lot of  
13 the issues. I would like to urge the Board to give us more  
14 time on a lot of these issues. I feel if we had more time,  
15 we would be able to develop important facts for the Board to  
16 look at.

17 I will state briefly that we have been contacted  
18 by workers out on the plant that are not willing to come  
19 forward because fear of their jobs and harassment, but have  
20 given us suggestion of quality assurance problems, and I  
21 feel if we had more time for that we could resolve whatever  
22 problem these people would be suggesting, and also the  
23 problem of the -- the contractual problem with the water,  
24 and possibly the effluent problem. Thank you.

25 JUDGE LAZO: Thank you, Ms. Morrison.



1                   During the last recess, Ms. Lee Hourihan  
2 approached the bench and asked if she would be permitted to  
3 make a limited appearance statement. We indicated that we  
4 thought there might be some objection to that, since Ms.  
5 Hourihan now does have a lawyer to speak for her. How say  
6 the other parties?

7                   MR. GEHR: Well, I told Ms. Hourihan that if she  
8 kept it brief, and as I understand, the subject matter is  
9 limited to the nature of the intervention procedures, I  
10 wouldn't have an objection, but on second thought, I would  
11 like to inquire, will I have an opportunity to cross-examine  
12 Ms. Hourihan during the course of this proceeding?

13                   JUDGE LAZO: I guess we don't know at this time  
14 whether Ms. Hourihan will become a witness to this  
15 proceeding, and if so, under what circumstances.

16                   MS. BERNABEI: Mr. Chairman, we at this time  
17 don't have any intention of calling her, having her as a  
18 witness. I certainly can't speak for the Staff or the  
19 Applicants, however.

20                   JUDGE LAZO: Is there anything that Ms. Hourihan  
21 can say respecting the intervention procedures that you  
22 cannot say?

23                   MS. BERNABEI: I believe she can. I believe that  
24 she is going to speak about her now two-year effort to bring  
25 the water contention and other contentions which were stricken

1 to this hearing. I entered this case very late, and  
2 although familiar with a number of other construction phase  
3 and operating license proceedings, certainly could not  
4 claim to know as much about the intervention process as Ms.  
5 Hourihan. I think her testimony is very relevant to this  
6 Board's understanding of how hard it is to be an Intervenor,  
7 and to get evidence before the Board, and it is very important  
8 in its determinations.

9 JUDGE LAZO: Well, I have the feeling that we  
10 have heard this. It is largely a legal argument. We have  
11 had several pre-hearing conferences, and Ms. Hourihan, when  
12 she was not represented by Counsel, has had an adequate  
13 opportunity to explain her position. I think we have been  
14 very sympathetic to her position. There have been a number  
15 of extensions of time and other accommodations for Ms.  
16 Hourihan. I don't know what we would be gaining by having  
17 her tell us now in her opinion why the legal system is  
18 deficient, or how it could be improved. These are also  
19 matters that can be handled by briefs by lawyers at the time  
20 of filings.

21 Mr. Dewey, what are your views on the matter?

22 MR. DEWEY: Well, sir, Section 2.715 of the  
23 Commission's rules specifically says that a person who is not  
24 a party may in the discretion of the presiding officer be  
25 permitted to make a limited appearance. Since Ms. Hourihan is

1 a party, then technically according to the rules, I don't  
2 think she is allowed to make a limited appearance, because it  
3 says a person who is not a party may make a limited  
4 appearance, and she is a party. She is the Intervenor.

5 JUDGE LAZO: She could, however, if the  
6 circumstances were appropriate, become a witness, in which  
7 case --

8 MR. DEWEY: Yes, sir. That is correct.

9 JUDGE LAZO: -- in which case she would be  
10 subject to cross-examination, and her testimony would be  
11 given under oath.

12 MR. DEWEY: Right. So I just -- technically, I  
13 don't think she is permitted to. If -- at least, I don't  
14 think the Staff would oppose a short statement, but we are  
15 not welcoming one, either. Technically she is not, she  
16 wouldn't be allowed to under the rules.

17 JUDGE LAZO: We think, in view of the circumsta-  
18 nces, and in a desire to have as complete a record as we can  
19 in this matter, that we should permit Ms. Hourihan to make  
20 her statement. It will be in the nature of a limited  
21 appearance statement, and we would ask you now, Ms. Hourihan,  
22 about approximately how long do you think you would require?

23 MS. HOURIHAN: Only about five minutes. I  
24 wasn't expecting all of this. I thought I could just make  
25 a limited appearance as everyone else had. Had I known that,

1 I may not have asked to make one.

2 JUDGE LAZO: Well, I don't think we have consumed  
3 a lot of time in reaching this position. If you wish to make  
4 the statement, you may.

5 MS. HOURIHAN: Okay, thank you. It is a little  
6 longer, so I will try to cut it down a little bit.

7 As an Intervenor in these licensing proceedings,  
8 I have had ample time to understand and research the  
9 nuclear regulatory laws surrounding the issuance of an  
10 operating license for a nuclear plant. When I began my  
11 original petition for leave to intervene, I had no idea it  
12 would be this complex. I probably would not have intervened.

13 I have been involved in a chess game of paperwork,  
14 and as an Intervenor, I am supposed to have an equal position  
15 in these proceedings with the Joint Applicants and the NRC  
16 Staff.

17 I am unclear as to how these rules and procedures  
18 were ever set up to allow this equality or position of all  
19 parties involved. With all due respect, gentlemen, I feel  
20 it is necessary to point out that the differences in our so-  
21 called equality. Last year APS paid legal fees of \$1.1  
22 million. I can only guess how much of that went to Snell and  
23 Wilmer, the attorneys to the Joint Applicants, and although  
24 these attorneys have been very courteous over the last two  
25 years, their positions are obviously the opposite of mine.

1           Snell and Wilmer is a law firm with approximately  
2 85 attorneys, not to mention numerous paralegals, secretaries  
3 and an entire printing staff. APS has unlimited resources  
4 with regard to public education and public relations  
5 regarding this nuclear plant.

6           The costs of interventions are absolutely  
7 absurd, yet the only way you can work within our system, as  
8 it is set up, is to intervene. The NRC Staff has also -- also  
9 has resources above and beyond the resources of an intervenor.  
10 I have had the good luck to meet with many intervenors into  
11 other nuclear proceedings across the country since I  
12 intervened, and even--- and every intervenor I have met has  
13 been in serious debt, myself included.

14           I think this procedure has one importance, in  
15 that it allows a small number of citizens in the country to  
16 learn a great deal about the government's rules and  
17 procedures surrounding nuclear plants, and it allows as well  
18 as forces intervenors to study their local nuclear plants.

19           Unfortunately, just as we start to understand  
20 the laws and the site-specific problems and make contacts  
21 and have anonymous packets sent, and so on, as you all know,  
22 the hearing is upon us. I do not think this is a fair  
23 procedure in any sense of the word "fair," it is certainly  
24 not a democratic procedure.

25           I am thankful that I have intervened in that it

1 gave me a chance to work with the law, and I am anxious to  
2 get back to my studies so that I may be an attorney so that I  
3 may more effectively represent other intervenors, but the  
4 bottom line here is that if I had equal resources, with the  
5 NRC and the Joint Applicants, I don't think this plant would  
6 ever be granted an operating license.

7 I think I understand why the NRC has set up  
8 these rules. They have set them up this way, because they  
9 know it is impossible for a citizen to keep up with the  
10 utilities in this legal process. Therefore, nuclear power  
11 plants win. It is painfully honest where the NRC stands, not  
12 only in this proceeding, but in all operating license  
13 proceedings.

14 I do not think it is right to call them a  
15 regulating commission. I am sure you have heard that before,  
16 but it was my last chance. Thank you.

17 JUDGE LAZO: Thank you, Ms. Hourihan.

18 Just off the record, please.

19 (Discussion off the record.)

20 JUDGE LAZO: On the record. Just one remark. I  
21 think everyone will agree with you that members of the public  
22 who intervene in these proceedings do have a difficult chore.  
23 They are generally not given the same amount of facilities to  
24 match up with those that are able to be marshalled by the  
25 Applicant and the NRC Staff. The Licensing Board tries the

best it can to counterbalance that situation by providing as much, if you will, legal assistance to the Intevenors so that they will have a better chance to learn the rules and to meet the rules of practice, and have a fair opportunity of winning their day.

Now, their day is often a desire to see the license of the Application denied, and no license granted. That rarely happens at an operating license proceeding, where the plant is subsntantially completed. However, the benefit to the public in most proceedings that I have been involved in and seen, is that the license that is ultimately issued to the Applicant generally has been conditioned to protect the health and safety of the public, and environmental values, based on matters that have been brought up by the Intervenors, so that there is a definite benefit to the public to have a hearing of this sort, and to have it in the vicinity of the plant.

Well, now. It is a quarter to five. We have at least a couple of outstanding motions we should deal with and get on with some legal arguments. Does anyone want a five-minute recess to change their papers around, or files, or are we ready to proceed?

MS. BERNABEI: Mr. Chairman, could you detail the motions that were made? I know that Intervenors' motion to add or amend contentions is pending. I am not aware of other

1 pending motions.

2 JUDGE LAZO: Well, there was a motion for an  
3 order requiring admission and production of documents within  
4 ten days.

5 MS. BERNABEI: I believe there has been a  
6 response by the Applicants filed.

7 JUDGE LAZO: I think the Applicants did in fact  
8 file a response to that on April the 19th. There was an  
9 earlier motion of April 14 for a protective order that related  
10 to a notice of deposition.

11 MS. BERNABEI: I believe that is moot at this  
12 point. The deposition of Hs. Hourihan was held. She  
13 intended to move for a protective order, probably more  
14 properly a motion to quash, as to documents and testimony  
15 relating to matters that were not yet encompassed in the  
16 contention.

17 JUDGE LAZO: All right. I thought that was  
18 probably the case. Her motion for a protective order reached  
19 my office late in the afternoon of April 19, and I knew  
20 that they had planned to depose her in the morning of the  
21 19th, so there really wasn't anything that we could do.

22 The last, the April 26th motion, is a submittal of  
23 two new contentions, or a motion to submit two new  
24 contentions, or to amend contention five, and I think that  
25 is one that we want to address.



1 JUDGE LAZO: (Continuing) Maybe that's the  
2 only outstanding motion at this time. And of course, there  
3 is an application for the issuance of a civil subpoena.

4 MS. BERNABEI: There's actually -- should be  
5 two applications.

6 JUDGE LAZO: Two applications for a subpoena.  
7 That's right. A subpoena for Mr. Philip Shea and for Bill  
8 Stephens.

9 MS. BERNABEI: That's correct.

10 JUDGE LAZO: Yes.

11 MS. BERNABEI: I'm prepared to address the  
12 motion to ammend or add any contentions if the Board wishes.

13 JUDGE LAZO: All right. Why don't we proceed.

14 MS. BERNABEI: I must apologize first of all  
15 for what's been called an eleventh hour attempt to ammend  
16 the contentions in this proceeding. I entered the case  
17 last Thursday and have since that time been familiarizing  
18 myself with what has been called the water issue. I believe  
19 the current contention that's been stipulated to has been  
20 labeled environmental somewhere along the line in terms of  
21 the stipulations and the conference calls between the  
22 parties. I believe the contention as currently written  
23 encompasses both safety and environmental considerations.  
24 The issue that is before this Board is whether there is  
25 sufficient water both to operate and to safely shut down

1 the three Palo Verde plants in the case of an accident.<sup>320</sup> I  
2 realize the contention is written in terms of one plant and  
3 not three. And the Applicant's and, I assume, the Staff's  
4 position is that it addresses only environmental considera-  
5 tions.

6 JUDGE LAZO: Does it say anything specific about  
7 an accident?

8 MS. BERNABEI: No, it does not, Your Honor.  
9 It addresses cooling waters available for the -- for Plant  
10 Number 3. I would note two things. One, the major issue  
11 in terms of the environmental issue will be the availability  
12 of effluent. We believe that involves the physical  
13 availability, the hydrological conditions in this area of  
14 possibly some cost benefit analysis as Mr. Gehr seems to  
15 have opened up in his opening statement. We believe it also  
16 involves consideration of the legal rights of this water.  
17 In fact, we think that may be the most important considera-  
18 tion in terms of whether that effluent will be available  
19 for operation of the plant. I would note in terms of  
20 shutting down the plant, the water that is -- according to  
21 the FSAR -- that will be used in the case of an accident  
22 to shut down the plant comes from pumps, 34 pumps on the  
23 Applicant's property. However, there is a secondary  
24 system, which as I understand it, from a deposition from  
25 Mr. Van Brunt on Monday, consists of water taken from the

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1 reservoir that is the effluent, that it has run through the  
2 water reclamation plan onsite and is then filtered into the  
3 -- or run into the spray ponds, as I understand the process.  
4 Therefore, the effluent does play some part in the shutdown  
5 of the plant as a secondary system. I believe the Applicant's  
6 position on that is that is not a safety system, that is,  
7 it's a backup system. It's not a safety system in terms  
8 of shutting down the plant.

9 As I understand from Mr. Van Brunt, there have  
10 been negotiations or discussions-- I assume they may stem  
11 from some deficiency letter from the NRC -- about a greater  
12 backup to that second backup system. Mr. Van Brunt has  
13 said that they have not yet decided on a system and those  
14 discussions are ongoing.

15 Our position is that there are serious questions  
16 about the availability of water to shut down the plant in  
17 case of an accident and that should be considered by this  
18 Board.

19 The second contention, which does not address  
20 the safety issue, is what I believe to be a refinement  
21 of the contention as it stands. That is, that the treatment  
22 plant onsite is insufficient to -- is inadequately designed  
23 or cannot assure both the adequate supply of water of a  
24 sufficient quality to operate the plant on a continuous  
25 basis or at least at the capacity that the Applicant claims

1 it will be operated. This involves a discussion of the  
2 quality of the water going to the plant from the 91st Avenue  
3 Treatment, the tests done on that, the projections made on  
4 what that quality of water will be.

5 As I mentioned in my opening statement, the  
6 quality of water has some effect on the quantity of water  
7 needed. I don't believe that that -- I believe, as it  
8 presently stands, that is encompassed in the Contention  
9 Number 5. However, I believe it's a further refinement  
10 that could only lead to a clearer focusing on the issues.

11 JUDGE LAZO: Ms. Bernabei, you have not said  
12 anything yet which would explain why these contentions are  
13 so untimely.

14 MS. BERNABEI: The basic reason is Ms. Hourihan  
15 was unable to retain an attorney until last week. I  
16 sincerely believe that she has attempted, without a legal  
17 background, to phrase the questions -- or the contentions  
18 in a way that she understood they should be phrased. I do  
19 not believe that the stipulations entered into with the  
20 Board -- with the Staff and with the Applicants, she  
21 understood that she was shutting out the safety issues  
22 explicitly. I believe, as many of the people making  
23 limited appearances today have said, that water is probably  
24 the major issue in terms of this operating license  
25 proceeding. And I think it would be foolish to limit that

14 1 to considerations of whether or not there's enough water  
2 to operate the plant.

3 JUDGE LAZO: Well, new contention number 2,  
4 which relates to the quality of the water in the water  
5 reclamation plant, quality of water, surely Ms. Hourihan  
6 was aware of that. There was a time early on, at the time  
7 of the stipulation, where she had indicated a concern about  
8 the quality of the water. She dropped that concern and  
9 now at this point is trying to insert a new contention  
10 without any showing of reasons for good cause for omitting  
11 it.

12 MS. BERNABEI: Well, let me note two things.  
13 We do now have a water expert that can testify as to what  
14 the quality meets both in terms of the design of that  
15 particular treatment plant and that nuclear plant and in  
16 terms of what quality needs for quality. It is true that  
17 the Applicants have made available certain Bechtel documents  
18 previously to Ms. Hourihan. There is no way she could've  
19 understood what those documents meant and analyzed them  
20 properly prior to retaining a water resources engineer.

21 My feeling is that it's unfair for this Board  
22 to have expected her, without expert help, to have understood  
23 enough to frame a contention. I also don't believe that  
24 it's going to delay these proceedings to bring that  
25 contention in. In other words, I think that those kind of

1 issues can be discussed within the parameters of Contention  
2 Number 5 at the present time.

3 JUDGE LAZO: Well, in that regard, your motion  
4 indicates that you would request an extension of time for  
5 additional discovery or the right to proceed with witnesses.  
6 I assume this would be oral, direct testimony.

7 MS. BERNABEI: That's correct. In discussions  
8 with the Applicant's Counsel, we have said that we would  
9 be prepared to submit written direct testimony if the other  
10 parties wished.

11 MR. GEHR: I'm sorry. I didn't hear.

12 MS. BERNABEI: In my discussions with Mr.  
13 Bischoff, I indicated that the Intervenor would be willing  
14 to permit written direct testimony of the witnesses whom  
15 we intended to present. I also indicated however that I  
16 did not believe that the Applicants, without submission of  
17 written direct testimony, were entitled to call direct  
18 witnesses either. As I understand it, they have only  
19 submitted affidavits which we would contend do not form  
20 a sufficient basis for cross examination. And if we were  
21 willing to submit written direct testimony, I assume the  
22 Applicants would be willing to do the same.

23 JUDGE LAZO: Well, then how do you feel that  
24 that procedure would not delay the proceedings?

25 MS. BERNABEI: I feel that we can go forward on

1 whatever witnesses are available at the present time and  
2 perhaps have a recess. I'm not sure how long this Board  
3 wishes to sit at this particular time, that is, whether  
4 you're available to sit past this week. We basically said  
5 we will be flexible. If the Applicants want written direct  
6 testimony from our witnesses, we'll try to provide it within  
7 the time constraints that we have.

8 JUDGE LAZO: And you have had discussions with  
9 Mr. Bischoff regarding this subject?

10 MS. BERNABEI: I had a discussion with him  
11 Friday about the matter when we talked about how this  
12 proceeding would be shaped, since both of us, I believe,  
13 at that time were somewhat uncertain about the scope of the  
14 hearing. I also spoke to him during the recess this  
15 afternoon about our feeling that if we were willing to  
16 present written direct testimony, I assume that he -- that  
17 is the Applicants would be willing to do the same. But I  
18 should Mr. Bischoff speak for himself.

19 JUDGE LAZO: Well, why don't we do that. Mr.  
20 Gehr or Mr. Bischoff, what is the Joint Applicants'  
21 position regarding the motion to add new contentions? I  
22 guess we heard it briefly this morning.

23 MR. GEHR: Yes. First of all, let's go to the  
24 contention that we're talking about. Counsel indicated  
25 that there was some ambiguity in the statement of the

1 statement of the contention as to whether it included  
2 safety matters. Let's read the contention. This is a  
3 revision. "Applicants will not have an assured supply of  
4 usable treated municipal effluent for cooling purposes for  
5 Unit 3 of PVNGS during months of peak reactor need for the  
6 first five years of operation."

7 Now, there is absolutely no way you can convert  
8 that statement of contention into a safety contention. If  
9 it wasn't good for Unit 3, it wasn't good for Unit 1. If  
10 it wasn't good for the first five years on Unit 3, it  
11 wouldn't be good for the rest of the life of Unit 3 if it  
12 were a safety contention. That was intended to be an  
13 environmental issue. There is absolutely no justification  
14 for raising a safety contention on the quality of effluent  
15 at this time.

16 Now, I don't see that that has any bearing.  
17 She has -- the Counsel for Intervenor has not addressed the  
18 five criteria that are required to be met before a late  
19 contention can be accepted. And that's what safety conten-  
20 tion is. She has just not addressed it. She has said that  
21 she had not -- that the good cause was because she hadn't  
22 been involved earlier in the proceeding. But Ms. Hourihan  
23 and the Intervenor did have counsel shortly after the  
24 contention was issued, the stipulation was entered into.  
25 The documents that she's talking about that the Board



1 reminded her had been produced in response to her quality  
2 concerns, were produced and delivered to her counsel and  
3 he subsequently, in the response to the interrogatories,  
4 withdrew the quality element of that contention. So she  
5 is not coming in here -- and it's really kind of a misstate-  
6 ment to say that, well, now, I've got an expert and I've  
7 got the expert's advice and I can reinstitute my quality  
8 contention -- aspect of the contention. I repeat though,  
9 she has not established good cause as to the new contention.  
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1                   MR. GEHR: (Continuing) She has not established  
2 in this connection, you know, she is -- the motion  
3 that she has filed indicates that she just learned about  
4 this Indian claim only in the last couple of months,  
5 I don't know. The fact is that she produced documents  
6 to us in the course of her deposition which showed that  
7 she had information about the Indian claims before she  
8 filed her petition for intervention. She gave to us  
9 Mr. Larry Bard's statement to the Phoenix press club  
10 dated 3 March, 1980. She stated in her deposition these  
11 were some of the documents she had in her file. Mr.  
12 Larry Bard -- it is interesting what he had here.  
13 If we look at it, he had a number points and the last  
14 three that he made, he says, the first one, the first  
15 point that he makes, ABE, excuse me, and acronym for  
16 Arizonans for a Better Environment and in his concluding  
17 remarks, the important points to hit in the KD -- KV  
18 interview for point one, what ABE is saying is that  
19 APS does not have an assured supply of effluent to cool  
20 reactor unit 3 and therefore should not be investigating  
21 -- I imagine he means investing funds in a project  
22 that we cannot be sure can ever be operated at a peak  
23 capacity. That is precisely -- you can see the derivation  
24 of contention number ~ right from that statement from  
25 ABE.

1                   Here is the next statement. There are questions  
2 with the assurity of the expansion of the 91st Avenue  
3 Plant, questions of seepage loss and prior effluent  
4 right commitments that have not been considered. These  
5 were elements that came and were put to us in her interroga-  
6 tories that we got, we had to answer about the 91st  
7 Avenue Expansion, we had to answer about questions of  
8 seepage laws, prior effluent right commitments. Mr.  
9 Bard went on to say and, and this is what I want to  
10 emphasize, and a question of whether the Interior Department  
11 has control over treated effluent that originally was  
12 part of the SRP system and therefore subject to use  
13 for Indian Reservations and Indian water rights. She  
14 was on -- she obviously, this document was in her possession,  
15 she acknowledged that she received it before she filed  
16 her petition to intervene. Its obvious she had knowledge  
17 of this matter. Well, I question whether she has ever  
18 established good cause. She's not addressed it in her  
19 motion. She has not addressed it today.

20                   There are other criteria that are missing.

21                   JUDGE LAZO: Mr. Gehr, going back to conten-  
22 tion one for a minute again -- the new contention.

23                   MR. GEHR: Yes.

24                   JUDGE LAZO: The proposed contention, or  
25 amended. You said on two different occasions that it

1 is not a safety issue and that it involves only a NEPA  
2 issue and I want to be just sure that I understand in  
3 my own mind whether or not there are any circumstances  
4 in which effluent water would get involved in let's  
5 say at a normal shut down situation -- if there is a  
6 shut down, and you have to rely on the steam generator  
7 to dispose of heat, rely on your feedwater system to  
8 dump decay heat right after you shut down, do you also  
9 have to rely on any extent on an adequate supply from  
10 effluent from your reclamation plant?

11 MR. GEHR: I should not be answering that  
12 question but my information is that the answer is negative.  
13 Now, the thing that I was going to come up with --

14 JUDGE LIZO: I should not be asking it because  
15 I'm really not a nuclear engineer, but given our under-  
16 standing --

17 MR. GEHR: Well I'm not -- I may think I'm  
18 qualified but others may not. But I was going to come  
19 up with a solution to Counsel for the Intervenor's dilemma  
20 here. We will have on the witness stand Mr. Bingham  
21 who was the engineer who worked on the analysis of the  
22 effluent requirements and those questions can be put  
23 to him on cross-examination or on direct examination  
24 and without any need for modifying a contention or insti-  
25 tuting a new one. And I think that's the proper way

1 to proceed.

2 JUDGE COLE: Are you saying he worked on  
3 the pilot plant studies?

4 MR. GEHR: Yes, sir. He worked on the --  
5 he has been the -- Mr. Bingham is the Bechtel Project  
6 Engineer for the Palo Verde Project. He has been with  
7 the project from its very inception, including the pilot  
8 plant operation.

9 MS. BERNABEI: May I address for a minute  
10 why I think that would be not a feasible solution to  
11 our time problem?

12 JUDGE LAZO: Well --

13 MS. BERNABEI: If I could for just a second.

14 MR. GEHR: Just a minute. I was asked a  
15 question by the Board and I responded and I have not  
16 completed my response to the request to make the new  
17 contention and I don't want to do this piece meal.

18 MS. BERNABEI: I apologize. I didn't mean  
19 to cut into Mr. Gehr's presentation.

20 JUDGE LAZO: We understand.

21 (Pause)

22 MR. GEHR: May counsel approach the bench,  
23 please?

24 JUDGE LAZO: Yes. Any -- ? We'll be off  
25 the record.

1 (Discussion off the record.)  
2 JUDGE LAZO: On the record. Thank you.  
3 MR. GEHR: The third criteria which must  
4 be met in establishing a late contention is that the  
5 extent to which the intervenor might assist in developing  
6 a sound record. I think it is quite clear in this 11th  
7 hour discovery and contention filing proposal, that  
8 it's clear that the matters she is relying on were brought  
9 to the Board's attention by Mr. Stephen's letter and  
10 by the NRC Staff and not by the Intervenor. I do not  
11 know why I am anticipating the normal requirement and  
12 the commitment I made in the conference call that was  
13 held in connection with Mr. Hourihan's motion for a  
14 continuance of the hearing, that we would address Mr.  
15 Stephen's comments and concerns about the contract in  
16 the hearing, why it is necessary to amend a contention  
17 to deal with that matter. I have stayed with that,  
18 I have indicated in my opening statement that Mr. Hulse  
19 would be here to testify as to that and Mr. Dick Juetten  
20 would be here to testify as to that matter and also  
21 Mr. Steiner, the Director of the Arizona Department  
22 of Water Resources so I don't see what is new, what  
23 has come up? She's had this opportunity for a good  
24 many months. There is no need for an amended contention  
25 on that score.

1                   And it's clear that if the contention were  
2 admitted, that the issues would be broadened and the  
3 proceeding would be delayed. I started out in response  
4 to the chairman's question about the function of the  
5 reservoir and a need of that for shut down of the reactor  
6 and I stated that our witnesses would be available and  
7 can testify as to the design specifically. I do not  
8 know why that is not an adequate solution to this problem  
9 as to the safety matters. I believe our testimony of  
10 our witnesses that we will introduce, we will present  
11 on the matter of the contract and the availability of  
12 effluent and the existence of adequate water resources  
13 in the valley to support that supply of effluent will  
14 fully deal with the problem.

15                   JUDGE LAZO: Mr. Gehr, comparing contention  
16 5 with the new proposed contention 1(a), do you think  
17 that new contention 1(a) would broaden the contention  
18 beyond the point where you would be prepared to deal  
19 with it in this session?

20                   MR. GEHR: No, sir. You see, when we recognized  
21 the order and memorandum and decision which the Board  
22 entered denying our motion for summary disposition of  
23 contention number 5, you did not reject the motion for  
24 summary disposition on the basis of our affidavits,  
25 on the basis of the statements of facts that accompanied

1 that motion. You did it instead by referral to Mr.  
2 Stephen's letter. Mr. Stephen's letter as I see it  
3 goes to all three units and does not go to unit 1, I  
4 mean just to unit 3 and I thought that the Board's concern  
5 was the adequacy of an effluent supply for all three  
6 units and we were prepared to address those contractual  
7 issues in the negotiations respecting the change.

8 JUDGE LAZO: For all three units?

9 MR. GEHR: For all three units.

10 JUDGE LAZO: Which is exactly what we meant.

11 MR. GEHR: Yes.

12 JUDGE LAZO: Therefore, how would you be  
13 harmed if we were to grant the request to amend contention  
14 5 or to replace it with a new contention -- at least,  
15 let's do this paragraph by paragraph. Suppose it was  
16 contention 1(a)?

17 MR. GEHR: I think the concern that we have  
18 is the accompanying concept that Counsel for Intervenor  
19 has indicated that she wants additional discovery.  
20 She wants something about written testimony that I don't  
21 understand. We were ready to respond on a matter which  
22 was not a subject of the contention with straight oral  
23 testimony and I think that's a perfectly adequate procedure  
24 under all elements of due process in the Constitution  
25 of the United States. This idea of pre-filed written



1 testimony is a nicety but under the circumstances, I  
2 think we're entitled to proceed to answer the Board's  
3 question raised in your memorandum and decision with  
4 straight oral testimony.

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1 JUDGE LAZO: This is the first we heard  
2 about the presentation of a pre-filed written testimony  
3 was here today. The way we understood the Intervenor's  
4 motion was that they were requesting time and an extension  
5 of time in order to complete discovery or in the alterna-  
6 tive that they would present testimony of their own  
7 witnesses and of course be ready to cross-examine your  
8 witnesses.

9 MR. GEHR: I don't ask for any written testi-  
10 mony from them. I want them to start the proceeding  
11 and start the evidence in the hearing tomorrow morning  
12 and let's go through and get the evidence in. If they  
13 have a witness, fine. If they do not have a witness,  
14 I'm sorry. I don't see any need for any need for any  
15 more of this written testimony business.

16 MS. BERNABEI: We have no disagreement with  
17 that.

18 JUDGE LAZO: You have no disagreement with  
19 that?

20 MS. BERNABEI: No.

21 MR. DEWEY: The staff might have some problems  
22 with some of these things. First of all, I think what's  
23 happening is, if she's allowed to file testimony --

24 JUDGE LAZO: You said file testimony?

25 MR. DEWEY: Not file testimony, Your Honor,

1 present witnesses.

2 JUDGE LAZO: Put on witnesses.

3 MR. DEWEY: At this stage with new materials  
4 and new contentions, then it very might well be necessary  
5 for the staff to obtain witnesses and bring them in -

6 JUDGE LAZO: But Mr. Dewey, aren't we saying  
7 now, we're talking now about contention 1(a). That's  
8 really maybe not a new contention. It does involve  
9 some different aspects because it relates to three units  
10 instead of unit three in 1986.

11 MR. DEWEY: Okay, if you look at her 1(a),  
12 this is true, that looks like it might be very limited,  
13 but then when you get down to her basis, you know, in  
14 otherwords, she lists 1(a), 1(b), and 1(c). Then in  
15 our basis though, she has all kinds of extraneous matters  
16 which the staff does not believe are proper considerations  
17 in this proceeding. For example, she brings in about  
18 the Indian lawsuit, water rights.

19 (Pause)

20 JUDGE LAZO: Well, I think it might make  
21 the rest of the conversation a little simpler if we  
22 explain to you that we have made a determination as  
23 to how we're going to rule on the question of the Salt  
24 River, Pima, Maricopa Indian community. As far as we're  
25 concerned, that lawsuit is a matter which will have

1 to be resolved in some other jurisdiction. It's not  
2 relevant to the determinations that we have to make  
3 here.

4 MR. DEWEY: Yes, sir. Well, there's further  
5 considerations here, too. For one thing, the order,  
6 if we expand 1(a) to make it all three units, we're  
7 talking about adding at that point -- the old contention  
8 there was only an additional, it was just additional  
9 water needed for three. Now we're adding one and two.

10 Now in addition to the Indian lawsuit, however, I'd  
11 like to say that there are other aspects such as the  
12 water users association problem, the ones they brought  
13 up. I don't think that that's a proper subject for  
14 this proceeding because that too is too conjectural and  
15 speculative.

16 JUDGE LAZO: We agree with you.

17 MR. DEWEY: Then today, well, yesterday I  
18 learned this for the first time where they had a problem  
19 apparently with the solid or the water quality issue  
20 that has just been brought in and as the board has already  
21 mentioned, this was all at one time part of that contention  
22 and it was withdrawn when the Intervenor had Counsel.

23 Now, we don't feel that it is right to be brought in  
24 at that time, either and it might be necessary if it  
25 is brought in for us to have to delay the proceeding

1 to get witnesses to testify on this point. So I'm saying  
2 it depends on how they want to amend 1(a) and how they  
3 want to include 1(a) and what new things are going to  
4 be brought in because it might be very necessary for  
5 us to get additional witnesses to take care of this  
6 matter and delay the proceeding quite a bit.

7 MS. BERNABEI: Mr. Chairman, may I address  
8 some of the concerns that were brought up?

9 JUDGE LAZO: Yes, you certainly may. Counselor,  
10 we're having a little difficulty hearing you. That  
11 microphone that you have is connected to the Court Reporter  
12 but it is not connected to the Court system. If you  
13 wanted to approach the podium, it might be easier for  
14 you.

15 MS. BERNABEI: Okay.

16 Let me address first the concerns of Mr.  
17 Gehr. As I mentioned at the bench conference, we have  
18 and I should say I as a late entrance into this case  
19 have taken every effort to inform the applicants who  
20 appear to bear the burden of proof in this proceeding  
21 of our intentions all along the way. In the deposition  
22 of Mr. Van Brunt, both Friday morning and Monday morning,  
23 I told them very specifically we intended to submit  
24 new contentions or amended contentions that would encompass  
25 the safety issue. This came up during the deposition

1 because I specifically asked Mr. Van Brunt about the  
2 safe shut down of the plant and the water needed for  
3 the safe shut down. His counsel at that time objected  
4 that that was beyond the scope of the deposition and  
5 I explained to him that we would be -- that if that  
6 were his position, well, that in any case we would be  
7 filing a new or amended contentions and asking leave  
8 to file those contentions. If I could correct Mr. Gehr,  
9 I understand from Mr. Van Brunt who is president of  
10 APS and in charge of engineering design in quality assurance  
11 that the effluent is part of the safe shut down system  
12 for the plant. It serves as a back up system, that  
13 is, the reservoir into which the effluent is deposited  
14 -- the storage reservoir is used as a back up to the  
15 spray ponds. That would be in the deposition which  
16 may or may not be filed with the board as of this time.  
17 We would be glad to provide it to you.

18  
19 Therefore, we think that the questions  
20 surrounding the availability and the security of  
21 effluent for use at Palo Verde is relevant to the safety  
22 issues about a safe shut down of the plant. I would  
23 also note that Mr. Van Brunt said that APS is still  
24 having discussions with the NRC about further back up,  
25 even to the reservoir in terms of a safe shut down of  
the plant. I do not believe that its system for shutting

1 that down, down that plant in case of a serious accident  
2 has been finally determined, at least according to Mr.  
3 Van Brunt and to the satisfaction of the NRC. I would  
4 also note that Mr. Gehr's suggestion that we would have  
5 a chance, the Intervenor would have a chance to cross-  
6 examine Mr. Bingham when he gives testimony is really  
7 not a sufficient answer. We did ask Applicant  
8 for documents that would explain beyond what the FSAR  
9 says about the waters available to shut down that plant  
10 in the case of an accident. Their position was that  
11 that was not a contention in the suit and they would  
12 not provide documents. I asked them for documents both  
13 this weekend when I had numerous conversations and meetings  
14 with Mr. Bischoff and I asked them again today what  
15 their position was in terms of providing documents relevant  
16 to water use in the shut down of the plant. Their position  
17 is it's not in the contention now and they're not going  
18 to provide documents. Therefore, I really can't see  
19 with the information we have now how I could adequately  
20 cross-examine Mr. Bingham who, it is true would be the  
21 person in Bechtel who would know about the water supply  
22 for shut down of the plant.

23 I could say that if we provided the document  
24 and had a chance to review them, it might be possible  
25 to cross-examine Mr. Bingham after we receive those

1 documents. I guess I wouldn't want to say that for  
2 sure until I have seen what they have provided us.

3 As to the specific things brought up by  
4 Mr. Gehr as to why this motion should not be granted  
5 and I assume we're talking right now basically about  
6 the safety and water quality parts of the contention,<sup>1</sup>  
7 I would note that first of all, the documents as I under-  
8 stand it that Ms. Hourihan provided to APS in an earlier  
9 stage of this proceeding, were documents that she, of  
10 which she was not an author. I am not even sure that  
11 she had read them entirely. She was quoting from and  
12 she should correct me if I'm wrong, Larry Bard who has  
13 to do with a group with which she may have contact but  
14 with which she is not a main protagonist. Whatever  
15 ABA happened to know about the Indian claims, Ms. Hourihan  
16 did not. The genesis of her motion was the motion to  
17 postpone the hearing was the, since it was filed by  
18 Mr. Shea on January 18th or January 19th of this year.

19 I would also differ with Mr. Dewey who suggests that,  
20 or excuse me it was Mr. Gehr who suggested that the  
21 staff originally brought these things to the Board's  
22 attention. My understanding is that the questions about  
23 the Indians and the question about the Interior Department  
24 position on federal reclamation lands was brought to  
25 this board's attention by Ms. Hourihan and I believe



1 she has taken great efforts to develop the record on  
2 those points, that is, the availability of water because  
3 of the overláp of reclamation laws and Indian rights  
4 in this area.

5 In terms of the second contention, the so-  
6 tagged water quality contention, that is relevant to  
7 the amount of water that will be available. We have  
8 not received documents from APS although we've requested  
9 them on Friday about the tests they've done, about how  
10 the amount of water required differs in accordance with  
11 the water quality, but we do know is that there is  
12 a great deal of research that the applicants have done  
13 in terms of their water treatment plant and the quality  
14 of the effluent and we think it's a major issue that  
15 this board should address, regardless of the quality,  
16 quantity inter-link.

17 JUDGE LAZO: I'm sorry, Ms. Bernabei. What  
18 about the untimeliness issue regarding the new proposed  
19 contention, too?

20 MS. BERNABEI: I'm sorry about the untimeliness  
21 aspect. I've just recently gotten into the case. My  
22 basic position is that this water issue, both quantity  
23 and quality is the most important issue in terms of  
24 whether this board should grant the applicants an operating  
25 license for Palo Verde. I can only reiterate what Ms.

1 Hourihan and others have said that I do not believe  
2 it is possible to participate in this kind of a proceeding  
3 without some kind of technical expert help and we now  
4 have that with Mr. Lorah. I'm also -- I also would  
5 say that I don't believe this puts the applicant at  
6 any disadvantage. Mr. Gehr talked about how Ms. Hourihan  
7 had not brought things to his attention and not turned  
8 over documents. I really must point out that the burden  
9 lies with the applicants at all times. The burden is  
10 not on the intervenor to bring these things to the Board's  
11 attention. Mr. Shea testified today that this situation  
12 about Indian rights, federal reclamation lands, possible  
13 restrictions on use of effluent outside the project  
14 boundaries were all things that the applicants knew  
15 about a long time ago. The burden should not be put  
16 on the applicant to bring it up before this board.  
17 Our basic position is that they knew about it a long  
18 time ago and they should be prepared to defend against  
19 any argument we have at this time.

20 JUDGE LAZO: Are you prepared to put on  
21 your witness, William Lorah this week?

22 MS. BERNABEI: Yes, we are, Your Honor.

23 JUDGE LAZO: All right, thank you.

24 Mr. Dewey, the Staff looks perplexed.

25 MR. DEWEY: Well, Your Honor, we are still

1 worried about delaying this proceeding and I think it  
2 it would be unnecessary. I'm not sure if the Board  
3 is still considering amending the contention. I think  
4 that a suitable alternative was suggested in the sense  
5 that the applicant said he would have witnesses here  
6 that can answer questions on some of these issues and  
7 the Board can ask those questions and get this matter  
8 cleared up.

9 JUDGE LAZO: We really don't have to amend  
10 the contention based on all the information we have.  
11 It would seem perfectly reasonable to simply interpret  
12 the contention in a somewhat different manner than some  
13 of us have been interpreting it.

14 MR. DEWEY: Well, that might be more suitable  
15 as long as --

16 JUDGE LAZO: And in fact, the licensing  
17 board itself had planned to go somewhat into contention  
18 5 even before the Van Brunt deposition raised the question  
19 of average meteorological conditions. Those were some  
20 questions that we were going to explore so it might  
21 be perfectly feasible to simply agree among ourselves  
22 that we'll expand the scope of contention 5 and then  
23 try and resolve these matters and go ahead with the  
24 proceeding, allow the applicants to put on their witnesses  
25 and the Intervenors to cross-examine them, let the

1 Intervenor put on their witnesses and then the Staff  
2 witnesses.

3 MR. DEWEY: Yes, sir. Well at the same time  
4 the Staff would like, if the Intervenor goes into areas  
5 which we feel are inappropriate in this proceeding,  
6 at that time we would like to make an appropriate objections  
7 as to why. For example, the Indian lawsuit or some  
8 of the matters brought up by the Municipal Waters Associa-  
9 tion.

10 JUDGE LAZO: I think we indicated a few moments  
11 ago that we do want to keep the scope of this proceeding  
12 within the scope we believe it should be. The Indian  
13 community lawsuit may go on for years and years and  
14 may go up to the Supreme Court. I don't think this  
15 is a proper form for us to try and resolve that. I  
16 don't know what we could do to help them, either side.  
17 We're going to rule that's beyond the scope of this  
18 proceeding. The same thing is true as to the validity  
19 of the contract for water. We're interested in the  
20 provisions of the contract but the ultimate validity  
21 really doesn't matter. If it is some time in the future,  
22 some jurisdiction says that contract is invalid, the  
23 reclamation laws apply, you've got to shut off Palo  
24 Verde, then that will happen.

25 ///

1 MR. DEWEY: Well, within the parameters you are  
2 discussing, I think that it sounds as if the Staff could make  
3 proper objections if areas are touched into that we feel  
4 are --

5 JUDGE LAZO: Well, we are never going to deny you  
6 the full right to stand up and object whenever you think you  
7 should.

8 MR. DEWEY: And we would like to have that we do  
9 not think that the Intervenor had met the burden under  
10 Section 2.714 for these late contentions, and I am not going  
11 to belabor the record unless you want me to, at this point,  
12 to discuss them any further, but I don't think that she  
13 would be entitled to bring any new contentions at this time,  
14 and I will be glad to outline those reasons if you would  
15 wish at this time.

16 JUDGE LAZO: But haven't we avoided that problem?

17 MR. DEWEY: I think so.

18 JUDGE LAZO: Suppose we simply rule that the new  
19 contentions are untimely --

20 MR. DEWEY: Yes, sir.

21 JUDGE LAZO: And that we enlarge the scope of  
22 contention five based on our understanding that there are  
23 additional matters that we want to go into, including the  
24 argument that the quality of the water does have a direct  
25 relationship to the quantity, that if you are increasing the

1 total dissolved solids from four or five to 15 or 20 or  
2 whatever, then you are going to have a lot more water than  
3 if you don't increase it that much, but can't we explore  
4 issues of that with your witnesses, Mr. Gehr?

5 MR. GEHR: You know, I am not objecting to that  
6 kind of extension of the scope. In fact, I think if you look  
7 at -- well, if you look at the discovery conducted by Counsel  
8 for the Intervenor, he raised the question about quality.  
9 We answered those questions, and then he withdrew, but  
10 forgetting that, I think it is clear in our motion for  
11 summary disposition that we recognize that quality, changes  
12 in quality can have a impact on the quantity of cooling water  
13 we are going to use. We have never denied that.

14 We have contended in our motion for summary  
15 disposition, that since the quality issue had been withdrawn  
16 that we shouldn't have to address it in our summary statement  
17 of facts, and our affidavits, but in case you did not agree  
18 with us, we put in the statements about quality.

19 Now, the thing is that we are talking about  
20 quality over 40 years, and there is ample evidence that the  
21 range on which we have designed this plant, our water  
22 reclamation facility, from the data we have had over many  
23 years, more than ten, is adequate, and you can't expect what  
24 you would look for in terms of changes in quality, it would  
25 be maybe an upset, temporary upset at a treatment plant. Well,

1 that is not an appropriate basis to get into a long harangue  
2 about quality when it is going to be a temporary thing. We  
3 have designed that plant to deal with effluent coming out  
4 of that 91st Avenue Plant based on ten years of data, plus  
5 some more.

6 JUDGE LAZO: Well, you presumably -- putting a  
7 witness --

8 MR. GEHR: And we don't mind putting that  
9 testimony in and having cross-examination on it, honestly.  
10 We are not talking about 1(b) and (c), however.

11 MR. DEWEY: The Staff would like to make one  
12 point. I guess we would not be opposed if this Board wanted --  
13 if the Board wanted to get in any questions about the quality,  
14 we wouldn't be opposed to it, but we would like to have the  
15 proviso that if we didn't think that the record was sufficient-  
16 ly developed, it might be necessary that we did call a witness,  
17 at a later time.

18 JUDGE LAZO: Oh, sure, Mr. Dewey, we understand  
19 that.

20 MR. DEWEY: Because otherwise, I think the Staff  
21 would be prejudiced.

22 JUDGE LAZO: And you know, once we get going, we  
23 really don't know where we are going to go, or what is going  
24 to develop. It may be that we may have to get some other  
25 witnesses, but that is just not too predictable, but I think

1 that with all the discussion we have had today, and the  
2 Board's understanding of this situation, that we probably  
3 should get on with the hearing.

4 MR. GEHR: Good. I would rather do that than  
5 come back.

6 JUDGE LAZO: Well, we may come back, too.

7 MS. BERNABEI: Mr. Chairman, may I ask one point  
8 of order? If we do encompass the quality issue in these  
9 proceedings, I assume that means that Intervenor in whatever  
10 time period we have can have discovery on that issue, is  
11 that correct?

12 JUDGE LAZO: No, we hadn't --

13 MS. BERNABEI: I mean, if it is feasible. I have  
14 already put in a request with the Applicants' attorney Mr.  
15 Bischoff for certain information about the tests that were  
16 done that Mr. Von Brunt referred to in his deposition, and I  
17 understand that there are such documents that exist. That  
18 is basically what I am talking about. I am not talking about  
19 interrogatories and requests for production.

20 JUDGE LAZO: You mean an exchange of information?

21 MS. BERNABEI: Yes, exactly. I assume that the --  
22 in this scope of this hearing, that Applicants should be  
23 willing to provide Intervenor with whatever documents are  
24 relevant to the quality issue, in the available time.

25 JUDGE LAZO: All right, well let me ask. Within



1 the available time --

2 MR. GEHR: Since I was not present at that  
3 deposition, I do not know what was said. I am going to ask  
4 Mr. Bischoff to address it. If we have data that we can give  
5 her tomorrow, or whenever, we will give it to her. We are not  
6 trying to hide anything.

7 MR. BISCHOFF: For the record, Mr. Lazo, if I may,  
8 during the course of Mr. Van Brunt's deposition, he was  
9 asked whether tests had been done on the quality of the  
10 effluent from the 91st Avenue Plant, and said that there had  
11 been some tests, and Counsel for Intervenor asked for our  
12 files, and this was a couple of days ago, the first portion  
13 of the deposition was Friday, and I have put in a request to  
14 an engineer with APS to compile the records of the tests of  
15 that effluent that we have, and as soon as those tests are  
16 put together, in terms of when the reports are put together,  
17 which contain the test results, and I suspect that would be  
18 tomorrow, we could provide the documents.

19 JUDGE LAZO: Would it be appropriate, in view of  
20 the hour, I think we have made about as much progress as we  
21 can today, but there are a few minutes left before they are  
22 going to start turning off the cooling system and everything  
23 else around here, to ask Counsel for the parties to get  
24 together, and agree upon a proposed agenda for witnesses?  
25 I would assume that Applicants' witnesses would lead off, and

1 if we -- when we meet again in the morning, if you could just  
2 give us a lineup of witnesses and where you intend to go from  
3 there, I think we would be in a position to make some useful  
4 progress.

5 MR. GEHR: Yes, I have two witnesses, if the  
6 chairman please, I have two witnesses who have to be somewhere  
7 else if they possibly can, and would like to get them on the  
8 stand, and off as soon as I can tomorrow. They are Mr.  
9 Russell Haltz, who will address the contract and the  
10 negotiations and the projections, on the quality of effluent.  
11 He will also be able to respond to any --

12 JUDGE COLE: Excuse me, you said the contract  
13 negotiations and the projects, but then you mentioned, and  
14 quality?

15 MR. GEHR: No, he is not capable -- that is not  
16 his area.

17 JUDGE COLE: Okay, I didn't think so.

18 MR. GEHR: No.

19 JUDGE COLE: Okay.

20 MR. GEHR: Mr. Haltz has to leave for Washington  
21 in the early afternoon, but he is addressing what Mr. Stephens  
22 brought up directly about the contract and the negotiations.  
23 Mr. Haltz has that responsibility.

24 In connection with that responsibility of  
25 resource planning, which is his area, he has to know about

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1 what there are projected future sources of cooling water  
2 for the APS plants, so we think he is qualified to deal with  
3 those. The next witness we have who would like, it is quite  
4 important he get to San Francisco, is Mr. Bill Bingham, the  
5 project engineer. Now, he is the one who can address the  
6 quality requirements. He can address how he got the average,  
7 what average means, and that it is clearly not the average  
8 which the bases for contention one indicates, but that -- I  
9 am not arguing about -- that is a basis and not a contention,  
10 so I am not raising a legal objection, but he is the one that  
11 can tell you, how that average was computed, and he is also  
12 the one that can tell you precisely what the interconnection  
13 is between the reservoir and the ultimate heat sink is.

14 JUDGE LAZO: Mr. Bingham can address that?

15 MR. GEHR: Yes, sir.

16 JUDGE LAZO: Well, you have caused us a little  
17 bit of concern, I think, Mr. Gehr, when you indicated that  
18 maybe these gentlemen were going to put on their testimony  
19 and leave town. Are they --

20 MR. GEHR: Well, you know, they are --

21 JUDGE LAZO: Are they available to come back  
22 during or at the end of the week?

23 MR. GEHR: We will make arrangements -- won't we,  
24 Bill? So that he is available, either to complete his  
25 testimony tomorrow and cross-examination, or return.

1 JUDGE LAZO: Fair enough.

2 MS. BERNABEI: As long as I understand that -- I  
3 mean, I am most concerned with Mr. Bingham, is ready to return,  
4 that is fine with me. Our problem, of course, as I said  
5 before, is we don't have any documents right now about the  
6 safety factors. I assume Applicants will get us as many as  
7 they can, and we will try to proceed expeditiously.

8 MR. GEHR: But the safety question is not an  
9 issue. There is no safety connection with effluent and the  
10 ultimate heat sink, and I --

11 MR. DEWEY: The Staff wishes to make just one more  
12 point in that regard, that in Supplement number 1 to the SER,  
13 in Section 1-2, you will see item 2, in that section.

14 JUDGE LAZO: Would you repeat the page number  
15 again?

16 MR. DEWEY: Page 1-2 in Supplement Number 1 to  
17 the SER.

18 JUDGE LAZO: I am sorry. Would you do it again?

19 MR. DEWEY: Excuse me. Page 1-2 in Supplement  
20 Number 1 to the SER, you will see that the ultimate heat sink  
21 is a -- still an open item which the Staff is resolving, and  
22 this will be taken care of, so I don't know if it really is  
23 too worthwhile to get too tied up in this quality issue, but  
24 of course the Board is -- I mean, the Staff will agree to do  
25 all we can to present all the evidence the Board feels is

1 necessary.

2 JUDGE LAZO: Well, Mr. Gehr is stating that the  
3 effluent is just not involved in the shutdown system, and  
4 Ms. Bernabei is saying that the effluent does serve as some  
5 sort of a backup system, as she understands it, for -- so it  
6 is part of the safety system. I think we are going to have to  
7 have some expert tell us how they understand it.

8 And again, we suggest that in the time remaining,  
9 if you could work out some witness schedules, it would help  
10 all of you, I am sure, and would be helpful to us.

11 MR. GEHR: If we continue the schedule, if I  
12 may --

13 JUDGE LAZO: Why don't you tell us in the morning.

14 MS. BERNABEI: I assume what you are suggesting,  
15 Mr. Chairman, is that there is some kind of consensus or  
16 agreement reached between Counsel?

17 JUDGE LAZO: I would prefer that, rather than  
18 simply --

19 MS. BERNABEI: Intervenor would certainly prefer  
20 that also.

21 MR. GEHR: I can reschedule some of this, of  
22 course, but I had thought that we would be ready for Mr.  
23 Steiner at one o'clock tomorrow afternoon. I can check with  
24 him and see whether he is available at three o'clock. As far  
25 as I know, he has his afternoon free. I would like to get Mr.

1 Steiner.

2 JUDGE LAZO: I think these are your problems.

3 MR. GEHR: Right, and I am saying, I am going to --  
4 I will schedule my witnesses the way I can.

5 JUDGE LAZO: fair enough. Now, what time shall  
6 we begin in the morning?

7 MR. GEHR: We are early risers around here.

8 MS. HOURIHAN: Ten o'clock?

9 JUDGE LAZO: Nine, nine thirty, didn't I hear  
10 somebody say ten?

11 MR. GEHR: Eight thirty?

12 MS. BERNABEI: If we provided you with a witness  
13 list perhaps at nine, we should start at 9:30. I assume you  
14 would want to know a little bit about what we had worked out.  
15 That would be my suggestion.

16 JUDGE LAZO: Well, really who is going to be  
17 inconvenienced by a nine o'clock start?

18 MR. GEHR: May I remind the Board that we have, I  
19 think I have heard at least three people saying they want to  
20 be here to make a limited appearance.

21 JUDGE LAZO: Oh, yes.

22 MR. REIS: Can we then suggest 8:30?

23 MR. GEHR: I just don't know how long it will  
24 take, but judging from what it went today, if we do that in  
25 less than a half hour, I will be surprised.

1 JUDGE LAZO: You know, if we say 8:30, and the  
2 people making limited appearances come in at 9:00 or 9:30,  
3 then we have to interrupt our proceeding.

4 MR. GEHR: That won't do.

5 JUDGE LAZO: Let us say nine o'clock. Then we  
6 are in recess -- are there any other matters we can profitably  
7 dispose of this evening?

8 Very well. Thank you. We are in recess until  
9 9:00 o'clock tomorrow morning.

10 (Whereupon, at 5:55 o'clock p.m., Tuesday,  
11 April 27, 1982, the hearing in the above-entitled matter was  
12 recessed, to reconvene the next day at 9:00 o'clock a.m.)

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This is to certify that the attached proceedings before the  
Nuclear Regulatory Commission Atomic Safety and Licensing Board

in the matter of: Arizona Public Service Company, et al.

Palo Verde Nuclear Generating Station Units 1, 2 and 3  
Date of Proceeding: April 27, 1982

Docket Number: STN 50-528, 50-529, 50-530

Place of Proceeding: Phoenix Arizona

were held as herein appears, and that this is the original transcript thereof for the file of the Commission.

Horace W. Briggs, II.

Official Reporter (Typed)

Horace W. Briggs

Official Reporter (Signature)