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Title: Telephone Conference with the
Nuclear Regulatory Commission
and the Citizens Awareness
Network to Hear Their Concerns

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1 TELEPHONE CONFERENCE WITH
2 THE NUCLEAR REGULATORY COMMISSION
3 AND THE CITIZENS AWARENESS NETWORK
4 TO HEAR THEIR CONCERNS

5
6 Wednesday, August 4, 1993

7
8 U.S. Nuclear Regulatory Commission
9 One White Flint North
10 Rockville, Maryland

11 The above-entitled conference commenced at 2:00

12 p.m.

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1 PARTICIPANTS:

2 NRC Attendees:

3 Richard Dudley, NRRD Commissioning Section Chief

4 Morton Fairtile, Yankee Rowe Project Manager

5 Robert Wood, Office of Nuclear Reactor Regulation

6 Ed Reis, Office of General Counsel

7 Richard Emch, Radiation Protection Branch, Office
8 of Nuclear Reactor Regulation

9 Shlomo S. Yaniv, Office of Research

10 Jack Barrett, Office of Nuclear Material Safety
11 and Safeguard, Decommissioning Section

12 NRC Region I Attendees:

13 Tom Shedlosky, NRC Section Chief

14 Marie Miller State Liaison Officer

15 Joseph Nick, Regional Health Physics Inspector
16 Assigned to Yankee Rowe

17 Paul Harris, Yankee Rowe Inspector

18 Citizens Awareness Network Attendees:

19 Fred Katz

20 Debbie Katz, Health Coordinator

21 Jean Ferris

22 Nuclear Information and Resource Service Attendees:

23 Paul Gunter

24

25

P R O C E E D I N G S

[2:00 p.m.]

MR. FAIRTILE: Good afternoon. I would like to say is if you want to jump in after they finish, that is fine, but do give your last name. Now, I want everyone to introduce themselves. And we'll start here in Rockville. Mr. Wood.

MR. WOOD: Yes. I am Robert Wood. I am in the Office of Nuclear Reactor Regulation. I handle financial matters that come before the Commission.

MR. REIS: I am Ed Reis in the Office of General Counsel.

MR. EMCH: I am Richard Emch. I'm in the Radiation Protection Branch in the Office of Nuclear Reactor Regulation.

DR. YANIV: I am Dr. Yaniv. I am with the Office of Research, and I deal with radiation health effects.

MR. BARRETT: I am Jack Barrett. And I am in the Office of Nuclear Material Safety and Safeguard, Decommissioning Section.

MR. DUDLEY: I am Richard Dudley. I am the NRRD Commissioning Section Chief.

MR. FAIRTILE: I am Mark Fairtile, the Yankee Rowe Project Manager. And I also want to put Mr. Thompson on, he is the court reporter, so you will know his voice.

1 THE REPORTER: My name is Cliff Thompson, and I
2 will be recording today's session. Can you hear me all
3 right?

4 MS. KATZ: Yes.

5 MR. FAIRTILE: Next, I'd like to have introduced
6 the NRC people in Region I that are on the line.

7 MR. SHEDLOSKY: Good afternoon. This is Tom
8 Shedlosky, I am acting for Jean Kelly, NRC Section Chief for
9 the Yankee Rowe Plant.

10 MS. MILLER: My name is Marie Miller, I am
11 Regional State Liaison in Region I.

12 THE REPORTER: You'll have to say your name again.
13 I couldn't hear you.

14 MR. FAIRTILE: Marie, do you want to repeat your
15 name, please?

16 THE REPORTER: Slowly, please.

17 MS. MILLER: Marie Miller, M-i-l-l-e-r.

18 THE REPORTER: Okay.

19 MS. MILLER: State Liaison Officer.

20 MR. FAIRTILE: Joe are you on?

21 MR. NICK: Yes. Joseph Nick, N-i-c-k. I am the
22 Regional Health Physics Inspector assigned to Yankee Rowe.

23 MR. FAIRTILE: Paul, are you on the line?

24 All right, there may be another NRC person come
25 on, Paul Harris, who is the inspector for Yankee Rowe.

1 Apparently, he has not signed in yet.

2 All right. Could the C.A.N and C.A.N.-affiliated
3 people, please introduce themselves.

4 MR. KATZ: I am with the C.A.N. group, Katz, Fred.
5 Greetings to you all. Welcome to this meeting.

6 THE REPORTER: I'm sorry. You were cutting out.
7 Would you repeat that slowly?

8 MR. KATZ: My name is Katz. Fred Katz, from the
9 C.A.N. group, the Citizens Awareness Network.

10 MR. FAIRTILE: Okay.

11 MS. KATZ: My name is Debbie Katz. I am with
12 Citizens Awareness Network. I am the health coordinator.

13 THE REPORTER: Is the last name K-a-t-z?

14 MR. KATZ: Yes.

15 MR. FAIRTILE: Okay. Next.

16 MS. FERRIS: My name is Jean Ferris. I am the
17 parent of a seven-year old child with Down's syndrome. And
18 I am a member of the health committee of C.A.N.

19 THE REPORTER: Jean, would you spell your last
20 name, please?

21 MS. FERRIS: F-e-r-r-i-s.

22 MR. FAIRTILE: Okay. Thank you.

23 MR. GUNTER: My name is Paul Gunter. I am with
24 Nuclear Information and Resource Service in Washington, D.C.
25 And I am being plugged into this conference call through

1 Mississippi right now.

2 MR. FAIRTILE: Thank you, Paul.

3 Anyone else? Okay. Let's get started then.

4 MR. FAIRTILE: All right. Ladies and gentlemen,
5 the purpose of this conference call, first of all, it was at
6 the request of the Citizens Awareness Network, in order for
7 the NRC to hear concerns that they have regarding the
8 component removal program at the Yankee Nuclear Power
9 Station.

10 And these are concerns that have arisen since we
11 had our June 9th meeting at the high school near Rowe. So,
12 I would like to turn this over to whoever wants to act as
13 spokesman for C.A.N. Please say your name each time until
14 we get accustomed to it. Remember that, preference all your
15 remarks with your last name.

16 MR. KATZ: This is Katz. I wanted to preference
17 this presentation with a few comments which I think may or
18 may not be relevant or even important.

19 But, I think, I would like to say that we don't
20 want this meeting to be construed as satisfy [telephone
21 interference] and it was for a public adjudicatory hearing.

22 Also, that the meeting seems to have come out from
23 questions that I brought to Mark Fairtile, and whether in
24 fact the meeting is due to our request or the NRC's request
25 may or may not be important. And I'm not certain as to

1 whether it is due to our request. But it may not be
2 important.

3 We still demand an adjudicatory public hearing,
4 and we still welcome this meeting. So I will attempt now to
5 begin.

6 Atomic power is inherently dangerous, and because
7 of this, an elaborate system of controls and regulations
8 have evolved. Various stages in reactor status are defined
9 in detail such as the possession only license, or operating
10 license, or a decommissioning license, or in fact, a
11 decommissioning option; all of which require licensing with
12 each stage having specific definitions and requirements:
13 hearing rights of citizens, rights of access to information,
14 et cetera.

15 What we see here at the Yankee Atomic Electric
16 Company site at Rowe, is that the utility is proceeding in a
17 component removal project which will mobilize and transport
18 90 percent of the non-fuel residual activity existing there
19 between July and October of this year, before a
20 decommissioning plan has been submitted.

21 Since the potential risk lies in the radioactivity
22 of the materials to be handled, what we are looking at is 90
23 percent of the task of decommissioning, including the
24 problematic elements in the short-lived cobalt and cesium
25 removal accomplished without the safety factor of the

1 elaborate system of controls and regulations engaged. And
2 though all the hearing process is scheduled to begin after
3 the component removal project is a fait accompli.

4 For the purpose of expediting the component
5 removal process, the NRC has assented in a process of
6 disengaging these processes from their regulatory
7 requirements by making specific definitions, licensing
8 stages, controls unclear.

9 This very speedy process is inconsistent with the
10 ALARA principle, since, for instance, the occupational
11 radiation dose for additional chemical decontamination is
12 relatively small, compared to the dose associated with
13 installing temporary shielding.

14 Thus, the licensee is granted exemptions to
15 requirements that are permitted under the possession-only
16 license status, access to decommissioning funds, and
17 legitimate decommissioning status appropriate to be
18 legitimate decommissioning status. They are granted
19 permission to remove components under a licensing to
20 operate.

21 The ability to define decommissioning alternatives
22 is granted, dependent upon the short-term financial climate
23 of the utility. Thus, decontamination for the component
24 removal is defined as maintenance, which will then switch to
25 safe store for an unspecified period, which will be

1 determined by the opportunity to dispose of wastes.

2 Presumably, it will switch back to decom.

3 For the electric company to proceed in this
4 experimental regulatory climate, is an unreviewed safety
5 issue as it circumvents scientific, citizen, and state
6 agency oversight; hearing rights of citizens, which, in
7 fact, if there were hearings, would permit the possibility
8 of such a review.

9 We, therefore, demand that the NRC halt this
10 process until this process is subjected to an evidentiary
11 hearing process, and the submission of a detailed plan which
12 would make possible comment on its safety issues available.

13 Now, we are also today going to bring up health
14 issues. The component removal project, whether it is to be
15 regarded as an operating procedure, or as reactor
16 maintenance, or legitimate decommissioning, is permitted as
17 having satisfied the NRC's assessment of Yankee Atomic
18 Electric Company's environmental report in 1987 that the
19 reactor had operated for more than 27 years with no
20 significant environmental impact.

21 It is based on an environmental report which had
22 addressed all important aspects of operation. Since there
23 has never been an epidemiological health study of the
24 impacted population in proximity to the reactor, and along
25 side the effluent pathway, there can be no basis for an

1 environmental report or a review of such a report.

2 The assessment by the NRC granting license to
3 continue operation back in 1988, or to make any review
4 allowing the licensee to engage in the component removal
5 project, or in fact, to grant the utility an opportunity to
6 utilize decommissioning funds, which also requires an
7 environmental report, and a review of such a report,
8 presents a situation in which these processes are being
9 allowed to proceed with no basis for an environmental
10 report.

11 The assessment by the NRC granting license to
12 continue operation, or any review of allowing the licensee
13 to engage, is therefore quite unfounded.

14 We, therefore, ask that the NRC order the licensee
15 to cease in the component removal project until such time as
16 a scientific basis for an environmental report is
17 established, and the NRC staff can complete an effective
18 review.

19 At this time, our group, the C.A.N. group, along
20 with other interested citizens, under the direction of Dr.
21 Sidney Cobb, and in cooperation with the Massachusetts
22 Department of Public Health, have assembled statistics which
23 are quite -- which give evidence that are quite in contrary
24 to any assessment that Yankee Atomic has been operating
25 without any significant environmental impact.

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1 And, in fact, we protest the granting of the
2 licensee's ability to utilize decommissioning funds under
3 that same environmental report which declares that it has no
4 environmental impact, is incompetent, as it is unreviewable,
5 as there exists no data or study which can be reviewed.

6 Now, at this point, Debbie Katz will continue with
7 this presentation.

8 MS. KATZ: Unless there are any questions. Do you
9 want to --

10 MR. KATZ: Well, I thought that what we could do
11 --

12 MS. KATZ: -- just go ahead?

13 MR. FAIRTILE: Remember, give your names.

14 MR. KATZ: -- is that present our materials and
15 operate under the assumption that the staff that is
16 assembled hearing this is there for the purpose of
17 clarifying our concerns through their questioning, which can
18 take place after Debbie Katz presents this material.

19 MS. KATZ: Okay. Katz, Debbie. I just wanted to
20 read something into the record that we had sent to Mr.
21 Fairtile in terms of our needs for the -- we sent
22 information in.

23 Enclosed is information relative to our meeting on
24 August 4th. They help to provide the grounds of material
25 for our concerns. We expect that these documents will be

1 included in the transcript sent to the PDR. In addition, we
2 want the bibliography to be an open file which can receive
3 additional scientific data as it becomes available.

4 MR. FAIRTILE: Well, pardon me --

5 MS. KATZ: The material presented may take more
6 than one meeting between Citizens Awareness Network and the
7 NRC to complete. We, therefore, want the opportunity to set
8 up subsequent meetings in the event that it is necessary.

9 We also have -- this is not in the letter --
10 additional information that we could not send in to you at
11 that point, but there will be a letter from Dr. Knorr, who
12 is the Deputy Director of the Environmental Health
13 Assessment Unit of the Massachusetts Department of Health.

14 And we have been in a preliminary investigation
15 with Dr. Knorr for about a year and a half about the health
16 concerns that we have around Rowe. There will also be a
17 statement from Harvard environmental graduate school in
18 terms of a meteorological review that they did for us.

19 And also a review by Shearson Lehman of the issues
20 of decommissioning and what they feel should be done in
21 terms of nuclear power stations.

22 I am a little nervous, so please give me -- I may
23 stumble a little.

24 The issues of health around Rowe are of deep
25 concern to us. So we feel that there are a number of things

1 that are important in terms of the Rowe reactor. And I will
2 just state them first, and then I will go back to attempt to
3 go into detail.

4 One is, we want the NRC to fund an effluent
5 pathway study of the Rowe reactor, in which an independent
6 group of scientists would be set up to do the study. We
7 feel that it is important in terms of understanding the
8 environmental impact of this reactor to do that.

9 We feel, too, that in the reevaluation of the
10 conceptual framework, is to determine the standard set for
11 the NRC, has to take place in terms of dose response
12 assumptions, in terms of issues such as organ dose, and
13 reevaluation of this concept in the light of Tritium, and
14 the scientific research that has been going on.

15 We also feel there has to be a reevaluation of the
16 concept of radiation protection, and what that constitutes
17 given what they can place at Rowe.

18 We understand that Rowe is an experiment, and that
19 in a certain way, we have been part of that experiment. The
20 use of a river for an effluent discharge, which has actually
21 been used by probably 500,000 people a year to swim, boat,
22 and fish in, [telephone interference] which has been used to
23 dump [telephone interference] material in on a regular
24 basis.

25 I want to also raise the issues of worker health

1 and health studies, and the growing data that is coming out
2 in terms of workers' exposure, increases in cancer, and the
3 increases, also, of cancer to children of workers.

4 And I also want to raise the issue of prior
5 notification, that we feel that this has to become part of
6 any plan by the NRC to allow Yankee to do any work around
7 here, is prior notification of any effluent releases,
8 whether they are into the water, or into the air.

9 Prior notification of transport; prior
10 notification of routes, so that we can make the choice to
11 protect ourselves. We could not [telephone interference]
12 enter into this experiment.

13 We were really ignorant of its potential when it
14 began. But I feel we should be afforded [telephone
15 interference] since we have suffered this assault.

16 Now, I would like to go back over the issues of
17 our health concerns because they are very serious to us. We
18 went to Dr. Cobb when, at the time Yankee was struggling
19 with the issue of [telephone interference], because we were
20 concerned about increases in health problems in this area;
21 increases in sterility, miscarriage among people who lived
22 in a relatively pristine environment, who lived very healthy
23 lives, who seemed to have excessive amounts of disease.

24 And Dr. Cobb enabled us to get information on --or
25 how to go about getting information, some of which he has

1 utilized in what I sent to you, and some of which we also
2 gathered from the PDR in terms of the releases into the
3 river by Yankee Atomic.

4 There were large Tritium releases into the
5 Deerfield River, always within the accepted standards of the
6 NRC, but large amounts into a small river, that was used for
7 recreational purposes in the 1960s and 1970s.

8 We did not have any statistics before 1965,
9 because Tritium was not clocked before that time. But we
10 know after 1965 into the 1970s, they were having problems
11 with their fuel rods, and relatively large amounts of
12 tritium went into that water.

13 There was an EPA study that was done -- we can
14 send you a copy of that as well, if you would like -- that
15 showed amounts of tritium in the water that was a concern to
16 them, and they asked that a study be done. And a study was
17 not done at that time.

18 Now, they changed the fuel rods. Yankee improved
19 their ability not to put radioactive nuclides into the
20 water, but there were those releases, and tritium was
21 continued to be released into that river, until the time
22 Yankee closed.

23 Now, in terms of the increases of disease, we have
24 had: We have nine children born with Down's syndrome -- I'm
25 sorry, this always makes me upset -- between the 1980s and

1 the 1990s who basically lived in a three-mile radius of each
2 other.

3 We have potentially another seven children born in
4 the 1970s that we have not yet been able to gain information
5 on. We have approximately five to six children conceived in
6 the 1980s to 1990s who were chromosomally damaged, non-
7 hereditary.

8 Only one of these children was born and lives
9 within this radius. These other families live within this
10 radius basically.

11 There is statistical significance in Down's
12 syndrome that there have been approximately -- and I want to
13 make it clear that this 2.5 mile radius is not filled with
14 shopping centers and large housing complexes. This is a
15 small rural community with hardly anyone living in it.
16 Down's syndrome should occur between one and 700 per one in
17 1000 live births. We have had approximately -- I don't have
18 the exact figures -- 2,000 live births in the last 20 years.
19 This is a very serious concern to us.

20 Dr. Cobb has found a 50 percent increase in five
21 different cancers. He has found a 40 percent increase in
22 heart disease. He has found a 110 percent increase in
23 infectious diseases leading to mortality -- certain
24 infectious disease, and a 70 percent increase in infectious
25 disease leading to mortality was found.

1 These are very serious to us, and he in fact,
2 raises the issue that there is an epidemic of disease taking
3 place in that valley.

4 These children, or rather their parents -- the
5 parents of these Down's syndrome children, all lived near
6 the river, or had extensive contact during their pregnancies
7 and before their pregnancies.

8 We feel that we are part of an experiment that has
9 taken place, and that we have to be studied as such. The
10 Massachusetts Department of Health has been involved in a
11 preliminary investigation with us, in which they in fact
12 found statistical significance in certain cancers in this
13 region.

14 We are a small community. I will say that again.
15 We should not even have statistical significance. There
16 were five -- there was statistical significance in five
17 different cancers in Greenfield.

18 We do not have large industry. We should have
19 [telephone interference] up here, and we don't. The
20 Massachusetts Department of Health has in fact made a
21 commitment to attempt to get funding to investigate these
22 issues.

23 But we are still left with these issues to deal
24 with. And we feel that it is incumbent upon, in some ways,
25 Yankee Atomic and the NRC, to help us to understand what

1 part radiation may have played in this health hazard we are
2 living.

3 Let's continue.

4 Now, one of the issues that we have and that -- I
5 read at the beginning, was the reevaluation the conceptual
6 framework used to determine the standards set by the NRC.
7 One of our concerns is the issue of [telephone interference]
8 which has gone into this river, and lot of the scientific --
9 I wanted to go back a second, because I realize I want to go
10 back over the issues of [telephone interference] because
11 there are number of studies that, in fact, link the issue of
12 cancer.

13 There is [telephone interference]; there is Roman
14 and Steve Wing, which I will go into in terms of nuclear
15 workers, had workers exposed -- found workers exposed to --
16 100 millirads [telephone interference] life-time doses. And
17 they had a 63 percent increase in risk of leukemia, and a 33
18 percent risk in terms of other cancers.

19 There have been a number of studies in terms of
20 Down's syndrome which have linked exposure to X-rays and
21 Down's syndrome. The [telephone interference] itself, has
22 said that there is no threshold for exposure to radiation
23 and Down's syndrome.

24 There have been background studies that were done,
25 which the background is approximately 400 millirads, and

1 that there were large increases in Down's syndrome and other
2 birth defects [telephone interference] has also found
3 background radiation exposures, and increases in birth
4 defects and Down's syndrome.

5 There is epidemiological matter which demonstrates
6 the correlation between Down's syndrome and radiation.
7 There have also been studies, broad studies, that links
8 radiation exposure to X-rays and heart disease.

9 There are many studies that are beginning to raise
10 the issue of radiation exposure, low-dose radiation exposure
11 and cancer.

12 Goodhead, and there are other scientists who say
13 there may be no threshold below which radiation -- let me
14 try to say that again.

15 The issue that Goodhead has raised is that the
16 body may be able to ascertain that it is being affected by
17 radiation at higher doses, but not at lower doses, that in
18 fact, low-dose radiation may not set off an alarm to the
19 repair system in the body to repair within the 24 hours that
20 it needs to do, the lesions that are created by exposure to
21 low-level radiation, and that you can be exposed to a gray
22 field of very low-level radiation without knowing it -- the
23 body knowing it -- and in fact, it potentially causes
24 cancer.

25 And I think these issues, which could not be seen

1 when nuclear power started, or ten years ago. or 20 years
2 ago, can only be seen as Steven Wing has shown, at 25 years
3 and up, when the health effects begin to be seen.

4 I mean, there was work done by Betastock with the
5 illuminizer dial workers which, in a certain way is a low-
6 dose study, because women were exposed to very low doses
7 every day, and should have been able to repair -- their
8 bodies should have been able to repair the effects of the
9 radiation, and yet were not, and there was statistical
10 significance in terms of cancer, breast cancer, to these
11 women.

12 There are many studies -- they are in fact in the
13 bibliography, and there are many more -- in terms of the
14 issues of low-dose radiation.

15 And I think it is incumbent upon the NRC to begin
16 to look at this issue at this point. And this is not a new
17 issue that has been raised to the NRC. But I think in light
18 of the tragedy that is taking place around Rowe, that it is
19 incumbent upon you to do so.

20 And it has been your responsibility to protect us.
21 And I think we have been left unprotected, not because
22 anyone has wanted to, but because nobody knew, or had the
23 scientific evidence to justify it. And I think the
24 scientific evidence is beginning to accumulate.

25 And what I'd like to do is talk a little about

1 tritium and the issues of tritium which were, in fact, not
2 well understood, because, as I have seen in the literature,
3 that tritium was, in fact, seen as a relatively benign
4 radionuclide, that it passed through everything, and you
5 didn't have to worry about it.

6 And this view has really been changing with the
7 research that has been done, especially around Rowe, with a
8 pressurized reactor vessel. And what is released into the
9 water from a pressurized reactor vessel, is large amounts of
10 tritium.

11 And so the issue of tritium, I think, is a very
12 important issue to look at. Not just in terms of Rowe, but
13 in terms of all reactors; in terms of the health effects;
14 and the underestimation of those health effects.

15 The Lawrence Livermore Laboratories did a study of
16 the health effects in exposure to tritium in 1991, in which
17 they found that the effects were underestimated in terms of
18 carcinogenic effects by one and a half times; that it was
19 underestimated two to five times in terms of mutagenic
20 effects; and that it was underestimated two times in terms
21 of tetragenic effects.

22 This has very serious ramifications on people who
23 have been exposed to tritium, especially in a situation such
24 as that river where we swam, boated and fished, and had
25 wells along that river.

1 There was a school that got its well water right
2 by that river. It still does. This is a deep concern, and
3 the inadequacy of the standards that have been set gravely
4 affect us.

5 I mean, one of the issues that comes up in terms
6 of the issue of tritium -- there are two issues. One is
7 that the whole conceptual framework of organ dose cannot
8 work for tritium, because tritium does not affect an organ,
9 it affects the cell.

10 And if you don't do microdose symmetry in terms
11 of understanding what tritium is doing, then you miss it
12 completely. And that if tritium affects a cermatic cell,
13 that you will have carcinogenic effects, and if it affects a
14 fetus, then you will have mutagenic effects, and if it
15 affects a germ cell, then you will have tetragenic effects.

16 And this has not been looked at. And there is
17 growing evidence in terms of tritium from many, many
18 sources. I sent you a selection of that, but there are many
19 more in terms of it in terms of the genetic effects from
20 exposure, much of it is in terms of mice, but there are also
21 studies.

22 The study around the Pinkering Reactor in Canada
23 is a study of tritium. That's what was released. And they
24 didn't find a direct correlation.

25 The Canadian Government -- didn't find one, but

1 Lambert and McArthur raise issues in terms of it. And in
2 fact, there was an 86 percent increase of Down's syndrome
3 around that reactor.

4 The work of Patricia Sheehan at the Girls School
5 in England in which the girls at that school were radiated
6 during a fire at a reprocessing plant across the Irish Sea,
7 what was released from that reprocessing plant was tritium.

8 And there was -- of the 120 women in that school,
9 50 of them participated in the study, the others didn't. Of
10 the ones that didn't, two of those women had Down's syndrome
11 children.

12 Of the women who participated, only 30 had gotten
13 married and had children. Of that, there were six Down's
14 syndrome children. There were, in all, 30 birth
15 abnormalities including six sterile women.

16 These issues are of great concern, and the issues
17 in Gardner's work in England in terms of exposure of workers
18 is in terms of tritium. And I think it really has to be
19 looked at and that the issue of protecting us has to be done
20 in terms of reevaluating the way we look at it.

21 One of the issues that is coming up in terms of
22 tritium, is also that it has an effect that is similar to
23 soft X-rays. And they have found that soft X-rays, in fact,
24 have a much greater impact on humans, than regular X-rays.

25 And there is the issue with tritium, not just in

1 terms of its radiational effect. There are two other issues
2 which -- one is this organically-bound tritium, that in the
3 process of taking tritium, and if it is taken -- if you take
4 it in a drinking water, in tritiated water -- it leaves the
5 body in approximately 12 days.

6 But once it unites with carbon, which it does if
7 it's on vegetation, if it goes into fish, if it goes into
8 animals, if it even goes into the human body, it stays in
9 the body for at least 450 to 650 days, and it actually is
10 taken up in the cell, in the protein precursors, in
11 different ways of those, and it then has a transformational
12 effect in which a chemical change takes place, which is also
13 mutagenic, so that it has more of an impact just than in
14 terms of its radiational effect, but also in terms of its
15 transmutational effect.

16 And none of this has been looked into. And I
17 understand that in some way that it couldn't be looked into.
18 But, you know, one of the issues around the Rowe reactor is
19 that there is farm land along there; there are cattle being
20 raised along there; that people have gardens along there;
21 that people have eaten food that has been contaminated with
22 organically-bound tritium.

23 There is some kind of nuclear reactor in Arizona
24 in which people were dosed with amounts of tritium, and
25 there was a school across the street from the place, and it

1 literally got into the food stuff. It was incorporated into
2 the bread, that sat outside the school, because of the
3 process of evaporation.

4 Well, in the work that we had Dr. Spangler do at
5 Harvard, there isn't even yet an understanding of the
6 effects of air soliziation or evaporation in terms of what
7 takes place.

8 But they found that there was 1,000 times more
9 concentration of tritium along that effluent pathway in the
10 river than anywhere else, that also in terms of that
11 effluent pathway, there are air inversions 30 percent of the
12 time, so that the air along that river is locked in there
13 under massive banks of clouds and moisture in which the
14 tritium was locked in there effectively.

15 So I really feel that a reevaluation of the whole
16 conceptual framework of tritium and it effects people is
17 incumbent of the NRC to do, for any kind of radiation
18 protection to take place or for any kind of environmental
19 report to take place.

20 And a whole different conceptual framework of
21 where effluent is dumped, has to take place. There was some
22 kind of idea that the Deerfield River wasn't used, and this
23 was a complete misconception, since it's used. Even in
24 drought, they suck up water from the river to spray crops
25 with. But we were spraying our crops with tritiated water.

1 This is terrifying to us.

2 Now I would like to also turn to the issue of
3 worker health in this. Because I think that's very
4 important, because the issue of this early component removal
5 is also of the workers being exposed to larger amounts of
6 radiation than need be. And I think that this is really
7 important in terms of the -- and -- just one second.

8 I mean, one of our concerns in terms of the issue
9 of the prior notification is that we are not put in a
10 position again where there are -- there is tritium -- there
11 is chemicals or anything else dumped in that river, and we
12 are ingesting it, and we don't know it.

13 Even at the NRC meeting, there was a disclosure
14 that there was releases into the river at the point that
15 none of us thought anything was going on anymore, and people
16 were still swimming in that water.

17 And since there is this whole question of
18 evaluation that has to take place of how much tritium, or
19 how much low-dose radiation affects us, then it's really
20 important for us to know what's taking place, and the issue
21 of fishing as well in terms of it. That river is used for
22 fishing. And the fishermen don't know that they've been
23 tritiated.

24 In the situation in Arizona, they were finding
25 that workers, the remains of tritium in their bodies for ten

1 years. Ten years, that's a long time.

2 Now I want to go into the issue -- I want to just
3 into the issue of worker health, because there are studies
4 that raise the whole issue of workers being exposed to
5 radiation and the problems in terms of it.

6 Because there have been a number of studies that
7 really raise the fact that workers who have been exposed to
8 low doses of radiation, that in fact, their children have
9 increased risk of leukemia and cancer.

10 And these are studies by Shorehan, Roman.
11 Gardener has done a lot of work with this around --
12 Shellyfield -- in which there were increases of leukemia and
13 lymphoma in children in that area.

14 There were also, the issues -- that Forman found
15 the increases of cancer near a nuclear installation,
16 especially around Shellyfield, and in certain areas in
17 Ireland.

18 Steven Wing, as I mentioned in doing a study of
19 Oakridge workers, found workers who had been exposed to 140
20 millirads life-time doses, had a 63 percent increase in risk
21 of leukemia after 25 years.

22 It's only after 25 years that these effects began
23 to be seen. The Neal information that is now coming up
24 around Hanford in the sensitivity of workers who are older,
25 to low doses of radiation, and check [telephone

1 interference] work in which most workers were exposed to two
2 rems of radiation -- life-time doses in which they had, I
3 think it was, increases in thyroid cancer and statistical
4 significance in leukemia.

5 There have also been studies by Sever around the
6 Hanford area, in exposures to low-level radiation and
7 congenital malformations, and Stern did a study around the
8 Plymouth Shipyard workers who had a 40 percent increase in
9 leukemia, having been exposed to under, I think it was, it
10 may have been two rems or four rems of radiation.

11 Now, these are small amounts of radiation. But
12 there are studies around nuclear weapons tests, and there is
13 also studies that check the background radiation that come
14 up as well in terms of X-rays and storage work finding that
15 fetuses exposed to X-rays had a 50 percent increase in
16 cancer and McManus, and that there have been many studies --
17 or there are studies coming up.

18 I understand there are a lot of studies that show
19 the opposite. But this is something that is coming up. And
20 given the issues of low-dose radiation and, specifically, of
21 tritium that are coming up, it is very important that it be
22 looked at in terms of -- so that I think the issue of
23 allowing these workers to be exposed to a hot reactor is
24 unconscionable.

25 It is unnecessary to have that happen at this

1 point. And the reason it's happening is because Yankee
2 Atomic wants to get things out really fast, and they feel it
3 is cheap and expeditious to do it this way.

4 But they don't have concern for the workers who
5 are being exposed. And they don't have concern for the
6 lives of the community who may be exposed. I understand
7 that in decommissioning, the major issue of exposure is in
8 terms of workers.

9 But I don't want to see them exposed to any more
10 radiation than is necessary. And it's incumbent on the NRC
11 to set standards in terms of it.

12 Now, I liked to raise the issue of prior
13 notification, because I think that's really important,
14 because, in a certain sense, we feel we've really been
15 assaulted by all of this, you know, in a way, in which we
16 never gave our consent.

17 And that may have come through our ignorance and
18 stupidity of not really knowing the effects, and I think
19 part of it is also, for us as well as for you, that the
20 effects were not known, that Rowe was an experiment.

21 And in a certain way, it's still an experiment.
22 And it's now in a decommissioning experiment. And we don't
23 want to be a party to that experiment unless we have some
24 voice in it; unless we can protect ourselves in some way,
25 from the issues of radiation; and to make choices that we

1 weren't given during this process, that we are now in an
2 epidemic of disease possibly over.

3 We don't want that that to happen again. And so
4 it's very important to us that prior notification be given
5 to us, and to people in this area, so they could now make
6 the choice about whether they want to swim in a river that
7 had radionuclides in it; whether they want to expose their
8 children, who are, as we know, much more sensitive to the
9 effects of radiation.

10 And some of these exposures to background
11 radiation which had increases in cancer to children were of
12 20 millirems; 20 millirads background exposure created these
13 increases.

14 And I don't think it's worth the risk to us. I
15 would like the NRC to be extremely conservative for a change
16 in what they allow. And I think prior notification is part
17 of that conservatism.

18 And your responsibility to the community, not just
19 to the reactor, that we know of releases, whether to the air
20 or to the water; that we know of sectioning and cutting and
21 whatever they're going to do in their dismantlement; that we
22 know the route so that we can make a choice not to be there;
23 that we know the times of transportation, so we can make the
24 choice not to be there. These are very, very important
25 concerns to us. And we want them to be important to you.

1 We realize that up until now, you may not have had the
2 awareness, in certain ways, because of the lack of evidence,
3 to protect us.

4 But given the body of evidence that is beginning
5 to grow upon us, at this point, we feel it is your
6 responsibility to investigate this, and to take a much
7 stronger stance to protect us.

8 And I realize that as I'm saying this, you're
9 taking less of stance to protect anyone. And it really
10 outrages me. I have two young children.

11 I live five miles from that reactor. And I'm
12 really concerned, not just for their welfare, but for the
13 welfare of all the children in this area who may develop
14 higher rates of cancer, or who may have children with birth
15 defects.

16 Because, of course, the issues of tritium are
17 really cumulative, so it can show up -- not in our
18 generation, we can be asymptomatic -- but in the next
19 generation, and the generation after that.

20 And I would like you to take these issues, and our
21 concerns seriously. And I really demand an answer to them.

22 MR. DUDLEY: Thank you. Debbie, this is Richard
23 Dudley of the NRC. I would like to try to summarize your
24 concerns into a number of issues, if I could.

25 But before I do that, I would like to start with a

1 question. When you began, you referred to, I believe, a
2 letter, or information, that you said you had submitted to
3 the NRC regarding health effects at Yankee.

4 MS. KATZ: Yes.

5 MR. DUDLEY: I am not aware of that reference, or
6 we are not aware of having received that. Can you elaborate
7 on to whom you submitted it, and what was in it --

8 MS. KATZ: Right.

9 MR. DUDLEY: -- when that submittal was made?

10 MS. KATZ: We sent it out to you on, I think, it
11 was Monday or Tuesday, overnight mail, so that you would
12 have it before the meeting -- that was our hope -- to Morton
13 Fairtile.

14 MR. FAIRTILE: Okay. This is Fairtile. It hasn't
15 hit my mailbox yet, but it may be there now. Thank you.

16 MS. KATZ: And what was in it is Dr. Cobb's
17 analysis, his rough analysis. It also has the bibliography.
18 I'm sorry you don't have this information.

19 MR. FAIRTILE: This is Fairtile. We will have it,
20 Debbie. It's probably, as I said, in my mailbox, and I'll
21 have it today or tomorrow.

22 MS. KATZ: Okay.

23 MR. DUDLEY: Debbie, this is Richard Dudley.
24 Would it be fair to say that the information you submitted
25 to us in this overnight package, when we receive it, would

1 represent a written documentation of the health concerns
2 that you discussed with us just now in the general sense?
3 Is that as a detailed assessment of the concerns that you
4 have described to us today in a general sense, is that
5 correct?

6 MS. KATZ: It is. Although, that's why we wanted
7 -- I mentioned sending Dr. Knorr's letter and Dr. Spangler's
8 information as well, because [telephone interference] and we
9 couldn't get it into that packet, but it is coming to us,
10 and it can further give you an understanding.

11 MR. DUDLEY: Okay. This is Richard Dudley again.
12 So you will provide us Dr. Knorr and Dr. Spangler's
13 information.

14 MS. KATZ: Yes, I will.

15 MR. DUDLEY: Okay. Fine. I would like to then go
16 back and try to summarize the issues that you raised so that
17 we don't miss any of them.

18 MS. KATZ: Debbie Katz. Okay.

19 MR. DUDLEY: Okay. This is Richard Dudley. You
20 stated that you would like for the NRC to fund a
21 radiological effluent pathway study in the area of the Rowe
22 reactor.

23 MS. KATZ: That is right. It's very important
24 that it be an effluent pathway study. What has been done
25 until now is basically concentric circle studies, which

1 dilute the information needed to understand what has
2 happened to people in the effluent pathway.

3 The issues are not generalized. There are certain
4 people who get doses that are much greater, and they fall
5 into this effluent pathway. And there are people who get
6 much lower doses, and they should not be included.

7 We feel that giving up this concentric ring system
8 is very important in understanding the effects of low-level
9 radiation, and the effects of any nuclear reactor or
10 reprocessing plant on the citizens living around it.

11 MR. DUDLEY: Your second concern -- this is Dudley
12 again -- was that the NRC reevaluate the NRC radiation dose
13 and radiation dose protection standards.

14 MS. KATZ: Yes. Katz. Especially in light of
15 tritium, that the focus is in light of tritium, and the
16 issue of microdose symmetry, that your conceptual framework
17 will not pick up the issues of the effects of tritium which
18 are cellular, rather than organ.

19 MR. DUDLEY: So the reevaluation of NRC dose
20 standards would only be with respect to tritium.

21 MS. KATZ: They should be for low-level radiation,
22 but specifically for tritium in terms of what has happened
23 to us around here.

24 MR. DUDLEY: Okay.

25 MS. KATZ: Major effluents released from that

1 reactor and from pressurized reactor vessels into the water
2 is tritium. So our understanding of tritium is exceedingly
3 important in determining what we have been exposed to, and
4 the conceptual framework for dealing with tritium is
5 completely inadequate.

6 MR. DUDLEY: Okay. You also cited a concern with
7 increases in cancer and various other illnesses that you
8 feel that could be linked to effluence from the Yankee
9 facility.

10 My understanding is that the information that we
11 shall be getting soon from you includes the additional
12 information we would need to look at to evaluate those
13 potential increases.

14 Is that a fair characterization of what I would
15 call your third issue?

16 MS. KATZ: They would help. They would help
17 evaluate those issues. They're not all of it, because this
18 is rough data. That's why an effluent pathway study needs
19 to be done, because we don't have the answers to it.

20 But we feel that it is incumbent that this study
21 be done to understand the effects of tritium on the citizen
22 population living in an effluent pathway, or we may find out
23 it has no effect, and we'll be all immensely relieved.

24 MR. DUDLEY: I understand. What I would call your
25 fourth issue, then, will be the issue of prior notification,

1 and that you have requested the NRC to implement some sort
2 of prior notification of the public before all releases of
3 liquid or airborne radionuclides, and before all
4 transportation of radioactive waste.

5 Is that a proper characterization of your concern
6 and request?

7 MS. KATZ: Also, I want the transport lines, so we
8 have a sense of where it's going to be going, so we can make
9 the choice there. So it's in terms of that, as well in
10 terms of the decommissioning process.

11 I just want to go back to three, because it's also
12 in terms of worker health. [Telephone interference] left
13 only, and the issues in some ways of ALARA, and the
14 exposures to workers unnecessarily to larger doses of
15 radiation in terms of working on that hot reactor at this
16 point, than need be if the reactor was put into safe store
17 for 50 or 60 years.

18 MR. DUDLEY: Okay. And in that light, I'll say
19 that your fifth concern was regarding the increase in
20 occupational radiation exposure to workers at the Yankee
21 facility, caused by the licensee's early component removal
22 program.

23 MS. KATZ: The concern we have, during the
24 process, that if Yankee continues to go in and out of safe
25 store, and is able to work on this hot reactor, because in

1 10 or 15 years, there isn't a very big difference -- or
2 seven years -- in terms of how hot that reactor is.

3 In 50 years, there will be a big difference. I
4 mean, that's one of the issues that was raised by Shearson
5 Lehman in their report, that they feel that reactors should
6 wait 50 to 60 years before they dismantle.

7 MR. DUDLEY: Well, have you submitted, or will you
8 submit to us, the Shearson Lehman report that you are
9 referring to?

10 MS. KATZ: Yes, I will. It's being sent to us.

11 MR. DUDLEY: Okay. Or, if you could give us the
12 reference, it may be that we already have that report.

13 MS. KATZ: Okay. When I have it, we will send
14 that information on to you.

15 MR. DUDLEY: Okay. Fine. So, do you think I have
16 summarized your five concerns accurately, or should I go
17 back and go over them again?

18 MS. KATZ: I somehow think we should go over it
19 again if it doesn't drive everyone crazy, because we added
20 to it.

21 MR. DUDLEY: Okay. This is Richard Dudley. The
22 first issue that I have from you, Debbie, is that the NRC
23 should fund an effluent pathway study of releases from the
24 Rowe facility.

25 The second concern was that the NRC should

1 generically reevaluate NRC radiation protection or dose
2 standards for low-level exposure to low-level radiation, and
3 specifically considering the different aspects of exposure
4 to tritium that you will providing us information on.

5 MS. KATZ: Yes. And the issue of microdose
6 symmetry.

7 MR. DUDLEY: I understand. The third issue is
8 that the NRC should look at the potential increases in
9 cancer and other health issues that may be caused by
10 releases from Yankee.

11 And this would be that we would evaluate data that
12 you will be providing us and that we should get shortly via
13 courier.

14 The fourth issue that I have is the request for
15 prior notification of the public for all effluents to be
16 released from Yankee, and all transport and the routes of
17 transport of all low-level radioactive waste from Yankee.

18 And the final issue was the concern about
19 increased exposure to -- occupational exposure to radiation
20 -- workers due to the early component removal program,
21 compared to removal of those components had they been left
22 in safe store for 30 or 40 years.

23 MS. KATZ: Sixty.

24 MR. DUDLEY: Sixty. Okay.

25 MS. KATZ: That's good.

1 MS. FERRIS: I'd like to speak. Jean Ferris.

2 MR. DUDLEY: Please go ahead.

3 MS. FERRIS: The only thing that I wanted to add
4 to that was, in number three, in the third issue, I'd like
5 to just have it stated for the record that it would be to
6 study the ill health effects of high cancer rates, as well
7 as Down's syndrome and other chromosomal damage.

8 MS. KATZ: Good, Jean. Thank you for clarifying
9 it.

10 MR. DUDLEY: Yes. Fine. We have that.

11 MS. FERRIS: Okay.

12 MR. DUDLEY: The information that you will be
13 providing to us also includes the information on Down's
14 syndrome incidents, is that correct?

15 MS. KATZ: Provides some of it. We can provide
16 some more information. The bibliography, in fact, has
17 references to Down's syndrome, and the letter from Dr.
18 Knorr, which I haven't received yet, should also have
19 information on that. And you can also contact him, and Dr.
20 Cobb, for more information.

21 MR. DUDLEY: Can you tell us when we might receive
22 the additional information from those two doctors, and could
23 you also spell their names? We would be guessing as to how
24 to spell their names.

25 MS. KATZ: There's Sydney Cobb, C-o-b-b and it's

1 Dr. Robert Knorr, K-n-o-r-r.

2 MR. DUDLEY: Okay. And when might we expect to
3 receive that information?

4 MS. KATZ: I am waiting for the letter from Dr.
5 Knorr to come in the mail. It's been delayed. So once I
6 get it, it should come sometime this week, and I should be
7 able to send it out to you.

8 MR. DUDLEY: So we should get that in a week or
9 two.

10 MS. KATZ: [No response.]

11 MR. DUDLEY: So we should expect that information
12 in a week or two, is that correct?

13 MS. KATZ: Yes, you can expect it in a week or
14 two.

15 MR. DUDLEY: Thank you.

16 MS. KATZ: Okay.

17 MR. DUDLEY: I'd like to back up and try to
18 summarize the issues raised by Fred Katz -- this is Richard
19 Dudley again -- in the initial discussion.

20 Fred, is that okay with you?

21 MR. KATZ: Yes.

22 MR. DUDLEY: Fred, the notes I took on your
23 statement were that you had two concerns. The first was
24 that since there was no epidemiological study done of the
25 Deerfield River Valley, that you feel the 1987-1988

1 environmental report done by the licensee for operation of
2 the Yankee facility was invalid, and because of that,
3 reliance by, perhaps, the NRC and the licensee on
4 information in that report, to review decommissioning
5 environmental impacts, you feel that review of the
6 decommissioning environmental impacts would also be invalid.

7 And because of that, your issue that you raised
8 was that the plant should be ordered to terminate the
9 component removal activities until a complete adjudicatory
10 hearing was completed.

11 Is that a fair characterization of the first
12 concern?

13 MR. KATZ: Well, it doesn't exclude the issue of
14 access to decommissioning funds, which are also dependent
15 upon a review of the safety issues, and also, are, in fact,
16 going ahead without a competent environmental report which
17 is required for access to these funds.

18 MR. DUDLEY: This is Dudley. So the plant should
19 be ordered to terminate component removal and suspend all
20 use of decommissioning trust funds until a complete hearing
21 is held.

22 Is that a better characterization?

23 MR. KATZ: Yes. That's our concern.

24 MR. DUDLEY: Just one moment with me, while I take
25 a note on that.

1 The second concern that you raised, Mr. Katz, was
2 that Dr. Sydney Cobb of the Massachusetts Department of
3 Health had data on environmental impact of Yankee during its
4 past operation.

5 And that appears to be an issue that was
6 elaborated upon further in detail by Debbie Katz. So is it
7 fair to say that her characterization of that issue
8 supercedes, or is a more detailed presentation of what your
9 concern was?

10 MR. KATZ: Katz. Yes. Yes.

11 MR. DUDLEY: Okay. This is Dudley again. So,
12 Fred Katz, I just have then the one issue that you raised,
13 that we have talked about before, with the understanding
14 that your second issue was superceded by the detailed
15 information and discussion that was provided later by Debbie
16 Katz.

17 MR. KATZ: That's right, that the environmental
18 report is not a competent report on which to base operation,
19 or component removal, or access to funds, and she went into
20 these health concerns that have been unreviewed.

21 MR. DUDLEY: This is Richard Dudley. Are there
22 any additional concerns or statements that the members of
23 the Citizens Awareness group, or any other members of the
24 public on this conference call, that they would like to make
25 regarding the Yankee Rowe activities at this time?

1 MR. GUNTER: Yes. This is Paul Gunter, Nuclear
2 Information and Resource Service. Yankee is currently
3 proposing this component removal under 10 C.F.R. 5059.

4 And they're basically saying, and I believe the
5 NRC has agreed, that this component removal does not result
6 in any unreviewed safety issues.

7 I'm wondering if the NRC will supply for us the
8 citations where the component removals that are being
9 constituted here in Yankee's proposal have been duplicated,
10 to the degree that Yankee is proposing to conduct this
11 procedure, and as it's been pointed out, results in 90
12 percent of the non-fuel activity.

13 MR. DUDLEY: This is Richard Dudley. Paul, I
14 don't believe I followed your request or your question.
15 Could you restate what it is that you would like to
16 determine if it was duplicated? I didn't quite understand.
17 If you would restate your comment or request, please.

18 MR. GUNTER: I'll try to put it in simple
19 language. Yankee has basically presented that they can
20 proceed under 10 C.F.R. 5059 for the component removal of
21 four steam generators, pressurizer, and reactor internals,
22 as part of this operation maintenance rule, which will
23 constitute 90 percent of the non-fuel activity at the
24 reactor site.

25 And they are being permitted to conduct this

1 component removal with the proviso that it does not
2 constitute unreviewed safety issues. What I would like from
3 the NRC or from Yankee, are the citations where these issues
4 have come up before; where is the documentation that
5 constitutes that this component removal has -- safety issues
6 raised in this component removal -- have been addressed.

7 Does that make it clearer?

8 MR. FAIRTILE: Paul, this is Mort Fairtile. I
9 think what you are referring to are the safety evaluations
10 prepared by Yankee to support their doing this work. Is
11 that what you mean?

12 MR. GUNTER: Okay. This is Gunter. As I
13 understand, they are proceeding on the component removal
14 under 10 C.F.R. 5059, is that correct?

15 MR. DUDLEY: Yes. That is correct.

16 MR. GUNTER: Okay. And that the provision that
17 they are being granted to proceed on the component removal
18 under 10 C.F.R. 5059 is, that it does not constitute
19 unreviewed safety issues. Am I correct?

20 MR. DUDLEY: That is correct.

21 MR. GUNTER: Okay. It seems to us, I mean, from
22 our position, that this the removal of 90 percent of the
23 component -- that this component removal representing 90
24 percent of the non-fuel activity on site -- constitutes an
25 unprecedented procedure.

1 And we would like to see the body of works that
2 establishes that all safety issues raised by the removal of
3 this material, by the transport of this material, have been
4 addressed in prior operations, or if in fact this has not
5 been reviewed before.

6 MR. DUDLEY: This is Richard Dudley. So your
7 request is to have access to the analysis that indicates
8 that there are no unreviewed safety issues associated with
9 these early component removal activities.

10 MR. GUNTER: This is Gunter. I think what we
11 would like is a clarification of whether these are in fact
12 issues that are addressed through probablistic risk
13 assessment, or whether they have been addressed through
14 actual experiential work, or if in fact these are basically
15 computer models.

16 I think that, at least from our position, and from
17 public concern's position, there is a difference. And we
18 just want to know which is what.

19 MR. FAIRTILE: This is Fairtile. They did it on
20 an engineering basis. There was no probablistic risk
21 assessments performed for this work.

22 It was done on an engineering basis, and it is
23 based partially on other plants that have done similar work,
24 and it is based partially on our generic environmental
25 impact statement, which I think is New Reg. 0578.

1 And that particular document establishes a certain
2 envelop that you can work within. This envelop deals with
3 the impact on the environment, radiation effects, things
4 like that.

5 So they did an internal engineering study along
6 these lines looking at the safety aspects, the radiation
7 aspects, the transportation, and all of that sort of thing.

8 And the whole purpose of 5059 is that the licensee
9 performs this analysis and makes a determination that he
10 needs not come in to NRC to get our prior approval. We
11 wrote him a letter dated July 15th, I believe it was, saying
12 that we had no objection, because he met certain criteria
13 that we established for his doing this work.

14 MR. GUNTER: Okay. This is Gunter. What I think
15 is it raises a question for us, and what we would like,
16 would be for you to provide us with information for
17 clarification purposes, that basically can provide us with
18 assurances that the procedures that Yankee is conducting do
19 not -- I mean in the proportions that they're proposing here
20 -- do not constitute unreviewed safety issues.

21 For example, we would like to see the specific
22 references to plants where the -- I can understand for a
23 steam generator -- or the steam generator issues -- and I
24 think that there is evidence of that.

25 We would like to see the documentation for reactor

1 internals as well, and as well as instances for, you know,
2 for the reactor pressurizer.

3 MR. FAIRTILE: Okay. The reactor internals, they
4 are only going to ship those internals that are below class
5 C which is a class, a level of radiation that is acceptable
6 at low-level waste disposal sites.

7 And that will be shipped in casts, and that has
8 been done at everyone of the 100 reactors in operation.
9 There is nothing unique or unusual about that.

10 I don't know of any other pressurizer that has
11 ever been shipped out. But the curie burden of their
12 pressurizer is below that of their steam generator. So
13 their steam generator shipments would envelop their
14 pressurizer shipment.

15 MR. GUNTER: Okay. This Gunter. Can we get that
16 material?

17 MR. DUDLEY: This is Richard Dudley. That
18 material has been reviewed and evaluated by the NRC in an
19 inspection, and the results of our evaluation will be put
20 forward in an inspection report.

21 We will raise the issue to our management of to
22 what extent we can go, and perhaps potentially copy this
23 material that is the property right now of the licensee, and
24 decide whether it is acceptable to provide that information
25 to you. We will look into that issue.

1 MR. FAIRTILE: This is Fairtile. We don't require
2 a licensee to submit its 5059 safety analyses to us. And I
3 think Mr. Dudley gave you the right response. We do audit
4 them. We do inspect them.

5 In fact, we did inspect these particular safety
6 analyses, and the inspection report Mr. Dudley mentioned
7 will be issued in late August. And I can even give you the
8 inspection report number. It will be 93-05.

9 Paul Harris, are you on the line?

10 MR. HARRIS: Yes, I am.

11 MR. FAIRTILE: Did I misspeak?

12 MR. HARRIS: You did not. The end of the
13 inspection period is July 31st. And during this month, the
14 report should be issued.

15 MR. GUNTER: This is Gunter. Could I get the
16 inspection report number again, please?

17 MR. FAIRTILE: Yes. The full number is
18 50-29/93-05. And it should be coming out in two to three
19 weeks. Mr. Harris would probably have a better feel for
20 that.

21 MR. GUNTER: This is Gunter. This would be under
22 the Rowe docket.

23 MR. FAIRTILE: Correct. This is Fairtile. 50-
24 29, right.

25 MR. GUNTER: This is Gunter again. I still have

1 concerns with regard to the fact that the safety analysis
2 from Rowe on this component removal -- the review by NRC is
3 not required.

4 I mean, how can the NRC basically take the
5 utility's word that the processes that they are reviewing,
6 or that they're proposing, did not constitute unreviewed
7 safety issues?

8 MR. FAIRTILE: This is Fairtile. While we don't
9 review 50-59 analyses, we do have the ability to audit them.
10 The licensees, you know, do maybe a 1,000 of these a year,
11 or maybe more. We look at all the important ones. Anytime
12 a licensee does any, you know, large analysis of this type,
13 we inspect them. We audit them.

14 MR. DUDLEY: This is Richard Dudley. So in this
15 case, although the NRC did not review and give the licensee
16 prior approval to undertake these activities, the NRC did,
17 in the form of an inspection, audit these reviews performed
18 by the licensee by reviewing these records at the licensee's
19 facility, and our evaluation of that inspection will be
20 published in the inspection report number that we have given
21 you.

22 But Mr. Gunter, I still have as an issue that you
23 raised, a request for us to provide you with the licensee's
24 actual analyses. Is that a fair characterization of the
25 issue you raised?

1 MR. GUNTER: This is Gunter. I think that what we
2 are looking for is a level -- to establish a level of
3 confidence that processes that are being proposed by Yankee
4 Rowe removal do not constitute unreviewed safety issues.

5 We would like any information that can
6 establish that the reactor internals in question -- I think,
7 see, when we're told that 90 percent of the non-fuel
8 activity is being removed, that must be more than class C
9 waste.

10 And so, consequently, we would like see that 90
11 percent broken down, and to have established that in fact it
12 does not constitute unreviewed safety issues. Because it
13 appears to us that in fact the process at this stage
14 represents a precedent.

15 And that raises a number of concerns for us, and
16 all we are really asking for you is to establish a level of
17 confidence that in fact these issues have been reviewed.

18 MR. DUDLEY: This is Richard Dudley. So in
19 response to your concern, we have stated that the NRC has
20 inspected and audited these evaluations, and will document
21 our results of that in the inspection report number that we
22 have given you.

23 And we will evaluate, raise the issue with higher
24 levels of management, whether we could provide to you, or, I
25 guess, put on the docket, these evaluations done by the

1 licensee that we inspected.

2 Does that appear to respond to your concern?

3 MR. GUNTER: This is Gunter. Yes. I believe this
4 would be a start. What my second question is, is that with
5 regard to the timetables for the removal of the components,
6 where does that fit in with the issuance of the inspection
7 report?

8 And, see, again, it raises the whole question of
9 providing some opportunity for the public to see what's
10 actually being removed here, and you know, the whole concern
11 that in fact the issuance of these reports represents
12 nothing more than hindsight to the public.

13 MR. FAIRTILE: This is Fairtile. The program, the
14 licensee has been involved in component removal for many
15 months. He has not yet reached -- he has done things like
16 asbestos removal, preparation of the plant, building of
17 scaffolds, things like that.

18 He hasn't yet started any of the critical items
19 like cutting pipe. That will probably start in late August.
20 He'll start cutting pipe maybe the third week in August, and
21 actually start shipping steam generators into the fall.

22 I believe he plans on taking a break during the
23 winter months, and resuming shipments again next spring, and
24 having them all completed by the end of June. I can't give
25 you firm dates, because the licensee doesn't have firm

1 dates. All these jobs are interrelated.

2 They are very complex, an usually there are
3 unplanned delays in these things, due to weather, having the
4 right people at the right time, and things like that. But
5 the actual cutting, which would signify the real beginning
6 of the job would start, I would say, the second or third
7 week of this month -- within a week or two from today.

8 MS. KATZ: This is Katz. Are we going to be given
9 prior notification of the beginning to cuts?

10 MR. FAIRTILE: This is Fairtile. That is --

11 MR. DUDLEY: This is Richard Dudley. We have that
12 listed as an issue that you have raised. We can't respond
13 to that now. The licensee has certain notification
14 requirements under existing federal regulations that we will
15 make certain that they comply with, but the extent as to
16 which releases and the level of notification for various
17 releases, probably does not go to the level that you have
18 requested that notification be done. But we have that noted
19 as an issue that you have raised that we will peruse.

20 MS. KATZ: Thank you. We have attempted to
21 pressure Yankee to give us prior notification, and the
22 Department of Health in Massachusetts has asked Yankee to
23 give prior notification, and they have refused.

24 MR. DUDLEY: This is Richard Dudley. Are there
25 any other statements or comments from members of the

1 Citizens Awareness group at this time?

2 MR. KATZ: Yes. Yes.

3 MR. DUDLEY: Please go ahead.

4 MR. KATZ: This is Katz. I actually have two.

5 One of them is that in the correspondence between me and the
6 NRC, include a lot of information and statements in regards
7 to [telephone interference]. And, in fact, the NRC is
8 giving permission to dismantle now, and in fact, [telephone
9 interference] to me on the telephone, because it would
10 really represent a savings of a lot of money.

11 But in fact, the Shearson Lehman report says that
12 it is in fact more costly in that respect, and we would like
13 a response to that in your response.

14 And in addition, the entire technique and
15 procedure for beginning the decommissioning process seems to
16 us to be a violation of the ALARA -- the principle of ALARA,
17 because, in fact, the NRC documents themselves show that
18 there is a vastly different exposure experience potentially
19 in the various kinds of decommissioning options chosen.

20 [Telephone interference] nuclide inventory from
21 the site [telephone interference]. A situation where the
22 task of decommissioning higher exposure [telephone
23 interference] for workers, and the public. And I would like
24 this, what seems to be really contradictory process to be
25 addressed.

1 MR. DUDLEY: Fred, let me try to restate your
2 concern. This is Richard Dudley. Your concern -- it's two
3 concerns. One was that Shearson Lehman says that a safe
4 store decommissioning, according to what you say -- the
5 report that as you read it -- Shearson Lehman says that safe
6 store is more costly, so why --

7 MR. KATZ: Less --

8 MR. DUDLEY: I'm sorry -- is less costly, and
9 therefore, why does the NRC allow the licensee to proceed
10 with another alternative, even though the licensee says that
11 for them, that other alternatives would save money.

12 Is that a characterization of your issue?

13 MR. KATZ: Katz here. Yes. Well, yes, I mean the
14 licensee is always bringing up the issue of costs, and the
15 NRC never says to them: Listen, don't talk to us about
16 costs. Talk to your banker or your stockholders.

17 But they seem to receive these communications and
18 I assume that they're relevant to your concerns. And you
19 never exclude them from these communications. So that, in
20 view of that, the Shearson Lehman analysis is very relevant,
21 and should be, therefore, addressed.

22 MR. DUDLEY: This is Dudley. Your second concern
23 was on occupational radiation exposure. But I think that is
24 duplicative of another concern that we had raised by Debbie
25 Katz, so I'm not going to address that one separately.

1 MR. KATZ: Well, I don't know whether it was --
2 Katz here -- in terms of the principle of ALARA. I think
3 she raised it in terms of some generalize humanitarian
4 concerns.

5 So I would like it specifically to be addressed in
6 the terms of the principle of ALARA, which I am completely
7 confounded by [telephone interference] what the experience
8 we're having right now.

9 MR. DUDLEY: Are there any additional comments,
10 questions, or concerns at this time?

11 MR. KATZ: I don't believe there are at this time.

12 MS. KATZ: What I would like to know is what
13 process is going to take place, and how what's going to
14 happen to what we have raised; how it will get worked on and
15 how we will continue working on it. Debbie Katz.

16 MR. DUDLEY: This is Richard Dudley. We have a
17 transcript that has been made of this discussion. We have
18 attempted to summarize the issues that you have presented,
19 and to the ones that we have reiterated during the meeting
20 we will -- I guess, a good way to proceed would be for us to
21 issue a written summary of the issues, and then we will, I
22 believe, take these issues and treat them in the form of an
23 allegation -- consider these, perhaps, as having been -- we
24 will investigate as to whether the allegation process is how
25 these issues should be handled on the short-term basis, but

1 we will deal with these issues, and give you, I guess a
2 docketed response on all of them, which was an agreement
3 that we made earlier with Fred Katz.

4 MR. GUNTER: This is Gunter. When you say that it
5 will be treated as an allegation, are your referencing 10
6 C.R.F. 10.206?

7 MR. DUDLEY: No. Let me restate my position on
8 that. We will first investigate the transcript to see if
9 there are any issues raised that would fall under the
10 category of allegations. And there may not be.

11 At this point, it looks like there might not be
12 any issues that come to that level, but we have already --
13 we have previously agreed with Fred Katz that we will
14 respond to him with formal written responses to all of the
15 issues.

16 And that was the reason that I was summarizing for
17 the purposes of the record -- a summary of the issues that
18 were raised.

19 Are there any more issues or concerns at this
20 point?

21 MS. KATZ: So that -- I'm a little confused. The
22 next communication we may get from you, is it a PDLR? Is
23 that it? Are we going to talk to you guys again, or, is
24 this it? I just wonder. I don't know the process. I'm
25 sort of a novice at this it. So I would just like some more

1 clarification of the step after, you know, you're going take
2 their concerns, and then you're going to review them, and
3 then what happens?

4 MR. DUDLEY: We will -- it's possible that the
5 next response you get from us will be our written response.
6 Or, if necessary, we might contact you if we need additional
7 information in various areas.

8 But first, when we get your first submittal that
9 you have transmitted, and we get the two additional packets
10 of information that you have promised, we will evaluate that
11 information with respect to the issues that we have
12 summarized here.

13 And then if we need additional information, we
14 will contact you, if we do not, we will respond to you on
15 these issues formally in writing. And I guess we would sent
16 the correspondence to the address that we have for the
17 Citizens Awareness Network.

18 MR. FAIRTILE: This is Fairtile. Is that still a
19 valid address that we have on our service list, and if not,
20 could you please give me one over the phone right now?

21 MR. KATZ: The address for the Citizens Awareness
22 Network remains the same. It's Box 83, Shelborne Falls.

23 MR. FAIRTILE: Okay. That's the one we have.
24 Right.

25 MR. GUNTER: This is Gunter. I would like to add

1 Nuclear Information and Resource Service, 1424 16th Street,
2 N.W., Suite 601, Washington, D.C., 20036.

3 MR. DUDLEY: This is Richard Dudley. At this
4 point, I would prefer that the Citizens Awareness Network
5 provide you that response, if they would commit to do so.

6 MR. GUNTER: This is Gunter. We are raising the
7 question with regard to the unreviewed safety issues on the
8 50-59, for our own concern, and we'd like to have that
9 addressed directly.

10 MR. DUDLEY: Mr. Gunter, we have our legal counsel
11 here, and perhaps --

12 MR. REIS: Mr. Gunter, you were invited by C.A.N.
13 And we think that it would be better if any communication
14 went through them. This was a C.A.N. meeting, a meeting
15 with C.A.N. and us. As a courtesy, you were invited to be
16 here. At this point, we will respond to you through C.A.N.

17 MR. GUNTER: Thank you. What does C.A.N. have to
18 say about that?

19 MR. KATZ: What can we do in response? We could
20 only protest to our colleagues that they have their concerns
21 addressed directly. I don't have any grenade launcher so
22 that what can I say except that I protest.

23 That's all we've been able to do, is protest.
24 [telephone interference] have a hearing, an adjudicatory
25 hearing, which would make all your work a lot easier than

1 this informal, illegal, chaotic process that we refuse to
2 agree, will replace a legal, decent way of going about
3 dealing with these life and death --

4 MR. DUDLEY: Hello? Okay. This is Richard
5 Dudley. We can send this one response to the Nuclear
6 Information and Research Service. We will do that.

7 MR. GUNTER: Okay. Thank you. This is Gunter.

8 MR. FAIRTILE: We need your address again.

9 MR. DUDLEY: Would you give us the address again,
10 slowly, to make sure we have it correctly in the record?

11 MR. GUNTER: Okay. This is Gunter. It's Nuclear
12 Information and Resource Service, 1424 16th Street, N.W.,
13 Suite 601, Washington, D.C., 20036; 202-328-0002. And to my
14 attention, please, Paul Gunter, G-u-n-t-e-r.

15 MR. DUDLEY: Are there any more comments at this
16 moment?

17 MS. KATZ: I would just like to get a sense of the
18 time line. Will we get a response to this before they begin
19 to cut?

20 MR. DUDLEY: I highly doubt it. We will likely
21 not have received all the information from Citizens
22 Awareness Network to begin our look by that time, but we
23 will respond in a timely fashion as soon we get the
24 information that we need to look into these things.

25 MS. KATZ: Debbie Katz. I guess there is nothing

1 we can do about that. Would you put off their cutting until
2 these issues are addressed?

3 MR. DUDLEY: That was Debbie Katz. We have heard
4 no information at this point that would cause us to order
5 the licensee to terminate these early component removal
6 activities.

7 But we will review the additional information that
8 you plan to provide us. But at this point, we have heard no
9 information that would cause us to order that these
10 activities be stopped.

11 MR. KATZ: Well, unfortunately, you have no
12 information to review [telephone interference] allow them to
13 proceed, and now you're telling us you have no information
14 to review to order them to stop. [Telephone interference]
15 illegal, illogical, and chaotic, and we need to have a
16 hearing.

17 I would like to say it again, and I think I stand
18 in the same place that the chairman of your commission
19 stands, and we would like to support him, as a matter of
20 fact, and we would like to give him our appreciation for his
21 input into this at this time. And I don't think there's
22 anything more we can say.

23 MR. DUDLEY: Okay. Thank you very much.

24 THE REPORTER: Was that Debbie Katz that spoke?

25 MR. KATZ: That was Debbie Katz, the Chairman of

1 the Health Committee.

2 MR. DUDLEY: You said that that was Debbie Katz.

3 MR. KATZ: Yes.

4 MR. DUDLEY: Okay. Thank you very much.

5 MS. KATZ: Thank you.

6 MR. KATZ: Thank you. Good afternoon.

7 [Whereupon, the conference was concluded.]

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REPORTER'S CERTIFICATE

This is to certify that the attached proceedings
before the United States Nuclear Regulatory
Commission
in the matter of:

NAME OF PROCEEDING: NRC Telecon with Citizens
Awareness Network

DOCKET NUMBER:

PLACE OF PROCEEDING: Rockville, MD

were held as herein appears, and that this is the
original transcript thereof for the file of the
United States Nuclear Regulatory Commission taken
by me and thereafter reduced to typewriting by me
or under the direction of the court reporting
company, and that the transcript is a true and
accurate record of the foregoing proceedings.

Clifford Thompson
Official Reporter
Ann Riley & Associates, Ltd.