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NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF:

PUGET SOUND POWER & LIGHT COMPANY, ET.AL. (SKAGIT)

Docket No: 50-522 523

Place - Seattle, Washington

Date - July 17, 1979

Pages 11954-12,146

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

In the matter of:

PUGET SOUND POWER & LIGHT
 COMPANY, et al.

Docket Nos. 50-522
 50-523

(Skagit Nuclear Power Project
 Units 1 and 2)

New Federal Building,
 South Auditorium,
 915 Second Avenue,
 Seattle, Washington.

Tuesday, 17 July 1979

The hearing in the above-entitled matter was
 reconvened, pursuant to notice, at 9:30 a.m.

BEFORE:

VALENTINE B. DEALE, Esq., Chairman,
 Atomic Safety and Licensing Board.

GUSTAVE A. LINENBERGER, Member.

DR. FRANK F. HOOPER, Member.

APPEARANCES:

On behalf of the Applicant:

F. THEODORE THOMSEN, Esq., DOUGLAS S. LITTLE, Esq.,
 Perkins, Coie, Stone, Olsen & Williams, Seattle,
 Washington, and MICHAEL BAUSER, Esq., Lowenstein,
 Newman, Reis, Axelrad & Toll, Washington, D.C.

On behalf of the Regulatory Commission Staff:

RICHARD L. BLACK, Esq., and DANIEL T. SWANSON, Esq.,
 Washington, D.C.

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APPEARANCES: (Continued)

2

On behalf of Skagitians Concerned about Nuclear Plants:
Intervenors:

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4

ROGER M. LEED, Esq., 1411 Fourth Avenue, Seattle,
Washington 98101

5

On behalf of Forelows on Board and the Coalition for
Safe Power:

6

7

ERIC STACHON, Portland, Oregon

8

On behalf of the State of Washington:

9

THOMAS F. CARR, Esq., Assistant Attorney General,
Olympia, Washington, and NICHOLAS LEWIS, Energy
Siting Council, Olympia, Washington

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On behalf of Skagit County:

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THOMAS MOSER, Esq., Deputy Prosecuting Attorney
for Skagit County

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mpblC O N T E N T S

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P R O C E E D I N G S

CHAIRMAN DEALE: Ladies and gentlemen, a brief announcement. I think this is good news. We have found a new place to hold our hearing session. It is downstairs in the auditorium, the South Auditorium on the fourth floor.

If the move is successful, we intend to call our meeting to order at a quarter to ten instead of 9:30. We will allow time for everybody who has mechanical paraphernalia to get organized.

Thank you very much.

(Recess)

9:55 a.m.

CHAIRMAN DEALE: This meeting will come to order.

We had a slight delay, but the delay was well worthwhile, because we traded a very small room, and really an inadequately-sized room, for this lovely arrangement.

This is a hearing session in the matter of Puget Sound Power & Light and others before the Atomic Safety and Licensing Board of the United States Nuclear Regulatory Commission. The docket numbers are 50-522 and 50-523.

The primary subject matter is the application of Puget Sound Power & Light and Associates for a construction permit, sometimes referred to as a CP, to build the Skagit Nuclear Power Project.

This particular hearing session was agreed to by

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1 the parties at their meeting with the Board on April 24.
2 The hearing session is also pursuant to the follow-up Board
3 Order of June 29, and an Order subsequently published in the
4 Federal Register.

5 At the outset, we welcome counsel for the parties
6 who are participating in this proceeding.

7 We ask them to introduce themselves, or to reintro-
8 duce themselves as the case may be. First we would like
9 to hear from the Applicants' counsel.

10 MR. THOMSEN: F. Theodore Thomsen of Perkins, Coie,
11 Stone, Olsen & Williams, Seattle, attorneys for the Applicants.

12 I am accompanied this morning by my associate,
13 Douglas S. Little of our firm, and my associate, Michael
14 Bauser from our Washington D.C. firm of Lowenstein, Newman,
15 Reis, Axelrad and Toll.

16 CHAIRMAN DEALE: Thank you.

17 Nice to see you again. We don't exactly welcome
18 the weather that we came into.

19 (Laughter.)

20 For the Regulatory Staff of the United States
21 Nuclear Regulatory Commission?

22 MR. BLACK: Good morning, Mr. Chairman. My name
23 is Richard L. Black, attorney for the NRC Staff.

24 Sitting on my left is Daniel T. Swanson, also
25 an attorney with the NRC Staff.

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1 CHAIRMAN DEALE: Fine. Thank you, Mr. Black. Nice
2 to see you again.

3 For the Skagitonians Concerned about Nuclear Plants,
4 more frequently known as SCANP?

5 MR. LEED: Good morning, Mr. Chairman. My
6 name is Roger Leed of Seattle, Washington. I represent the
7 Intervenors.

8 CHAIRMAN DEALE: Fine. Thank you very much,
9 Mr. Leed.

10 Now, some of the parties are not represented by
11 counsel, but they are represented by persons who are members
12 of the organizations which they represent. And we call
13 upon the representatives of Forelaws on Board, the Coalition
14 for Safe Power, to introduce themselves.

15 MR. STACHON: Yes, Mr. Chairman.

16 My name is Eric Stachon. I am representing both
17 Forelaws on Board and Coalition for Safe Power from Portland,
18 Oregon. Our address is in the record.

19 CHAIRMAN DEALE: Fine. Thank you very much,
20 Mr. Stachon.

21 Now also participating in this proceeding is the
22 State of Washington represented by the Energy Facility for
23 Site Evaluation Council. The State of Washington, or the
24 Council, is represented by the Attorney General's Office.

25 And who is the representative?

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1 MR. CARR: I am right here. Thank you,
2 Mr. Chairman.

3 Tom Carr. I hold an appointment as an Assistant
4 Attorney General. I am accompanied here this morning by
5 Mr. Nicholas Lewis, who is Chairman of the Energy Siting
6 Council.

7 CHAIRMAN DEALE: Fine. Nice to meet you Mr. Carr.
8 We have exchanged correspondence. I just had the pleasure
9 of meeting Mr. Lewis.

10 The State of Oregon is also participating in this
11 proceeding as an interested state.

12 Is the person representing the State of Oregon
13 here?

14 (No response)

15 Apparently the representative from the State of
16 Oregon is not able to make it today.

17 Now, since we last met, that is at our conference
18 on April 24, Skagit County has also become a participant in
19 the proceeding as an interested state agency. We would
20 appreciate hearing from the representative of Skagit County.

21 MR. MOSER: Mr. Chairman, my name is Tom Moser.
22 I am Deputy Prosecuting Attorney for Skagit County.

23 On behalf of Skagit County we appreciate the
24 opportunity to participate in these proceedings.

25 CHAIRMAN DEALE: Thank you.

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1 How do you spell your name?

2 MR. MOSER: M-o-s-e-r, Moser.

3 CHAIRMAN LEALE: Thanks, Mr. Moser, nice to meet
4 you, and glad to have you aboard.

5 Now, the status of the three Indian tribes
6 petitioning to intervene in this proceeding, is still before
7 the Atomic Licensing and Appeal Board.

8 That Board's latest action is reflected in its
9 decision dated July 10, 1979.

10 If counsel for the petitioning Indian tribes are
11 here today we welcome hearing from them, and offer them the
12 opportunity to introduce themselves.

13 (No response)

14 Mr. Bush-- apparently the Indian tribes are
15 not represented here today.

16 Now we expect to address ourselves to the proposed
17 agenda for this hearing session after we permit limited
18 appearances. After we permit limited appearances, we will
19 also address ourselves to preliminary matters which appear
20 to us to be outstanding.

21 This initial positioning of limited appearances
22 at this hearing session was referred to in the Board's
23 Comments on Parties' Preparation for a Hearing Session. We
24 said in those comments, and I quote:

25 "In working out the order of presentation

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1 among themselves, the Parties should allow for
2 limited appearances at the outset of the hearing."

3 Now, absent objections, we intend to move along
4 with the limited appearances. Then, after the limited
5 appearances are concluded, the Board will consider preliminary
6 matters and then proceed with the latest order of presentation.

7 This order of presentation the Board received from
8 Mr. Thomsen by his letter of June 29, and as modified by his
9 letter of July 6.

10 Now, since our conference here on April 24, there
11 have been several persons in behalf of themselves and their
12 organizations, who have asked us for the opportunity to make,
13 in effect, a limited appearance under the Commission's
14 Regulations.

15 For the information of those concerned with
16 limited appearances, I will read you the pertinent section
17 of the Commission's Regulations concerning limited appearances.
18 The section of the Commission's Rules is entitled
19 "Participation by a Person Not a Party." Paragraph A
20 states:

21 "A person who is not a party should in the
22 discretion of the presiding officer, be permitted
23 to make a limited appearance by making oral or
24 written statement of his position on the issues at
25 any session of the hearing or any prehearing

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1 conference within such limits and on such
2 conditions as may be fixed by the presiding officer.
3 But he may not otherwise participate in the
4 proceeding."

5 We have had several people seek the opportunity
6 to make a limited appearance. Four of them have been
7 indicated in a Board Order, and Mr. Mitchell has compiled a
8 list today.

9 We will give preference to the people who have
10 written in their request to make a limited appearance.

11 Now the purpose of a limited appearance is to give
12 an individual or his organization, the opportunity to speak
13 his piece on the issue before the Board without carrying the
14 burden of being a party to the proceeding. The ideas of
15 persons making a limited appearance may prove useful to the
16 parties and to the Board during the course of the proceeding.
17 And to that extent, those making a limited appearance have the
18 opportunity to contribute to the development of the proceeding.

19 For the information of those engaged in a limited
20 appearance, though their statements become a matter of record,
21 they are not subject to questioning or cross-examination by
22 the parties and they are not sworn in.

23 Now, if the Board has a question or two arising
24 out of their statements, the person making a limited appearance
25 may be invited to answer such questions.

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1 Now, without further ado, we will call upon the
2 first person to make a limited appearance today. He is
3 Robert E. Skelly.

4 Mr. Skelly is a member of the Legislative
5 Assembly of the Province of British Columbia.

6 Mr. Skelly?

7 LIMITED APPEARANCE STATEMENT OF ROBERT E. SKELLY,
8 MEMBER, LEGISLATIVE ASSEMBLY, PROVINCE OF
9 BRITISH COLUMBIA, PRESENTED BY C. D'ARCY.

10 MR. SKELLY: Thank you.

11 Our brief will be presented by on behalf of the
12 New Democratic Party of British Columbia by Chris D'Arcy,
13 who is our energy person.

14 CHAIRMAN DEALE: Thank you very much.

15 MR. D'ARCY: Thank you.

16 At the outset let me say how much I appreciate
17 this opportunity to appear before the Commission. I also
18 want to -- my name is Chris D'Arcy. I want to introduce the
19 other members of the Legislature.

20 Gordon Hanson, representing Victoria, the
21 Southern Tip.

22 Bob Skelly who just spoke to you represents the
23 Alberni Valley.

24 I am from the Rossland-Trail which is on the
25 U.S. border, near Spokane.

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1 I want to just preface my remarks by indicating
2 that we certainly don't presume to come here and tell the
3 State of Washington or the United States what sort of power
4 plants they may put in.

5 We want to indicate a concern we have in the event
6 that anything which happens across the border should
7 affect the health and welfare of British Columbians, whether
8 it be radioactive waste material or fallout from an accident
9 like happened at Three Mile Island, or whether it be
10 pesticides, herbicides or industrial fallout from the thermal
11 plants.

12 And I might add the United States has expressed
13 the same concerns for that kind of activity which affects the
14 land across the U.S. border.

15 We see that at the Poplar Flats, the proposals
16 for Saskatchewan; for that we raised objections. And
17 we also of course saw the major settlement in the 1930's
18 due to smelter waste from the refining operations at Trail
19 brought by property owners in the north Fort Washington area,
20 a successful action, I might add.

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1 Reading from the brief, the proposal to build a
2 nuclear power plant at Sedro Woolley, a town that lies between
3 Seattle and the Canadian-U. S. border, has aroused new
4 fears on both sides of the border concerning dangers from atomic
5 radiation.

6 It is for this reason that I and other members of the
7 New Democratic Party caucus are before you today to make a
8 statement at this hearing of the Atomic Safety and Licensing
9 Board.

10 Our concern as public officials hopefully will
11 not come as a surprise, that we have a responsibility to the
12 British Columbia electorate who returned -- you almost might
13 say -- a hung jury in a recent provincial election, giving
14 49 percent of the vote to one party and 46 to the other. We
15 represent the 46 part; that's why we're not the government.

16 I think it's significant, however, that the government
17 of BC is not here officially represented today; neither is
18 the government of Canada.

19 Secondly, we recognize that the nuclear power issue
20 is inextricably related to the political process, and we
21 might point out that national governments have risen or fallen
22 on this issue, and we saw that in Sweden recently.

23 Three Mile Island has made it painfully clear to
24 all of us that nuclear plants are not at all immune to
25 accidents. Admittedly, we recognize that there were some

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1 unusual mechanical failures at Three Mile Island; however,
2 it was human error which was the fundamental aggravating
3 factor, as the staff report of the Nuclear Regulatory
4 Commission pointed out. A technician confusedly turned off
5 the emergency core cooling system at the peak of the crisis.
6 The NRC report further revealed good luck had as much to do with
7 averting a catastrophe as good engineering did.

8 Had the plant operators decided to depressurize
9 the reactor vessel, which the NRC points out is exactly
10 what the staff engineers had in mind on the first day of the
11 crisis, a disaster would have been visited upon the entire
12 state of Pennsylvania.

13 The point we are attempting to make for the
14 purpose of this statement is this: nuclear technology is
15 still a matter of "what if."

16 Such uncertainty is compounded in the case of the
17 Sedro Woolley plant by its location in virtually the
18 shadow of an active volcano, Mount Baker. We are not altogether
19 reassured on the other aspects of geological safety, the
20 activity or nonactivity of fault lines in the Skagit Valley
21 where the plant is to be constructed.

22 The probability of earthquakes occurring or
23 volcanoes erupting magnifies the "worst possibility scenario"
24 of a nuclear accident.

25 If there was a major accident in the operation of the

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1 proposed plant, we might as what the result might be as
2 far as British Columbia is concerned.

3 First of all, there is little doubt we'd be in the
4 path of radiation drift, especially on those occasions when
5 there are unsettled conditions in the Pacific Northwest and
6 prevailing winds from the north.

7 Furthermore, the NRC and the Environmental Protection
8 Agency have prepared a task force report on emergency
9 evacuation in the case of nuclear accidents; all those
10 within a 50 mile radius of the accident are advised to
11 evacuate their residences. Over 1 million people in the
12 lower mainland of Vancouver would be affected, as there is
13 no direct route away from Vancouver except to the east.

14 Those who live in the city, in the southern sectors,
15 Surrey, White Rock, and Richmond, would have to move toward
16 the source of radioactivity before they could escape away
17 from the harmful emissions.

18 As any commuter in the lower Fraser Valley of
19 Vancouver could tell us, the transportation system leaves a
20 great deal to be desired under normal conditions, let alone
21 under any emergency evacuation situation.

22 But a 50 mile radius seems to be somewhat on the
23 conservative side. In its followup to the Three Mile Island
24 accident, the official publication of the American
25 Association for the Advancement of Science notes that a
physicist for the Food and Drug Administration has calculated

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1 that people as far away as 200 miles downwind of any nuclear
2 leak would need protection.

3 At this distance, almost 79 percent of the total
4 population of British Columbia -- or approximately 2 million
5 people -- would be affected.

6 Just think a moment of the demography of BC: most
7 of the people in BC live in the Fraser Valley and southern
8 Vancouver Island; in fact, what we call the lower mainland in
9 the Fraser Valley area is more densely populated per square
10 mile than the most populous part of Europe which is
11 Belgium and the low countries. So, you might say we're
12 somewhat crowded already by being hemmed in on the north
13 by a mountain range; on the west and east -- on the north
14 and east by mountains; on the west by the Strait of Georgia
15 (phonetic) and to the south of course is the U. S. boundary.

16 The damages from a nuclear accident are insured in
17 the United States to a legal liability of \$560 million, as
18 a result of the Price-Anderson Act. If a nuclear accident
19 occurred affecting British Columbia, two questions arise:
20 would BC residents -- for example, farmers with property and
21 livestock in the Fraser Valley -- be covered?

22 The second question concerns the ceiling of the
23 liability. If damages were in excess of 560 million, as
24 they certainly would be in the event of a major nuclear
25 accident, would British Columbians receive any monies in

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1 excess of the \$560 million limit?

2 Although we recognize the precedent of other cross
3 border environmental damage suits, such as the Trail
4 Smelter Arbitration, as I mentioned earlier, in the
5 1930's and the more recent Saskatchewan Poplar Eats case,
6 aren't we dealing here with a whole new area of international
7 law?

8 How do you calculate damages on human life?
9 An overwhelming amount of data shows that there is no
10 safe level of exposure and no dose of radiation so low that
11 the risk of malignancy is zero. An increase is -- in
12 leukemia or birth defects in a population 10 years or 20
13 years after a nuclear accident has not been thought out in
14 terms of liability at the national level, let alone the
15 international level.

16 We are not here solely to talk about the event
17 of a nuclear accident. We are also concerned about the
18 routine releases of low level radioactive particles into the
19 air and water around Sedro Woolley, in particular, the release
20 of radioactive materials into the Skagit River.

21 Skagit is a major resource river for all the
22 Pacific Northwest. It supports native runs of all
23 five commercial species of salmon; that is, there is no
24 artificial stocking of the Skagit. For fisheries biologists,
25 it serves as a vital gauge; it is the river that has
produced salmon that have been the fittest survivors in the

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1 Pacific Northwest. It is the gene pool for native stock.

2 It might be superfluous, but I might add that the
3 fish don't know the 49th parallel is there; fish that
4 spawn in U. S. rivers are caught by Canadian fisherman, and
5 it works the other way, too. Fish that spawn in Canada are
6 caught by commercial and sport fishermen from the United
7 States.

8 Last year British Columbia had a commercial
9 fishing industry that was worth in excess of \$400 million
10 in revenue to the province. The release of radioactive
11 particles in the Skagit River would cut down the fishing
12 industry considerably. The effect on the tourist industry
13 which attractssport fishermen by the tens of thousands
14 we feel would likewise be dramatic.

15 We are also concerned about where and how you
16 will store the long lived high level wastes from a plant
17 like Sedro Woolley over the 30 year life of the plant. Huge
18 quantities of waste must somehow be removed from the reactors
19 and must without mishap be put in containers that will never
20 rupture. These quantities of waste must be moved to
21 a burial ground or to reprocessing plants, handled again,
22 and disposed of with risk of human factor -- error at
23 every step.

24 Accidents in transportation have occurred already;
25 trucks bearing radioactive materials have been involved in

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1 accidents and there is record of at least one instance of
2 a train carrying radioactive waste derailing.

3 After Three Mile Island, who would dismiss the
4 chance of a truck or railway carrier carrying radioactive
5 material blowing sky high or dumping its cargo in the midst
6 of a town or if it occurred in a rural area, waste flowing into
7 a watershed area.

8 The final point worth noting is the extraordinary
9 cost of nuclear power; the Sedro Woolley plant has jumped over
10 \$1 billion in estimates in construction costs in the last
11 three years. That cost could eventually affect British
12 Columbians, as there are power sharing agreements between
13 Washington state utilities and British Columbia utilities in
14 the event of temporary transmission line failures in British
15 Columbia.

16 It is therefore our position in terms of economics
17 and safety that the plant would be a terrible mistake; our
18 policy as a political party in BC and nationally is opposed
19 to nuclear power plants anywhere, primarily because we
20 feel that neither is the energy needed nor is the technology
21 available to guarantee that no mishaps will occur, and there
22 is no way to provide for safe disposal of waste that will
23 remain radioactive for thousands and thousands of years.

24 We are not going into in this brief statement
25 about alternative sources of power, but we feel that there
are alternatives that perhaps have not been looked at by

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1 the utility on both sides of the border.

2 I want to make it clear that we're not "no growth";
3 we recognize that there is a reason on both sides of the
4 border to have controlled economic growth. We need to have
5 business and job opportunities. We also recognize that, however,
6 there are other ways of developing energy, each one of which is
7 more labor intensive in our view -- both in the construction
8 and the operation -- so I want to make it clear that we in
9 BC are not opposed to economic growth or other forms of
10 energy development.

11 And we recognize that there are jobs involved in
12 other forms of energy as well as in nuclear proposals. The
13 assumptions of the studies are based on conservative --
14 even greater energy savings can be realized.

15 We feel that there is a lot of improvement that
16 can be made in insulating practices and the plant's efficiency
17 standards, controlling pump water use during peak periods.
18 We believe that most residential space heating will
19 be electric even by the turn of the century. In the process
20 of adapting conventional houses to solar heat -- this has
21 never been exploited.

22 I'd like to conclude by saying that the point
23 here, we feel that nuclear energy, far from being the wave
24 of the future, we think is a conceptual throwback to another
25 era; it makes us think in terms of centralized,

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1 inflexible grid power systems. It should not be that way
2 in 1979. We think we have the technological
3 resources to overcome our -- what we think are social
4 and institutional barriers we have put in our way.

5 The last point I would like to make is that in the
6 event that technologists and physicists in the United States,
7 Soviet Union and Western Europe do develop workable fission power,
8 in other words, controlling hydrogen reactions, fusion power --
9 excuse me -- controlling hydrogen reactions, we will probably
10 look back at the whole question of uranium fuel, fusion
11 power plants as the same way we look back on the people
12 who bled people to cure diseases 100 years ago.

13 We'll wonder why we ever got involved with radioactivity
14 and the mining of uranium for production of power.

15 Thank you very much.

16 Oh, excuse me; I have one last thing. We just
17 have a bit of a map here to show graphically -- we put some
18 circles on it. This is Sedro Woolley -- this is the total --
19 the red line is the total evacuation area from a Three Mile
20 Island type of disaster.

21 This is the 50 mile -- this is the 100 mile
22 line. As you see, it takes in most of the populated area
23 of British Columbia, and the larger line is the 200 mile
24 circle where the U. S. National Research Council has indicated
25 that that's the airborne limit of fallout from the kind of

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1 accident that we've already had at Three Mile Island.

2 And you can see perhaps why we're concerned in
3 Canada about something that may happen just over the
4 border.

5 CHAIRMAN DEALE: Thank you very much. We appreciate
6 your presentation. And it is to our satisfaction, too,
7 that you came here and made this presentation. We don't
8 want to get into politics, but we hope that you do a little
9 bit better the next time around.

10 MR. SKELLY: So do we.

11 (Laughter.)

12 CHAIRMAN DEALE: Again, we do wish to thank
13 Mr. Skelly and his colleagues who are members of the
14 legislative assembly of the province of British Columbia.

15 We next call upon Bob Jacobs, who is with the
16 municipal council of Surrey in British Columbia, and Mr. Jacobs
17 had forwarded to us a certification from the council that
18 he be permitted to speak on behalf of the council.

19 Mr. Jacobs,

20 LIMITED APPEARANCE STATEMENT BY

21 BOB JACOBS ON BEHALF OF THE MUNICIPAL COUNCIL,
22 SURREY, BRITISH COLUMBIA

23 MR. JACOBS: Thank you, Mr. Chairman and members
24 of the board.

25 Yes, indeed, the council certified me to present

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1 this brief on their behalf. Last night the brief was
2 presented to them and it was approved unanimously in its
3 entirely by the municipal council.

4 Mr. Chairman, the people and the municipal council
5 of Surrey, British Columbia thank you, indeed, for the
6 opportunity of being allowed to appear here today to express
7 our concerns about the proposals by Puget Power for a
8 nuclear power plant at Sedro Woolley, Washington.

9 Our municipality, sir, is the largest one in
10 Canada at 132 square miles, and it has a population of
11 130,000 people and has as one of its boundaries, the
12 southern boundary, the Canada-United States of America
13 border.

14 And while Canada and the United States have long
15 been friendly neighbors, the people of Surrey especially
16 recognize this neighborly attitude, being in such close
17 proximity to the United States of America.

18 And it's within that context that this presentation
19 is made, a spirit of cooperation and one of hope that our
20 concerns will be considered to our mutual satisfaction.
21 We recognize the very fact that we are allowed to make
22 this presentation to you in a foreign nation not only indicates
23 your typical friendly attitude, but also the quality of the
24 democratic process in the United States.

25 And, indeed, I think it's kind of a historic
moment when a political body in one country can plug into the

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1 decision making process in other country regarding something
2 so crucial as the question of energy is today.

3 Now, the municipality of Surrey is located only
4 35 miles from Sedro Woolley, Washington, and upon my
5 initiative at council, we decided to make our concerns
6 known for the official record, as only in this way will we
7 have any impact on a proposal which has a potential for
8 an almost unimaginable holocaust, if a major accident
9 should occur.

10 I think we just had the DC-10 plane crisis, and
11 I think that pales in comparison to the comparison of a
12 Sedro Woolley nuclear accident, because if a major
13 nuclear accident occurred at Sedro Woolley, Washington, over
14 1.2 Canadian lives in the lower end of British Columbia would
15 be placed in jeopardy.

16 I know -- I don't want to be overly dramatic, but
17 that is difficult. But in effect, a nuclear energy plant
18 sitting next door to British Columbia is a potential nuclear
19 time bomb, and the very thought of an accident like Hiroshima
20 makes us shudder.

21 The people of Surrey -- in fact all of the people
22 of the lower mainland of British Columbia are anxious in
23 respect to future power proposals because of our very close
24 proximity and the fact that nuclear radiation from an
25 accident would reach us via the prevailing winds before the

davidl3 1 city of Seattle, and perhaps the people's consciousness of
2 a nuclear catastrophe has been raised by the Three Mile
3 Island incident.

4 But the very real fact remains that our people are
5 concerned, as are the people of the United States of
6 America, from what I've read; and one thing the Three
7 Mile Island incident proves is that the so-called failsafe
8 gadgets of modern technology in relation to nuclear power
9 are as fallible as the scientists and engineers who design
10 them.

11 It is clear that tougher safety standards
12 are required; that further research is therefore necessary
13 and before nuclear power can be declared absolutely and
14 irrevocably safe, then a moratorium should be placed on the
15 construction of such plants.

end 2.

mpb fls.

1A MADELON
s David
npbl

1 It is better to be safe than sorry, or as
2 Senator Kennedy put it:

3 "It is more important to build these
4 plants safely than to build them quickly."

5 It is my understanding from the news broadcasts
6 this morning that there is a bill before the United States
7 Senate to pass a moratorium on nuclear power plants for six
8 months. Now in relation to the Sedro Woolley proposal,
9 geologists are concerned that the geology in the vicinity of
10 the plant proposal is sufficiently unknown, and further
11 seismologists point out the earthquake faults in that area.
12 So the possible scenario in terms of an accident is devastat-
13 ing.

14 If an earthquake of considerable magnitude occur-
15 ed or the plant experienced a major accident, the lower main-
16 land of British Columbia would have to be evacuated. But as
17 Mr. Skelley pointed out, all major highway evacuation routes
18 in the lower mainland, and particularly within the municipality
19 of Surry, follow Highway Number 1 east and would bring the
20 people evacuating even closer to the hot spot of Sedro Woolley
21 before safety could be reached.

22 I realize the proponents of the project argue that
23 the plant will be built to withstand any expected earthquake.
24 Yet is this promise good enough when the Nuclear Regulatory
25 Commission shut down five nuclear power plants in the east

mpb2 1 because it was not certain that they had been designed so that
2 their coolant pipes could survive an earthquake.

3 We do not believe that nuclear energy has been
4 proven to be absolutely safe, and furthermore by allowing
5 private enterprise to construct and operate nuclear energy
6 plants even with stringent government regulations and safety
7 requirements, leaves the door open to a laxity of safety
8 standards because of private enterprises need to make a profit
9 or at the very least, not to suffer heavy monetary losses over
10 a long period of time.

11 Will a safety corner be cut if the plant is
12 experiencing a monetary loss and if so, will that cut, no
13 matter how minor, trigger a disaster. We should not even
14 have to speculate along these lines.

15 I don't want to paint the "China Syndrome", a
16 film which depicts nuclear plant officials as placing greed
17 for profits far above their concern for public safety, but maybe
18 in some bizarre sense that is not as far-fetched as we might
19 imagine.

20 We believe that something as potentially catastro-
21 phic as nuclear energy, if it should be considered, should be
22 within the exclusive jurisdiction of government which, as we
23 all know, need not cut corners to make a profit. This philo-
24 sophic approach, therefore, precludes the granting of a
25 license to Puget Power.

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mpb3

1 Mr. Chairman, another issue, secondary to the
2 primary issue of nuclear power plants, but one that warrants
3 consideration in our view is the complex problem of dealing
4 with the disposal of radioactive waste from a nuclear power
5 plant. There are very few disposal sites, and whatever site
6 is chosen is ruined for mankind for a period of something like
7 2000 years.

8 And to give you an illustration of this problem,
9 I point out the problem we have encountered, which may be a
10 small one in your perspective, but it's been a problem to our
11 municipality in Surry, and that is in the Bridgeview district
12 of our municipality, where there has been lying for a number of
13 years 35 tons of low level radioactive waste. And our
14 municipal council has been trying to have this material re-
15 moved for the past two years, without success. And during that
16 time we have almost experienced civil disobedience from the
17 residents of the area and workers who feel, or who fear the
18 material as well. And yet we have no luck moving this material,
19 partly because of the cost, but more importantly because
20 there is no place to put it. There is simply only one dump-
21 ing ground in Canada, to our knowledge, and we even wonder if
22 there is really one.

23 Another collateral issue and one over which you
24 may have no direct jurisdiction over and one which you may
25 perhaps make a recommendation to the legislators, concerns

mpb4

1 the law of damages should a nuclear accident occur. And
2 Mr. Skelly also went into this matter of the Price-Anderson
3 Act, wherein liability for a nuclear accident is limited to
4 \$560 million. And of course it's clear that in the horrendous
5 event of a major accident occurred, \$560 million would be
6 totally insufficient.

7 For example, if the Three Mile Island crisis had
8 turned into a nuclear nightmare the damages would have run
9 into the billions. And of course, in respect to the power
10 plant at Sedro Woolley, if such an accident should occur there,
11 billions of dollars' worth of damages could result to
12 British Columbia.

13 Of course, Canada could launch an action in the
14 International Court of Justice for the excess or possibly
15 through the International Joint Commission, but would the
16 United States of America honor any judgment in excess of
17 \$560 million as International law primarily relies upon
18 voluntary and not mandatory compliance. And would the
19 United States of America say '\$560 million dollars is our
20 limit, even internationally'.

21 So therefore our council feels that our people
22 could feel more at ease in this regard if the monetary limita-
23 tion of the Price-Anderson Act was significantly higher.

24 Now, Mr. Chairman and members of the Board, as
25 mentioned in the beginning of this presentation, it is made

mpb5

1 in the spirit offriendliness and to be true, we Canadians
2 have not the unfettered right to oppose nuclear energy in the
3 United States of America in these critical energy times un-
4 less we can offer you some alternate energy source. In other
5 words, we can't have our cake and eat it too.

6 But as true neighbors, if Washington State is
7 energy short, British Columbia should further develop its
8 great hydro resources and export power to its southerly
9 neighbor at a price which would be equitable. As a political
10 body, I believe that you may count on our support in
11 British Columbia if you deem this to be a constructive alter-
12 native.

13 In fact, the chairman of British Columbia Hydro
14 has also advocated something along this line.

15 In summary, sir, in the great rush for energy since
16 all of the pitfalls of nuclear energy are unknown, we believe
17 it would be prudent at this time to have a moratorium on
18 nuclear energy, and in particular we believe that there are
19 too many problems from our perspective, associated with the
20 Puget Power and Light Company application at Sedro Woolley,
21 Washington, and would implore you to exercise your discretion
22 and not grant a license of construction to them and their
23 consortium.

24 We make this presentation, of course, not as
25 experts in the field of nuclear energy, but as elected

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mpb6

1 representatives of a district in British Columbia. And the
2 people's concerns are very evident and they're very real.
3 And even if these valid concerns were discounted, we have an
4 obligation to allay the psychological fears of people because
5 in our mutual democratic society everyone is entitled to peace,
6 including peace of mind.

7 Therefore, our purpose is not merely to express
8 certain thoughts that you've probably heard before, but to ask
9 you to give the just consideration due to the people because,
10 as you are acutely aware, that is what this hearing is all
11 about.

12 We are gratified to be able to make this presenta-
13 tion on behalf of the people of Surrey, British Columbia, and
14 to have had the opportunity of appearing before you here today
15 in Seattle, Washington. And we thank you very much for your
16 consideration.

17 (Applause.)

18 CHAIRMAN DEALE: Thank you very much, Mr. Jacobs.
19 And we want to say that we appreciate your taking the time and
20 trouble to prepare the statement and to come down here and
21 give us the benefit of your thinking. We appreciate it.

22 MR. JACOBS: Thank you, sir. And I'll leave the
23 original and three copies of the brief with the clerk.

24 CHAIRMAN DEALE: That will be very helpful. Thank
25 you.

mpb7

1 My colleague, Mr. Linenberger, pointed out that
2 everybody at the table here has had the opportunity to intro-
3 duce themselves, and he thinks that the Board ought to intro-
4 duce itself. Well, I think he has a point.

5 (Laughter.)

6 So let me present Mr. Gustave A. Linenberger,
7 who is a permanent member of the Atomic Safety and Licensing
8 Board panel. Mr. Linenberger.

9 (Applause.)

10 And on my left is Dr. Frank Hooper. Dr. Hooper
11 is a member of the faculty of the University of Michigan.
12 Dr. Hooper.

13 (Applause.)

14 And I am Valentine Deale. I'm a lawyer in
15 Washington, D.C. And like Dr. Hooper, we are part-time
16 members of the panel. But when we direct our attention to
17 this case, we see nothing part-time about the work that's
18 involved.

19 We are appreciative of the political representa-
20 tives of the people of British Columbia coming down here and
21 explaining their viewpoint and articulating the matter in
22 such an effective fashion.

23 The next person is also from British Columbia,
24 and he is the president of the Medical Association.

25 I might say before I ask him to speak to us that

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mpb8 1 on behalf of the Board, we are very sorry that the communica-
2 tions seem to have bogged down a bit between ourselves and
3 the Canadian people who are interested and who are making
4 limited appearances. But we did finally get together, and
5 we're happy that we did.

6 I call upon now Dr. R. Woollard from the
7 British Columbia Medical Association.

8 Dr. Woollard.

9 LIMITED APPEARANCE STATEMENT OF DR. R. WOOLLARD
10 ON BEHALF OF DR. PETERMAN

11 DR. WOOLLARD: Mr. Chairman, I am appearing, as
12 my letter to the parties indicated, on behalf of the
13 president, Dr. Peterman, who originally received permission
14 to appear before you.

15 The board of directors in June of this year passed
16 unanimously a resolution opposing the siting of the
17 Sedro Woolley plant until its safety could be assured to the
18 satisfaction of the B.C. Regulatory Association. This matter
19 was referred to my committee, which is the Environmental
20 Health Committee of the British Columbia Medical Association,
21 for our consideration.

22 And the brief that we are presenting today is a
23 result of our latest deliberations. I might point out that the
24 committee is composed of both medical and non-medical people,
25 of biostatisticians, epidemiologists, and in particular the

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mpb9 1 chief epidemiologist of the Cancer Control Agency of
2 British Columbia, practicing physicians, public health
3 physicians and lay representatives from both labor and
4 management.

5 We would like to express the appreciation of
6 the British Columbia Medical Association for this opportunity
7 to appear before the Nuclear Regulatory Commission on a
8 matter which has the potential of having profound effects
9 on the health of our patients. The brief that follows
10 represents a preliminary review of limited information avail-
11 able to us up to the time of this hearing.

12 The necessity of our being here is dictated by
13 the fact that in spite of the potentially profound effects
14 the projects may have on the health and safety of Canadians,
15 those Canadian institutions which we may have expected to
16 become party to these proceedings have failed to do so.

17 Whereas we were heartened and aided by individual
18 members of various agencies, both political and regulatory,
19 in the preparation of this report, we remain deeply concerned
20 about the lack of official consultation and involvement by the
21 senior levels of government and the international tribunals
22 that might be considered appropriate.

23 The lack of involvement, regrettable as it is, is
24 perhaps less emblematic of negligence than it is of the fact
25 that we are more advanced in our engineering technology than

mpb10¹ we are in the social and legal institutions that decide
2 about the appropriateness and the safe control of such
3 technologies. The engineers who designed this project may
4 feel that they have a firm grasp of the situation, but it is
5 doubtful that they appreciate the subtleties of the process
6 whereby society decides whether or not to accept the risk
7 that the engineers deem so acceptable.

8 Our provincial government has expressed concern
9 but have deferred any active participation to the federal
10 government. In our attempts to discover the federal
11 government's response, we have contacted the following
12 agencies: the Atmospheric Environmental Service of
13 Environment Canada, through its regional director, Environ-
14 mental Protection Service of Environment Canada, through the
15 regional coordinator of that service, Environment Canada,
16 Ottawa, through Mr. James Munro and Mr. B. G. Brule, who is
17 the adviser for U.S.-Canada Relations, and Inland Waters
18 Directorate, Environment Canada, through its regional
19 director, Mr. Mac Clark.

20 It is our understanding after discussions with
21 all of these agencies that there has been no significant on-
22 going Canadian involvement in the proceedings surrounding the
23 Sedro Woolley proposal.

24 It is our understanding that the International
25 Joint Commission might be considered to have an applicable

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2 advisory function in dealing with a project of this type. It
3 is our understanding that referral could be made by either
4 government as regards the advisory function, although an
5 adjudicatory function, which may in fact be required at
6 some future date, would require the assent of both the
7 United States Senate and the Federal Cabinet of Canada.

8 We would respectfully ask the Nuclear Regulatory
9 Commission, through this Board, if in their view the Inter-
10 national Joint Commission might serve a useful function in
11 rectifying the lack of Canadian input into these proceedings
12 thus far.

13 It therefore remains for citizen groups and
14 private organizations such as ourselves to carry these
15 concerns into these proceedings. This is perhaps as clear a
16 demonstration as any that as a society we are dabbling with
17 technologies that are at the very fringes of our meaningful
18 control.

19 It is only recently that the full consequences
20 of a major nuclear accident have really entered public
21 consciousness. The very widespread and, in our view, well
22 founded public concern is, at least in our country, well
23 ahead of the political and the traditional regulatory process.

24 There is a lamentable tendency on the part of the
25 nuclear industry to dismiss this concern as an ill-informed
response to a sensationalist and biased media -- a variation

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on the traditional "shoot the messenger" philosophy. However, if we place these environmental concerns in their proper historical perspective we will see that far from being inconsequential, such public involvement represents the impetus that finally gets things done in protecting our own and future generations.

For example, even the most cursory reading of the history surrounding the British clean air legislation demonstrates that it was public demand and not scientific criteria, not expert testimony, not political leadership and not industrial altruism or 'esprit de corps' that finally led to cleaning up the air in London.

We must not forget that this pressure was finally generated after the "killer smogs" in the early 1950s. We would hope that such a graphic event would not be required before similar public involvement can be generated on the nuclear question.

In a matter of this complexity -- even if one concentrates solely on the Sedco Woolley site -- there is an understandable reticence on the part of the public to getting involved, a reticence which the B.C.M.A. certainly shares. However, because the consequences of a major failure are so far reaching and might directly affect a large number of patients in our care we felt that our responsibilities dictated that we take some part in these hearings in an attempt to

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mpbl3¹ review the potential for danger to those patients.

2 As shall be discussed later in this paper, our
3 research has made us aware of a number of Canadian concerns
4 that have been raised by a number of individuals within the
5 academic and government circles. It is our hope that we may
6 prevail upon the commission to address these concerns and
7 to seek meaningful resolution of them before proceeding
8 with the Limited Work Authorization. We ask this because in
9 our country, at least, such an authorization would prejudice
10 the issue and create a momentum that would have a significant
11 influence on later stages of the hearings when the ultimate
12 decision must be made as to whether the project is approved
13 or rejected.

14 We are conscious of the fact that our responsibilit-
15 ies, like yours and everyone else's in this room, are not
16 limited by national boundaries or by our own self-interest.
17 We are, however, aware of our own limitations and while
18 regretting that the American Medical Association has sought
19 only to address in a speculative fashion one of the peripheral
20 issues in this debate, we will concentrate on the potential
21 Canadian effects of the project and outline steps that we
22 feel should be taken to study these effects and involve
23 Canadians in something which may profoundly affect them.

24 In our consideration of these matters, the B.C.
25 Medical Association may to some extent stray from the narrow

mpbl4 1 confines of medical expertise. We are very conscious of our
2 limitations in this regard, but because of the paucity of
3 Canadian representation at these hearings we have felt
4 that it is incumbent upon us to raise these other matters
5 since the final common denominator of all of the action
6 surrounding the granting of the permit is the health of our
7 patients. It is naive to think that the medical profession
8 should simply ignore potential hazards to health until they
9 become real hazards.

10 In fact, the code of ethics of the Canadian
11 Medical Association states that an ethical physician:

12 "...will accept his share of the
13 profession's responsibility to society in
14 matters relating to public health, health
15 education and legislation affecting the
16 health or well being of the community..."

17 It is therefore with some trepidation that we
18 undertake this task and we ask the indulgence of the Commission
19 in what we consider to be reasonable requests about reason-
20 able concerns we have about the project.

21 The BCMA has been involved in consideration of
22 health matters related to nuclear energy for approximately
23 two years now. Our concerns in this area have recently
24 become more focused when we became aware of the Sedro Woolley
25 proposal. A preliminary review of the data available to us

mpbl5¹ together with the significant disagreement among experts is
2 not reassuring to us.

3 It is our understanding that there have been
4 some significant reassessments of the figures that the
5 industry has so glibly used to convince people to worry more
6 about a meteorite shower than a nuclear accident. We in
7 Canada have been presented with a far more sobering aspect
8 by the Royal Commission on Electric Power Planning. After
9 reviewing some of the safety documents related to the actual
10 operation of Canadian reactors the Commission reported
11 to the Ontario Legislature that:

12 "We believe that the Edwards/Torrie
13 estimate is more realistic than the theoretical
14 probability, not least because of the Rasmussen
15 report has concluded probability of an uncontain-
16 ed meltdown in a light water (United States)
17 reactor is one in 20,000 per reactor per year.
18 Assuming, for the sake of argument, that within
19 the next forth years Canada will have 100 operat-
20 ing reactors, the probability of a core meltdown
21 might be in the order of one in 40 years, if the
22 most pessimistic estimate of probabilities is
23 assumed.

24 "Evidence to support the Edwards/Torrie
25 position which is available in the Pickering

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2 safety reports, indicates that there were in
3 fact six loss of regulation accidents within
4 four years. This compares very unfavorably
5 with the design target of one in 100 years."

6 These disquieting possibilities give us great
7 concern about the development of the Sedro Woolley site,
8 since as we will demonstrate, the consequences of such an
9 accident to Canadians may be grave. We recognize that such
10 generic assumptions may not directly apply to site specific
11 hearings, but as we will subsequently demonstrate, there is
12 real concern that some of the unresolved generic questions
13 -- for example, earthquake possibilities -- may have particular
14 application to the Sedro Woolley site.

15 We do not presume to be experts on mathematical
16 modeling, although we have some familiarity with the Reactor
17 Safety Study, and more particularly with the risk assessment
18 review reports, the Lewis Report. However, we would like to
19 express some of our general concerns, concerns which are
20 represented in part by the recently adopted call by the
21 Canadian Medical Association to have a practicing physician as
22 a member of the Atomic Energy Board in Canada.

23 In our two years of active involvement with the
24 scientists surrounding the nuclear industry in Canada, we have
25 developed some real concerns regarding the perspective applied
to such speculative processes as predicting the behavior of

mph17¹ men and material under various conditions. We have become
2 convinced that the complexity of inter-relating variables
3 in the operating and safety systems of a nuclear plant more
4 closely approaches the biological rather than the physical
5 model, thus the propensity for predicting events that so
6 preoccupies the physics of public reassurance may not be
7 appropriate.

8 The practice of medicine involves a daily dose of
9 humility as we are presented with the vagaries and unpredict-
10 ability of biological and human systems. Thus in the general
11 sense, we have a great deal of difficulty accepting the re-
12 assurances and the specific figures that are so often promoted
13 by apologists for the industry.

14 We do not underestimate the importance of such
15 a task, but given the relative youth of the art of prediction
16 and the significant criticisms involved in the Lewis Report
17 it seems premature to be assuming the kind of massive risks
18 that we are talking about. From the medical perspective, it
19 would seem that there would need to be a very compelling need
20 in order to justify such risk.

21 It seems doubly inappropriate to feign that
22 the likelihood of such an event is so incredible as to be not
23 given consideration at site specific hearings. If the
24 Nuclear Regulatory Commission is not using the models develop-
25 ed in WASH-1400 and subsequent revisions by the Lewis Committee

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mpbl8 1 in its regulatory proceedings, then we might justly ask what
2 is the basis for proceeding?

3 Here we are struck, as we have been many times
4 over the past two years, with the rather unscientific faith
5 that matters will work out. This faith is a recurring theme
6 in many aspects of the industry in Canada, and the fact that
7 it does not seem to have been significantly shaken by the
8 events at Three Mile Island gives us grave concern about the
9 objectivity of the regulatory process in our country at least.

10 We would respectfully request that the staff of
11 these hearings provide the B.C. Medical Association with an
12 outline of the basis for regulatory decisions in this area.

13 We recognize that, as at Three Mile Island, a
14 particular accident sequence will likely be unexpected.
15 However, we postulate one possible, no matter how improbable,
16 accident sequence and this we feel justifies our grave
17 concerns about proceeding at this time with the Limited Work
18 Authorization.

19 It is our understanding that there are significant
20 uncertainties regarding the geology underlying the Sedro
21 Woolley site. We are aware of the letter dated November 2,
22 1977, from faculty members in the earth sciences at the
23 University of Washington, Seattle, Washington, 98195, which
24 contains in part the following statement:

25 "In our opinion, the bedrock geology,

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2 glacial geology, or tectonic/seismic fabric
3 of north-western Washington is sufficiently
4 unknown and complex that detailed geologic
5 mapping of the bedrock and unconsolidated
6 sediments are needed prior to the siting
7 of nuclear power plants in this region."

8 We are aware that hearings are to be held in the
9 future addressing the question of geological stability, and
10 we respectfully suggest to the Commission that geologists of
11 unquestioned independence and expertise should be called upon
12 to make an independent report and assessment and report this
13 to the Commission. We would further respectfully request that
14 Canadians who have developed significant expertise in this
15 area -- and the Medical Association has noted such people,
16 such Canadians in our brief -- be asked to participate in such
17 an independent review.

18 Quite apart from the above specific consideration
19 but because of concern that the earthquakes may present a
20 significant hazard in this area, we would also specifically
21 request that this Commission consider the question of earth-
22 quake effects on the accident sequence before they proceed with
23 a Limited Work Authorization. The reason for this request
24 derives from a perusal of the Lewis Report, which, as you're
25 certainly aware, is the critique of the Rasmussen Report.
Pages 37 and 38 should be read in their entirety for an

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mpb20 1 appreciation of why we are concerned, and the following
2 cardinal points are worth highlighting:

3 We believe that the entire subject of
4 earthquake risk in nuclear plants deserves much
5 more attention than it has received. It may be
6 that not enough is truly known about the source
7 mechanisms and spectra to make possible truly
8 sophisticated calculations of the threat to a
9 given plant from a given fault, but we believe
10 that the treatment can be improved. In particular
11 it is surely wrong to characterize a large earth-
12 quake as a point source at the location of the
13 nearest fault, since it is well known that
14 really large earthquakes involve the release
15 of energy along large sections of a fault.
16 WASH-1400 concludes that earthquakes do not
17 contribute significantly to the risk attached
18 to operation of nuclear power plants. Other
19 calculations (by Hsieh and Okrent) based upon
20 different assumptions, lead to the conclusion
21 that they might contribute significantly."

22 And this is their concluding sentence:

23 "Investigation at a level of sophistica-
24 tion necessary to resolve this issue to our
25 satisfaction has not yet been performed, and

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it is important that it be done."

Further, we are given to understand that it is not known that the computer program used in the design of nuclear power plant buildings to withstand earthquakes is correct. Just this year a computer error was found with consequent shutdown of several plants in the United States.

We again feel that these investigations form a necessary prelude to any consideration of a construction permit in an area so close to our patients. We are mindful of our limitations in geologic expertise but insofar as these concerns have been raised by highly competent people, they should form part of future Canadian involvement in what should become an international decision.

As shown on the map in the Environmental Report of the Puget Sound Power and Light Company, Section 2, a substantial area of the lower mainland of B.C. lies within a 50 mile radius of the plant site. Major Canadian population centers include Whiterock, Surry, Sperling, Abbotsford, Mission City and Chilliwack, with Victoria lying only seven miles and down Vancouver lying 19 miles outside the target area.

The wind summary for the plant site shows the prevailing annual wind at the 60 meter level to be from east-northeast and at the ten meter level to be also from east-northeast with a fair component from the west and

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mpb22 1 west-northwest.

2 It is noted by PSPL, if I may use that abbreviation
3 for Puget Sound Power and Light, that this is "coincident with
4 the orientation of the Skagit River Valley" and that air
5 movement is "generally brisk" with average speeds at ten
6 meters altitude of 6.39 miles per hour and at 60 meters of 9.43
7 miles per hour. The valley is three miles wide at an ev
8 elevation of 420 feet above mean sea level. The mouth of the
9 valley is five miles west of the plant site and opens into a
10 12 mile wide expanse of lowland bordering Puget Sound.

11 I drove by there this morning and it's very
12 beautiful country, a beautiful drive.

13 As noted by the NRC Final Environmental Statement,
14 "the weather in northwest Washington is strongly affected by
15 Puget Sound and the Pacific Ocean on the west and the Cascade
16 Mountain Range on the East."

17 We in the lower mainland are disturbed by the
18 attempted reassurance given by Mr. J. Ellis, president of
19 PSPL in the following quote in the Vancouver Sun, Friday,
20 July 13, 1979:

21 "Any kind of scenario I can dream up
22 does not cause any problem to Canada. It is
23 inherent in the siting criteria. The prevail-
24 ing winds are westerly."

25 This seems to imply that air pollution from

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mpb23¹ Sedro Woolley does not reach the lower mainland of B.C.
² Although the circulation patterns in the Pacific Northwest
³ are complex and infinite varieties of dispersion models can
⁴ occur, Mr. Jack Mathieson, the regional director of the
⁵ Atmospheric Environment Service of the Federal Department of
⁶ the Environment informed the B.C. Medical Association's
⁷ Environmental Health Committee on July 12, 1979, that:

⁸ "Airborne pollution from the Sedro
⁹ Woolley area can reach the Vancouver/Victoria
¹⁰ area in fairly repeatable patterns that occur
¹¹ a significant number of times."

¹² Although no site specific study has been done by
¹³ his department, enough regional data is available to sub-
¹⁴ stantiate the statement. The B.C. Medical Association would
¹⁵ therefore request that a climatology study be done by an
¹⁶ independent body elucidating the occurrence and frequency of
¹⁷ various circulation patterns from the Sedro Woolley area to
¹⁸ southern B.C. and submit them to Environment Canada Atmospheric
¹⁹ Environment Service for verification. We feel that this is
²⁰ essential in order to calculate dose rates of chronic low level
²¹ ionizing radiation and dose rates of chronic low level ioniz-
²² ing radiation and dose rates from various classes of acute
²³ accidents that would affect the population of southern B.C.
²⁴ and the food chain as well.

²⁵ Turning to radiation effects, we recognize that

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mpb24 1 the major proportion of the low-level ionizing radiation
2 emitted from the plant during routine operation and start-ups
3 would contaminate the Skagit Valley, in particular. PSPL
4 has estimated the dose of 11 millirems per year to infant
5 thyroid glands and 10 to 20 millirad per year to local biota
6 and notes that there is:

7 "...no fundamental difference in the ways
8 man and other biota can be exposed to environ-
9 mental radioactivity."

10 We have already submitted our study on the Health
11 Dangers of the Nuclear Fuel Chain and low-level ionizing
12 radiation as evidence.

13 As you know, the threshold theory of radiation-
14 induced somatic and genetic damage is no longer accepted.

15 The induction of cancer and chromosomal damage
16 has been estimated for low dose, low dose-rate, low LET
17 radiation per rad per generation per million people by the BEIR
18 Report -- this is not the BEIR Report that just came out,
19 but the preceding BEIR Report that we are quoting at this
20 time; And it is my understanding that that merely confirmed
21 the earlier findings from the 1977 report. -- and by the
22 UNSCEAR Report -77.

23 Genetic effects of one rad will increase current
24 incidence by 0.2 to 0.5 percent at equilibrium, that is after
25 five generations, totalling up to 600 per million. As Harvard

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University Nobel-Prizewinning biologist George Wald has said:

"Every dose is an overdose. A little radiation does a little harm; a lot does more harm."

We note that PSPL has included estimates of radiation releases for class 1 to 3.3(b) accidents. We feel that it is imperative that we have made available to us the releases from all boiling water reactors in the U.S. in the last ten years to compare the theoretic postulated of the company with the BWR operational releases in practice. PSPL has not been requested to study the effects of a Three Mile Island -- and if I may use the abbreviation 'TMI', I'm sure you're already tired of hearing that -- or Class 9 accident, as we understand, because such accidents were considered too remote and speculative.

If this has been the reasoning it is now obviously incorrect, particularly since Xenon-133 levels from TMI releases have been estimated at 13×10^6 curies, which is about twice the standard maximum credible release estimate in licensing proceedings.

The necessity to calculate TMI and Class 9 releases is, in the particular instance of the Sedro Woolley plant, a site specific not generic question. The reasons are numerous. While the citizens of Washington may have chosen to accept some risk, however minimal, of nuclear power, the

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1 population and government of B.C. have not accepted even an
2 infinitesimally small risk associated with the production of
3 nuclear power.

4 The Royal Commission on Electric Power Planning
5 in 1978 has said, as previously noted, that the risk of a melt-
6 down might be one in 40 years if 100 plants are operating.
7 The amounts of radiation released at TMI and the distance to
8 which it was carried are still under investigation.

9 A report from the Institute for Reactor Safety of
10 the Technical Control Association of Germany recently trans-
11 lated by the NRC concedes that a breach of containment is, in
12 fact, possible by producing figures of dose exposures and
13 estimates of fraction releases from the total nuclear
14 inventory of a nuclear power plant. It demonstrates that in
15 a core meltdown 100 percent of the xenon, krypton, bromine
16 and iodine, 90 percent of the rubidium and cesium, 25 percent
17 of the tritium -- and we go through a whole series of things
18 which are in our brief, but I don't think we need to take our
19 time here.

20 From these it calculates the doses of various
21 accident scenarios. Table 4.11 shows release from a core
22 melting at weather condition three, which is the best weather
23 condition, when the wind velocity is one meter per second,
24 with releases at ground level.

25 The integrated dose exposure is given in rads

mpb27¹ per reference organ at a distance of 10^3 , 10^4 and 10^5 meters.
2 That is, 100 kilometers or approximately 62 miles, a similar
3 distance from Sedro Woolley to Vancouver. At 100 kilometers
4 radiation released from such an accident would result in
5 entire body radiation of $1.3E+3$, which in our calculations
6 leads to a dose of 1300 rems, gastrointestinal radiation of
7 400 rems, thyroid radiation of 18000 rems and bone radiation
8 of 25000 rems, the dose being integrated over five years in
9 their calculations.

10 Assuming there is no translation error, these
11 figures are frightening as the L/D 50, which is the dose at
12 which 50 percent of the people would die from ionizing radia-
13 tion is 400 to 500 rems with a severe acute hematologic
14 syndrome occurring below that dose, the gastrointestinal
15 syndrome occurring between 600 and 1500 rad with GI death
16 usually between 1800 to 4000 rad, and the fulminating, always
17 fatal, neurological syndrome at 4000 to 5000 rads.

18 Because the population of B.C. has not elected to
19 accept any risk, no matter how remote, for the products of
20 nuclear power and because the Skagit project is so close to
21 our border, it is imperative that Canadians are given what
22 we are convinced is absolutely essential information on Three
23 Mile Island radiation releases by full disclosure of data by
24 the Lessons Learned Task force, and on radiation exposures
25 from Class 9 accidents in this particular site. We would

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1 also request of the NRC that such figures are presented to us
2 for study in the same form as the excellent German study by
3 Dr. Bachner, et al, which we have quoted in our study, in
4 integrated dose exposures in rem per reference organs at
5 10^3 , 10^4 and 10^5 meters from the site for various weather
6 conditions. This risk to Canadians is as yet unidentified and
7 must not remain so.

3 Concerning evacuation, we understand that the
9 task force of the NRC and the EPA in December, 1978, in its
10 document on the Basis for Radiologic Emergency Response Plans
11 had discussed a possible emergency planning zone radius of
12 ten miles for plume contamination and 50 miles for ingestion.
13 In our own perusal of the available information, we have
14 been unable to find an assessment of evacuation procedures in
15 the case of major accidents. To protect our patients we
16 feel that it is of the utmost importance that an international
17 joint study of the feasibility of evacuation for a 50 mile
18 target zone around the plant be made available to us and to
19 the NRC.

20 We note that because of the problems that the
21 geography of this particular area presents, there would be
22 significant difficulties in quickly informing residents in the
23 Gulf Islands and various institutions including hospitals,
24 and evacuating them "en masse". One must also assess the
25 impact of thousands of Americans evacuating northward over the

mpb291 border as well as the adequacy of evacuation routes out of
2 Vancouver. Included in this, the element of panic that would
3 undoubtedly occur must be considered.

4 We therefore request that the feasibility of such
5 a situation be considered by a combined B.C. and Washington
6 government study. If it proves not to be reasonably possible,
7 we feel that the proposed Skagit site should not be accepted.

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8 Concerning water contamination, as we know, the
9 Skagit River empties into Puget Sound and then by tidal
10 action its water flows to the Strait of Juan de Fuca and
11 the Strait of Georgia. These areas are the migratory
12 route for salmon, the fishing grounds for many other fish and
13 possess rich shellfish beds. We also know that some radioactive
14 contaminants are concentrated as they go up the food chain
15 from plants and phytoplankton to fish and man.

16 In its environmental report, PSPL describes its
17 liquid radwaste system in section 3.5. We note that in
18 section 5.2.1 of the report the company states that:

19 "Due to the design of the liquid radwaste
20 system, no releases of radioactive liquids are
21 anticipated and consequently, no radiation
22 exposure to terrestrial or aquatic biota via
23 the liquid effluent exposure pathway is
24 expected."

25 Although neither PSPL nor the NRC are considering

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excessive radiation doses entering the waterways, we wish to point out that in May 1977 the Gentilly Plant in Quebec, a different type of reactor, spewed ten metric tons of heavy water containing 31,000 curies of tritium into the waters of the St. Lawrence River, and that on February 28, 1978, one metric ton of heavy water and 18,000 curies of tritium was emitted from the Pickering Plant, Unit 2, in Ontario.

We recognize that there is no heavy water in the proposed boiling water reactors and that the design is different. However, these amounts of contaminated effluents entering the water system in Canada were not expected either. A major accident would undoubtedly lead to significant contamination of the Skagit River and possibly Puget Sound. Some attempt should be made to quantify this risk.

Waste Disposal. It is the official adopted policy of the B.C. Medical Association that we are opposed to the building and licensing of any new reactors until there is established a safe, proven, permanent method of storage for those wastes that have already been generated. Whereas it may seem presumptuous of us to carry this policy outside of our own nation, there can hardly be disagreement that a significant failure at a large waste isolation plant would have effects of such temporal and geographic significance as to truly deserve the term "global problem".

We are aware that current plans for temporary storage

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mpb31¹ of waste produced at Sedro Woolley will be on site. We are
2 further aware that the ultimate waste disposal program in
3 the United States is under active consideration but is
4 certainly in a state of flux. We have reviewed with interest
5 the major studies surrounding the waste disposal made by the
6 Comptroller General of the United States, the California
7 State Energy Commission and concerns raised by the Geological
8 Survey.

9 These studies and our knowledge of the Canadian
10 situation, where initial geologic drilling is just beginning,
11 lead us to the conclusion that the B.C. Medical Association
12 criteria for waste disposal have not been met. We therefore
13 maintain that it is irresponsible to persist in the production
14 of large quantities of highly radioactive waste such as we
15 might expect from the Sedro Woolley plant. We would like
16 some specific discussion of this matter at some point during the
17 development of the hearings.

18 In terms of liability, the B.C. Medical
19 Association recognizes that in the event of a major reactor
20 accident, lawsuits would serve little more than a vindictive
21 function. This is particularly true in view of the limitations
22 placed by the Price-Anderson Act. However, it would seem to
23 us to be prudent to explore ahead of time the judicial
24 consequences of a potential contamination of the lower main-
25 land in the event of an accident.

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1 We are dismayed that this matter has not been
2 referred to the International Joint Commission for at least
3 their advice and consideration. We attach hereto the brief
4 prepared for the B.C. Medical Association by the West Coast
5 Environmental Law Research Foundation that may be a useful
6 starting point for such a referral.

7 I will just assure you that some of these pages
8 don't have to be read.

9 In addition to this, we would respectfully request
10 that the Commission inform us of its responsibilities in these
11 hearings under Executive Order 12114 - January 4th, '79, a
12 referenced report:

13 "Wherein the NRC is required to assess
14 the environmental impact of "Major Federal
15 Actions Significantly Affecting the Environment
16 of a foreign nation not participating with the
17 United States and not otherwise involved in the
18 action."

19 And further, how it relates to the Code of
20 Federal Regulations, reference:

21 "Wherein the NRC is required to assess
22 "The probable impact of the proposed action on
23 the environment", subsection 1. This requires
24 agencies to assess the positive and negative
25 effects of the proposed action as it affects

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both the national and international environ-
ment."

Such clarification and delineation would be very
useful in preventing future jurisdictional problems. In this
same regard, we recognize that many of the health effects
which may be visited upon B.C. by accidents at the plant would
be an incremental increase in diseases that already exist in
the lower mainland.

We therefore recommend that consideration be given
to ensuring that detailed baseline studies of the populations
potentially affected should be undertaken ahead of time.

As I mentioned earlier, the chief epidemiologist
for the Cancer Control Agency of B.C. is a member of our
committee, so we are aware, through his membership on our
committee, that such geographically specific incidence rates
for malignant disease are not yet available in British Columbia.
It therefore seems premature to assume a risk which will not
be quantifiable in the near future.

And this, of course, has a direct bearing on the
question of liability, if you don't know how much damage you
have done.

Risk-benefit analysis. It has become a truism
in regulatory proceedings surrounding the nuclear industry
that what one is really talking about is a risk-benefit
analysis. There have been attempts at various levels of

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sophistication to derive some meaningful approximations that may be useful to public consideration of this matter. Needless to say, given the complexity and controversy surrounding the risk side of the equation, such a task is monumental and it is understandable that various agencies and professions have tended to concentrate on their particular area of expertise to the exclusion of an overall assessment of the problem.

It is therefore with some trepidation that the D.C. Medical Association has entered this debate in recent years.

The problem of risk-benefit analysis is both a generic and a site specific problem, and needs to be addressed at every level of the decisionmaking process. It is important that those who are assuming the risk be active participants in the process and that their participation not be frustrated by jurisdictional uncertainties or by the nihilism that arises when being confronted with mathematical complexities.

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MELTZER

1 We do not underestimate the complexity of the
2 risk-benefit analysis, but it would seem that some major
3 principle should be retained and should not be lost sight of
4 during the complex process of arriving at a decision regarding
5 the building of the Sedro Woolley plant.

6 First of all, all those who would have to bear
7 the risks or the benefits of the projects, should be
8 actively involved in decisions relating to the project.
9 Obviously, the larger the project the more difficult it is to
10 obtain this participation in a meaningful way. This is an
11 inevitable consequence of size and inevitable consequences of
12 deciding you are going to solve your needs with large projects.
13 And it is all too often referred to as "too much red tape,"
14 which must be "cut through in order to insure that a given
15 project goes ahead."

16 This appealing attempt to simplify a complex
17 situation must be looked upon as inappropriate, or we will
18 soon run into a crisis of faith in our institutions if a
19 significant number of people discover that the price they paid
20 for a particular project was far more than what they had been
21 led to believe.

22 Secondly, it should be accepted as an ethical
23 absolute that we do not have the right to place significant
24 risks upon future generations for benefits that we derive
25 ourselves.

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1 It is very easy to slide into the trap of
2 believing that problems are imminently solvable with
3 scientific faith that I mentioned earlier, and therefore,
4 "should represent no difficulty with future generations."

5 In considering the consequences of an adequate
6 nuclear waste disposal program the BC Medical Association feels
7 that it is irresponsible to continue with production of such
8 wastes in the absence of a proven technology.

9 C. Risks of very high consequence, even if low
10 probability, must require an impressive offsetting benefit.
11 This is particularly true if those risks are projected into
12 the future.

13 This is very obviously the case with the Sedro
14 Woolley plant, since a major failure, apart from its
15 immediate effects on those present, would alienate a large
16 area for future habitation and its effects would reverberate
17 through the food chain for many generations.

18 D. The current crisis mentality regarding North
19 American energy policy has created an artificially inflated
20 concept of the benefits that may derive from this plant.

21 We see the two nations who are by far the greatest
22 per capita energy consumers in the world, seriously stating
23 that we must assume all manner of risk to future generations
24 in order that we can continue consuming at that rate.

25

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mm3 1 Both the Science Council of Canada in a reference
2 report, and the Harvard Business School in a recent reference
3 report, have outlined ways in which dramatic energy savings
4 may be undertaken with no significant change in the standard
5 of living.

6 It, therefore, seems doubtful to us that a case
7 where compelling and urgent benefits can be made that will
8 offset the kinds of risks that we are contemplating.

9 Finally, in the principles, we remain concerned
10 about the prospects for terrorism at a site which may place
11 Canadians at a significant risk.

12 With the dissemination of more sophisticated mobile
13 weapons and the tensions that increase in a world of shortages,
14 it becomes progressively easier to imagine credible scenarios
15 involving nuclear facilities. It is little reassurance to
16 realize that there are easier chemical alternatives for
17 such terrorists, since the fundamental fact remains that a
18 terrorist could hold for ransom not only a massive number of
19 people and their energy source, but a physical area of the
20 globe which belongs not just to us, but to our children.

21 It is easy to lose site of this fact in the morass
22 of calculated possibilities. What we cannot lose
23 sight of is the fact that whatever that risk may be, it
24 is steadily increasing as time progresses.

25 In closing, we would like to express our

mm4 1 appreciation for the courtesy of the Nuclear Regulatory
2 Commission in allowing this limited presentation. We hope
3 that this will be the beginning of more meaningful Canadian
4 involvement in this very important matter.

5 It is our hope that an effective link may be forged
6 between our two nations that will assure that the final
7 decisions that remain are the most equitable that we can devise
8 for each other and for our descendants.

9 For your convenience, we have listed the requests,
10 various requests that we have made throughout the body,
11 and these are attached to the end of the report. They number
12 a total of 13, and I will not review them at this time.

13 We ask that the limited work authorization be
14 deferred until these important matters have been attended to.

15 Thank you again, gentlemen.

16 (Applause.)

17 CHAIRMAN DEALE: Thank you very much, Mr. Woollard.

18 We certainly appreciate the time and effort which
19 you and your committee has spent in the preparation of this
20 presentation.

21 We are pleased to have the presentation as a
22 matter of this Committee's record. Thank you very much, again.

23 The next person who is listed on our agenda for
24 a limited appearance, wrote us and asked for a limited
25 appearance. And as a result of telephone conversations between

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1 Mr. Mitchell and the individual, we forwarded a telegram
2 indicating that he is scheduled to make a limited appearance
3 here.

4 The next person to make a limited appearance here
5 is Mr. Rod Marney, who is the Director of Green Peace.
6 Mr. Marney from Vancouver, British Columbia.

7 LIMITED APPEARANCE STATEMENT OF ROD MARNEY,
8 DIRECTOR, GREEN PEACE.

9 MR. MARNEY: Thank you very much.

10 I'm sorry for being late. I was trying to get
11 here earlier this morning. We left at 5:30 from Vancouver,
12 and there were a number of delays, one of them being border
13 crossing. We were quite a couple of hours late in arriving
14 here.

15 I want to express, first of all, that we were kind
16 of naive about the Sedro Woolley plant. At least the public
17 seemed to be as of June 18th. This is when we first heard of
18 the proposed twin reactors in our daily newspaper. The front
19 headlines in the Express read, "Nuclear Cloud Hangs Over BC."

20 We had no idea that this plant was in the making
21 at that stage, so we decided -- and shortly after that we
22 heard about the hearings and we presented our letter and so
23 on.

24 We would like to make it very clear, though, that
25 we wanted a letter back from I believe it is called the

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1 Nuclear Regulatory Commission because we wanted to show the
2 border customs agent that we were invited and we were coming
3 down as a delegation.

4 I had three weeks of trying to find out what
5 happened to the letter. It was supposed to have been sent on
6 June 29. It arrived in our office on July 5th or 6th,
7 something like that.

8 CHAIRMAN DEALE: You did get our telegram, didn't
9 you?

10 MR. MARNEY: We did get the telegram. But you
11 said you sent the letter, we realized you hadn't sent the
12 letter and so forth and so on.

13 I know that most of the people that have spoken
14 before me have covered a lot of issues, but I will try to
15 make a few points here that are fairly clear. One is, you
16 are obviously -- there are a lot of groups interested in this
17 matter, Canadian groups that are interested in this matter.
18 And obviously, the Commission recognizes this because it is
19 permitting us to speak today.

20 However, if they are going to recognize that there
21 is a Canadian interest, then they should recognize also that
22 Canadian groups have the right to participate fully in the
23 inquiries.

24 Presently we have legal counsel looking at making
25 formal application for major participant status.

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1 We have been told that the Federal Notice is
2 published throughout the United States and contains official
3 notices of planned nuclear power public hearings by the United
4 States Federal Government. To the best of our knowledge, the
5 notice is not distributed throughout Canada. In fact, we
6 are not even notified officially or otherwise when these
7 proceedings were undertaken.

8 We have no way of making our concerns known
9 in this timely matter, or obtaining the right to participate
10 in these proceedings. Yet, the fact remains that the
11 proceedings are likely to have a great deal of effect on our
12 interests and the interests of people who live in the Southern
13 British Columbia.

14 Because we were never notified, we should be able
15 to intervene and present evidence on all issues. We understand
16 that one of the standards governing intervention under the
17 rules is whether or not our interests are addressed by
18 another party. In other words, SCANP, Skagitonians
19 Concerned Against Nuclear Power, had addressed certain
20 issues such as the Skagit fishery.

21 But, the issue doesn't just stay in the fishery.
22 We happen to make a livelihood off the Skagit fishery.

23 In other words, there is these are these issues
24 that have not been taken into consideration, there being no
25 Canadian intervention regarding the Skagit fisheries, and

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1 these interests are unique and so are all the repercussions
2 from water pollution which may diminish Canadian fisheries.

3 Again I want to emphasize the unique Canadian
4 interests. The point being that parts of BC, especially
5 Vancouver, are downwind from Sedro Woolley. If there
6 was an accident, even if an evacuation plan had been prepared,
7 the evacuation plan would not address the need to evacuate
8 any Canadians, nor would it determine the procedure for
9 coordinating the evacuation between the states -- the
10 Washington State Nuclear Regulatory Commission and the Province
11 of British Columbia.

12 I wouldn't like to hear about an accident three
13 or four days down the line. If an accident occurred, there
14 may be time to evacuate Canadians, but there is no assurance
15 that Canadians would receive prompt, correct information that
16 would enable them to act on their own safety.

17 I believe the issue of geology has been
18 extensively addressed. I have been told by SCANP that you
19 have got into this area. But I believe that the geology
20 reports and research has stopped at the 49th parallel
21 and you haven't considered going beyond that.

22 I think our border is sufficiently close enough to
23 the proposed power plants that should take this issue into
24 consideration. Any major activity in this area would affect
25 the plant.

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1 I have got a postcard here I just picked up a
2 couple of days ago that I wish to give you. I don't know
3 if you have ever been up around Hope and seen the Hope slide.
4 Let me give you a picture of it.

5 (Handing document to Board)

6 It is actually just two days ago I was up around
7 Hope, and I passed this tourist attraction as it is called now,
8 and I saw a big sign up there that said, unfortunately four
9 people in three vehicles were caught in a wave of mud and
10 gravel and rock and were swept back into the valley from the
11 south side. Two of the victims were never found.

12 Seismograph records indicated that earthquakes
13 happened that morning with epicenters in the Nicolem Valley
14 area.

15 The second of these shocks was at 6:58 a.m., the
16 time the big slide occurred.

17 CHAIRMAN DEALE: Excuse me a minute, Mr. Marney.
18 It just so happens, our colleague here, Dr. Frank Hooper has
19 been there a couple of days ago.

20 MR. MARNEY: I just want to emphasize that earthquakes
21 are not something that we have heard about but not seen any
22 evidence of around this area. This is something to think about.

23 CHAIRMAN DEALE: All right.

24 MR. MARNEY: Another concern we have is that of
25 radon gas and radiation. I would like to get deeply involved

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1 in this also. I am sure that our Canadian colleagues would
2 also like to deal with these issues.

3 There is another small issue here that has a closeness
4 to my heart. It is the large population of bald eagles which
5 spend the winter in Sedro Woolley Valley, and the summer in
6 BC.

7 I have seen them, I have travelled the coast of
8 British Columbia. There is a beautiful place called Ripple
9 Rock, about 100 miles north of Nanaimo, British Columbia, and
10 it is interesting because the tidal currents bring up all the
11 fish and there is an island smack in the middle of it, of
12 this inlet, and you can see when you are travelling
13 through there, approximately 2- or 300 bald eagles.

14 These eagles are going to lose a lot of their
15 inhabitants to the nuclear power plant. I think these are,
16 even though you might not think so, birds -- especially these
17 kinds of birds have a very strong sensitivity to nuclear
18 power plants.

19 (Laughter.)

20 Anyway, the eagle, as I am sure you know, is the
21 national bird, but is also highly valued by Canadians.

22 My closing remarks -- in closing we believe that
23 the national regulatory commission has been seriously
24 deficient in failing to address the interests of Canadian
25 people who will be very directly affected. We have not

small 1 received any United States notification of plans to build a
2 nuclear power plant next to the third largest city of Canada,
3 nor has a representative of either the British Columbia
4 government or the Canadian government or the interests of
5 Canadian citizens been allowed to intervene as a major
6 participant.

7 We Canadians have the right to intervene and we
8 must raise all the issues that affect our lives.

9 Thank you very much.

10 (Applause)

11 CHAIRMAN DEALE: Thank you.

12 The next person we have is Mr. John M. Smith, who
13 represents the Cities of Hamilton and Lyman.

14 Mr. Smith?

15 LIMITED APPEARANCE STATEMENT OF JOHN M. SMITH,
16 REPRESENTING THE CITIES OF HAMILTON AND LYMAN.

17 MR. SMITH: Mr. Chairman and members of the Board,
18 at its regular meeting on July 9th of this year, the City
19 Council of Hamilton, Washington, approved the attached
20 resolution.

21 I was asked to present that resolution and to
22 provide additional testimony on the Skagit plant hearings
23 to this Board. I would like to read that resolution at this
24 time.

25 "Whereas the nuclear regulatory hearings on

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1 Skagit nuclear plants are about to reconvene and,
2 Whereas the town of Hamilton is very near the
3 proposed site of the two reactors and will be
4 directly affected by construction, by the influx
5 of workers and by possible accidents to the operating
6 reactors and, Whereas the construction costs for
7 such plants are astronomical that will be borne by
8 the ratepayers, and Whereas the life expectancy of
9 such plants is short, and Whereas the proposed site
10 is fraught with potential problems, geological faults,
11 location in a valley that produces huge amounts of
12 vegetable, feed, dairy products, fish, et cetera where
13 an accident would have disastrous results; therefore,
14 be it resolved that the City Council of Hamilton,
15 Washington, opposes the construction of the proposed
16 nuclear plants."

17 This is signed by the Mayor, Mr. Nelson, and
18 also by five council members.

19 (Applause)

20 Yesterday, I received the following letter from
21 the Mayor of Lyman, Washington.

22 "The City of Lyman opposes the construction of
23 the twin nuclear plants proposed by Puget Sound Power &
24 Light Company at the Bacus Hill site. We join with
25 our neighbors in Hamilton and support their testimony

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1 before the Board. Sincerely, Louis Parker, Mayor of
2 Lyman."

3 (Applause)

4 The City of Hamilton opposes construction of the
5 Skagit plants. Our opposition is briefly described under
6 the following areas of concern:

7 Radiation exposure and environment. Hamilton is
8 a town of 261 persons located approximately four miles east
9 of the BACUS Hill site.

10 Most of the residents of Hamilton raise vegetable
11 gardens, and several keep cows or goats for milk and raise
12 other small animals for meat.

13 We believe even so-called safe releases of
14 radioactive material from the proposed reactors will be
15 carried with the prevailing winds up the Skagit valley towards
16 Hamilton. Since we eat the vegetable and berries raised in
17 our gardens, we fear a double dose of radiation from airborne
18 emissions falling upon us and those transmitted through our
19 crops.

20 Just beyond the limits of Hamilton are several
21 dairy and other farms producing for consumption in the Skagit
22 Valley. We are concerned that these products may also become
23 contaminated.

24 We believe that weather data included in Puget
25 Power's testimony is inaccurate and not current. Rainfall

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1 data appears to have been gathered from coastal areas and
2 not from the Bacus Hills site where rainfall is more abundant.
3 Not only more abundant, but generally light rains which
4 establish particulate matter from the air most efficiently.

5 Residents.

6 Also, inversion conditions in the valley, which
7 is quite narrow at the proposed site, may concentrate radio-
8 active effluents on Hamilton.

9 Since medical authorities have concluded after
10 scientific study that person avoid all unnecessary radiation
11 exposure, and there is "no threshold level of radiation below
12 which no harmful effects can be seen," we believe the reactors
13 would be a clear and present danger to our town.

14 Therefore, we urge that Puget Power be required
15 to provide appropriate and current meteorological data. Their
16 data-gathering power, I understand, has been down for over
17 a year. We believe that this data must be supplied, since the
18 reactor's exclusionary area may need to be increased, thereby
19 necessitating the removal of agricultural land from use and
20 the relocation of nearby residents.

21 Accident possibility.

22 We believe that the zirconium clad fuel rods to
23 be used in Puget's reactor pose the extreme possibility for
24 hydrogen explosion with consequences far more disastrous
25 than Three Mile Island, given the Skagit Plant's much larger

mm15 1 capacity.

2 We feel no construction should begin until the
3 problems with hydrogen generation are overcome.

4 Site construction.

5 We urge the Atomic Safety and Licensing Board not
6 to grant a construction permit or limited work authorization
7 at this time because of the destruction and disruption of
8 several stream beds which must take place before actual
9 building can begin.

10 The lesson of the past disasters should make it
11 abundantly clear that any excavation must not take place
12 until heavy rains of fall and winter have passed. We believe
13 that site preparation and related rerouting of Platt Creek,
14 Wiseman Creek and other streams may have a harmful effect on
15 the drainage of the site and pose additional problems to the
16 wild salmon runs of the Skagit and its tributaries.

17 The residents of Hamilton are particularly concerned
18 since sport fishing on the Skagit for food is a favorite
19 pastime.

20 Cost of decommissioning.

21 The citizens of Hamilton believe the dollar costs
22 of these plants and consequent power rate increases will have
23 a destructive influence on their economy. Not only are the
24 costs of these plants astronomical, but their life expectancy
25 is short.

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1 We have begun in this state, the unfortunate
2 practice of paying for construction work in progress. Should
3 these plants be approved, our rates will no doubt soon reflect
4 their costs. Not only will we pay for the plants before they
5 produce, but after they are no longer productive.

6 It is of great concern to Hamilton that only 40
7 percent of these plants will be owned by our utility, Puget
8 Power. We are bewildered as to why 60 percent of these plants,
9 and presumably a comparable portion of their output, is owned
10 and needed by Oregon utilities.

11 Must the plants be built so far from the
12 ultimate destination of most of the power?

13 Why must we face the problems associated with
14 construction, operation, waste storage and decommissioning?

15 It is of concern also that the co-owners of
16 Puget Power are Oregon corporations and function under the
17 rules of the Oregon state regulatory body.

18 When it is time later, or sooner -- witness Three
19 Mile Island -- to decommission these plants, will the Oregon
20 regulatory body cause its ratepayers to contribute to the
21 attendant costs?

22 Puget Power's own financial status is shakey at
23 best. Can we depend on it to be around at decommissioning
24 time?

25 Puget states that the cost of decommissioning will.

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mm17 1 be in the range of \$30- to \$40 million. But New Jersey
2 Central Power & Light figures it will need \$100 million for
3 onsite entombment of its Oyster Creek Nuclear Plant, and that
4 plant has only one-half the capacity of one of the two
5 proposed Skagit plants.

6 Furthermore, the only nuclear plant ever dismantled
7 in the United States, the Elk River, Minnesota plant cost
8 more to dismantle than it did to build.

9 Should the Skagit plants be built, they will be
10 with us forever. Hamilton believes that the decommissioning
11 costs must be more accurately estimated and provided for before
12 any approval is given or any work begun on these plants.

13 Nuclear fuel costs also concern the residents of
14 Hamilton. We know that uranium is not cheap, is not
15 abundant, is controlled by an international cartel and has
16 seen price rises in the recent past that make OPEC price
17 increases look benign.

18 We do not need or want this additional source of
19 non-renewable energy.

20 Evacuation.

21 We, in Hamilton, believe that an evacuation plan
22 should be approved and in effect before any authorization for
23 these plants is given.
24
25

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1 Construction disruption: Hamilton has no
2 law enforcement authority or traffic control beyond a few
3 stop signs. We feel that a project of the magnitude required
4 by the Skagit plant construction would do irreparable
5 harm to Hamilton and its residents and destroy forever
6 the way of life we enjoy there today. .

7 The problems associated with the plant construction
8 are insufferable. The financial health promised by Puget
9 Power in its contracts with local and state governments
10 is only deferred payment by the taxpayers. We think that
11 any transient benefits derived from the construction process,
12 an influx of workers and their families, would be a little
13 return on a poor investment.

14 The increased property values and attendant
15 property taxes would drive out any of Hamilton's long time
16 residents.

17 Need for power and efficiency: Puget's predictions
18 for growth and power consumption are highly inflated. Washington
19 state and especially our portion of the state have not need
20 this additional 2576 megawatts of power from the most
21 expensive and unreliable source ever developed.

22 As an example of this unreliability, we have the
23 Trojan plant at Portland, Oregon, which operations were
24 at far below projected standards during its first year. We
25 see no reason to believe why these plants will be any more

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1 efficient.

2 Psychological harm: finally, we feel that the
3 people of Hamilton would suffer undue and grave psychological
4 harm if these plants are built at the proposed site; the
5 worry that our children and their unborn offspring
6 would suffer birth defects, cancer or other diseases
7 attributable to radiation exposure is in itself a serious
8 problem .

9 With the many risks one is exposed to today, there
10 is no reason for adding another even more insidious one to
11 our lives.

12 Thank you very much.

13 (Applause.)

14 CHAIRMAN DEALE: Would you indicate, please, where
15 is Hamilton and Lyman in relation to Sedro Woolley?

16 MR. SMITH : Lyman lies approximately
17 at the base of the hill where the proposed reactors will
18 be built; I would say it's less than one mile from the
19 center of the reactor area.

20 CHAIRMAN DEALE: What's the population?

21 MR. SMITH : I'm not sure of the population
22 of Lyman. I believe it's under 400 people. It's a
23 residential town with a very small number of businesses.
24 Hamilton is located about four miles east of Lyman. It's a
25 town of 260 people in our recent census. It's a town of

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1 very little industry. There are two businesses there you
2 could consider industries, and it has a couple of stores and
3 it's a very rural setting in that area.

4 People there can't build on a lot that's less
5 than half an acre, so we really enjoy our existence there
6 and certainly hope to maintain that way of life.

7 We enjoyed it these many years.

8 CHAIRMAN LEALE: Thank you very much.

9 (Applause.)

10 The next person on our list is a lady from
11 Canada, from British Columbia, Vancouver, Gina Hartley,
12 president, Consumer Association of Canada. Ms. or Mr.
13 Hartley?

14 You'll of course indicate your name and so forth.

15 LIMITED APPEARANCE STATEMENT OF TERRY MC COMAS

16 MR. MC COMAS: Mr. Chairman and members of the
17 board, my name is Terry McComas, and I appear before you
18 today representing British Columbia branch of the Consumers
19 Association of Canada.

20 Perhaps initially a few words as to who we are
21 would be in order. The national organization is approximately
22 130,000 members; CAC concerns itself with the interests of
23 the consumer public, and has activities such as frequent
24 appearances at regulated industry hearings; publication
25 of the magazine Canadian Consumer; and maintenance of a

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1 number of offices which handle consumer complaints and
2 inquiries as well as product testing information.

3 Our British Columbia chapter has approximately
4 14,000 members; we are situated throughout the province
5 and they mostly belong to that major segment of society known
6 as the so-called silent majority.

7 But we are no longer silent. We are becoming
8 increasingly concerned and vocal about a number of issues,
9 nuclear power generation being the one under discussion today.
10 And our motivation is simple. We fear that the proliferation
11 of nuclear reactors, be they Canadian or American, will
12 increase the frequency of potentially fatal diseases such as
13 cancer in personnel involved at the front end of the nuclear
14 industry as well as nuclear staff -- I'm sorry --
15 as well as nuclear reactor staff and the surrounding
16 populations.

17 Since the proposed nuclear facility at Sedro
18 Woolley is frequently upwind from British Columbia, we are
19 particularly concerned, since we feel its operation would
20 pose both cancer and genetic hazards to British Columbia
21 residents.

22 It has long been known that exposure to ionizing
23 radiation can cause cancer, radium -- atomic bomb survivors
24 of Japan and patients who were grossly irradiated have
25 demonstrated clearly that large doses of radiation are

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davids 1 carcinogenic.

2 It is now becoming evident that small doses,
3 whether received all at once or over an extended period,
4 have the same capacity; whether low doses of radiation
5 or lesser have greater efficiency for cancer induction than
6 large ones still remains unclear.

7 Hence, we apprehend a hazard posed by this facility,
8 not only in the event of a major accident, but also by its
9 normal gaseous radiation emissions; because of the fact
10 that phosphorous 32 and zinc 65 radionuclides from the
11 cooling water of such plants such as Hanford have been
12 observed to bioaccumulate in bird populations near the
13 body of water used for cooling -- in that case, the Columbia
14 River -- we are also aware of the possibility of citizen
15 exposure from Sedro Woolley emissions by routes other
16 than air.

17 We are also concerned about waste disposal. To
18 our knowledge, a proven long term waste disposal method does
19 not exist. It is our perception that any nation -- and we
20 include Canada -- that produces highly toxic waste without
21 the techniques to dispose of it is operating in a scientifically
22 irresponsible manner.

23 Plainly, short term surface storage in the hope
24 that an acceptable method will be found in the future is
25 similarly unacceptable.

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1 In view of the rising prices and dwindling oil
2 supplies of the OPEC nations, coupled with the recently
3 announced American policy of limiting offshore oil purchases ,
4 the United States and Canada are approaching a serious energy
5 deficit. Some might argue that the United States is already
6 in a serious energy deficit; rather than desperately
7 grasping at energy sources of dubious safety, our nation
8 should opt for the environmentally sound and low cost
9 alternative conservation.

10 I can say that with no self-righteousness, as
11 Canada's record of energy waste exceeds even that of the
12 United States. Our future is even more uncertain.

13 Such changes as reduced consumption of energy
14 or one-shot materials such as aluminum and styrofoam and
15 increased energy efficiency in our homes achieved by more
16 insulation, double glazing of windows and better design,
17 increased efficiency in transportation -- more rapid transit,
18 smaller cars -- and economic incentives for more use of
19 industrial waste will go a long way toward alleviating our
20 looming shortage.

21 It is we, the general public, who will bear
22 the costs in the event of a mishap or miscalculation;
23 ultimately, it is also the general public who will make the
24 decision about the future of nuclear power in our two
25 countries by exercising their democratic rights.

david7

1 We demand that the voice of the people be heard
2 and be acted upon; in hearings of this nature there is often
3 a tendency to lose sight of the real questions: what
4 with testimony from a large number of experts, readings from
5 figures and graphs, and having to work within a frequently
6 cumbersome and unwieldy regulatory procedure, one can easily
7 be distracted from the ultimate concern, the health of
8 our population and future population above all others; this
9 is our major interest.

10 It must similarly be yours.

11 Thank you, Mr. Chairman.

12 (Applause.)

13 CHAIRMAN DEALE: Our next person who will make
14 a limited appearance is from British Columbia, too, from
15 White Rock and the District Council of Women, and this is
16 Edna Smith.

17 Ms. Smith is the vice president of that
18 organization.

19 MS. LANGFORD: Good morning, Mr. Chairman and
20 members of the board.

21 I am appearing on behalf of the White Rock and
22 District Council of Women. My name is Carol Landford, not
23 Edna Smith. I think Edna Smith was the one with whom you had
24 your correspondence.

25 CHAIRMAN DEALE: Yes, that's right; glad to have

david3 1 you, Ms. Langford.

2 LIMITED APPEARANCE STATEMENT OF CAROL LANGFORD,
3 WHITE ROCK AND DISTRICT COUNCIL OF WOMEN

4 Ms. Langford. The White Rock --

5 CHAIRMAN DEALE: Let's let the technician work
6 out his problem.

7 MS. LANGFORD: I'll try again. The White
8 Rock and District Council of Women --

9 (Pause.)

10 We're going to try again.

11 The White Rock and District Council of Women is
12 a local organization, but -- and it is composed of 30
13 affiliate organizations representing more than 1500 women
14 in the communities of White Rock and Surrey, British Columbia.
15 The area from which our membership is drawn is located
16 approximately 30 miles from the nuclear power plant proposed
17 by Puget Sound Power and Light Utility Company to be
18 situated at Sedro Woolley, Washington.

19 The council of women also functions at the
20 international, national, and provincial levels and for more
21 than 25 years has been concerned with the known and unknown
22 effects of atomic radiation on the public at large.

23 Our most recent resolution in this respect
24 called upon the government of Canada to ensure the setting
25 and enforcement of high standards for safety and pollution

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control in nuclear power plants.

The issue we raise today is one of safety. In the interest of brevity, we will confine our remarks to the biological hazards of radiation in the context of the normal operation of a nuclear power plant and will not discuss accident possibility, although we have grave concerns, indeed, about the health and environmental impacts of a reactor accident; low, intermediate and high level radiation are present in all phases of the nuclear fuel cycle.

The International Commission on Radiological Protection has recommended certain maximum levels of human exposure to radiation.

However, the question of whether there is in fact an allowable dose or an acceptable level of radiation is one which is hotly debated by men and women knowledgeable in the field of nuclear energy.

It should be noted too that there is a possible tendency for advocates of nuclear power to find increasingly higher levels of radiation acceptable in order to legitimize their already predisposed economic and political commitment to the use of nuclear power.

(Applause.)

When this bias is accounted for, then it is certainly not at all clear that a safe threshold of radiation

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1 exists.

2 However, what is clear and generally agreed
3 upon by proponents and opponents of nuclear energy is that
4 exposure of human beings to all radiation should be kept as
5 low as possible.

6 The real question, then, is whether Puget Sound
7 Power and Light should be permitted to increase the radiation
8 exposure of people living within the area of its proposed
9 nuclear operations, thus adding to the already existing
10 radiation dose from medical X-rays and the background
11 radiation dose which is emitted from the natural environment.
12 In dealing with this question, it is instructive to note
13 that the Bross study which was funded by the United States
14 National Cancer Institute found that people who lived in
15 the areas around nuclear power plants contracted diseases
16 such as cancer, heart disease and hardening of the arteries
17 at an age earlier than normally expected.

18 The study also found -- and please
19 take note of this, Mr. Chairman, that where parents had
20 been exposed to radiation prior to the conception of their
21 children, a percentage of their offspring sustained genetic
22 damage that surfaced in the first generation as a five-fold
23 increase in pneumonia, dysentery, rheumatic fever, asthma,
24 and allergies.

25 A 50-fold increase in leukemia incidence was also

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1 documented.

2 These data suggest that the immunological systems
3 of the children living in areas around nuclear power plants
4 were affected by low level radiation.

5 The truly frightening aspect of this study is
6 of course the possibility of genetic damage being continued
7 through successive generations and thus compounding the risk
8 of exposure. The problem of even more massive and alarming
9 proportions is the transportation, interim storage, and
10 ultimate disposal of high level radioactive waste resulting
11 from the operation of a nuclear power plant.

12 At this time it is not clear to our organization
13 whether the management and disposal of radioactive waste
14 and spent fuel from the proposed Sedco Woolley plant poses a
15 threat to the residents of British Columbia. Yet we believe
16 that we have an obligation to raise this concern on behalf
17 of our fellow North Americans living in the state of
18 Washington.

19 May we therefore remind you, Mr. Chairman and
20 members of the board, that no method presently exists which
21 can beyond reasonable doubt ensure the safe containment of
22 spent fuel.

23 It seems to us in the absence of a solution to
24 the waste disposal problem that it is indefensible to permit
25 accumulation in the environment of extremely toxic and lethal

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1 substances, which include fission products such as the
2 radioisotope iodine 131 and plutonium 239, which give
3 off radiation for 100,000 years.

4 A decision now to approve the construction of a
5 nuclear power plant at Sedro Woolley necessarily commits the
6 future descendants of the residents of this area to solve
7 the problem which you today admit that you do not know how
8 to solve.

9 Therefore, the White Rock and District Council of
10 women urges the Atomic Safety and Licensing Board to consider
11 and act on the following recommendations: that general
12 siting principles and criteria predicated on environmental,
13 health, and safety factors be established and enforced; and
14 that public participation in decision making regarding
15 siting be made mandatory; that studies of the local population
16 be undertaken to determine what level of radiation, if any,
17 is safe for this particular population; that a detailed
18 plan be drawn up by Puget Sound Power and Light which
19 demonstrates a safe method for containing the spent fuel
20 from its nuclear operation; and that all relevant information
21 in respect of disposal sites and procedures be widely
22 disseminated.

23 In conclusion, we believe believe that the
24 onus properly lies with Puget Sound Power and Light to prove to
25 us, the public, that its operation will be safe; not upon

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us, the residents of British Columbia and Washington state,
to prove that its operations will be unsafe.

(Applause.)

It is the responsibility of the utility
company to gain the confidence of the public in its project.
As concerned citizens of the community, we the members of
the White Rock and District Council of Women cannot sit
back and watch with apathy and disinterest a decision being
made by the Atomic Safety and Licensing Board which could
affect our lives, the lives of our children and our children's
children.

We respectfully remind you, Mr. Chairman, and
members of the board, if you decide to grant a license
to Puget Sound Power and Light, then we, as residents of
British Columbia, will not be the beneficiaries of this
decision.

So we and our children might well be its
victims. This hearing constitutes our right to make input
into your deliberations. It constitutes our right to be
listened to in the truest sense of the word before you
reach your decision.

Thank you for the opportunity.

(Applause.)

CHAIRMAN DEALE: I just wanted to ask you: would
you orient us as to where is White Rock.

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1 MS. LANGFORD: 30 miles north of the proposed
2 nuclear plant; it is about 26 miles south of Vancouver
3 on the border between the United States and Canada.

4 CHAIRMAN DEALE: Fine, thank you.

5 MS. LANGFORD: We see the land of the free from
6 our homes.

7 CHAIRMAN DEALE: Thank you very much for coming
8 here and giving us your presentation.

9 The next person is also from Vancouver,
10 British Columbia, from the Rand Society, and he is MR. J. L.
11 McCann.

12 Mr. McCann.

13 LIMITED APPEARANCE STATEMENT OF J. L. MC CANN,
14 THE RAND SOCIETY

15 MR. MC CANN: Thank you very much for having me
16 come down here.

17 CHAIRMAN DEALE: We're glad you came.

18 MR. MC CANN: Thank you.

19 I'm against nuclear power as you're putting
20 it down here for one specific reason; it isn't the intensity
21 of radiation that's dangerous, it's the frequency. It is a
22 continuous source radiation like you have in a nuclear power
23 plant that parallels very closely a neutron bomb which
24 is also a semi-continuous source.

25 And I don't feel I have the right to really object

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1 to you building it; I'm not a resident, but I do feel that your
2 problem is more than just nuclear development at this time.
3 Mr. Carter spoke on Sunday that if he had at his disposal
4 an answer to the energy crisis at this time he would have
5 spoken up. But he didn't speak of it because he has no
6 answer.

7 If you build this nuclear power plant, you have
8 a time factor involved there and Mr. Carter is talking about
9 8.5 million barrels a day of oil at \$20 a barrel, which
10 is \$62 million a year.

11 You cannot take that time; you have not got it.
12 We put our little presentation here showing an alternate
13 method of producing power without a continuous source of
14 radiation.

15 And basically it is an apple or any organic
16 material or metal even that is allowed to decay, gives off
17 heat known as the heat of evolution or metal or mineral,
18 the heat of oxidation. This has always been known, but
19 the problem is how to capture it, and we feel we have the
20 answer.

21 We can produce in the Seattle area enough electricity
22 to supply its needs with this technique and put on your
23 country's base, we can produce enough crude oil with it to
24 make about 2 to 4 million barrels of crude oil a day for
25 about 50 cents a barrel.

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1 Without the American people being totally
2 independent from an energy source from outside its
3 boundaries, I don't think the American government can
4 survive.

5 They certainly cannot survive \$62 billion a year
6 plus another \$140 million for research. This technique is
7 very simple. You have in Seattle the Robbins Company that
8 makes the tunnel borers and the boring equipment. I'll get
9 you the phone number of the Robbins Company.

10 (Pause.)

11 767-7150.

12 I am assuming that you should be able to make a
13 power plant comparable to your Puget -- your Sadro Wodley
14 plant for around \$100 to \$200 million which is an awful
15 difference in what you're going to pay this way; but you are
16 building nuclear power on the conventional method and you
17 have gamma ray radiation. You have a neutron bomb, and I
18 don't think your citizens are going to like it too much.

19 A second part of our presentation -- this -- the
20 citizens of the country -- it has no benefit to your country
21 if it were to be used by any major industry. It is strictly
22 for the citizens of the country as a present from us to your
23 people.

24 Another thing we have to offer today to try to
25 give you an alternative to the problem is an engine that

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POOR ORIGINAL

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1 gets 200 miles to the gallon on fuel. I brought down
2 four copies and a small presentation. We just did it up
3 in a hurry to show you what can be done. The reason you have
4 a problem getting good mileage from a car is the time factor.
5 Your engines in some cases are running up to 3000 rpm which
6 is 1/100th of a second to complete a 180 degree stroke, and
7 that is not enough time to burn the fuel.

8 This engine we're presenting today has one-half
9 a horse power of a 426 Dodge Omni and 19 times the
10 torque and it operates at 500 rpms with a mass weight of
11 100 pounds.

12 I don't know what else I can say.

13 (Applause.)

14 CHAIRMAN DEALE: And now Mr. Louis R. Walter from
15 local 77 IBEW; Mr. Walter.

16 MR. WALTER: My name is Lou Walter. I'm from
17 local 77. I was appointed as a journeyman lineman for Seattle
18 City Light and the local union here of the International
19 Brotherhood of Electrical Workers.

20 We represent a 1300 employees at Puget Sound Power
21 and Light, 6500 utility and construction workers in the
22 state of Washington and northern Idaho.

23 Our international union, the International
24 Brotherhood of Electrical workers is on the record as
25 supporting nuclear power as a solvable alternative to

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1 the energy crisis that's facing this country today. The
2 arguments that we're hearing today, pro and con, and the
3 alternatives have been said in hearings across the country.
4 I don't think there's any brand new revelations that are going
5 to be brought forth today, and I don't know the type of
6 arguments I'm going to bring forth are going to be any releva-
7 tion to anyone either.

8 But the major concern that we're dealing with is
9 the working people and we believe energy and jobs are
10 germane to one another in a marriage that we cannot have a
11 divorce.

12 We believe the capabilities of the utility companies
13 in this state and region should be able to generate power for
14 the future. This is important to the future of our children
15 as was discussed earlier, to be able to support and
16 economic environment, it's going to be -- the jobs to promote
17 a future.

18 The region would like to see the future development
19 of all generation sources, including conservation, hydro,
20 coal, and nuclear. This is because we would like the
21 economic impact that it has on the region. It brings jobs in
22 this area. The money stays here in this area. The
23 construction is done here and it further lessens our
24 dependence on other areas and regions of the country which
25 drains and hurts the value of our dollar and increases the

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1 inflation that I am forced to sit down at the bargaining
2 table with Puget Power to try to resolve the issue in the
3 wage adjustments.

4 We see the construction employment as a benefit
5 to the area. We see the long term benefit of employment
6 to the operation and maintenance of the plant, and we
7 see the revenue, both from taxes and the sale of power, as
8 keeping money and a healthy situation to the economy in
9 this area, including that situation.

10 I represent people today that are just working
11 people. They can't come here. They don't have the time.
12 They have the jobs -- the situation, whatever it is -- but
13 they know the importance, whether their attitude right now
14 is saying, "Well, I'm for nuclear power or against nuclear
15 power."

16 They know that the bottom line is that the energy
17 has to be there for the future for them to be able to
18 work, be able to raise their families, be able to stay
19 in this region to make a living.

20 I don't see any alternatives over the horizon
21 that's basically going to be able to accomplish what
22 we're trying to do here with the building of the nuclear
23 power plant at Sedro Woolley and the other plants that are
24 being developed in this state.

25 Again, I say that it's just one of the many
facets of the option available to us as far as generation,

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1 but it's part of the overall picture. We can't be dependant
2 on conservation to be able to solve all our problems, no
3 more than we can expect to just build all the nuclear power
4 plants and be able to do it.

5 It has to be a blend and it has to be done
6 where it eliminates our dependency on other countries to
7 supply us with power.

8 IN California, the difficulty of siting a power
9 plant of any kind is to the point where it's forcing the
10 utility companies now to go to Mexico to build plants. What
11 that basically -- we're looking at other people taking jobs
12 from this country, producing plants where there are no
13 environmental protection laws and that are so detrimental
14 to the environment that there is no protection at all. And
15 yet we promote that. Don't build it in our backyard. Don't
16 build it in Mexico.

17 Well, we can build the plants. We have the
18 best technology. We have the best skilled people to do it.
19 We can address the problems and the concerns of the people
20 that are coming here today in opposition of the plant. But
21 we should do it in this country and we should build the
22 plants here.

23 And the local union is basically on the record
24 supporting the Puget Power and the proposed plant at Sedro
25 Woolley.

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1 I thank you for the opportunity to speak. I
2 dn't have a prepared statement, but we'll forward you one.

3 CHAIRMAN DEALE: Fine. but it's all covered by
4 the stenographer.

5 Thank you very much.

6 We would like to hear from Mr. Richard H. Dildine
7 from the Hildaldo (phonetic) Environmental Council.

8 LIMITED APPEARANCE STATEMENT OF RICHARD DILDINE,
9 HILDALDO ENVIRONMENTAL COUNCIL

10 MR. DILDINE: My name is Richard Dildine, and
11 I'm a member of the Hildaldo Environmental Council. When
12 the Sedro Woolley nuclear plant was first proposed, the
13 Skagit County Environmental Council undertook a study of
14 certain of the effects that this might have, in apportioning
15 out some of the work, my lot fell to studying the
16 availability of power.

17 One of the first questions that came to mind was:
18 do we really need this plant? The major argument about
19 Puget in planning this nuclear plant was that we urgently
20 needed a new source of electricity. I understood -- I
21 undertook to make this study by contacting the Federal Power
22 Commission -- in those days -- and more recently, the
23 Federal Energy Agency to find out not what Puget says our
24 needs will be, but what historically the availability of
25 power has been, and if we project our historical record, what

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1 it should be in the future.

2 It has always puzzled me that neither the
3 government, the industry, nor the news media has seen fit
4 to tell the people in the state of Washington how much power
5 they really have and where it's going.

6 So I'd like to give you -- and I won't take too
7 much of your time -- I'd just like to bring you up to date
8 on the latest information I received from the Federal Energy
9 Agency. This is most interesting because it is for the
10 year 1977 and I think you all remember 1977 as the year
11 declared to be the 100 year record low water period in our
12 hy dro system.

13 In 1977 the state of Washington had a surplus of
14 20 billion kilowatt hours; of that, we produced 12.5
15 percent more hydroelectricity than the entire state used. To
16 go a bit further, if we took nine states west of the Rocky
17 Mountains and took the total electricity consumed, the
18 total electricity produced in those nine states, the net
19 surplus was 20.2 billion kilowatt hours.

20 Now, these figures are made more remarkable
21 by the fact that this was the driest year in the history of
22 our hydro system. And in case the point is brought up that
23 this hydro power often represents peaking power, I'd like
24 to point out that if you study the figures of these reports,
25 you'll find that each and every month of 1977 the state of

david21

1 Washington produced from 1 to 2 billion kilowatt hours
2 surplus. There was no shortage in the state of Washington.

3 Now, how much did we use? As I said, I started
4 making a survey of our consumption when our plant was first
5 proposed, and I think inside the first cover here you will
6 find a letter that I received from the Federal Power Commission
7 on the year 1974.

end 5

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1 In 1974 the State of Washington used 59.1 billion
2 kilowatt hours of electricity.

3 In 1977 we used 59.1 billion kilowatt hours of
4 electricity.

5 The point being that with the amount of power we are
6 now producing -- and last year we produced 59.1 billion kilowatt
7 hours in the State of Washington -- with that amount of power
8 and the surplus that we are now producing without building
9 another power plant in the State of Washington and having a
10 2 percent increase in the growth of use every year from now
11 until the end of the century, we could not now use up our
12 surplus.

13 So the need for this plant -- some of our
14 politicians are always talking about freezing and the dark --
15 the need for this plant is not apparent if you look at the
16 real figures. But as I say, I really appreciate the opportunity
17 to present these to you and to the public today. And, I would
18 wish the news media would somehow make a regular report on
19 the current figures of power and not simply look at the
20 predictions which I am sure, in a certain measure, are self-
21 serving, the prediction of the utilities and how much they are
22 going to run short.

23 It hasn't happened. As a matter of fact, in the
24 first 16 years -- well, I should say 1960 the State of
25 Washington produced 36 billion kilowatt hours of electricity.

543 102

POOR ORIGINAL

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1 It used 26 billion, and had a surplus of 10
2 billion.

3 In the first 16 years after that, we increased our
4 surplus by 2 billion kilowatt hours per year surplus. And
5 at the end of 1976, we were producing over four times the
6 surplus of 1960.

7 Last year our surplus was 33.6 billion kilowatt
8 hours. Almost four times. But we are just recovering from
9 our dry period. We had an extremely cold winter. The actual
10 increase in consumption is not apparent, and 2 percent may be --
11 with what the President has told us recently -- 2 percent
12 may be ambitious. We may not increase our consumption by 2
13 percent a year. But if we did, we have already produced that
14 electricity.

15 Thank you.

16 (Applause)

17 CHAIRMAN DEALE: Thank you very much.

18 The next person we invite to the podium is
19 Ms. Joan Whole, who is representing herself.

20 LIMITED APPEARANCE STATEMENT OF MS. JOAN WHOLE

21 MS. WHOLE: Mr. Chairman and members of the Board,
22 I have been sitting here trying to think of what I could
23 say to you in just a couple of minutes that would convince you
24 not to go ahead and permit a license for the construction of
25 these few plants up in the Skagit Valley. I don't know if I
can do any better job than many of the people who have already

nm3 1 spoken this morning.

2 I really think that you have heard some excellent
3 testimony, especially from Dr. Woolliard from Canada. The
4 people from Canada -- one woman I was sitting next to said
5 that they didn't hear about the proposed plants until just a
6 couple of months ago.

7 Anyway, I think they gave some excellent testimony.
8 But they do need to be involved with the proceedings for
9 these plants.

10 I'm the energy research coordinator for the
11 Washington Public Interest Research Group at the University
12 of Washington. But, I am speaking today for myself as a
13 member of the public. I live in Bellview. I am a ratepayer
14 to Puget Power, and I want to just talk about why I am so
15 opposed to these plants.

16 To me, aside from evidence that these plants are
17 not needed -- study after study show that they are not needed --
18 if we really get serious about solar and conservation, we
19 can do without these plants. We already have five nuclear plants
20 under construction in this state, we have one operating plant
21 in this state, and I don't think that we need any more.

22 All the studies show that with the plants that are
23 under construction we don't need any more power until the
24 end of the Year 2000.

25 The area of nuclear waste is something I.

543 104

POOR ORIGINAL

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1 personally, have been doing a lot of research in the last
2 couple of years. I have convinced myself that not only is
3 there no solution in existence now for the permanent disposal
4 of nuclear wastes, it appears to me that there never will be
5 a permanent solution to the disposal of nuclear waste.

6 I was pretty shocked a few months ago when I saw
7 the president of Puget Power, John Ellis, on a television
8 program stating nuclear waste was essentially no problem;
9 that the waste remained hazardous for only 50 years.

10 I just about fell off my chair hearing those
11 statements.

12 So I talked to Mr. Ellis shortly after that
13 television program and he said, no, he had made a mistake and
14 that it was 200 years.

15 Well, in document after document on the subject of
16 nuclear waste, the waste remain hazardous for thousands of
17 years, not 200 years. Plutonium alone has a half life of
18 24,000 years, which makes it hazardous for approximately
19 250,000 years. And so for me, aside from the problems of the
20 accidents that can happen at these plants, which I think
21 will eventually happen, I think that it is really a moral
22 issue of using the power today, building the plants for a short
23 period of time, for 30 years, using one of the arguments of
24 cutting our dependents on foreign oil so it is just going to
25 be switching to a dependence on foreign uranium, because this

mm5

1 country certainly doesn't have enough uranium to fuel the
2 nuclear plants it already has in existence for their 30-year
3 lifetimes.

4 That just the idea of us getting the benefit of the
5 power from these plants, and then having a highly radioactive
6 plant at the end of 30 years that has to be dismantled and
7 disposed of somewhere and will remain hazardous essentially
8 forever, from the way I view the problem, and then of the
9 hazardous wastes themselves, the spent fuel, it just seems like
10 an immoral thing that we are doing here.

11 So I would hope that the Licensing Board would
12 consider some of these moral issues when making a decision on
13 the granting of a license.

14 The one last recommendation I would have to the
15 Licensing Board is that I really think that it is -- I don't
16 know how to quite say this -- to have a board of three people,
17 that your sole purpose is to license nuclear facilities, the
18 reason for the existence of this particular Board. The Atomic
19 Safety and Licensing Board, is to license nuclear facilities.
20 It seems to me -- anyway, that's the way I understand your
21 purpose -- is what we need in this country is some sort of
22 objective board, such as an energy safety and licensing
23 board that could look at all the long-term effects of nuclear
24 power on an equal footing with other types of generation.

25 I just want to conclude by saying, I think what we

mm6

1 need in this country, to get serious about conservation and
2 solar alternatives, and move away from continued dependence
3 on the non-renewable nuclear option.

4 Thank you.

5 (Applause)

6 CHAIRMAN DEALE: Thank you very much.

7 For whatever it is worth, I would like to tell you
8 and the others if it is of interest to them, that I was a
9 member of a Board that denied a license.

10 (Applause)

11 I think we ought to have a bite for lunch, and
12 then come back.

13 It is 12:40 now. We will come back here at
14 2:00 o'clock.

15 (Whereupon, at 12:40 p.m., the hearing was
16 recessed, to resume at 2:00 p.m. this same day.)
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18
19
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21
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23
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25

AFTERNOON SESSION

(2:10 p.m.)

CHAIRMAN DEALE: Please come to order; please come to order.

We'll proceed with the limited appearances. And at the break the chairman was reminded that in his list he missed a person that might have been called a little earlier, so we'll take this opportunity now to call a person whom we might have called a bit earlier. And that's Ms. Sophie Neble. She represents the neighbors at the proposed site.

Ms. Neble?

LIMITED APPEARANCE STATEMENT OF SOPHIE NEBLE

MS. NEBLE: I'm Sophie Neble, and I live at ground zero at the nuclear site.

(Laughter.)

(Applause.)

And I represent my neighbors far and close. And the first thing I want to mention is that a number of years ago when Puget Power first decided to put the nuclear plant there, at that time they decided in the plans -- that was they were going to build an eight acre dam up on Wiseman (phonetic) Creek on Sackus Hill (phonetic).

Well, they never notified us or they never notified my neighbors, but we have water rights on Wiseman Creek for irrigation of our farm acreage.

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1 So when I found out about it, I went to the courthouse
2 and talked to my commissioners. So my commissioner put
3 together a Puget Power man and a couple of engineers, and
4 the commissioners, they come up my house and we discussed
5 the water rights, my water rights for Wiseman Creek.

6 And Puget Power told me, "Why, I have nothing to
7 worry about," that they would never --- because I maintain
8 if they stir over that Backus Hill and whenever they go to
9 reroute Black Creek by backing it back up off the hill off
10 the property, it's going to stir up so much silt and so on
11 and so on that the silt will all come down the hill.

12 And when it comes down the flat part of the hill and
13 hits the flat part of the country where I live, that silt
14 will all wind up on my farm.

15 But they kept tellin --- reassuring me that that
16 wasn't true, that that would never happen.

17 So I asks them, I says, "Well, if you are so
18 sure that silt will never wind up on my farm, so why not
19 sign a contract with me telling me that if it does you'll
20 fix it?"

21 But they would not do it, so that's as much as
22 telling me, "Well, if it does come down here, tough luck,
23 old lady," because I wasn't about to take on a big industry
24 like Puget Power.

25 so then another thing that comes up on that is

david3

1 that Skagit County has one dam for public use for water, and
2 that's Judy (phonetic) Reservoir which is across the valley,
3 a little to the west of the site.

4 And the total county takes water out of there,
5 the areas west; they get their water out of the Skagit River
6 at Avon, and I feel that even that being so close can get
7 contaminated because our winds in that valley go two ways:
8 east and west.

9 In the wintertimes it's mostly west, and in the
10 summertime they also go east and a lot of them go east in
11 the summertime.

12 Now, I'll have to bring up some earthquakes. In
13 1969 or 1970 exactly about 12:00 o'clock at midnight I had
14 gone to bed.

15 And shortly after I had laid down there was an
16 earthquake and that earthquake was just grinding rocks. You'd
17 sworn you was against a rock crusher and that lasted for on
18 and on and on. I didn't think it was evergoing to quit. Well,
19 that earthquake has never been reported. I was hoping that
20 it would be in the news the next day. It wasn't in the next
21 day.

22 And I wrote the Ferguson (phonetic), and I also
23 wrote a letter -- well, they were supposed to have researched
24 it, and they tell me there was no earthquake. But I know there
25 was. I just assumed it was a covered up earthquake.

543 110

POOR ORIGINAL

david4

(Laughter.)

And also on October 8, 1977 I was sitting on a chair at 8:00 o'clock in the evening and knitting or crocheting as usual, and all of a sudden the earth started shaking and there was a boom. And I couldn't imagine -- my lights just bounced up and down and I thought, my goodness, what happened.

So I got up to go outside to look and there was another explosion and when I finally got outside -- I got an oak tree in my front yard, and it looked like somebody was standing there shaking that tree.

That tree's got a trunk on it that big.

(Indicating.)

And then there was another earthquake which was a year ago last May, 1978, and it was between 11:00 and 12:00 o'clock, and most of that was felt at Hamilton Mountain. the loggers was in there eating their lunch. And they also heard a loud explosion. And I didn't feel the earthquake, that one; I was in the basement washing clothes, so I didn't feel that one.

I had a lot of the neighbors tell me about it, such as George Mahappi (phonetic) and Molly Gardle (phonetic) and Vernice Mellon (phonetic) and a number of other people that knew the men that was logging up there.

Now, another thing that puzzles me is air inversion;

DavidS

1 last winter we had two weeks solid of air inversion. When
2 I mean air inversion, you couldn't even move a feather, and
3 it was fog.

4 What's going to happen to that steam that going
5 to be coming out of those two cooling towers when we have
6 an air inversion in that neighborhood, say, for two weeks.
7 Completely -- you couldn't have moved a feather.

8 And then of course another thing that comes into the
9 picture then is gardening. Everybody grows a garden. We
10 have to supplement our incomes with gardens because we don't
11 make enough money. I own a farm, but I don't make any --
12 I don't make enough money on that farm to maintain myself,
13 so I have to grow a garden.

14 And since those nuclear plants are being built
15 on Backus Hill, all the water that comes off that hill, it
16 comes down to Wiseman Creek because of -- about 80 percent
17 of that site drains into Wiseman Creek, and the other
18 part of it drains into what they call -- I forgot what they
19 call it -- Tank (phonetic) Creek, and that comes down into
20 Mingo Lake.

21 So our ground water will be contaminated. They
22 also have -- I understand they have what they call a spoils
23 area, and I understood -- I was told that that's where they're
24 going to dump their low radioactive waste. Because I couldn't
25 figure out why they wanted to fence it and make such a

david5

1 sophisticated containment of that area. They told us -- Puget
2 Power told us that that was because they're going to dump
3 their surplus power from the site that they're not
4 going to leave -- but __ can't imagine why they would want
5 to dyke and fence surplus rock.

6 So I questioned and questioned and asked a number
7 of people and I was finally told that that was one where
8 they intend to dump their low radioactive -- you know, the
9 wash water from the hands. I don't know. I don't completely
10 understand that part of it, but that's what I understood ,
11 anyway.

12 And another thing that is really puzzling to me
13 is this: they had a meeting in the Gateway Hotel, I think
14 it was, last fall -- I believe it was last fall. I'm not sure.
15 And we were only allowed to ask one question, so I asked
16 them who is going to have to -- who is going to have the
17 priority on the Skagit River waterway if those plants are
18 built on that site.

19 And they told me the nuclear plant is going to
20 have the priority on the Skagit River. And that brings
21 another thing into question. Since I mentioned to you the
22 Judy Reservoir; Judy Reservoir in 1977 when it was so dry,
23 it wasn't hardly a reservoir. It was a frog pond. Because
24 I drove up to see it. And since all the people are moving into
25 the county area, Puget Power has the priority on the river;

david7

1 where is Skagit County going to get its water if they're
2 not going to be allowed to tap into the river?

3 And I'm sure with all the people that's moving in,
4 whether it's on the pretense of working for the nuclear
5 people or what it is, but there's an awful lot of people
6 moving into that county.

7 And another thing comes up now, too, evacuation.
8 Past that plant, there is only one narrow two lane highway,
9 and I -- last winter Puget Power asked the state highway
10 department if they could bury or put a water line from the
11 Backus Hill site to the wells along highway 20.

12 Now, I understand that water line is four foot
13 in diameter, and I understand also that it's going to be
14 under 200 pounds of pressure to push that water up from
15 Backus Hill.

16 So if that water line is along the river and if
17 we happen to have an earthquake, which we do have in there,
18 which -- I lived there for 33 years and I -- I seen all
19 kinds of quakes up there. Last year was the first year
20 that I can remember the years that we lived up there that
21 I don't recall an earthquake being strong enough that I can
22 feel it. And I heard there might have been, but nobody's
23 ever detected it.

24 And I'm sure we wouldn't be told about it if
25 we didn't detect it.

david8

1 So if that water is there and we should happen
2 to have an earthquake and that water line should break and
3 we should have a catastrophe like that had at Three Mile
4 Island, that would completely cut off everybody because
5 being along the road where you've got that kind of water,
6 it's going to take that road out right now.

7 So how do they intend to move those people from
8 Hamilton, Lyman, and if the highway is closed, the
9 only way you can get out is through Darrington (Phonetic).
10 Then they'd have to go down -- well, they could go to
11 Granite Falls -- not Granite Falls, but they could go to --
12 they have another place. I can't think of the name of it.
13 And the insurance: if they should have an accident up in
14 there and the insurance would be so small you couldn't even --
15 well, we couldn't even afford to get out of there, as far
16 as that goes.

17 And now I have to speak a little bit on the --
18 on a greenhouse, solar energy. Ten years ago when I retired
19 from milking, I always wanted a greenhouse, and I didn't
20 want a greenhouse that I'd have to heat. So solar
21 was becoming pretty popular, and I thought, well, I'm going
22 to build one and just see what happens.

23 It cost me \$100, and last winter during the
24 coldest day we had, which was around maybe 17 degrees in the
25 daytime: then I had 30 degrees in that greenhouse and no

david9

1 electric heat. And it got so warm in there --

2 (Applause)

3 -- that it was midnight before I went to bed that
4 I could go in there and plug in my electric heater so it
5 wouldn't get too cold before morning, you see. Now that
6 was -- because we had lots of cold weather last year. We
7 had lots of sunshine in the daytime, and that's the result.
8 And I have proof. You come over to my house and I'll show
9 you all the plants that came out of it.

10 (Laughter.)

11 That's true.

12 And last but not least, I think that this
13 generation has absolutely no right to create poison on this
14 planet for future generations. I'm -- if we had a way of
15 harnessing nuclear power, guaranteed safe, maybe that would
16 be a different story.

17 But we don't know enough about it -- our engineers
18 don't know enough about it, and I think until such time
19 as we can absolutely, positively figure out a way where
20 we can dispose of nuclear waste and figure out a guaranteed
21 safe nuclear plant, we should forget about them and do with
22 what we have.

23 Okay, thank you.

24 CHAIRMAN DEALE: Dr. Hooper would like to comment
25 about a statement that Ms. Neble made.

david10

1 DR. HOOPER: I don't have anything I want to ask
2 here. I just want to make sure the staff is aware of the
3 possibility -- I haven't thought of -- at least, I haven't
4 seen in the record anything concerning the possibility of a
5 cooling water line break and the pressure washing out the
6 road, and its effect on nuclear -- on evacuation plans. That
7 is something I think the staff should officially take
8 note of.

9 (Applause.)

10 CHAIRMAN DEALE: Thank you very much.

11 The next person has been a correspondent of ours
12 for some time. We have recognized him at our other
13 conferences, and he too has recently asked that he be
14 given a chance to make a limited appearance. And his name
15 is Jeffrey Margolis. He is from the Biological Conservation
16 Fund in Vanzant (phonetic), Washington.

17 LIMITED APPEARANCE STATEMENT OF JEFFREY MARGOLIS,
18 BIOLOGICAL CONVERSION INDUSTRIES

19 MR. MARGOLIS: Thank you, Mr. Chairman. I'd like
20 to say that that was Biological Conversion Industries,
21 which is a small research and development company that is
22 composed of some friends of mine; basically, I'm a small
23 businessman.

24 I own a store called Everybody's Store, which is
25 pretty close to the site, just above the Skagit County line.

David11

CHAIRMAN DEALE: I'm sorry I misidentified --
I misread what my colleague had written.

MR. MARCOLES: Okay. And -- okay -- earlier
this year we wrote to the Nuclear Regulatory Commission and
made two points to them: that there was an earthquake in
the vicinity of Sedro Woolley, Washington on the morning
of January 6, 1979.

And two: it is essential to calculate an updated
hydrological model of the Skagit River basin, which took
into consideration both proposed facilities at Skagit nuclear
facilities and the Seattle Dam.

The development of a comprehensive hydrological
model based on recent data is particularly critical in
light of the current drought in the northwest and the
resulting reduced snow fields in the North Cascades.

It was very gracious and timely of Senator
Warren Magnusen to take the initiative and inquire of the
U. S. Geological Survey concerning these matters.

From his reply to Senator Magnusen, I was surprised
to learn the following from the acting director of the
United States Geological Survey: "The earthquake to which
Mr. Margolis evidently referred occurred January 6, 1979.

"It was recorded and located by the seismologists
at the University of Washington, but since it was magnitude
3.4 -- small -- it was not included in the data sent to the

david:12

1 U. S. Geological Survey for publication."

2 However evident -- unquote -- the NRC has no
3 knowledge of this event, and this is what Sophie was
4 talking about.

5 Furthermore -- he continues, "All such events,
6 if large enough to be located instrumentally, are included
7 in the assessment by the federal government of the
8 seismology of a region around a proposed nuclear facility.

9 We find this information inaccurate and evasive,
10 and pray that somehow, someone in the United States
11 government will assure the Nuclear Regulatory Commission,
12 the applicant and Senator Magnusen that they can have a
13 continuous, complete, systematic, accurate and unabridged
14 log of the seismic activity of this volcanic region.

end 7

MELTZER
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1 Let us try to explain our position. The
2 United States Department of Interior publishes each month
3 its periodical, the Preliminary Determination of Epicenters.
4 The information in this bulletin is compiled by the National
5 Earthquake Information Center in Boulder, Colorado. In the
6 listing for October 1977, there is a record for October 14,
7 at 253 hours for Sedro Woolley, Washington, of magnitude
8 3.3 felt at eleven stations.

9 In the listing for July 1977, on the 10th of the
10 month, the quake was felt at 719 hours at Lyman, Bellingham,
11 Acme -- Vanzandt is five miles north of Acme -- Bow, Hamilton
12 and Clinton. It was magnitude 3.4.

13 So, if the Geological Survey doesn't release
14 information to you about events that are magnitude 3.4,
15 well, what else is missing from the record.

16 Shall we wait for another nuclear tragedy to explain
17 how, as a result of arbitrary misinformation, two reactors are
18 built at the foot of an active volcano.

19 We, who live here, know when the ground shakes.

20 (Applause)

21 Unofficial as it is, a continuous record of the
22 seismicity of this region is ~~ten~~ by and available from
23 Ms. Lois Garlick, affiliated with the geology department at
24 Western Washington University in Bellingham. Her log of other
25 than non-occurrences is a couple of hundred pages thick for

mm2

1 1977, '78 and '79.

2 There was also a record for all occurrences which
3 is more than ten years old.

4 In examining recent Western Washington University
5 records for seismic activities similar to the unreported tremor
6 of January 6, 1979, one finds reports of seismic events for
7 the dates of December 20, '76; July 18, '77; March 11, '78;
8 April 23, '78. All of these were duly recorded as significant
9 occurrences by Geological Survey.

10 It is particularly to be noted that on the 10th
11 of July 1977, an event was of the same magnitude as the
12 unreported event of last January 9.

13 In other words, now that seismic activity has
14 become a critical issue in the licensing process for the
15 Skagit nuclear power plants, we find seismic events that were
16 deemed significant in past years are now viewed as unworthy
17 of recognition or serious consideration.

18 This would seem to be an egregious error and in
19 view of the increased public opposition to nuclear power, one
20 has to question whether the suppression of the January 9
21 event was not, in fact, politically motivated or influenced.

22 I have seismic charts here -- (Indicating)

23 The obvious contradictions in keeping adequate
24 seismic records needs to be rectified. Otherwise, our nation
25 innocently attempts to make dangerous judgments on the basis of

mm3 1 what is false.

2 Is it wise to eliminate information for the
3 NRC?

4 Might not the Geological Survey provide a
5 continuous standard account for the members of the Atomic
6 Safety and Licensing Board, conscientiously permit the
7 installation of a nuclear facility at the southwest region
8 of Mt. Baker, officially recognized as a modern, active
9 volcano.

10 Senator Magnuson was notified that the Geological
11 Survey was forwarding to me their Water Supply Bulletin 47,
12 titled "Water in the Skagit River Basin, Washington," published
13 in 1973.

14 Now I'm curious. If I'm supposed to believe that
15 this Bulletin 47 was the source of information used by the
16 NRC to assess and evaluate the questions pertaining to water
17 quality in the proposed project, or perhaps it was just some
18 flimflam justification to placate a too-curious citizen.
19 Because none of the information in Bulletin 47 was procured
20 after 1973.

21 The text of Bulletin 47 supposes that the proposed
22 divergence of the nuclear plant's water supply, which is
23 one percent of the low flow, or 106 cubic feet per second,
24 or 46,200 gallons per minute, and a discharge of 11,600
25 gallons of heated water per minute, would not violate our

mm4

1 standards for Washington Grade A water. Long ago we kissed
2 AA water goodbye.

3 This assumption is seriously in doubt in light of
4 the drought, and also in view of Radlinsky's comment that
5 storage in the Ross reservoir is presently about 69 percent
6 of the long-term average, and is very nearly the same as
7 January 31st, '77, which was a drought year.

8 The water content of the snow pack above the
9 reservoir is about 55 percent normal for this type of year.
10 Unquote.

11 In other words, the drought is unabated. If, in the
12 first place, the Geological Survey had forwarded snowpack
13 reports -- and I had previously sent all of these snowpack
14 data to you, Mr. Deale, and I don't get any replies from the
15 NRC, so I really don't know if anything is being wrought --
16 someone could have begun to calculate an anticipated low
17 stream flow based on taking into consideration an historically
18 unprecedented low snowpack, that is drought.

19 The destructive effect of the proposed nuclear
20 facility on native salmon runs will be considerable, even if
21 one assumes the normal stream flow.

22 How much greater might it be in view of the long-
23 range effects of a substantial period of drought, or further,
24 what if the greenhouse effect and other atmospheric impacts
25 of the industrial age have permanently altered weather

mm5 1 patterns such that our concept of normal stream flows needs to
2 be redefined.

3 These factors are begging for consideration.

4 Fundamentally these issues raise the question of ability of
5 humans to predict natural events, and how much margin of
6 error needs to be given to the factor of human fallibility.
7 Men are not Gods. They make mistakes and are unable to foretell
8 the future, let alone control it.

9 The fact that our society is faced with energy
10 shortages does not justify our imposing dangerous risks on the
11 citizenry or on the biosphere in order to facilitate politically
12 expedient, short-run solutions to these problems.

13 And this certainly does not justify a refusal to
14 consider all of the evidence relevant to the evaluation of
15 these risks on the assumption, presumably, that those elements
16 which are now recognized, somehow cease to exist.

17 So, in view of this I don't think it would be a
18 very good idea to give limited work authorization to construct
19 the plant.

20 Furthermore, let's say something about the labor
21 situation.

22 I just want to briefly point out that the Washington
23 Teamster's Newsletter for Volume 42, No. 28, it says here --
24 this is very recent:

25 "The dismal experience with nuclear power

mm6

1 calls for a serious look at alternatives. No time
2 can be wasted in turning to the known possibilities,
3 to solar energy, windmills, coal-fired plants and
4 methane produced from organic matter. We regret
5 the years lost in waiting for operation of nuclear
6 power plants. We cannot afford to wait out another
7 decade of wishful thinking. We must turn our
8 attention to the energy forms that will give us what
9 we need without producing risks to life. That realism
10 now calls for development of alternatives to nuclear
11 power."

12 That was the Teamsters' Union from the State of
13 Washington.

14 Now, as to the question of need for power, too
15 often commentaries about this scheduled nuclear project, and of
16 nuclear power in general, emphasize physical -- that is
17 allegedly empirical matters, as if metaphysical or social
18 considerations were inconsequential. Perhaps the enormity,
19 if not the immeasurability of the situation belies the
20 disproportionate attention given to the subject of nuclear
21 safety versus nuclear safeguards.

22 Nuclear safety attends to the nuts and bolts
23 integrity of the machinery.

24 Nuclear safeguards refers to the thorough political
25 and military control of the nuclear process and nuclear

mm7 1 environment.

2 In the future, nothing short of a garrison
3 state can guarantee the integrity of the nuclear process and
4 nuclear environment. Nuclear plants, their components and
5 systems are highly vulnerable targets threatened by theft,
6 sabotage, attack and blackmail; each disaffected citizen,
7 hostage to the nuclear megalomania becomes a potential suspect.
8 As the state increases the alert status of its nuclear defense
9 forces, surveillance intensifies. Soon everyone is on
10 guard.

11 The proposed Skagit nuclear project literally
12 presents our region with an explosive political situation.
13 We are involuntarily tossed into a war zone for now and
14 generations to come.

15 Is this the prognosis for America?

16 When it comes to nuclear waste, just simply as
17 I put it is, nuclear radiation, nuclear power is an enemy
18 that will not sit down. It is an enemy that all the generations
19 will have to cope with, will have to put back in canisters and
20 find ways. It is not going to sit down for our grandchildren,
21 it is never going to let us rest. We are going to be paying it
22 for the rest of our lives.

23 Nuclear power is an enemy that won't sit down.

24 So, for the love of God --

25 (Applause.)

mm8 1 -- for the love of God, please seek the path of happiness.

2 (Applause)

3 CHAIRMAN DEALE: Mr. Black, in the preparation of
4 the Staff's testimony on seismology and geology, we would wish
5 that you would make sure that the people preparing that
6 testimony, take into consideration the points appropos that
7 Mr. Margolis has made.

8 As I understand it, and I am sure that you have
9 been aware of this because Mr. Margolis had sent me letters, and
10 as I recall I have seen to it that the letters have
11 circulated among all of the parties, so that I believe the
12 points which he had made of the inaccuracy of the material
13 which geologists and seismologists have been making their
14 recommendations, should be considered and answered.

15 It is quite shocking, as he was saying, that
16 information about earthquakes of 3.4, aren't known. But,
17 whatever the case, we certainly want to make sure that the
18 point that he made is covered in the testimony which will be
19 forthcoming.

20 Thank you very much, Mr. Margolis. And as I had
21 indicated, the material which you have sent to me has already
22 been distributed among the parties, and they in turn will,
23 presumably, make it available to the people who are preparing
24 their testimony and the like for themselves, such as the
25 Staff. And as you know -- well, if you don't know, the Staff

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1 is looking to, among others, the United States Geological
2 Survey for its analysis of the seismicity of the area. This
3 is a major consideration, certainly of this Board, and is a
4 consideration of all the parties. There is no secret about
5 that.

6 Unfortunately, during the immediate hearing session,
7 the subject of geology and seismology will not come up.
8 However, as we get along with this hearing session, we will,
9 hopefully, get commitments from the parties as to when their
10 testimony and evidence will be available to all of us, and
11 this would mean to the public, too.

12 So again, thank you for your continuing interest.
13 I am pleased to say that the material that you have sent us,
14 has not, as they say, "been deposited in the deep six."

15 Now we have another person from Washington, the
16 State of Washington. He is from the Society of Simple Language.
17 And it is Mr. Dan Grantham.

18 Is Mr. Grantham here? Fine. Please take the
19 podium.

20 LIMITED APPEARANCE STATEMENT OF DAN GRANTHAM,
21 SOCIETY OF SIMPLE LANGUAGE.

22 MR. GRANTHAM: (Distributing document to Board
23 and Parties.)

24 I am really happy to be here again. It is always
25 a pleasure to come to these meetings and listen to the people

mm10

1 who speak at them. It restores my faith in the people in
2 this world.

3 Sometimes I get -- well, like the President
4 mentioned in his speech, we tend to lose confidence, you
5 know. And I feel there is not that much reason to look forward
6 to tomorrow, to the years ahead.

7 When I hear the people that are here today, I feel
8 really optimistic about the future.

9 The Society for Simple Language is dedicated to
10 putting things in terms that we can all understand. It has
11 been a long time since I first started listening to hearings
12 over nuclear power. In the first three years I couldn't
13 understand anything, which, you know, I'm not the only one who
14 felt that way.

15 And over the years, a lot of us have become almost
16 experts in a lot of aspects of nuclear technology. I
17 don't consider myself an expert by any means, but I do try
18 to put what I do understand into simple language. For instance,
19 there was a gentleman here today who spoke about jobs and the
20 need for power and how power and jobs go together.

21 In a situation, depending on how you look at it,
22 you are going to get different interpretations.

23 Now I have listed here in this paper, a way to
24 produce the same amount of energy as the Baccus Hill proposed
25 plant hopes to produce, by employing more people than it would

mm11 1 take to, you know, build a plant for a longer period of time.

2 Well, let me just run through it and describe it to
3 you.

4 Suppose you have a choice to fix a hole in your
5 pocket where you are losing money, or to take a dangerous job
6 to replace what you are losing. It seems like a fairly easy
7 choice to make.

8 Here are some simple figures. Puget Power hopes to
9 install two 1300-megawatt nuclear generators at Bacus Hill
10 above prime Skagit River Valley farmlands, using some of our
11 best fishing waters at a rapidly rising price tag of 2.9 billion
12 that is 2.9 million kilowatts at more than \$1000 a kilowatt
13 without even counting the cost of fuel.

14 Here are some more figures. There is about 1.3
15 million homes in Washington State. If each one of these homes
16 could find just two kilowatts an hour, we would have the same
17 amount of power that Puget proposes to produce even if their
18 proposed plant was operating at 100 percent capacity, 24 hours
19 a day.

20 Now, without considering the kind of home generators
21 you could have for \$2000 -- and there are many, all of which
22 run on cheaper fuels than uranium -- let's look at the
23 kilowatts slipping out the doors, windows, walls, ceilings
24 and floors. Each one of these houses has some kind of heater
25 going at least half a year. A heater in a modest house might

mm12

1 average 45,000 Btu's an hour. Look at the back of your heater
2 to find out.

3 That figure means the house loses about that
4 many Btu's an hour, and your heater is working just to replace
5 losses.

6 What's a Btu? It is a unit of heat or power. And
7 3.4 of them are equal to a watt. So if we can save 6800 Btu's,
8 we have two kilowatts.

9 These figures are for the coast. In colder areas,
10 as in Eastern Washington, losses and potential savings are
11 much higher.

12 Heat losses in a house can be cut dramatically with
13 weatherstripping and insulation. Storm windows or plastic
14 alone can save two kilowatts in many homes.

15 Another advantage to insulation is a cooler house
16 in hot weather. Air conditioning can be as expensive as
17 heating.

18 Commercial buildings, which were not counted with the
19 houses, offer even greater savings to heat engineering. Some
20 businesses produce enough waste heat to warm a whole neighbor-
21 hood or a town.

22 It is ironic that nuclear plants need large
23 rivers to keep cool. Those are megawatts. Any house that
24 is so well insulated, \$2000 couldn't save two kilowatts, could
25 probably stay warm all winter with a solar heater.

mm13 1 Politicians should love this plan. It is a way to
2 end unemployment; do something that will benefit all of us in
3 a practical way, increase health and comfort, and increase
4 available energy without ecological damage.

5 In fact this plan could and should be applied to
6 the entire works budget on a larger scale. It is too bad the
7 utilities won't get richer, but we wouldn't have to worry about
8 waste, higher bills, accidents, spills, fishkills, terrorists
9 and uranium price hikes.

10 To you, friend, from the Society for Simple
11 Language.

12 Quite a few years ago, a very intelligent man named
13 Ben Franklin made a study of Pennsylvania. It was kind of
14 interesting how two examples that we can learn from have come
15 from Pennsylvania.

16 His example was the study of -- originally
17 Pennsylvania was owned almost entirely by English settlers.
18 A couple of hundred years later, it was owned by Dutch
19 settlers. And he wondered about it.

20 And after study of the problem, he determined
21 that the reason was that the English had these big,
22 beautiful fireplaces that burned wood like crazy, and the
23 Dutch had small, efficient fireplaces.

24 And in the generations between the times of this
25 study, that the work saved by cutting firewood enabled the

nm14 1 Dutch people to buy the land.

2 (Laughter.)

3 I used to worry a lot about the negative aspects
4 of nuclear waste. I found it was a little bit too depressing
5 to think about for very long. There is one thing about
6 Hanford that I would like to mention.

7 Hanford is sort of becoming by default, our dump,
8 the national dump. And that is a good way to describe it.

9 I mean, my father is a geologist. He has been in
10 Washington for quite a few years, and I remember him
11 describing a phenomenon called "Columbia River Basin Range."

12 A long time ago, people noticed that if you put
13 dye in the water up by Wilbur, for instance, it would eventually
14 come out the Cancanyon walls of the Columbia River a couple of
15 hundred miles to the south. Apparently -- you know if you
16 read something about the Columbia Basin, you know, you might
17 read that it is composed of beds of lava miles thick. Well,
18 that's true. But inbetween those beds of lava there is layers
19 of sedimentary deposits which are extremely porous.
20 And the ground water literally flows through them like a river.

21 And because of irrigation in that area, the water
22 table is constantly raising.

23 Now it is also pretty common knowledge that Hanford
24 is well known for some spills. In fact a lot of times they just
25 dump the waste water in the ground and dig a trench. High-level

mnls5 1 wastes eat their way out of the stainless steel tanks. I
2 mean, there is just -- like it was said, it is an enemy that
3 won't sit down. I mean, even if you build a pyramid around
4 a reactor, how long is it going to take to eat its way out of
5 that?

6 Well the point is, these wastes are traveling
7 downward and towards the river, and eventually they are going
8 to hit it in massive quantities. There is already enough
9 radio poisons in the Columbia, that a person can, without too
10 much trouble in a year's time, eat enough white fish to receive
11 a toxic dose. White fish is a bottom-feeding fish.

12 Fortunately the salmon that come up the Columbia
13 don't eat on their way up. If they did we would be in trouble
14 a lot quicker. But it is just postponing the time.

15 See, we can get away with polluting for probably
16 our generation, you know, unless there is some massive accidents
17 I mean, it is not really going to be noticeable.

18 How many people notice a few hundred more leukemia
19 deaths per 10,000 or whatever. It is not that obvious or that
20 glaring.

21 Cases where there has been testing and it is really
22 obvious, people can say, well, you know that's what happens
23 when you test bombs. But it is not going to go away. And it
24 is going to concentrate in the biological systems.

25 For instance, they have found glutathione in

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1 coyotes over by Hanford. How did coyotes eat plutonium?

2 They ate the birds that ate the insects that ate the plutonium.

3 Now we live at the top of the food chain and every
4 step along the way concentrates these poisons more and more,
5 and we are going to get it, you know, sooner or later. There
6 is no doubt about that.

7 The question is, what can we do about it? You know
8 how can we stop it?

9 And I don't know of much research that has been done
10 on that. It seems like it would be worth studying, instead
11 of just leaving it for, you know, the future to deal with.
12 It seems, really, unfair to dump a problem like that on our
13 great grandchildren. And it seems like the farther ahead
14 in the future you look, the worse it is going to be. You know,
15 until say 500,000 years from now, or 50,000 years.

16 WE have no idea if we are going to even be around
17 in 10,000 years from now at the rate that it is going.

18 If there is one thing that we really do have that
19 is worth protecting, I would say it is our gene pool. Because
20 if we are ever -- you know, that's what we are, our gene pool.
21 And that is the most susceptible part of us to radiation
22 damage.

23 The doctor earlier mentioned something, the
24 fulmination of the nerves. You know, that is something that
25 comes down on us.

nm17

1 You know, if we make a mistake, we reap the
2 damage. That is fair in a way, except that the people who reap
3 the damage are not going to be the people who made the decision
4 They are going to be the people who, you know, didn't even know
5 about it.

6 The towns of Hamilton and Lyman, you know, five
7 years ago, what did they know, what did any of us know. Now
8 we have studied, now we know, now we are saying, wait a minute,
9 it doesn't sound like the best thing to do.

10 In fact, I think right as a general rule you could
11 say that any project that requires evacuation plans, is
12 suspect from the start.

13 (Applause)

14 I would love to talk here for a while about
15 alternate energy systems, but I will probably just mention
16 one to you that is another really good job producer.

17 General Motors happens to own the rights to
18 produce it in this country. It is called the Sterling Hot
19 Air Engine. It is ideally adapted for solar heat transport.
20 It is a very interesting engine, very efficient, very quiet,
21 nonpolluting, easier to manufacture than a car is. Much
22 easier.

23 If it came down to it, you know, I think we have
24 reached the point that we can look and see that gasoline
25 automobiles are, you know, peaked out and they are going to

mm18 1 slowly fade away. This is not going to happen immediately,
2 but I think it is obvious.

3 Now to replace those jobs, why not make solar
4 engines. What have we got to lose? At least they are not going
5 to blow up.

6 Thank you.

7 (Applause)

8 CHAIRMAN DEAL: Thank you very much, Mr. Grantham.

9 We have a person from British Columbia, Council of
10 the Confederation of Canadian Unions, Kathy Walker.

11 LIMITED APPEARANCE STATEMENT OF KATHY WALKER,
12 COUNCIL OF THE CONFEDERATION OF CANADIAN UNIONS.

13 MS.WALKER: I would like to thank the Commission
14 for allowing us to speak on such short notice.

15 I am the vice-chairperson of the BC Council of the
16 Confederation of Canadian Unions. The CCU represents 30,000
17 workers employed in the mining, smelting, manufacturing and
18 service industries.

19 At our national convention held in Vancouver two
20 days ago, the union delegates present expressed their
21 continued opposition to the development of nuclear energy
22 and to the mining of uranium. We are concerned about the
23 potential hazards of nuclear energy, many of which have not
24 yet been adequately studied.

25 The effects of low-level radiation, for example,

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1 are not yet known in employment data terms, but recent
2 studies, such as the Bross Study, the Mancuso Study and the
3 Enchikawa(?) Study give us great cause for alarm.

4 The as-yet unsolved problem of nuclear waste
5 disposal presents, in our opinion, an immoral legacy for future
6 generations.

7 The reactor which is being contemplated at Sedra
8 Woolley is within a very few miles of the 49th Parallel. Many
9 of our members live within sight of the border. They are
10 concerned that a reactor may be built near their homes and
11 that Canadians have no direct power in the decisionmaking
12 structure to prevent that construction from taking place.

13 We are concerned about the ethics of a corporation
14 such as Puget Sound Light & Power which uses the energy
15 crisis as one of the reasons for proposing yet another
16 nuclear reactor in the State of Washington for electricity
17 production; yet proposes a technology which is also based upon
18 the non-renewable energy source, namely uranium.

19 We feel that the resources of a utility such as
20 the PSLP should, instead be devoted to the development of
21 energy based on renewable resources such as solar energy
22 and hot fuel, both of which are abundant in the state of
23 Washington.

24 We, as representatives of the Canadian labor
25 movement wish to differentiate our position from that of the

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1 comments made by the representative of the International
2 Brotherhood of Electrical Workers. We think it is the worst
3 kind of shortsighted opportunism for those in a labor movement
4 to be more concerned about employment for their own members
5 than for the health and safety of themselves, their families
6 and their neighbors.

7 My own union, the Canadian Association of
8 Industrial, Mechanical and Allied Workers represents, among
9 others, 2200 miners in BC, and those miners have told us
10 that jobs in uranium mines are not worth the risk to their
11 health or to the environment.

12 They have instructed us to do all in our power to
13 prevent the development of uranium mining in BC. And if we
14 represented workers who would potentially benefit in the
15 short run through employment in nuclear reactor construction
16 and operations, our position would be the same.

17 Thank you very much.

18 (Applause)

19 CHAIRMAN DEALE: Thank you very much.

20 The next person we have has after her name,
21 according to Paul Mitchell, "The Voice of Women." And that
22 is a voice that we have to listen to.

23 Ms. Alice Kopaya.

24 LIMITED APPEARANCE STATEMENT OF ALICE KOPAYA.

25 MS. KOPAYA: I would like to be able to make this

mm21

1 a very short recitation.

2 The Voice of Women would endorse most of what
3 was said, but we also feel strongly that it is completely
4 irresponsible and morally bankrupt to even consider any
5 expansion of the nuclear industry until the question of what
6 to do with the waste has been resolved, and all existing
7 wastes have been disposed of.

8 Also, we are very concerned that it is not possible
9 to get insurance against damage caused from any nuclear source.

10 This is the "Year of the Child." One of the most
11 significant things that could be done to insure a livable
12 future for our children is to call a moratorium on nuclear
13 production and to close down all existing plants.

14 Therefore, we hope this Board do not grant a
15 license for Sedro Woolley.

16 Earlier it has been mentioned that in the
17 case of an accident, evacuation would be eastwards. But these
18 roads would probably be closed because of excessive radiation
19 unless the usual lines of lies and deception is given us.
20 That wasn't mentioned.

21 And I would like to suggest to everybody that
22 they read Dr. Helen Caldicott's book, "Nuclear Madness."
23 And I would like to read one very short paragraph from it.

24 "As a physician, I contend that nuclear
25 technology threatens life on our planet with

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1 extinction. If present trends continue, the air
2 we breathe, the food we eat and the water we
3 drink will soon be contaminated with enough
4 radioactive pollutants to pose a potential health
5 hazard far greater than any plague humanity has
6 ever experienced. Unknowingly exposed to these
7 radioactive poisons, some of us may be developing
8 cancer right now. Others may be imparting damaged
9 genes, the basic chemical units that transmit
10 hereditary characteristics to future generations.
11 And more of us will inevitably be affected unless
12 we bring about a drastic reversal of our government's
13 pro-nuclear policies."

14 Thank you.

15 (Applause)

16 CHAIRMAN DEALE: We have another gentleman from
17 British Columbia, a government official, Mr. Chris D'Arcy.

18 Mr. D'Arcy?

19 (No response)

20 We will pass him by for the moment.

21 We have another representative of Green Peace from
22 Seattle, Mr. Alan Locklear.

23 Mr. Locklear?

24 LIMITED APPEARANCE STATEMENT OF ALAN LOCKLEAR.

25 MR. LOCKLEAR: Mr. Chairman, members of the Atomic

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1 Safety and Licensing Board, my name is Alan Locklear. I
2 represent the Seattle Green Peace Organization.

3 We wish to express our opposition to the granting
4 of any type of permit to Puget Power for expansion of the
5 Skagit nuclear project.

6 Recent events in this country have demonstrated
7 what I and many others have been saying for many years; that
8 is that the present technological and industrial level of
9 the United States is not sufficiently developed to safely
10 design, build and operate nuclear power plants.

11 Nuclear power is an unforgiving technology. Tiny
12 errors in design, minor mistakes in construction, slightly
13 inadequate instrumentation, simple errors in judgment by
14 operators, all of these separately or in poorly understood
15 combinations are capable of triggering uncontrollable
16 accidents.

17 These events, far from being industrial accidents
18 concerning a single company in its balance sheet, rather are
19 major incidents which may kill and injure thousands or
20 millions of people and render huge areas permanently
21 contaminated.

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1 Nuclear power has many unsolved problems, not
2 the least of which is the growing volume of radioactive
3 waste, which is still, by government admission at least
4 15 years in the future for safe storage.

5 Certainly, safe and economic alternatives
6 such as conservation, co-generation, solar and wind power
7 are available; it is ethically unjustified to saddle our
8 society and our descendants with risks of this magnitude.

9 In light of the foregoing, we respectfully ask
10 that Puget's application for construction permit be denied.

11 (Applause.)

12 CHAIRMAN DEALE: We have also a Bruce Heff
13 (phonetic) on behalf of --

14 MR. LOCKLEAR: Bruce Heff was signing up for
15 another organization, but he'll pass.

16 CHAIRMAN DEALE: He passes today.

17 MR. LOCKLEAR: He was signing up for somebody who
18 had already signed up and he didn't know that they had.

19 CHAIRMAN DEALE: Fine, thank you.

20 We find out from our colleague that Chris
21 D'Arcy of the British Columbia government had also spoken
22 to us; you recall that we had Mr. Skelly here and Mr. Skelly
23 had two people with him and the principal spokesman of the
24 two who Mr. Skelly had brought along with him was Mr. D'Arcy.

25 We now come to a representative of the Canadian

David?

Sierra Club from Surrey, British Columbia, Ms. Joan Smallwood. Ms. Smallwood, we're sorry that we had to wait so long to get to you, but you know, some people come first and some people second and third. And this was your place.

LIMITED APPEARANCE STATEMENT OF JOAN SMALLWOOD,
CANADIAN SIERRA CLUB

MS. SMALLWOOD: I'm sorry I don't have anything really prepared, and I'm also sorry that all I can do is reiterate that which has already been said, but I'm doing so in hopes that if we all keep expressing our concerns, someone might listen.

I cannot find the words to express how I feel about nuclear energy. I know that I don't want to be poisoned by nuclear waste. I know that I don't want to take such horrendous chances to allow some people to use electric toothbrushes.

Why must I fall victim to a huge power company's demands? They did not ask my opinion. I am vitally concerned for the health and purity of the land and its inhabitants: not only today but for generations and centuries to come. Most of us in North America live -- sorry -- most of us in North America are learning to conserve. I know I can live on a lot less, and I do not want to be told that nuclear energy must be in order for civilization to move forward.

The time has come in our civilization for --

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1 where moral responsibility must be uppermost in everyone's
2 mind.

3 Thank you.

4 CHAIRMAN DEALLE: Thank you very much, Ms. Smallwood.

5 (Applause.)

6 The last name on our list is Rich Greenbaum, a
7 resident of Bellingham (phonetic), Washington.

8 Mr. Greenbaum.

9 Did we lose Mr. Greenbaum?

10 MR. GREENBAUM: NO, here I am.

11 CHAIRMAN DEALLE: All right, fine.

12 LIMITED APPEARANCE STATEMENT OF RICHARD GREENBAUM

13 MR. GREENBAUM: I'm a resident of Bellingham.

14 I came here today to support and not to speak, but I
15 have yet to hear anybody bring up our area, which is in the
16 northwest corner of Washington. In order to leave
17 Bellingham, we either have to come south and then head over
18 past Sedro Woolley, or north into Canada.

19 Anybody who's gone into Canada on a national
20 holiday knows that it's a three hour wait.

21 What's going to happen to us in a holocaust. I
22 don't think they're going to give us an open border. Thank
23 you.

24 CHAIRMAN DEALLE: Thank you very much.

25 (Applause.)

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1 CHAIRMAN DEALE: We take this opportunity
2 to thank once more those people that have taken considerable
3 time and effort and undertook certain expenses to participate
4 in this proceeding as one making a limited appearance.
5 You've heard the comments and the statements, and I believe
6 the comments and statements speak for themselves with
7 respect to the quality and concern of the individuals who
8 made limited appearances.

9 And we ask and admonish the parties to the
10 proceedings to take into account the considerations which
11 have been presented here expressing deep concern in various
12 manners about the prospective plant.

13 At this time we believe it's in order to have a
14 recess. And we suggest 10 minutes.

15 (Brief recess.)

16 CHAIRMAN DEALE: All right, please come to order.
17 Please come to order.

18 As we stated at the outset, following the
19 presentation of limited appearances, we will proceed with
20 the preliminary matters in anticipation of the introduction
21 of evidence.

22 Now, at this time, we call upon Mr. Thomsen who
23 has been the focal point among the parties for preparing for
24 the board the order of presentation. And the order of
25 presentation that we have is -- was forwarded to us by

David

Mr. Thomsen's letter of June 9, and it was modified somewhat by his letter of July 2.

And without further ado, I'm happy to give you Mr. Thomsen.

MR. THOMSEN: Thank you, Mr. Chairman. I think it was my letter of June 29th.

CHAIRMAN DEALE: The 29th, surely, I'm sorry.

MR. THOMSEN: So far as I'm aware, that scheduled order of presentation dated June 29th, is still -- there are two modifications I would mention; one I covered in my subsequent letter, that we will not be addressing geology and seismology at this session. I guess that crossed in the mail with the board's suggestion to that effect.

And secondly, you'll see in about the middle of the page under the 25th, loose parts monitoring --

CHAIRMAN DEALE: Yes.

MR. THOMSEN: That should be deferred; there are ongoing discussions between the staff and applicants. I think we should let those discussions continue, and that will not be addressed at this session.

CHAIRMAN DEALE: Very good.

MR. THOMSEN: Those are the only gross changes I'm aware of in there.

CHAIRMAN DEALE: But no other matters that we

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can drop or defer?

MR. THOMSEN: Not that I'm aware of.

CHAIRMAN DEALE: That's quite all right, then.

MR. THOMSEN: I have other preliminary matters, but I will follow your lead.

CHAIRMAN DEALE: Well, now on each subject, this is -- what is your idea or the parties ideas as to the order of presentation, let us say, on the subject -- well, obviously the applicant presents his material on the application, the PSAR. But let us get to the controversial matter, the Ranney collectors; now, the thought -- let us have as an initial thought -- we looked upon it as the applicant has burden of proof. In having that responsibility, the applicant should go first, and present his case on the subject of, say, the Ranney collector system.

After that the other party to this proceeding, aside from the intervenors, is the staff. Our disposition would be to then, after the applicant has made out his case, that the staff can go forward. And then after the staff we would have the senior intervenor, SCAMP, and then FOB Coalition for Safe Power.

Following the parties, we would propose to have the government agencies who participate in this proceeding, and in that case I think we would give the seniority here

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1 to the state of Washington and then go to the state of
2 Oregon. And then we have the new one, which would be
3 Skagit County.

4 Now, after the NRC staff, SCANP, FOB, Washington,
5 Oregon, and Skagit County make whatever presentations they
6 wish to make in cross examination and the like, we would
7 give the applicant the chance to, let us say, give rebuttal
8 or what have you.

9 But the sense of it here is that the applicant,
10 while it has, say, the burden of the first word, it also
11 has the privilege of the last word.

12 Now, this is the general disposition toward
13 treating each of these subjects which come up, again, like
14 the Ranney collectors, and all the way down the line.

15 MR. THOMSEN: Applicants agree with that as a
16 general proposition; as far as I'm aware -- well, I can't
17 speak for the other parties -- it's similar to what we've
18 done in the past.

19 CHAIRMAN DEALE: Fine.

20 MR. THOMSEN: And I recall at least one instance
21 where we had to depart from that because of witness availability
22 and there may be others. But applicants are certainly
23 amenable to that order of presentation on each subject, subject
24 to only the witness availability problems.

25 I don't know what the other parties think of that,

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but it's all right with us.

CHAIRMAN DEALS: We'll start off with that approach. My colleague has a question.

MR. LINENBURGER: With respect to the proposed agenda, Mr. Thomsen, are you in a position to indicate at what point in the agenda we might expect people such as Mr. Reid to be available.

You had indicated at our previous conference with counsel inresponse to, I think it was, my request --

MR. THOMSEN: On quality assurance? I don't --

MR. LINENBURGER: Excuse me, I had the wrong name: the president of the company?

MR. THOMSEN: Ellis. Yes, again, you see him under the 25th. That's a week from Wednesday, about the middle of the page. The entry there, quality assurance, staff and applicants, it's planned that he can come about a week from Wednesday, as our first witness in the quality assurance presentation that we will make.

MR. LINENBURGER: All right.

MR. THOMSEN: You recall we prefiled a statement by Mr. Ellis and three others: Mr. Ferguson (phonetic), Paget and -- our plan is to work out -- as we approach next week, to work out a specific time for Mr. Ellis, and then to follow him with the other three as a panel, if that's okay with the board.

david9

1 But we can, you know, adjust those things to
2 your desires. I don't know his schedule this week, for
3 example.

4 MR. LINENBURGER: I'm sure Mr. Ellis' schedule
5 is more critical than mine. I'm kind of captive here and
6 will be here every day.

7 MR. THOMSEN: I've told him to stand by for mid-
8 next week.

9 MR. LINENBURGER: I just wanted to verify that
10 that is still your intent.

11 MR. THOMSEN: That's still our plan.

12 MR. LINENBURGER: In that regard, with your
13 permission, Mr. Chairman, one of the aspects of quality
14 assurance that the board will want to inquire into and
15 indeed will want to be -- well, it's a possible, potential
16 problem area. I don't know whether it is here or not. It
17 has to do with the fact that Puget is one of four applicants
18 and owners, and to the extent that management of the
19 plant construction and the quality assurance aspects of that
20 might be influenced by another participant in the ownership
21 who might not be satisfied with the way monies are
22 being spent or the amount of monies being spent and
23 such considerations; to that extent, I think that is an
24 area that the board would like to talk to Mr. Ellis and
25 others about.

MR. THOMSEN: Sure.

MR. LINENBURGER: So I wanted to alert you to that.

MR. THOMSEN: I appreciate your alerting us to that, and I will address that and other things of interest to the board.

MR. LINENBURGER: Thank you.

CHAIRMAN DEALE: I note that in this order that we just reviewed, that is, applicant and staff and the states and the counties and then go back to the applicant, we forgot to put one entity there, and that is the board.

(Laughter.)

I'm sure that I would have been reminded there of the fact, but it's probably better to be -- now, as we see it, and we probably ought to first line up the areas of current disagreement.

We have a disagreement here about -- that with SCANP against the NRC staff, and this generally relates to the military reservation question.

Then we have a second area of disagreement: SCANP versus the applicant. This has to do with the discovery question and the applicant's disinclination to honor the discovery motion.

And then there's a third one, and that has to do with the presentation of a witness of British Columbia Coal and this is pertinent to the West Roosevelt site. And

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1 this is the disagreement between SCAMP and the applicant.

2 NOW, before we get into each of these three points,
3 I invite the parties to come up with whatever other
4 outstanding preliminary matters that they might have so
5 we can get a laundry list up and check them off and take
6 care of the matter before we get into the formal presentation
7 of evidence.

8 MR. THOMSEN: Could I inquire on that, identifying
9 the second item, SCAMP versus applicant on a discovery
10 matter, I wasn't sure, are you referring there to the
11 discovery concerning the subsidiary --

12 CHAIRMAN DEALE: I really don't know what the
13 discovery is. It has to do with the June 7 newspaper --

14 MR. THOMSEN: The wholly owned subsidiary --

15 CHAIRMAN DEALE: That apparently prompted SCAMP
16 to submit a motion to --

17 MR. THOMSEN: I was on the third item, excuse me.

18 CHAIRMAN DEALE: On the third item --

19 MR. THOMSEN: Again, I'm on --

20 CHAIRMAN DEALE: On the third item they're asking
21 you to give them a witness or, you know, to present a witness
22 for them to examine on the British Columbia Coal --

23 MR. THOMSEN: I think that --

24 CHAIRMAN DEALE: The West Roosevelt site.

25 MR. THOMSEN: The West Roosevelt site is in the

david12

state of Washington and doesn't relate to British Columbia Coal, so I know what you mean by the West Roosevelt dispute; I didn't think we had a dispute about British Columbia Coal.

CHAIRMAN DEALE: Okay, okay. I might have misspoken, mislabeled the area of controversy, but I should get it straight.

MR. THOMSEN: As to new items --

CHAIRMAN DEALE: Yes.

MR. THOMSEN: On behalf of applicant, we have discovery; we have an outstanding set of interrogatories and request for production dated May 31 to SCANP. So this is applicant versus SCANP on those requests.

We have neither answers nor objections, but we have a letter of June 6, about six weeks ago, from counsel for SCANP saying he would answer these as soon as possible.

We'd like to find out what that means, when we're going to get those answers.

CHAIRMAN DEALE: All right.

MR. THOMSEN: Let me look at my list. I can't think of anything else, but others may. Let's see.

MR. BLACK: Mr. Chairman, while there's a pause, maybe we can get back to this matter of scheduling. I hope you're not too confused by Mr. Thomsen's outlined schedule dated June 26th where he has, let's say, for instance, Ranney collectors; where he has those parties

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1 listed is because the applicants have already presented
2 their case on Ranney collectors and now we're back.
3 I believe the applicants are listed last there because
4 they want to reserve their right for -- oh, I'm looking
5 at a new schedule.

6 Well, let's say the Ranney collectors: they're
7 listed last because they have presented their case on
8 Ranney collectors and merely wish -- well, they are
9 reserving their right to put on rebuttal if they so desire.

10 MR. THOMSEN: That's correct.

11 MR. BLACK: And even getting down to emergency
12 planning, which is listed for the 24th, it's indicated
13 that staff is going first. Applicant, as far as
14 emergency planning is concerned, they have presented their
15 case on that issue, and the staff has actually presented
16 its case as well.

17 But we felt in light of more recent developments
18 we ought to come back and present a more thorough analysis
19 of emergency plans.

20 So that's why we decided to do it this way.
21 Obviously, the applicants are reserving again their right
22 for rebuttal.

23 One other thing --

24 CHAIRMAN DEAL: Excuse me, Mr. Black, and this
25 is simply because of my slowness here in following you. I'm

david:

looking at an order of presentation dated June 29.

MR. BLACK: That's right.

CHAIRMAN DEALE: Okay. And now on the Ranney collector, what are you saying?

MR. BLACK: You indicated before that the applicant would go first, and this is indicated as staff, SCANP and then applicants and the reason it's listed this way is because the applicants have already presented their case on the Ranney collector issue.

And that's the same with alternative sites, where only the staff issue is listed. Emergency planning, as I indicated before, the applicants have already presented their case. Staff presented its case years ago, but they thought they ought to update it in light of more recent events and more recent studies.

One other thing that I should mention is that, as is obvious, because of the length of limited appearances statements, this schedule is already -- we can't adhere to this schedule more than likely.

And I would just indicate at this time that in so far as the staff is concerned because of lodging restrictions around the Seattle Airport, we're on a fairly tight schedule.

We had a very difficult time of finding reservations for the number of people that were required to be out here.

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1 And so if we could stick to this schedule as
2 tightly as possible, we would certainly appreciate it because
3 of the things that are going on in the Seattle area. And
4 also we might keep in mind if we get too far behind this
5 schedule, we might give some consideration to a Saturday
6 morning session, let's say, to maybe just make up some
7 ground.

8 And also we might think about maybe beginning
9 at 9:00 or something like that, rather than 9:30, but I
10 guess we can wait and see.

11 Insofar as the RPV delivery issue, I -- I should
12 say at this time that as you recall, we did an assessment
13 of the RPV delivery in response to Chairman Jench's
14 request to do so and Chairman Jench's request was basically
15 one where you assess this in the FES and the FES supplement.
16 The applicants come in and give more detailed plans and
17 you see if the conclusions have changed.

18 and as we indicated in the affidavits, our
19 previous conclusions have not changed. And when I submitted
20 those affidavits on June 1, I indicated that I wanted
21 responses by July 2 from the board and the parties as to
22 whether they wanted those witnesses available for
23 examination.

24 Subsequent to that time, we also received a letter
25 from Skagit County indicating that they wanted to examine
on this issue and we sent them a copy of that testimony.

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1 And today they indicated that they had their
2 experts look at it and didn't have disagreement with it.
3 So at this time, I guess because I haven't heard from anybody,
4 I would just like to move by stipulation those affidavits
5 into evidence and not present those witnesses. And that
6 is our intention, just to offer them that way at this
7 time, rather than presenting those witnesses for examination.

8 CHAIRMAN DEALE: You were given that background
9 earlier. Everyone had the chance to challenge it at one
10 point or another.

11 MR. BLACK: I think that is the only thing I
12 would comment about the scheduling.

13 MR. THOMSEN: The proposed stipulation there,
14 entering the affidavits, is acceptable to applicants. That
15 would be the Bivins (phonetic) and Goldstein affidavits; is
16 that right?

17 MR. BLACK: That's correct.

18 MR. THOMSEN: I assume what you had in mind
19 was printing those in the transcript.

20 MR. BLACK: That's correct.

21 CHAIRMAN DEALE: Yes, it's certainly better to
22 put them in the transcript when you're trying to follow
23 what's going on.

24 MR. THOMSEN: That's acceptable to applicants.

25 CHAIRMAN DEALE: All right.

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1 MR. LINENBURGER: I'd like to say that if
2 the board so stipulates, it can be on a non-prejudiced
3 basis.

4 MR. BLACK: For some reason, I think that always
5 is the case.

6 MR. THOMSEN: As to further squabbles in
7 the preliminary arena, there is perhaps a -- one we discussed
8 with Mr. Lead off the record. It relates to the board's
9 letter of June 29th, a letter Mr. Lead had sent up about
10 that report, and he couldn't take a look at that until he
11 had a look at the proprietary information and so on.

12 I think the status of that is we offered criteria
13 for Mr. Lead, and I don't think he's accepted that offer
14 yet.

15 Whether we need to burden the record with any
16 more discussion of that I don't know. But that's a potential
17 item.

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1 CHAIRMAN DEALE: This is the idea, to get every-
2 thing out in the open we can so that we're not taken by sur-
3 prise down the road.

4 This I would relate to, I think, SCAMP's consider-
5 ation that they would object to testimony that relates to
6 geology and seismology.

7 MR. THOMSEN: Yes, that's correct.

8 I had another request, to advise the Board and
9 parties that our first witness was to be Mr. Macca, to
10 introduce the amended application, the updated application
11 and the updated complete PSAR. Unfortunately he had an
12 accident and can't be with us until probably late next week.

13 And I would ask the parties, as we have done
14 previously with these documents, to agree that his testimony
15 and those documents could be admitted by stipulation at the
16 outset of the hearing. I think that is an orderly time to put
17 those into evidence.

18 CHAIRMAN DEALE: Yes.

19 MR. THOMSEN: And I would ask them to consider
20 that, because he is simply not physically available until
21 late next week.

22 If somebody wishes to pursue part of that with
23 him, he can come when he gets out of the hospital. We had
24 prefilled very short testimony for him, and that's what I'm
25 referring to.

mpb2 1 If it would facilitate, I have some papers. Is
2 this the time to pass out a few papers?

3 CHAIRMAN DEALE: What I want to do is basically
4 to get the squabbles on the table and then address ourselves
5 to those issues and dispose of them. And then -- this is
6 before introducing anything into evidence. It is not holding
7 back on anything; it's just a matter of, I would like to say
8 keeping good order.

9 Now are there any others? Mr. Leed, you usually
10 generate a few squabbles. You have been characteristically
11 silent while everybody else talked.

12 MR. LEED: I think we've touched on all matters,
13 Mr. Chairman.

14 CHAIRMAN DEALE: Well, good.

15 MR. STACHON: Mr. Chairman, I can break the
16 silence for FOB with a preliminary matter.

17 I have a motion to distribute to the parties.

18 CHAIRMAN DEALE: That's a new motion?

19 MR. STACHON: Yes, it's a new motion.

20 CHAIRMAN DEALE: Well, the sooner we get them,
21 the better. And then we have a question by one of our Board
22 members, and then we will hopefully get to these issues.

23 (Distributing documents.)

24 MR. STACHON: I can address the motion after
25 passing it out.

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CHAIRMAN DEALE: Well, go ahead, Mr. Stachon.

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MR. STACHON: Basically, Mr. Chairman, it's FOB's

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and the Coalition for Safe Power's position that the Board's

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handling of the petition to intervene with respect to the

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Indians has seriously prejudiced their rights in these

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proceedings.

7

As you know, there are several matters that

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will be addressed at this session that they indicated in their

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petition and subsequent filings that there are issues here

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that they were concerned with and that need to be dealt with.

11

And we feel that with the matter now before the appeal board

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and these hearings going on at the same time, that -- well,

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like I say, their rights are prejudiced.

14

And therefore we are moving, under the

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Commission's regulations, that the Chairman disqualify

16

himself.

17

CHAIRMAN DEALE: Well, very good. We'll take

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a look at the motion as well as the Board regulations concerned

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with the handling of this sort of a motion.

20

MR. STACHON: I might note for the record that

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the other parties on the service list who are not here have

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been mailed copies.

23

CHAIRMAN DEALE: Fine.

24

All right. What we'll do, nevertheless, at the

25

moment we'll proceed as though we haven't received it, and I

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mpb4 1 would imagine tomorrow we will have something to say about it,
2 and take whatever action at least the Board feels is appro-
3 priate.

4 MR. BLACK: Mr. Chairman, I just want to make it
5 clear, or have Forelaws on Board indicate to us that it is
6 clear that they are asking for the disqualification of the
7 Board Chairman because they are indicating the rights of the
8 petitioning tribes have been prejudiced.

9 Is that the thrust of it?

10 MR. STACHON: Yes. That's the thrust.

11 MR. BLACK: I would also I guess at this time --
12 I think we should all consider whether the Forelaws on Board
13 have standing to file this motion, because I think that there
14 is some case law that indicates that your rights have to be
15 prejudiced. You can't assert the rights of third parties.
16 But that's one thing we'll have to look at I think in response
17 to this motion.

18 CHAIRMAN DEALE: Well, in view of the fact that,
19 you know, this is life, here it is and it's before us, I think
20 the parties here to the extent that they can develop thoughts
21 on the subject and be ready to express them tomorrow, it
22 would be very helpful. This tomorrow might later be extended.
23 But without having a chance to look over this, I would like to
24 say that we will ask you what you think about it tomorrow.

25 MR. STACHON: That's perfectly fine with us.

mpb5

1 CHAIRMAN DEALE: Well, are there any other
2 squabbles?

3 MR. LINENBERGER: Mr. Leed?

4 MR. LEED: Yes.

5 MR. LINENBERGER: Under your correspondence of
6 July 10th you transmitted three items of prefiled statements
7 and indicated statements from four other persons would be
8 forthcoming later. They may very well have come forth later,
9 but the Board did not receive those before we left town.
10 These were the statements of Mr. Carstens, Cheney, Maroka
11 and Kramer.

12 Can you shed some light on that situation for us,
13 please?

14 MR. LEED: Yes.

15 Excuse me, Mr. Linenberger, if I may consult.

16 (Pause.)

17 MR. LEED: We are hoping to have Dr. Cheney's
18 statement available for distribution today, Mr. Carstens'
19 tomorrow and neither Prof. Maroka nor Mr. Kramer could be
20 available and we will have, I hope, Dr. Cook instead. But he
21 will not be available I believe until Thursday.

22 MR. LINENBERGER: Excuse me, Maroka and Kramer,
23 which one is being replaced by Cook?

24 MR. LEED: Both.

25 MR. LINENBERGER: Both.

mpb6 1

And when will the prefiled statement be available?

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Thursday?

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MR. LEED: Hopefully Thursday.

4

MR. LINENBERGER: Thursday.

5

You will give us Cheney today, did you say?

6

MR. LEED: I will try. It is substantially

7

complete. There are some revisions that are being made now,

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and depending on how long they take and how long it takes to

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duplicate, they can be here.

10

CHAIRMAN DEALE: Let's address ourselves now to

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this squabble between SCANP and the Staff regarding military

12

reservations.

13

I have in front of me the NRC's letter to Mr.

14

Leed explaining about the aircraft situation.

15

And, Mr. Leed, did you reply to that letter of

16

June 28th?

17

(Pause.)

18

I think you did on July 7th.

19

MR. LEED: Yes.

20

CHAIRMAN DEALE: Fine.

21

What do you propose to do about this?

22

MR. LEED: Well, we haven't had a response from

23

Mr. Black.

24

CHAIRMAN DEALE: All right.

25

Mr. Black, on June 28th you wrote to Mr. Leed

mpb7 1 giving what appears to be your last word on the information
2 concerning military aircraft. Mr. Leed responded to you by
3 his letter of July 7th in which I think it's fair to say that
4 he was dissatisfied with your response of June 28th.

5 Do you have anything further to say on the subject?
6 We would like to, you know, put this thing to rest.

7 MR. BLACK: Well, I guess I would have to regress
8 a little bit to indicate to you that we have, obviously, we
9 have filed testimony in evidence regarding the military
10 aviation aircraft risk, and that was done by Dr. Reid of the
11 NRC Staff.

12 And when Mr. Leed requested further information
13 regarding the air crash rate of the A-6 and -2 aircraft, I
14 had Dr. Reid go back and he indicated to me -- and the reason
15 that Mr. Leed requested that update information was because he
16 felt that our air crash analysis was based on a crash rate
17 of the A-6 aircraft, and I wrote back to him and indicated
18 no, that was not the case, that our air crash rate was
19 developed from the peacetime crash rate of all combat aircraft,
20 and the A-6 was just a component of that air crash rate.

21 And so therefore we felt that even if the A-6
22 has suffered increased air crash casualties, that it wouldn't
23 make any difference to the rate that we developed in our
24 testimony. And now Mr. Leed has come back and said 'Well,
25 that's not sufficient because we think that the A-6 is

mpb8 1 suffering greater casualties than you indicated and this may
2 be significant.'

3 He also raises a couple of other points as to --
4 We also indicate in our letter that we didn't think it was
5 significant because the A-6 is a fairly old aircraft and if
6 the Skagit project is ever licensed and when it gets into the
7 operational mode we believe, and quite strongly, that the A-6
8 will be replaced at Whidby Island Naval Air Station. So it
9 really doesn't matter what the air crash rate is right now.

10 So Mr. Ised comes back and says he's not satisfied
11 with that, that we really should develop the A-6, we should
12 look into it, we should also find out what is going to be the
13 replacement airplane at Whidby Island. And I would just
14 simply say that the Staff really rests on its evidence that
15 we presented in this case.

16 Now it now looks as though SCANP is trying to get
17 the Staff to work out its case for it, and I would only say
18 that if it believes that our air crash probability testimony
19 is insufficient, is wrong, is erroneous for whatever reason,
20 then it is incumbent upon SCANP to present testimony to
21 satisfy its burden of going forward. It should not go back
22 to the Staff. And we rest on our case.

23 And so we would just simply say that -- And we're
24 willing to give them information, but we're unwilling to
25 develop their case for them. And to the extent that we can

mpb9 1 reply to this letter other than developing a whole new crash
2 probability, we'll try to do so. To the extent that we can
3 get information from the Navy as to what its plans are, we'll
4 attempt to do so. But we are not going to go back and develop
5 a new crash rate based upon SCANP's allegation that the A-6
6 is suffering heavier casualties. It is not important.

7 CHAIRMAN DEALE: Dr. Reid -- Is Dr. Reid going to
8 testify for you?

9 MR. BLACK: He already has.

10 CHAIRMAN DEALE: He already has.

11 MR. BLACK: And he will not change his testimony
12 just based on allegations that the A-6 is suffering heavier
13 casualties. In fact, if you do go back to our previous
14 testimony, there is a sufficient cushion in there as to the
15 probability of the crash. I don't know if you're familiar
16 with our Standard Review Plan as to air craft hazards and
17 what risk is acceptable to the Staff, but it's around, let's
18 say, 10^{-6} or something like that. And I believe that we
19 developed a risk at Skagit that has sufficient cushion, so
20 even if the A-6 right now is suffering heavier casualties,
21 we believe it is still within the acceptable margins of risk.

22 But we don't know that the A-6 is suffering
23 heavier casualties and in fact it's not important to the risk
24 analysis that we did do. So we just say that even if he
25 wants this information we're not going to change our risk

mpbl0

1 analysis and so therefore I don't think that what he's
2 asking for is relevant to the risk analysis that we did.

3 But like I say, to the extent that we can gather
4 information for him, we will endeavor to do so as long as we
5 don't have to dig into classified Navy documents or something
6 like that. But we're not going to develop SCANP's case for
7 them on this issue.

#12 flws

8 CHAIRMAN DEALE: Mr. Leed, I think he's putting
9 the ball in your court.

10 MR. LEED: Yes. I can't agree with very much
11 Mr. Black has said, least of all his attempt to represent
12 requests that we've made to the Staff, nor even his attempt
13 to characterize his own witness's testimony in this record.

14 The Staff has offered several different versions
15 of accident risk, aviation accident risk in this docket, and
16 they were in Dr. Reid's testimony at some point in the past;
17 and we've learned that the Staff has used different approaches
18 in different dockets of evaluating aircraft risk.

19 That is important to bear in mind because of
20 counsel's reference to the Standard Review Plan, which may
21 suggest that there's one uniform approach. And we would
22 suggest to Mr. Black that that is not the case.

23 Now it may or may not be that Mr. Reid has
24 correctly calculated his risk rates based on the information
25 he had available to him. But I think it is true to say that

mpb111 he made the assumption that the A-6 crash rate was comparable
2 to that of the average military aircraft, and that assumption
3 is inherent on Mr. Black's side.

4 The request which we made to the Staff was for
5 information which is available to the Staff from the Navy and
6 must routinely be made available to the Staff on this and
7 other dockets, and it is not available to SCAMP. It hardly
8 needs a showing to demonstrate that; the Navy's statistics,
9 in other words, with respect to aircraft type.

10 Now our information which suggested to us that this
11 type of aircraft has encountered accidents since Mr. Reid
12 testified, after he testified was why we made our request at
13 this time. And we simply expected that Staff would have
14 access to this information since they had access to it the
15 last time Dr. Reid prepared testimony on a routine basis.
16 And that if they learned that there was a significant increase
17 in the accident rate for this type of aircraft, notwithstanding
18 whatever Mr. Black may be saying here, the Staff would take
19 that information into account before determining whether or
20 not Mr. Reid's testimony may have to be amended in any way.

21 It seems to me for Mr. Black to suggest here
22 that no matter what the accident rate on the A-6, Mr. Reid
23 would not modify his analysis. I would imagine that Mr. Black
24 would agree that if the inquiry results in information that
25 the accident rate of the A-6 is not comparable to the average

mpbl2¹ military aircraft and is substantially higher, and that
2 this margin of cushion that Mr. Reid was counting upon is
3 no longer available that the Staff would do further analysis
4 in order to offer the Board their best information and judgment
5 with respect to what is necessary on this site to ensure
6 safety against crash.

7 CHAIRMAN DEALE: Is this correct, there is no
8 provision for testimony on military aircrafts coming up?

9 MR. BLACK: What was that?

10 CHAIRMAN DEALE: Coming up.

11 MR. BLACK: No, that's our point, Mr. Chairman,
12 there has to be an end to litigation. Now Mr. Lead comes
13 back and says 'We have some information that the A-6 air
14 crash rate is greater than depicted in Staff testimony.' My
15 response is we didn't depict an A-6 crash rate in our testimony.
16 And if he thinks, whatever his source of information is
17 that he can develop this issue, he thinks that the Staff
18 testimony is wrong, then he should develop that issue.

19 But there has to be an end to litigation. He
20 comes in at the eleventh hour and brings up this new source
21 of information that we don't have any idea what he's talking
22 about, he at least ought to carry the burden that far as to
23 give us the source of information as to why the A-6 casualty
24 rate has increased. He ought to give us a little bit more
25 information as to why he thinks our crash rate is wrong.

mpbl3¹

1 I can understand that he is concerned about this,
2 but I think the ball is in his court now. There has to be an
3 end to litigation.

4 MR. LEED: The reason there are no witnesses on
5 that subject, Mr. Chairman -- and had Mr. Black been saying
6 in correspondence the things that he is saying here, why, I
7 think maybe we would have had an opportunity to have prepared
8 some. But some considerable time ago military aviation was
9 presented through Dr. Reid and subsequently to his testimony
10 there were additional affidavits filed by Staff. And it was
11 left that we would be offered the opportunity to contest
12 Staff's information, Staff's conclusions on military aviation
13 by affidavit or I think if necessary by testimony.

14 We are still trying to ascertain whether Staff is
15 willing to secure this additional information before we make
16 any decision as to whether or not we should offer additional
17 testimony on this issue.

18 Now there was one other thing that was very
19 important in Mr. Black's letter which should not be overlooked.
20 For the very first time the Staff offered the suggestion that
21 the A-6 crash rate was irrelevant because a new aircraft type
22 would be involved by the time the plants became operational.
23 So that's the first time that I had any inkling that that was
24 the case, when I received Mr. Black's letter. So the Navy
25 evidently furnished this information to the Staff, and I

mpbl4¹ wonder if maybe they did not furnish more than that. They
2 may have already furnished the information about crash rates,
3 and I would lay on this record the request that if Staff has
4 that information that they make it available to us rather
5 than stand on what seems to me to be a very technical posi-
6 tion, asking us to prove information that they have and we
7 do not.

8 Now the significance of the new aircraft is
9 obviously to call into question the analysis of military
10 aviation risk already performed by Staff, which is dependent
11 on the size and weight of the aircraft that might cause the
12 hypothetical accident. So in my response to Mr. Black's
13 letter, I requested the Staff to offer to us information
14 about the type of aircraft that would be replacing the A-6,
15 and also to determine whether or not that replacement air-
16 craft required a reanalysis of the military aviation.

17 CHAIRMAN DEALE: As the matter stands now,
18 Mr. Black has introduced his case and you're questioning
19 the conclusion of that case because you're suggesting that
20 the figures that he used are not valid. And you're suggesting
21 also that he has some more information that you would like
22 to have turned over to you. And Mr. Black is saying 'I've
23 given the Board the case that I have. If you like it, fine;
24 if you don't like it, it's too bad; but that's my case and I
25 stand on it.'

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2 And you're saying 'Well, I don't like it.' Well,
3 you have all the opportunity in the world to, if he does
4 stand on the case, to, I suppose, rebut the case, but you can
5 rebut the case quite apart from other testimony by showing
6 the invalidity of his position. And this is what Mr. Black,
7 I think, is in effect challenging you to do. And he's saying
8 'Enough's enough.'

9 I really don't know. The matter is not in a
10 satisfactory posture because you don't like his figures. And
11 he's saying 'Those are the figures I've got and they have a
12 sufficient cushion in them, and I'm going to stand on it.'

13 MR. LEED: Well, Mr. Chairman, I realize you
14 were not here when this testimony was brought up the first
15 time.

16 CHAIRMAN DEALE: That's right.

17 MR. LEED: Perhaps that accounts for the
18 characterization of this dispute between the parties as to our
19 positions. I don't really see it as that.

20 It seems to me that it's the Staff's obligation
21 to bring before this proceeding up to date and accurate
22 information. It's not solely our concern that those facts
23 be accurate and up to date, but rather of all parties and the
24 Board itself.

25 MR. BLACK: Mr. Chairman, if I can just respond
to that, I'm sure the Staff, if it felt it had information

mpbl6¹ in its hand, they would indicate that the risk analysis that
2 it did before was wrong. It would change, or it would go
3 back and do a reassessment.

4 A perfect example of that is the aircraft risk
5 assessment that we did at TMI, where we initially did -- TMI
6 was designed to withstand a direct hit from a 200,000 pound
7 aircraft at 200 knots from the Harrisburg International
8 Airport. Subsequent to that time heavier aircraft were
9 flying in and out of Harrisburg International Airport. The
10 Staff went back and did a complete reassessment of the air-
11 craft risk.

12 Obviously if new and different types of aircraft
13 will be flying out of Whidby Island Naval Air Station, and
14 the Staff perceives that to be a higher risk than it did
15 before, it will go back, as it did in TMI, and reassess that
16 risk to see if there has to be anything done to the design
17 or engineering of the Skagit Nuclear Plant to withstand that
18 safety hazard.

19 I can assure you that we would do it in this case.
20 But we have seen nothing to date that would make us to back
21 and reassess it. Mr. Leed is merely saying that he has some
22 information that the crash rate is different, and I'm challeng-
23 ing him to give us that information, and we will reassess it
24 and determine whether we'll come forward with a new risk
25 analysis. But at this time we don't see that.

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CHAIRMAN DEALE: Well, I gather from what

2 Mr. Black is saying, Mr. Leed, they don't believe you.

3 You are saying there is some other information
4 somewhere that suggests that the crash rate is higher than the
5 crash rate that the staff used.

6 And Mr. Black is saying, "I don't believe you."

7 If you do have information to that effect, let's
8 have it.

9 MR. LEED: Let's consider, Mr. Chairman the fact
10 that we have asked the Staff to verify whether or not the
11 Staff's information is correct.

12 That is the posture of this matter.

13 The Staff has refused to do that.

14 CHAIRMAN DEALE: As I understand, he is standing --

15 MR. LEED: That is quite different from Mr. Black
16 challenging evidence on our part.

17 The Staff are the ones that brought out the
18 information regarding this aircraft in the first place, because
19 they have access to the Navy, and we don't.

20 Now we are just following the procedure that has
21 been established in this docket when we asked the Staff to
22 ascertain whether there has been any change.

23 There is a big difference for Mr. Black to tell us
24 that the Staff refuses to ascertain if there has been any change
25 from the posture the Staff has taken up to this point.

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1 I have never encountered that kind of response
2 to a reasonable request in this docket before on the part
3 of the Staff.

4 (Board conferring.)

5 CHAIRMAN DWALE: Mr. Leed, is this the position;
6 you are challenging Staff's testimony?

7 My colleagues here verify that the Board said
8 they left it open for you to challenge the testimony of
9 Dr. Reid.

10 If you could cross-examine Dr. Reid, that would be
11 it?

12 MR. LEED: I guess I haven't succeeded in making
13 our position clear.

14 I haven't used the word "challenge."

15 If Mr. Black and Staff can represent to us and
16 the Board that, yes, the crash rate is the same, then there
17 is no basis for our challenging Dr. Reid's analysis in that
18 event. And I am hoping that it would not be necessary.

19 The only other thing that has been raised by
20 Mr. Black's recent letter to me, which as I say I was
21 totally unaware of, is the possibility that there is a new
22 aircraft type to be considered. I think this raises an entirely
23 different question.

24 Presumably Staff has to evaluate the risk in terms
25 of the aircraft creating the risk. As Mr. Black has indicated,

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1 the weight and type of aircraft is relevant.

2 And so my letter to Mr. Black in July said, in
3 effect, is the new aircraft going to be different, materially
4 heavier, than the EA-6?

5 Now if the Staff has information on that point,
6 then I would imagine on their own motion they would make
7 appropriate modification in Mr. Reid's testimony.

8 If they did so, we would still not necessarily
9 have any basis to challenge Mr. Reid's testimony, because we
10 would be satisfied that the Staff has taken into account the
11 actual type aircraft that is being encountered if the plant
12 was constructed.

13 Right now I would say, rather than being in a
14 position where we raise a challenge to Dr. Reid's testimony,
15 we have asked the Staff if they would simply verify the
16 accident rate, and secondly, determine whether the aircraft
17 type used in their analysis is still a reasonable assumption.

18 CHAIRMAN DEALE: Would you do that?

19 MR. BLACK: Mr. Chairman, I would agree with that
20 assertion that SCANP really has not challenged the Staff's
21 analysis. They have asked us, has the A-6 aircraft crash rate
22 gone up.

23 And as I indicated in the letter, we didn't use
24 that crash rate in our analysis.

25 So as indicated, it is not relevant whether it has

mm4 1 gone up or gone down, or what have you because we didn't
2 use that.

3 And this other thing also is, we don't know at
4 this time what is going to replace the A-6 at Whidby Island.
5 We are just saying now it is a very old aircraft. They
6 stopped production of it back in --

7 IRMAN DEALE: This is speculation on your part?

8 MR. BLACK: Right.

9 One other thing I might indicate is that the
10 air crash rate that we used, as I indicated, was developed
11 from the peacetime crash rate of all U.S. combat aircraft.
12 Because if you just took the A-6 by itself and tried to
13 develop an air crash rate, you couldn't get a very good
14 statistical probability. It wouldn't be meaningful.

15 So we used all-combat aircraft. We feel it is a very
16 good rate.

17 In fact, we find it is very conservative,
18 because we used 10^{-5} crashes per year, or something like that,
19 when, in fact, the rate is 10^{-6} . And so we have got a
20 magnitude of cushion to a degree.

21 CHAIRMAN DEALE: Hold on a second.

22 Is that the area of difference between Mr. Leed
23 and you? That is, Mr. Leed wants you to center on the
24 crash rate of a particular plane, and you say we are not
25 doing that, we are using a crash rate of all military aircraft.

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1 And this, from Mr. Leed's standpoint, is not
2 satisfactory because you are taking a general group of
3 aircraft when he is interested in only the one aircraft, let
4 us say, that flies out of the neighboring base?

5 MR. BLACK: That's part of it right there.

6 CHAIRMAN DEALE: Is that a fair statement,
7 Mr. Leed?

8 MR. LEED: Yes, but it is not complete, because I
9 think it is also necessary to say that the Staff's use of a
10 general rate is, presumably, based upon an implicit
11 determination that general rate is reasonable to apply with
12 respect to this particular type of aircraft. And that
13 therefore -- in other words, having in mind the actual crash
14 experience of this particular type of aircraft, it is within
15 the parameters of this general rate --

16 CHAIRMAN DEALE: If they could identify that the
17 general rate that they used is a reasonable rate for use,
18 would that satisfy you?

19 Because the difference is, you are insisting upon
20 having them coming up with a crash rate for a specific plane,
21 one plane. And they say that isn't the way of doing it, we
22 are coming up with a rate for a group of planes.

23 You are suggesting or questioning whether the rate
24 for a group of planes is a reasonable rate to use, out for
25 the neighboring aircraft experience.

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1 In other words, they picked, say, ten planes. If
2 they had picked another ten planes, the rate would have
3 shown a greater crash rate.

4 MR. LEED: Yes.

5 CHAIRMAN DEALE: I mean, you are suggesting that
6 they, let us say, maneuvered or selected crash rates for a
7 group of planes which would come up with an average crash
8 rate that would support their position.

9 MR. LEED: Well that, I suppose, is a possibility.
10 But it is important to bear in mind that the A-6 crash
11 rate was something the Staff investigated at the time they
12 were developing their testimony. And while Mr. Reid's most
13 recent Affidavit may rely on general military aviation rate,
14 it did so at the same time Mr. Reid had before him the crash
15 rate for this particular type of aircraft.

16 So that is why I am suggesting it is implicit in
17 the use of the general rate, the fact that the Staff is aware
18 of the EA-6 rate.

19 Now of course, as the Chairman has pointed out in an
20 empiric sense, an average represents a scattering of points.
21 The crash rate for this type of military aircraft might
22 differ very considerably from that reflected in the average.
23 And we are talking about conservative risk assessments in these
24 proceedings. And I would imagine that the Board and the Staff,
25 for that matter, would -- could conceive circumstances where

mm7 1 the crash rate for a given type of aircraft was so much
2 greater than the average, that the average will not be a
3 reasonable assumption.

4 That is simply what I am trying to get at, is the
5 average a reasonable assumption anymore?

6 MR. BLACK: Mr. Chairman, I might point out, I
7 think what he is getting into now should have been asked when
8 Dr. Reid was available; whether the assumptions used by the
9 Staff in picking this generic crash rate that it did, rather
10 than a specific A-6 aircraft, are something that should have been
11 asked a year ago when Dr. Reid was on the stand.

12 I can give you the reasons why we did -- the Staff
13 used the assumptions it did. It is very simple and I can tell
14 you that, but I don't want to testify because I am not an
15 expert. But I know the answer.

16 It is nothing different that the Staff did in this
17 case. When we looked at crash rates at TMI we took a generic
18 pool of airplanes and developed a crash rate, and I believe
19 it is reasonable and proper to do so to get a good, statistical
20 analysis.

21 CHAIRMAN DEALE: You based your figures on a crash
22 rate for a group of planes?

23 MR. BLACK: That's correct.

24 CHAIRMAN DEALE: And Mr. Leed wants to have
25 assurance that that crash rate is a reasonable crash rate for

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1 using for this particular plane.

2 You are saying it is, and you are also saying that
3 if you use a crash rate for a single plane, it would not
4 be reasonable because we don't have enough figures.

5 MR. BLACK: It is not only that, but also let's
6 say if you use the crash rate for the A-6 aircraft, which is --
7 most of the maneuvers are off the decks of aircraft carriers,
8 and most of the crashes that have occurred with the A-6
9 aircraft have occurred in landings and takeoffs off of aircraft
10 carriers.

11 Now if you apply that crash rate to the activities
12 that occur over the Skagit site, you are going to get a crash
13 rate that doesn't represent the activities that are occurring
14 over Skagit site.

15 So therefore, even if you did look at the A-6 you
16 are going to get a crash rate that is not even relevant to
17 any activity around Skagit. So that is why we didn't use the
18 A-6 crash rate at Skagit.

19 In fact, across the board we used this generic
20 analysis because the activities you are looking at, a
21 particular nuclear plant, don't reflect the activities that
22 particular aircraft is doing in its military duties.

23 CHAIRMAN DEALE: We gave Mr. Leed a chance to --
24 let us say to make up for his lack of opportunity to cross-
25 examine Mr. Reid. And he is saying, well, I want to have

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1 justification for the crash rate that you used, and you supplied
2 it.

3 Mr. Leed isn't satisfied, and you are saying, well,
4 that's too bad. This is in effect.

5 And he is saying, well, this leaves the matter
6 completely opened because I have really -- was given an
7 opportunity to -- what was it, cross-examine Mr. Reid, when
8 it didn't happen.

9 MR. BLACK: What was that?

10 CHAIRMAN DEALE: I am just trying to get a
11 resolution here.

12 DR. LINENBERGER: Mr. Black, the Chairman was
13 referring to the fact that at the time Dr. Reid testified,
14 and the various -- a variety of questions were put to him
15 which I recall, his availability was curtailed because of
16 other considerations, plane schedules or something.

17 Mr. Leed asked at the time, if he might have an
18 opportunity later to cross-examine Dr. Reid.

19 The answer was, yes.

20 In a review of the transcript on this just a
21 couple of months ago to satisfy myself that my memory was
22 correct on that, that appears to be the way it is.

23 However, it is not clear to me at this point that
24 making Dr. Reid available satisfies Mr. Leed's needs. I
25 can't answer that.

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1 But, in answer to your question, the statement
2 that it should have been brought up a year or so ago, there
3 was, I think, a curtailment on Dr. Reid's availability at
4 the time that prevented that, and the Board recognized this
5 in the transcript when it occurred.

6 MR. BLACK: My recollection of that is slightly
7 different from your recollection.

8 I know that we had this problem before, and I did
9 go back to the transcript just a few weeks ago and looked
10 that up. I think what happened was, Dr. Reid was available
11 once. We made him go back and supply some further information.

12 He came back and was available for examination, but
13 our allotted -- whatever we allotted for hearings at that time --
14 two weeks, was closing. And at that time we indicated Dr. Reid
15 was available for examination. He would have stayed over, at
16 least as I recall.

17 But we wanted to close up the hearings. We stipulated
18 to his affidavits. And my understanding was that at this
19 time Mr. Leed wanted an opportunity to rebut those affidavits.
20 And we said, fine.

21 So consequently I believe Mr. Leed did get a person
22 to look over those affidavits and submit a memo to Mr. Leed
23 that indicated there were some faulty assumptions used. And
24 certainly we would welcome that opportunity to have that
25 person come up as a witness and we would examine him to find

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mm11 1 out what his assumptions used.

2 But I don't believe it was the fact that we
3 would call Dr. Reid back for further examination.

4 It was a question that SCAMP would have the
5 opportunity to rebut by their own witness.

6 CHAIRMAN DEALE: Do you want to --

7 MR. LEED: Do you have any ideas, Mr. Chairman?

8 CHAIRMAN DEALE: It is the validity of the crash
9 rate which was used in Dr. Reid's testimony?

10 And that that crash rate was not the same crash
11 rate as this particular plane.

12 Now, if Mr. Black could, say, give you some
13 assurance that the crash rate that was used, and define the
14 crash rate that was used, and showed that that crash rate
15 was a reasonable rate to be used under the circumstances --
16 and this is quite apart from the individual crash rate of
17 this plane at this place --

18 MR. LEED: What we really want is very simple.

19 We would simply like to have updated information
20 of the same kind and type that Staff obtained to found
21 Dr. Reid's original testimony. And he did look
22 into the crash rate of the EA-6 aircraft at that time. And
23 I believe it is of record here as to what that crash rate
24 was.

25 CHAIRMAN DEALE: Well, say if he came up with an

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1 affidavit to that effect, is that all right, or do you want
2 him here?

3 MR. LEED: That would be fine. I would take it
4 from Mr. Black. And then we would be in a position to
5 determine whether or not we should go forward with
6 initial affidavit ---

7 CHAIRMAN DEALE: And have it with evidence of your own.

8 MR. BLACK: I guess I have one lingering doubt
9 about that approach, and that is if we supply an updated
10 crash analysis, we would be doing our whole risk assessment
11 over again.

12 That is quite an expenditure of time and effort.
13 And we, as I indicated, have not seen anything that would
14 lead us to want to change that risk assessment because we
15 had conservatisms built in, we have no information that
16 would change that risk assessment.

17 So I am saying that we are reluctant at this
18 point to do it.

19 CHAIRMAN DEALE: I think that what Mr. Leed's
20 question is, this is all very fine coming from you. If
21 Dr. Reid -- it is Dr. Reid?

22 MR. BLACK: That's correct.

23 CHAIRMAN DEALE: -- Dr. Reid would say the same
24 thing, that I have reviewed the testimony which I have given
25 under these circumstances -- whatever qualifications you want

mm13 1 to put in there -- and have found that this is a reasonable
2 approach, could you get that kind of a statement from
3 Dr. Reid?

4 MR. BLACK: Oh, I'm sure we could do that.

5 I think we could do that.
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CHAIRMAN DEALE: I think this is what we --

MR. BLACK: This is what we lack and in fact I would carry it further. I would want Dr. Reid to explain the reasons why he believes the crash rate is a reasonable rate to use in the risk assessment that was done.

CHAIRMAN DEALE: Okay. And Mr. Lead --

MR. LEAD: That still leaves us with the problem is listing information from the Navy. If Dr. Reid will list the information, fine. If staff will not, then I suppose we will have the -- we'll have to subpoena the Navy.

CHAIRMAN DEALE: Basically you're saying that if what he comes up with isn't right, then you have a problem.

MR. LEAD: Well, when I heard Mr. Black describe what he was suggesting, I did not hear him suggest that the staff would obtain for us what we asked for, which was simply the crash rate on the A-6 aircraft. Anything else staff wants to offer is fine with us too. But --

CHAIRMAN DEALE: They're not going to give you a crash rate on that A-6 aircraft because it isn't relevant because the A-6 crash rates are developed from planes taking off from aircraft carriers, and this hasn't anything to do with crash rates in and around land bases.

MR. LEAD: That of course is not the whole story.

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1 Counsel's representation that these aircraft take off
2 from aircraft carriers is all very well and good; however,
3 this aircraft is basically based at one land airbase, and
4 that's Whidby Island for the entire United States fleet.
5 And there are crashes that occur in that configuration as
6 well.

7 And there are statistics on those crashes. I
8 think the evidence ought to be what determines whether or
9 not the crash rate from the airbase of airplanes of this
10 kind of -- is such that is not reasonable for Dr. Reid
11 to give us that rate.

12 CHAIRMAN DEALE: In other words, if you got
13 the crash rate for the A-6 plane for that base over a given
14 period of time --

15 MR. LEAD: From 1969, I believe.

16 CHAIRMAN DEALE: -- that would be -- now, if they
17 had asked the Navy this and let us say the Navy says --
18 I'm thinking of the worst -- whether it's confidential or
19 "we're not going to give it to you." That would be it.

20 MR. LEAD: As I said before, inquiries have
21 been made by the staff about the accident rate, and the
22 Navy cooperated last time. So --

23 CHAIRMAN DEALE: We're hopeful they will
24 cooperate. Mr. Black, would you have any problem about
25 asking the Navy for this information, whether or not you use

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1 it. You can make the case out about the crash rate; the
2 Navy might give you with this particular plane over a
3 10 or 15 years period -- it's not -- should not be used.
4 That's fair enough.

5 But it is a fair point to say, well, what is
6 the crash rate.

7 MR. BLACK: We will endeavor to inquire of the
8 Navy as to that information, the crash rate of the A-6 at
9 Whidby over the last 10 year period.

10 CHAIRMAN DEAL: Mr. Lead, I expect you to clap.

11 (Applause.)

12 MR. LEAD: And if staff wants to get even
13 more information about the crash rate, we welcome that too.
14 If they can break it down by carrier landings and so on,
15 that would be fine.

16 CHAIRMAN DEAL: Dr. Hooper has a question.

17 DR. LOOPER: Mr. Black, did you say you would get
18 the information on land-based aircraft?

19 MR. BLACK: No, I said A-6 crash rate at Whidby.

20 DR. HOOPER: At Whidby.

21 MR. BLACK: I believe that's what Mr. Lead
22 requested.

23 CHAIRMAN DEAL: Okay. As long as it's understood
24 that's from Whidby, not at Whidby.

25 MR. THOMSEN: Operating out of.

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1 MR. LEAD: I don't know whether Mr. Black was
2 making --

3 CHAIRMAN DEALE: All right. All right. We'll
4 take the suggestion of Mr. Thomsen that you made.

5 MR. THOMSEN: What was that?

6 CHAIRMAN DEALE: It was sometime ago, I concede.

7 (Laughter.)

8 And that is we will start at 9:00 o'clock.
9 We're not finished with the squabbles and I hope that each
10 of these particular squabbles will not take as long to
11 resolve, at least in part resolve, as we have this one. And
12 I don't really think it will, but whatever the case, what
13 we're going to do is meet here in this room at 9:00 o'clock.
14 Surely, we don't know whether many people will be here
15 tomorrow and -- or whether they'll be a few.

16 But in the event that as many people show up
17 tomorrow as showed up today, we'll have the room. And I don't
18 think any of you will be bothered by the fact that there
19 might be quite a few chairs behind you which are empty.

20 But in any event, the idea is we'll meet here
21 tomorrow and we will address ourselves, certainly, to the
22 preliminary matters which we have identified, and this
23 relates to the discovery matter that SCANP has raised and
24 the applicant has declined and also this presentation of
25 witness of British -- no -- concerning the West Roosevelt

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1 site.

2 Another preliminary matter will be is that I
3 will ask your comments about the FOB Coalition for Safe
4 Power's motion.

5 Af that, we look forward to the introduction of
6 evidence.

7 MR. THOMSEN: Before we adjourn, I have some
8 reading for you regarding those squabbles that you might
9 want to have now rather than in the morning.

10 CHAIRMAN DEALE: Fine.

11 MR. THOMSEN: On the West Roosevelt matter, I
12 wasn't sure you'd gotten my letter of July 12. In case
13 you haven't, I have copies.

14 (Counsel distributing documents.)

15 That's my sort of reply to the West Roosevelt
16 thing.

17 Secondly, I have a short written reply to the
18 motion to compel relating to the use of the subsidiary
19 corporation, which I serve on everyone here and mail serve
20 those who aren't here.

21 (Counsel distributing documents.)

22 CHAIRMAN DEALE: Mr. Lead, it so happens.
23 Mr. Lead, that none of the board members has a copy of your
24 interrogatories, which included the July -- the June 7
25 newspaper article. Do you happen to have it now? Or could we

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1 get it duplicated now?

2 MR. THOMSEN: I can lend you my copy.

3 CHAIRMAN DEALE: That would be good. The point
4 is we don't have it, and it seems to be central to your
5 motion.

6 MR. LEAD: Yes, sir, I would say so.

7 MR. THOMSEN: You have his motion to compel,
8 I take it but not the interrogatories.

9 CHAIRMAN DEALE: Yes, we don't have the
10 interrogatories. We do have the motion to compel, and
11 the interrogatories included a copy of this.

12 MR. THOMSEN: Yes. That's my copy. Excuse the
13 marks.

14 CHAIRMAN DEALE: All right. We'll return it.
15 All right, without further ado -- Mr. Linenburger has a
16 last minute statement.

17 MR. LINENBURGER: Mr. Lead, you indicated earlier
18 that testimon⁷ of Mr. Cook would be available on Thursday
19 regarding reactor pressure vessel delivery. Does that mean
20 we cannot take up that subject tomorrow so far as you're
21 concerned?

22 MR. LEAD: NO, no. Dr. Cook is not available
23 until then. I have some other witnesses on that subject
24 who will be.

25 MR. LINENBURGER: Will you be prefiling before

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Thursday?

MR. LEAD: I don't think so.

MR. THOMSEN: Cook is on the RPV delivery?

MR. LEAD: On that and alternative sites. I'm handing out Dr. Chaney's (phonetic) testimony. I was asked about it earlier.

(Counsel distributing documents.)

CHAIRMAN DEALE: All right. There's nothing else before the board at this time, so we are adjourning until tomorrow. And we'll meet here at 9:00 o'clock in the morning. We'll meet in this room rather than upstairs.

(Whereupon, at 5:00 p.m., the hearing was adjourned.)

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