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BEFORE THE UNITED STATES
NUCLEAR REGULATORY COMMISSION

IN RE: THE MATTER)
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OF)
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THE NUCLEAR REGULATORY)
COMMISSION'S BELOW REGULATORY)
CONCERN POLICY STATEMENT)

TRANSCRIPT OF PROCEEDINGS had in the above-entitled matter at The Holiday Inn O'Hare, Rosemont, Illinois, on the 28th day of August, A.D. 1990, at 1:00 p.m.

PRESENT:

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NRC Region III;

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Office of Nuclear Regulatory Research, NRC;

MR. JOHN W. N. HICKEY,
Office of Nuclear Materials Safety and Safeguards, NRC;

L. J. CUNNINGHAM,
Office of Nuclear Reactor Regulation, NRC;

MR. ROBERT FONNER,
Office of General Counsel, NRC.

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MR. PAPERIELLO: Let's get started. We have a long afternoon. We have at the last count 34 individuals who wanted to say something, and we are going to try to end by 6 o'clock tonight. At least, as sort of a practical problem, it's the period of time we rented the room and have court reporter coverage.

Good afternoon. I am Carl Paperiello. I am the deputy regional administrator for the NRC Region 3 office located in the Chicago suburbs.

I am pleased to speak to you today on the Nuclear Regulatory Commission's Below Regulatory Policy.

Also here today are Donald Cool, Chief of the Radiation Protection and Health Effects Branch, Office of Nuclear Materials Safety and Safeguards -- excuse me. He is the Office of Nuclear Regulatory Research.

John Hickey is Chief of the Industrial and Medical Safety Operations Branch,

Office of Nuclear Material Safety and Safeguards.

Jay Cunningham, Chief Radiation Protection Branch, Office of Nuclear Reactor Regulation; and Robert Fonner from the Office of General Counsel.

In addition, there are several other NRC representatives from the NRC headquarters regional offices in the audience.

A few words about the conduct of the meeting. There will be two additional NRC presentations in addition to my opening remarks. First, to discuss the basis of the radiation dose criteria set forth in the policy statement and second, to discuss how the policy will be implemented.

We will then take a short break and invite oral statements from those who requested in advance to make a prepared statement.

As noted in the Federal Register Notice, oral statements are limited to five minutes. If you have written statements, please

give them to the secretary at the door.

I have to ask you to limit your statements. Because of the number of people we have who want to speak, and some additional people that we have made provisions for, a number of local elected officials who wish to speak that came in at the last minute, somebody is going to be deprived of an opportunity if we go over.

After an hour of oral presentations, the panel will answer questions from the audience for an hour.

If you wish to ask a question, please get a card at the door and write your question, along with your name and address, if you wish, and give it to the secretary.

We will then take starting at 4 o'clock the remainder of all the oral statements. If we finish before 6:00, we will go on with more questions or additional statements from people who haven't signed up in advance.

Questions that remain unanswered will be reviewed with other issues and published in our meeting report.

This meeting will be transcribed, as will other regional meetings. The intention of the NRC is to gather all the statements and questions, identify the issues raised and publish a report responding to the issues raised at public meetings.

I expect the Commissior will consider these issues as they relate to the policy before the Commission approves any practice that implements the policy.

You will find at the door an agenda for the scheduled speakers, copies of the slides used by the NRC speakers, the Commission policy statement and a booklet that discusses the policy.

The Atomic Energy Act gives the NRC the responsibility to regulate the uses of nuclear material in the public interest and to protect the public health and safety.

Knowing that protection of the public health and safety is our prime concern, we might ask why is the NRC pursuing a BRC policy? Even if only very small amounts of radioactive material are released as a result of this policy, isn't even a small amount too much?

This question goes to the heart of our rationale for BRC policy. If the public would not be better protected with the policy than without it, we have no business allowing BRC exemptions.

Let me emphasize we are convinced that the public would be better overall protected within this policy because it enables people using and regulating radioactive materials to concentrate their efforts on more consequential risk.

Let me give you an example. Let's say you are packaging waste for shipment to a disposal facility and you have two kinds of waste, one clearly above normal background

radiation levels and another kind you believe might be contaminated but you can't detect whether its radioactivity is from contamination or from the radioactivity found naturally in almost every substance.

Common sense suggests that after making your radiation surveys and other checks on the origin and documentation of the material, you and the public will be better off if you spent your time and money making sure that the more radioactive waste, which is more of a health hazard, is well and safely packaged.

A similar logic would apply to very slightly contaminated material that could be shipped for recycling instead of disposal and to the decontamination of defunct facility sites.

This way of thinking has been the Commission's statutory mandate for the onset of a regulatory program.

The Atomic Energy Act provides for the exemption of quantities or uses of radioactive materials that will not constitute

an unreasonable risk to the public health and safety and the environment.

Since the beginning of regulation, certain uses have been exempt from regulatory control. Some of these, such as uranium glazes and the thorium in gas mantles, predate the nuclear age. Other exemptions involving man-made radioisotopes permitted new uses of radioactive material in consumer products, such as smoke detectors.

Still other exemptions acknowledge the reality that uranium and thorium source material are present naturally in some concentration in almost every substance on the surface of the earth.

Although experience has shown that these exemptions have not resulted in any significant risk to the public, they are not based on any consistent criteria for radiological dose.

The NRC Below Regulatory Concern policy statement provides licensees and the NRC

staff guidance on an acceptable radiation dose level when reviewing the risk associated with certain activities involved in the use of nuclear materials where these risks are so low that the activity need not be further controlled by the regulator to protect the public health and safety.

Existing exemptions will be evaluated against these criteria and will be tightened as needed to assure a consistent and proper level of protection.

In 1985, the United States Congress directed the NRC to develop standards and procedures and act on petitions to exempt waste streams with very low concentrations of radionuclides from regulatory concern -- regulatory control. This legislation referred to these low concentrations as Below Regulatory Concern.

In 1986, the Commission issued a policy statement to provide procedures for processing petitions for such waste disposals.

In addition to exemptions for consumer products and waste stream, this policy will also be used for decommissioning and decontamination of nuclear facilities. Currently, decommissioning is conducted on a case by case basis using regulatory guidance that has evolved with time. These criteria need revision to reflect the state-of-the-art ability to calculate effective radiation doses through multiple paths and relate these to risk.

From a practical viewpoint, you cannot decontaminate to zero. You can only decontaminate to nondetectability. Detectability varies widely with radioactive elements and the amount of money you are willing to spend on the analysis.

The ultimate physical limit is the presence of natural radioactive material due either to thorium and uranium, present in almost everything around us, as well as cosmic ray induced radioactive elements.

The Commission has recently

established rules requiring decommissioning funding for all large facilities and most mid-size ones. To ensure that funds are adequate, some target level of residual radioactivity must be defined.

Defining a detection limit that must be met for radioactivity and defining a BRC dose practically amounts to the same thing. A limit based on BRC, however, gives greater consistency within a more general exemption policy and can more easily be related to risk.

This policy could permit solid material containing low levels of radioactivity not previously exempted from licensing to be disposed of in other than a low-level waste disposal site.

Note that I say "not previously exempted." Most things placed in non-nuclear waste disposal sites contain thorium and uranium already exempted due to its low concentration. Because radiation and radioactive material are pervasive in our environment, practicality

eventually requires an exemption limit.

Chairman Hart has noted that we run the risk that the wastes requiring disposal in a licensed facility are cleaner than the environment we are trying to protect.

If one accepts that BRC policy is needed for sound practical reasons, how can one identify a dose limit sufficiently low to say at this point it's not worth spending any more resources to lower the dose?

The Commission works in two approaches. One approaches is to identify dose levels whose associated risk is comparable to other societal risks that are considered acceptable. On the other hand, we can identify changes in natural background dose and practices that increase our exposure to natural background radiation that society will not spend resources to avoid.

In fact, the variation in background radiation in the United States is considerably greater than the dose limits in the

Commission policy.

The policy's individual dose of 10 millirem per year for small limited numbers of people is comparable to the difference between the incremental radiation associated with living in a brick house versus [illegible] house. And a 1 millirem per year criteria for large numbers of people corresponds to the incremental radiation dose caused by change in elevation of 200 feet above sea level. The average difference in natural background radiation between Chicago and Denver is about 60 to 70 milirem per year.

An absorbed dose of several millirem corresponds to a theoretical lifetime health hazard risk of a few chances per million.

Current reports from the National Academy of Sciences as well as the United Nations Scientific Committee state: For exposures comparable to external natural background radiation, the possibility that there is no risk cannot be ruled out.

On the other hand, there are many other practices characteristic of our society that result in exposures of several mil irem per year above background for certain members of society. These include the use of phosphate fertilizer, combustion of fossile fuel, the use of televisions and video display terminals and any number of industrial mining and smelting practices.

It hardly seems reasonable to require material which may contain less radioactivity than fertilizer, potash or smelter slide to be sent to a licensed radioactive waste disposal site just because it originated in a nuclear fa..lity such as a hospital, university or power plant.

Dr. Cool will discuss the dose criteria policy further.

Let me conclude by clarifying a few misconceptions. First, the BRC policy will not in itself allow anyone to engage in new exempt practices. Rule-making or licensing actions

will first be required.

Decisions on these actions will be made only after detailed staff analysis and consideration of public comment.

Second, exemptions are not uncontrolled. Licensees granted exemptions will be required to meet appropriate constraints before transferring the material to exempt status.

John Hickey will discuss how the policy will be implemented.

I will now call upon Dr. Cool to discuss the BRC dose limit.

DR. COOL: Thank you, Dr. Paperiello.

Let's first start by reviewing once again what the objectives of the Nuclear Regulatory Commission's Below Regulatory Concern policy statement were. Those objectives are to continue to meet our mandate for public health and safety. And then within that objective, to establish a broadly applicable risk base framework within which we can make decisions

with regard to what materials need the full range of controls for public health and safety and which kind of materials may not need that full change of controls and, therefore, may be all or partially exemptable.

To meet those objectives, the Commission has established several conditions under which an exemption may be the appropriate regulatory approach. First of all, once again, we have to establish that the public health and safety has been adequately protected. And then within that, to determine that the application of regulatory controls does not result in any significant change to the dose as a result of that practice or that the costs of the controls that could be imposed is such that there is no balancing with result to the risk, that would actually be reduced, as a result of those changes in controls.

To meet those basic conditions, to allow information on a quantitative basis, to try and determine what sorts of practices may

actually be conditions for exerptions, the Commission looked at several bases for dose criteria.

Dr. Paperiello has already stated ionizing radiation is part of our natural environment. It's here in this room in the air that we breathe and the food that we drink. There is significant variations in that from place to place and from time to time.

The Commission has taken that into account in looking at what sort of doses might be appropriate for its criteria. The Commission has also considered whether or not there is an ability to measure, detect the sorts of radiation, radioactive materials that we may be talking about because one of the things that we will need to do is demonstrate that any practice in fact meets the conditions we have established, the conditions, restraints, requirements, through inspection and enforcement.

And the Commission has also looked

at the risk estimates, risk analyses that have been done by various groups at various times with regard to the risk of ionizing radiation, such as those published by the National Academy of Sciences in the Biological Effects of Ionizing Radiation report that came out in December of last year.

Given those bases, the Commission has established both individual and collective dose criteria to govern whether or not a practice may be considered for exemption from some or all regulatory controls.

On the individual dose side, the Commission has established two separate criteria: 10 millirem per year for those practices which would be very limited in the scope of exposures, very limited number of individuals or very small population which can be exposed as a result of that practice; and 1 millirem per year criteria for practices which would have a more wide-spread distribution, practices where a large number of individuals

could potentially be exposed.

In addition to the individual criteria, Commission has also determined that it's appropriate to consider the total societal impact of the exemption which may be taken. Given that, the Commission has determined that an appropriate value is 1,000 person-rem per year over the entire population, including all individuals that may be exposed.

One of the things to look at in looking at these criteria, particularly the individual dose criteria, are these are the values which apply to the maximum individual, those individuals within the critical group, that individual or small handfull of individuals which receive maximum exposure.

They are not the values which would apply to everyone associated with the practice. Rather, we would expect that most all of the individuals associated with a given practice would receive exposure significantly less than these maximum criteria.

To reiterate a little bit for you by way of background and by way of comparison. Radiation is part of our environment: Cosmic radiation from space; the air that we breathe, including radon, soil gases; from the food that we eat and drink; from the various soils and building materials used in construction and other activities.

Taken together, the various sources of exposure to an average individual in the US population is something on the order of 360 milirem per year, including the average value for radon. Of that, approximately 82 percent is natural radioactivity from the air and water that we breathe. The rest of that material, about 18 percent, is from various man-made sources, the bulk of which are medical exposures.

Once again, remember, these are the average values -- no one is exactly the average -- the average over the entire United States as taken from the information supplied by the

National Council on Radiation Protection and Measurements.

Smaller amounts of exposure comes from various consumer products which NCRP, national academy, includes things like some building materials, water from taps, television receivers and various things. And then other categories, including fallout from the nuclear detonation testing, fuel sites and various other activities.

How do these numbers compare to the numbers which the Commission has selected as the criteria for maximum individuals under this policy statement?

Take a look once again at all natural background, which is something on the order of 300 milirem per year; for medical exposure, 50 milirem per year. And there are variations in that.

Values for maximum individuals, critical group under this policy statement, are considerably less than those values.

Comparable, in fact, to something like a chest x-ray, which you may have for screening if you have pain in the chest and your doctor suspects a heart attack.

Similarly, these criteria were selected keeping in mind the variations in natural background and natural exposure which we all experience.

Dr. Paperiello has already discussed the fact there are relatively large variations depending on where you are in the country and variations something on the order of 10 milirem simply on the basis on the kind of house in which you live.

Likewise, flying in an airplane from coast to coast is associated with an increased radiation dose, simply because of the increased altitude.

The Commission has determined that values such as these variations give a good perspective with regard to the sorts of levels which could be considered for the maximum

individuals under this policy statement.

From a quantitative standpoint, what does this mean in comparison to the risk assessments that have been done by the National Academy of Sciences and United Nations groups?

The 10 millirem per year average individual dose criteria for maximum individuals corresponds to an annual risk of fatal cancer of 1 in 200,000. This corresponds to an annual risk of fatal cancer from all causes here in the United States in the aggregate for the average individual of something on the order of 400 per 200,000. Of course, that's for one year.

Over the course of a lifetime, 400 per 200,000 corresponds to cancer incidence on the order of 20 percent of the US population.

As a result, potential effects which some people might see as being attributable to these policy statements will not be measurable or discernible within the context of the exposures which are already present and the variations of those exposures which are

present in the US population.

The Commission has two individual dose criteria: 10 millirem per year and 1 millirem per year for that maximum individual, that critical group. The Commission selected an additional interim value of 1 millirem per year in order that we can gain further experience with regard to how exemptions may be requested of the Commission and how exemptions may aggregate over the course of time as we look at the various applications of this policy statement.

The 1 millirem criteria will be particularly applicable to situations where a large number of individuals may be exposed, such as consumer products, recycling of materials. It provides an additional insurance that individual exposures to multiple practices, your wristwatch, your smoke detector, all the things that you can possibly add up, will still not reach any significant level approaching any sort of dose limit.

What will the NRC do under this policy statement? We have published a final policy statement. That policy statement, however, does not exempt any material from radioactive control.

It doesn't mean that radioactive waste which had to be disposed of in a licensed facility may now be disposed of in some other manner. Instead, the Commission intends to develop regulations, regulatory guidance in implementing the policy statement to look at those specific practices which may be considered acceptable for exemptions from regulatory control.

The Commission also intends to go back and look at all of the exemptions that have been made over the past 30 to 40 years under our various Atomic Energy Act authorities, to look at those and determine whether or not those exemptions meet the test of the new policy statement or whether further change would need to be made in order to assure a consistent level

of protection.

Commission will consider petitions for exemption from regulatory control and the Commission will publish information and proposals to the Federal Register in order to ensure the public, you folks, have an opportunity for continued input into the decision-making process.

When looking at any given petition, any given rule-making, the first thing that we will need to do is analyze those proposals for exemptions to determine whether or not the risk from these proposals are acceptable and within the criteria of the policy statement.

When we have made that analysis, we will need to establish conditions and strengths, requirements to determine whether or not those risks which we deem to be acceptable will continue to be met over time, not a one-shot operation.

After establishing the conditions and constraints, the Commission intends to

inspect and enforce, verify that those conditions, restraints and requirements continue to be met by licensees in the transfer of material from controlled to an uncontrolled status.

And the Commission intends to periodically review over of the course of time all the exemptions which may be granted to determine that the public health and safety has been adequately protected and to assure that the build-up of materials is not resulting in exposure in excess of our criteria.

To wrap up this particular segment, once again I remind you the Commission has put out this policy statement in full recognition of the fact that its mandate is to protect public health and safety. Within that, this is an effort to establish a broad framework of which to make decisions on the control and the appropriate controls of radioactive material so that we can focus our resources and the resources of others involved in radioactive

material upon those risks which are most important for the control of public health and safety.

John Hickey, who is Chief of the Operations Branch of the Office of Nuclear Materials Safety and Safeguards, is now going to briefly address some of the details with regard to implementation of the policy.

MR. HICKEY: Thank you, Dr. Cool. I will be addressing two questions briefly: What will be the impact of the BRC policy? Now that the policy has been issued, what should you do?

As you have heard, the BRC policy provides regulatory framework for four types of practices: Decommissioning, distribution of consumer products, waste disposal and recycling. All of those practices involve transfer of low-level radioactive material from regulated to unregulated status. All of this has been going on for many years.

The reasonable question would be how are things going to change as a result of

the BRC policy?

In the short run, there will be very little change. The policy is not self-contained. It will have to be implemented with rules and licensing actions.

Licensees need not be concerned that the BRC policy itself would disrupt their current operations of waste disposal. However, in the longrun, the BRC policy is the beginning process which will apply consistent radiation risk basis to exemption status.

We can expect that most waste disposal practices and consumer product authorizations involving transfer of radioactive material to unregulated status will be evaluated in light of the policy. We believe that most existing practices do meet the criteria and will not change.

Cases which do not meet the BRC criteria may have to be modified or justified using traditional as low as is reasonably achievable methods.

Also, the BRC policy will need to establish clean-up standards for decontamination of nuclear facilities. We are interested in having existing contaminated sites cleaned up as expeditiously as possible, and we believe that definitive clean-up standards will encourage this.

I would like to illustrate these points by going through a few examples.

First, let me remind everybody of the dose criteria that Dr. Cool covered. In order for a practice to be considered BRC, it should meet the individual dose criteria of 10 milirem per year or 1 millirem per year for practices with wide-spread impact and collective dose criteria of 1,000 persons per year.

Therefore, you can expect any activity involving decommissioning, waste disposal or consumer products to be scrutinized to see whether it meets these dose criteria.

Let me first take the example of decontaminating, decommissioning established

facilities. NRC has got 8,000 licensees, and the agreement states have another 14,000 licensees. Most have seal sources or short-lived materials only so they don't have a significant decommissioning problem.

However, NRC must deal with a number of cases every year where determinations must be made as to whether contaminated facilities are going to have to be cleaned up.

Current NRC regulations do not specify acceptable clean-up levels for contaminated facilities. They do not relate contamination levels to dose. One of our highest priorities will be to establish such regulations.

In the meantime, we have published Regulatory Guide 1.86 and other documents. These guidelines specify the contaminated areas and equipment that should be cleaned up to certain levels of residual contamination. They cover a wide variety of radionuclides, and they are not readily convertible to dose numbers.

However, our preliminary calculations show that for several common radionuclides, such as trillium, cesium 137, the projected doses will be about 1 millirem per year or less. Therefore, in many cases, there may not be any significant change in clean-up criteria.

On the other hand, for some radionuclides, licensees in some cases may have to do additional clean-up which would not have been required prior to BRC.

The bottom line is we will have a consistent, stable basis for deciding how much clean-up is necessary for contaminated facilities. This will benefit both the public and the regulated industry.

Next let's discuss waste disposal. Most radioactive waste is now sent to licensed radioactive waste disposal facilities. However, there are already some limited provisions in our regulations for disposal of waste containing very low levels of radioactivity.

For example, Section 20.306 of our regulations allow assimilation fluids and animal carcasses contaminated with low levels of trillium and carbon 14 to be disposed of without regard to the radioactivity. Also, the animal carcasses may not be disposed of in any manner that would allow for their use for food in humans.

This is important because many of our exemptions will include restrictions as may be appropriate to a particular situation. I will come back to this point in a moment.

When we developed this rule, we estimated the maximum potential radiation doses to any exposed members of the public resulting from exempt disposals would be less than 1 millirem per year. So this appears to be an existing regulation that is consistent with BRC policy.

Another example of regulation which already permits exempt disposal is 35.92. This regulation allows medical facilities to hold

short-lived waste of ten-and-a-half lives and dispose of it as ordinary trash if there is no detectable radioactivity.

In addition to these examples of current regulations, NRC has considered petitions from the academic community that would allow exempt disposals of specific types of slightly contaminated waste.

Also, we could receive additional petitions; so it's likely that in the future we will approve additional types of waste for exempt disposal.

Note that all proposed rules, including those associated with petitions, are published with public comment. All interested parties will have an opportunity to comment on the proposals.

Going on to consumer products. You are probably all aware we have already approved smoke detectors, luminous wristwatches, thorium lamp mantles and several other less common products that contain small amounts of

radioactive material.

We do not currently have any proposals for new types of products, but we will consider them if they are proposed. However, we will be going back and reviewing whether currently authorized consumer products meet the BRC criteria.

You can see from this table, for example, smoke detectors appear to meet the criteria. In the meantime, currently authorized products can continue to be distributed.

With respect to recycling, our current applications are very limited, and we have no new proposals under consideration.

One current example is the recycling of calcium fluoride slightly contaminated with uranium which is used in the steel production process. The steel itself is not contaminated, and the projected doses to a limited number of steel workers from this activity are a few milirems per year or less.

So that appears to be also

consistent with BRC policy.

This, in brief, has been a summary of where we are now and where we are going at BRC.

You may be asking, What should I be doing? In most cases, the answer may be nothing. NRC has initiated --

(Laughter.)

MR. HICKEY: NRC has initiated or will be initiating certain regulatory reviews and revisions. Licensees don't necessarily need to do anything unless they are specifically notified to do so by NRC.

However, if you identify a need for exempt disposal of a certain class of waste or new consumer product, you can petition NRC for rule-making to authorize such a practice. Policy statement spells out the information that you will have to provide.

In brief, the following will have to be covered: Evaluation of individual societal impacts, uses of the radioactive

material, pathways of exposure, quantities of radioactivity, potential for accidents and misuse, quality assurance and reporting requirements, constraints and conditions of use.

Constraints and conditions are important, as I mentioned before. For example, we may require that certain types of waste must be incinerated, disposed of at a specified location or disposed of so it cannot be used in food.

NRC will consider the information submitted, and if our evaluation is favorable, we would approve the exempt practice.

What if you are not a licensee? You may be reasonably concerned that adequate protection of public health -- about adequate protection of public health from exempt practices.

I would like to make two points. First of all, opportunity for public comment will be provided for all regulations and

licensing action which differ from previously regulated exemptions.

Second, approval of BRC for exempt practices does not mean NRC will remove all regulatory controls. Exempt radioactive materials are produced by licensees. Those licensees will continue to be regulated by NRC. Licensees will be inspected to ensure they dispose of radioactive material properly and maintain proper records.

We will also check to make sure that consumer products are safely constructed and, if so required, labeled.

Decommissioning facilities will be closely inspected to assure that they have been properly decontaminated.

In summary, BRC policy will be implemented such that there can be assurance of the adequate protection of the public health and safety.

No action is necessarily required on licensees' part. If you are a licensee, you

will receive timely notification of any regulatory changes made which may affect you.

Members of the public will be given opportunity to comment on proposed rule changes.

NRC will continue to tightly regulate licensees to assure exempt practices are safe. In this manner, we will meet our obligation to protect the public health and safety.

Thank you.

DR. PAPERIELLO: I thank people for their interest. As of a week ago, the only indication I had is we were going to have about 45 people attend. Clearly, we specified a room for 300, and we have more than that here. Obviously, also a number of individuals came who didn't tell us beforehand. Otherwise we would have provided more space.

We have some complications. The complication is the number of people who wish to speak. Again, it's one of these things that as

of about a week ago, we had seven people who wanted to speak, and it suddenly exploded on us.

Therefore, I would ask you when you step up to the podium and make your -- state what you want to say, that you definitely stay within the five minutes.

A couple of individuals have requested to speak that did not call us ahead of time. If I can get you in, I will. But I would ask you to limit your remarks to about a minute.

If you have something to submit to us in writing, you can give it to either me or the secretary at the door; and it will be considered.

I would like to suggest, because of the number of elected officials who have asked to speak and the time that I told them we would start taking statements, to maybe take about a ten-minute break.

Is the Secretary of State Jim Edgar

here? He did want to make a statement. My understanding is he might be here at 2 o'clock.

What I would like to do is take about a ten-minute break. It is now 1:40. Come back in 10 minutes at 1:50 and start taking statements.

Questions. There are cards at the door for people who want to ask questions. I would ask you to write your question on the card and give it to the secretary.

We will take a break from statements at 3 o'clock. The panel will answer questions. And then after an hour we will go back and continue until whenever, until we get all the statements done.

(WHEREUPON, a recess was had.)

DR. PAPERIELLO: Can I have your attention, please? I have been told that the Secretary of State is at O'Hare and will be here shortly.

I will start going down the list of state officials who have requested an

opportunity to make some remarks.

Are there any other -- besides the Secretary of State, are there any other state-wide elected officials that haven't previously asked to speak here?

Then I will go on. Is State Senator Patrick Welch here?

SENATOR WELCH: Yes.

(Applause)

SENATOR WELCH: Thank you very much.

Mr. Chairman, ladies and gentlemen on the committee. My name is State Senator Patrick Welch. I am chairman of the State Senate Energy and Environment Committee in Springfield. I am here today to testify about the proposed regulation before the Nuclear Regulatory Commission.

The proposed policy change is of great concern to me for several reasons. I come from a district which is the site of the first Federal Superfund clean-up in Illinois, LaSalle, Illinois.

That's not a fact I am proud of. However, it is something that those of us in the district have to live with every day.

Commissioners, I don't believe that any of us want more waste in our backyards. Why should we tell so· ne they should put waste in their backyards?

Illinois, like other states, is already facing a landfill space shortage. Downstate landfills are taking in more and more waste from Cook County daily and throughout the State of Illinois and other states as well.

The difficulty that we are currently experiencing with keeping toxic waste out of our landfills will be exacerbated by trying to keep radioactive waste above the BRC levels out of those same landfills.

It's one thing for someone to stand by the landfill gate and say you can't throw that tire in that landfill, and it's quite another for a person to determine what low-level radioactive waste is and say you can't bring

that in.

Chairman Carr has said that the country needs a safe Below Regulatory Concern policy today. But as we know from experience, what may be safe today may not be safe 20 years from now or even ten years from now.

(Applause.)

SENATOR WELCH: Why should we in Illinois put ourselves at risk for a potential clean-up?

(Applause.)

SENATOR WELCH: There are already hundreds of millions of dollars in clean-up costs for hazardous wastes, costs that we cannot afford.

Do we really need to add to that by depositing BRCs in landfills here in Illinois? I don't think so.

This type of policy also has the potential of contaminating precious reserves of ground water, water resources that our state will need in the future.

The Environment Protection Agency has stated all landfills will leak at some time

or other. We cannot take the chance that ground water resources could become contaminated with radioactive waste as well.

Additional concerns focus on waste haulers driving these BRCs through our towns and cities. What kind of liability will they have to assume? What kind of liabilities will our cities have to assume? What liability will the waste hauler be responsible for if there is a clean-up if one of the trucks carrying that waste turns over?

Can the waste hauler afford that liability? And can we, as citizens, afford that liability?

Here in Illinois we found out in the last year the number of accidents by trains and trucks carrying waste to landfills more than doubled. Do we really want to risk that by having the same trucks also carrying radioactive waste? I don't think so.

Washington is sending us incredibly mixed signals on this issue. Six years ago I

was on a committee that was formed when Congress passed legislation requiring states to site low-level radioactive waste disposal sites. And now in 1990, the Nuclear Regulatory Commission wants to deposit low-level radioactive waste in our landfills.

Ladies and gentlemen, the Commission makes us all wonder what the federal policy is or even if there is a public policy.

(Applause.)

SENATOR WELCH: If the Below Regulatory Concern standard is adopted, it will once again encourage the export of radioactive waste Congress tried to limit by adopting a system of interstate low-level waste compacts.

Some states have either no landfill space available, or like New York, will run out of space in the next few years. The system of transporting radioactive waste will continue, which state government thought Congress wanted to stop.

Those states closest to the East

Coast will come to the Midwest because of the closeness of transportation and the limit on those costs. States like Illinois, Wisconsin and Indiana will become importing states for radioactive waste as well as other garbage that we are already importing.

Our land is too precious to become a dump site in Illinois. Our children are too much expecting us to be stewards of this land and not the spoilers of their land.

Finally, let me say that the decommissioning issue brought up by this Commission as one reason to lessen the standards is one that we have already addressed in Illinois.

Currently, those communities served by nuclear power are paying a fee -- Commonwealth Edison or Illinois Power -- for the decommissioning cost of those plants. That is the nuclear power plant's responsibility. They are billing us for doing just that. Don't make us pay twice for the same service.

(Applause.)

SENATOR WELCH: Finally, let me say that in Springfield this coming spring, I am going to introduce legislation with Senator Joyce to try to ensure that radioactive waste does not go into our landfills, and I would encourage all you folks right here today who show an interest in this issue to come down to Springfield in the spring and testify. And we will certainly be willing to hear you in my committee.

(Applause.)

SENATOR WELCH: Mr. Chairman, Senator Jerry Joyce could not be here today, but I have written remarks by him that I will submit.

Thank you very much.

(Applause.)

DR. PAPERIELLO: Thank you, Senator Welch.

Did you say Senator Joyce wouldn't be here today?

SENATOR WELCH: That's correct.

DR. PAPERIELLO: Is Secretary of State

Jim Edgar here yet? Okay. Representative Clem Balandoff.

(Applause.)

REPRESENTATIVE BALANDOFF: Thank you. Good afternoon everybody.

It's truely frightening that this hearing is even taking place. How can the Nuclear Regulatory Commission consider even the possibility of putting radioactive waste in every landfill, in every incinerator, in municipal sewer systems and even in recycling streams?

The NRC is charged with protecting the health and welfare of the public. How can they be the agency pushing for the deregulation of BRC radioactive waste?

This situation is almost beyond comprehension. What are the possibilities if BRC is deregulated? Many workers across the country, from truck drivers to garbage men to steel workers, without their knowledge, would come in daily contact with radioactive waste.

Municipal waste incinerators and toxic waste incinerators, which already spew their poison into the air that all of us breathe, would now be spitting out radioactivity all across the country. Nobody, but nobody, would be protected.

Fire fighters would be in danger because even the knowledge that a fire was radioactive would no longer be available. They would be denied this knowledge because there would be no manifesting of BRC waste.

If radioactive waste were to contaminate the recycling stream, it could produce the possibility of your morning newspaper setting off a Geiger counter. Eventually radioactivity would enter the food chain, and we could be serving our children orange juice that glows.

Commonwealth Edison would no longer have to worry about power outages or class action lawsuits because everyone could own a piece of furniture that would glow in the dark.

(Applause.)

REPRESENTATIVE BALANDOFF: Bottom line is that there is absolutely no known safe level of radiation exposure.

The research scientist who was the first to warn pregnant women against having x-rays has now concluded that the amount of radioactivity that we are now releasing into our environment over and above the background radiation from the earth and outerspace causes 75 percent of childhood cancer.

(Applause.)

REPRESENTATIVE BALANDOFF: If BRC is deregulated, the only way for rates of cancer and birth defects to go is up.

With all those known facts about radiation, why would anyone conceive of deregulating any level of radioactive waste? The answer is simple. It's a matter of dollars and cents for a very powerful Washington lobby, the nuclear power industry.

(Applause.)

REPRESENTATIVE BALANDOFF: There is no known safe level of radioactivity. What we are talking about today is merely a matter of semantics or, as many call it, linguistic detoxification.

In Illinois, the House of Representatives passed a resolution in June calling on the Nuclear Regulatory Commission not to deregulate BRC.

If this policy is adopted, I will certainly urge my colleagues in the legislature to do what a number of other states have already done: Provide that Illinois is to supersede the NRC decision because it's our responsibility as elected officials to protect the people of this state, already the most radioactive in the nation.

(Applause.)

REPRESENTATIVE BALANDOFF: I come from the South Side of Chicago where the IEPA has said we have the largest concentration of waste dumps on the North American continent. People in my

community are already at risk with cancer rates among the highest in the nation because of our polluted environment.

If BRC is deregulated, it will certainly mean a further increase in our cancer rate. And you must understand that my backyard and your backyard are the same.

I stand here before you today as much on behalf of you and your children as for myself, my children and my constituents.

We must remember, according to the old proverb: The earth is not a gift to us from our parents. It is a loan from our children.

On behalf of all of us, I tell you that deregulation of BRC would be one of the worst policy decisions ever made by a government body.

(Applause.)

REPRESENTATIVE BALANDOFF: This proposed deregulation would be as monstrous a mistake as was the commissioning of the nuclear power industry in the first place.

(Applause.)

REPRESENTATIVE BALANDOFF: To put it in very simple terms, it doesn't make sense. It's outrageous. Don't do it.

Thank you very much.

(Applause.)

DR. PAPERIELLO: Thank you, Mr. Representative.

I understand it appears that the Secretary of State Jim Edgar has arrived. Would you like to speak, sir?

SECRETARY OF STATE EDGAR: Thank you. I would like to take as little of your time as possible, so what I will do is make a brief statement; and I would invite the members here to read the longer, more detailed testimony that I have submitted in writing.

I am here today to voice my opposition to the NRC's proposal to deregulate low-level hazardous wastes.

(Applause.)

SECRETARY OF STATE EDGAR: I believe the

proposal is wrong because it deprives states of their right to regulate hazardous waste, because it leaves serious public health questions unanswered, because it undermines public confidence in the NRC and other regulators and because it will make it harder, if not impossible, to locate new landfills and incinerators near communities that already have more than enough reasons to fear environmental impact of such waste disposal operations.

Public health questions remain because authorities disagree about the dosage level of radioactivity that can be considered safe.

The NRC staff has itself given conflicting reports about whether safety stops at 1 millirem or 10 milirem. Its current conclusion, 10 millirem, is 10 times the level recommended by the International Atomic Energy Agency and two and a half times federal EPA standards.

I am no scientist. As a layman, I

depend on the experts. But until the experts agree on what is safe, I have to consider your proposal unsafe.

(Applause.)

SECRETARY OF STATE EDGAR: We in Illinois face a waste disposal dilemma. By 1995 our landfill capacity will be exhausted. Efforts are being made to build new landfills, but community resistance is very strong.

We may soon have no place to put our garbage.

Radiophobia will make that dilemma even worse. If we cannot put environmental concerns to rest today, how will we ever do so if radioactivity enters the picture? Who is going to want to see these gloves (indicating) go into the local landfill?

One final point. The NRC's proposal did not address a concern of potentially even greater danger. It says nothing about the presence of radioactive materials in consumer products such as smoke

detectors.

Would the new policy allow higher levels of radioactivity in products we keep around the house?

If this policy is implemented despite the objections I share with many other citizens, I will join with those who share my view and fight the policy through other means. We will propose state legislation to regulate the waste you exempt, and we will work with our Congressional delegation to get Congress to rescind this policy.

(Applause.)

SECRETARY OF STATE EDGAR: By coming to Illinois today, you have demonstrated a willingness to open your ear to those of us who might have to live with the waste modern society produces.

I appreciate your sensitivity to our concerns. I thank you for lending us your ear, and I encourage you to reconsider and withdraw this proposal.

Thank you very much.

DR. PAPERIELLO: Thank you, Mr. Secretary.

Are there any other state-wide elected officials who wish to speak?

I will call upon Director Thomas Ortciger of the Illinois Department of Nuclear Safety. Is he here?

DIRECTOR ORTCIGER: Ladies and gentlemen, Mr. Chairman, panel members. What I would like to do is just give you a brief synposis of testimony that I presented before the United States Congress Interior Subcommittee on Energy and the Environment on June 27, 1990, at which time we were asked to testify regarding the State of Illinois' positions on BRC.

Illinois' concern regarding this concept of designating certain radioactive material as being below regulatory concern is not new. Almost two years ago when we learned that the US EPA had submitted a proposal of BRC rules to the Office of Management of the Budget,

Illinois expressed its concern over the concept of federally-established BRC standards.

More recently, in December of 1989, and again in February of 1990, we wrote the NRC expressing our concern about the proposal of exempting certain practices and radioactive materials from regulatory concern.

Our concern now, as then, is that the adoption of a BRC standard which would allow the disposal of low-level radioactive waste in facilities not specifically designed and licensed to receive radioactive material would interfere with the efforts of the state and regional compacts to develop new facilities for the disposal of low-level radioactive waste.

Furthermore, we fear that the policy will allow significant quantities of radioactive waste to be disposed of in sanitary landfills, making the siting and development of new solid waste disposal facilities virtually impossible.

However, our most serious concern

with the NRC's final policy statement is that the NRC has indicated that they intend to make rule-making that will implement these policy items of compatibility on agreement states, there by limiting the regulatory authority of the state to prohibit unrestricted disposal of radioactive material and revoking the authority of the state and regior compacts to determine how best to manage disposal of low-level radioactive waste.

Perhaps one of the most reprehensible aspects of the BRC policy statement is that the NRC did not make any real effort to seek public comment.

(Applause.)

DIRECTOR ORTCIGER: In 1988 the NRC did make and publish an advance notice of proposed statement and meeting which identified some elements of the policy that the NRC was considering and invited, quote, "preliminary views concerning a policy of exemptions."

But prior to the issuance of the

final policy statement, the NRC did not publish a notice of proposed policy statement or even distribute a draft version of the policy for public scrutiny.

Let me go back just for a moment to our environmental activities in this state. In 1987, the IEPA predicted that existing landfills would be exhausted by 1992. Thanks in part to increase recycling, the estimates have now been raised to 1995.

However, in the last decade, only five new solid waste disposal facilities have been developed in Illinois; and since 1985, only one new facility has been put into service.

Even without the threat of radioactive materials, it is extremely difficult to site new landfills.

(Applause.)

DIRECTOR ORTCIGER: If the state cannot prohibit radioactive waste from being disposed of in solid waste facilities, siting new plant landfills would be virtually impossible.

Illinois vehemently objects to the NRC policy statement. The Commission has done far more than lay the groundwork for making further decisions regarding appropriateness of exempting radioactive materials and from certain regulatory controls.

With only the sheerest of camouflage, the Commission has laid the groundwork for making its future exemption decision binding on all the states. By this action, the NRC has attempted to usurp the rights of states to independently determine how to fulfill their responsibilities.

Furtherrore, the NRC has attempted to tie the hands of the states that wish to be responsive to the demands of their citizens that low-level radioactive waste be disposed of in the safest possible manner.

Thank you.

(Applause.)

DR. PAPERIELLO: Thank you, Mr. Otciger.

Are there any other state-wide appointed officials? Alderman Jesse Evans.

MS. BURNS: Alderman Evans regrets he is unable to attend. He wishes to concur with Representative Balandoff's statement, and he has asked me to speak briefly in his place.

I am Marian Burns, co-chairperson of CURE, Citizens United to Reclaim the Environment.

(Applause.)

MS. BURNS: CURE has been fighting since September, 1985 for the protection and clean-up of our highly polluted environment on the Southeast Side of Chicago.

We are a coalition of seven grassroots organizations across the Southeast Side and south suburbs.

At this point we feel like Alice in Alice through the Looking Glass when the White Queen seized her by the hand and shouted, "Run." After running as fast as possible for a long time, Alice observed, "But we are in the same

place where we started."

White Queen replied, "Oh, it takes all the running you can do just to stay in the same place around here."

We have fought hard and constantly for five years to reclaim our local environment for human life. But as fast as we can defeat one environmental threat, we see several others rushing at us from all directions.

This threat to deregulate BRC waste is the final outrage. If this insane proposal becomes effective, we will be getting radioactivity from our mountainous waste management landfills, from our waste management toxic incinerators and from the sludge from our local sewage treatment plants which is used for recovery of our landfill mountains.

Aren't we getting enough poison already? We have been making bitter jokes for years that we glow in the dark on the Southeast Side.

We have been getting persistent

rumors from residents that radioactive waste has been disposed of illegally in our landfills on a number of occasions.

Now the nightmare could become a reality. The disposal of radioactive waste in our area could be done legally if the proposal becomes effective.

We plead with you, don't do this to us. Don't take away the last remnant of hope that we can ever make the Southeast Side a safe place to live.

The clean-up of the Southeast Side would be a gigantic task. Don't make it any more monstrous than it is already by adding BRC to the witch's brew that's already poisoning our land, our air and our water.

Give us a chance to turn the destiny of our area in a different direction. Give life a chance.

(Applause.)

DR. PAPERIELLO: Thank you. Alderman Edwin Eisendrath.

ALDERMAN EISENDRATH: Than you very much.

I appreciate you allowing me to testify today on this issue of BRC. I am going to be brief and provide a local government perspective.

I understand that you are having five hearings across the country on this issue. I hope they are better publicized, more convenient than this one.

(Applause.)

ALDERMAN EISENDRATH: The public, at least where I live, is not just professional lobbyists. People who work in other fields are concerned, too.

I am a little confused by the intent of the hearings because, as I understand it, the NRC has already approved the policy of BRC. So either this is about overturning that policy, which I hope it is. If it isn't, then the NRC is guilty of feeding that growing cynicism that alienates Americans from their government.

(Applause.)

ALDERMAN EISENDRATH: The local elected officials, like me, we are the front lines, and we hear things that sometimes don't get heard by the folks in Washington, DC.

As a rule, people here have little confidence that their interests are being fought for forcibly by folks in the federal government. The concept of BRC doesn't help dispel that attitude.

Our government tells us that a little exposure to radioactivity is safe, that certain contaminated by-products can enter the waste stream or be recycled in the consumer marketplace. We are told that products like radioactive cosmetics may not be labeled, that communities will not know if BRC is disposed in local landfills.

These conclusions are counter-intuitive. And that may mean that the public isn't really educated on these issues, but it also can't be explained just that way.

In fact, let's take the no labeling provisions. They reverse a long trend towards the community's right to know. And the notion that radioactive waste may not need special care conflicts with even things that other government agencies are doing, the high profile taken even by the Department of Energy on their clean-up of weapons testing sites around the country.

I wouldn't want to be second fiddle to that.

(Laughter.)

ALDERMAN EISENDRATH: People are not relieved when the NRC states that many things in the natural environment are radioactive. The fact that airplane rides and luminous watches and x-rays, and to some extent almost everything else, is radioactive doesn't argue for less concern but, rather, more.

(Applause.)

ALDERMAN EISENDRATH: I understand one of the arguments you push for the BRC policy is that the Nuclear Regulatory Commission needs to

focus its resources.

Well, that's a way of saying we have lost the battle; that we can't really protect our citizens any more, so let's be satisfied by limiting the damage that we allow. That isn't good enough.

(Applause.)

ALDERMAN EISENDRATH: It's been raised by people before that the decommissioning issue is very important, especially to us in this area. We are surrounded by nuclear power plants.

Decommissioning will be among the toughest challenges we face in this country. In order to prepare ourselves, we have to be talking about ways of disposing radioactive waste in a responsible way. Instead, we are talking about ways to sweep the stuff under the rug.

That's not the appropriate way to prepare for what will be a very important issue in our future.

So I urge you to reverse the BRC

policy. Radioactive waste isn't safe at any level. It isn't enough to say other things are just as unsafe.

Labeling is a responsible thing to do. We require it in the food industry. And certainly Vitamin C at any level is safer than BRC at any level.

(Applause.)

ALDERMAN EISENDRATH: Merging the radioactive waste stream with the larger waste river in America doesn't just taint the main stream, but it diverts attention away from very important questions of how we will deal with more contaminated radioactive waste in the future.

Locally, the people that I represent and other local elected officials feel very strongly about this and hope you will bring that concern back to Washington, DC.

Thank you very much.

(Applause.)

DR. PAPERIELLO: Thank you.

Commissioner Jo Gardner?

Commissioner Jo Gardner?

Are there any other elected state or local officials here who wish to speak who haven't registered ahead of time?

Okay. I will call upon Sharon Pines.

MS. PINES: My name is Sharon Pines, and I am the regional executive director of Greenpeace in the Great Lakes Area of the country.

Can you hear me back there?

I am here today representing the staff and over two million supporters of Greenpeace in this country, a considerable number of Americans who wish to express their outrage to Congress and to the NRC. Outrage at this ludicrous policy, outrage at a process that has effectively cancelled out public participation, outrage at a federal government which persists in kowtowing to the wishes of the nuclear lobby; and finally, outrage at the arrogance of the NRC in thinking that they, you

(indicating) can pull the wool over the public's eyes.

(Applause.)

MS. PINES: You know, when many of us heard about this policy, I think we had the same reaction: Surely you aren't serious.

I mean, this policy has all the makings of a science fiction horror movie. By a mere flick of the pen, the NRC declares radioactive waste to be safe. Decommissioned nuclear power plants and contaminated nuclear weapons facilities can then be taken apart and dumped in landfills, burned in incinerators, poured down sewers and taken to recycling centers.

From recycling centers, contaminated material could be remanufactured into toys, jewelry, furniture and household cooking utensils which would carry no warning labels. And all this with absolutely no public debate.

Now, what's wrong with this

picture? Let me tell you a few things. Morally, it is an outrage that the financial well-being of the nuclear power industry and the DOE be permitted to take precedence over human health.

(Applause.)

MS. PINES: Legally, it is unconscionable that due process has been violated and the public locked out of the decision-making process.

This hearing, held after the fact, at a time when most people are working and at a remote location, is an insult. It doesn't constitute an open process.

(Applause.)

MS. PINES: Finally, the NRC has sorely underestimated the American public. When the National Academy of Sciences concludes that radiation is far more hazardous at far lower levels than had been thought a mere decade previously, and when even the US EPA, for God's sake, fears for human health --

(Laughter.)

MS. PINES: -- with the promulgation of the BRC rules, then the NRC is playing us for fools.

Unbeknowst, obviously, to the NRC, people everywhere are coming together to form the fastest growing social justice movement in the nation.

(Applause.)

MS. PINES: It's what we call the grassroots movement for environmental justice.

This movement is demanding an end to toxic and radioactive contamination of our homes and neighborhoods an end to corporation decision-making about public health matters, and an end to government disregard about people's concerns for health in the environment.

This is the movement that will speak to you, Mr. NRC Commissioners, at these hearings. And this is the movement that you, the NRC, and Congress will be unable to ignore.

BRC is a target of this movement,

and we a[illegible]etermined that we shall prevail.

(Applause.)

DR. PAPERIELLO: Thank you. Carol Oldershaw?

MS. OLDERSHAW: I am Carol Oldershaw, and for a moment I'd like to relinquish my allotted time to make certain that Dr. Judith Jonsroot is heard at this hearing today.

She's traveled a great distance to be here, was unable to sign up and is scheduled at the bitter end of the meeting. And I think that we need to hear from her now.

I will exchange places with her and talk at a later time.

(Applause.)

DR. JONSROOT: My name is Judith H. Jonsroot. I am a doctor in the f[illegible]ld o[illegible] geography. I am from State College, Pennsylvania.

I have been asked by Mrs. Oldershaw to represent a newly-formed coalition of citizens organizations deeply concerned about

radioactive waste in all its forms and most especially about the NRC's decision to deregulate one-third or more of the nation's low-level radioactive waste through this policy.

There is far more to comment, and I would like to submit my written statement for you for the record later.

And I thank you for this opportunity, the representatives of the NRC and to this audience, for caring about the future, and what low-level radioactive waste, deregulated, to be recycled into all our lives in every possible way means.

I want to start by noting that those who produce the next and all future generations are not represented on this panel before you. There is not a woman to be seen on this panel.

(Applause.)

MS. JONSROOT: I make that point because the deregulation of low-level radioactive waste

will affect those unborn in that each individual woman is born with all of the ova she will carry through her life. All the people who will ever live on the face of the earth are in the women and their ova and in the men through their sperm today. And any damage which the Nuclear Regulatory Commission permits to be inflicted upon the very basis of life through any additional exposures that are cumulative, aggregative to the individual, will damage human beings for the future as well as today.

And gentlemen, it is time for you, you as representatives, whose salaries we pa -- (Applause.)

DR. JONSROOT: -- to go back to the commissioners and say, Rescind this policy.

The Low-level Waste Policy Act Amendments did not require the Nuclear Regulatory Commission to deregulate anything nor to exempt any practice. And I call upon the NRC of its own volition to revoke its policy and, instead, to formulate a policy that will assure

the absolute sequestration from the environment of all low-level radioactive waste that has been generated and to prevent the generation of any more. It is within your authority.

(Applause.)

DR. JOWSROOT: The Atomic Energy Act calls upon the Nuclear Regulatory Commission and other regulatory agencies for the development, use and control of atomic energy to be developed, directed, so as to make the maximum contribution to the general welfare.

In 1953, perhaps we did not understand enough about the dosages that are required to cause damage to human health. Today we do. Today we know from Dr. Alice Stuart and others in the medical field, rather than engineers, that even an exposure on the order of 165 millirem to the fetus may increase markedly the risk of childhood cancer or leukemia. We know that.

We know that the NRC is obligated by law to protect the general welfare and to

promote world peace. Certainly more radiation in the environment of the world is not in the interests of world peace nor the general welfare of anyone.

Moreover, under the Energy Reorganization Act that founded this organization, this agency, the NRC, is directed specifically to protect public health and welfare. And it is time they did so rather than protecting the interests of the nuclear industry.

(Applause.)

DR. JONSROOT: A commissioner -- one of your bosses -- a commissioner of the NRC recently wrote in my local newspaper in Pennsylvania that a BRC exempted consumer product would be limited so that the annual radiation dose to an individual user would be about one-third hundredth or one-third of 1 percent of natural background radiation.

I do not know where the NRC thinks it's coming up with its number 360 millirem

annual average exposure to citizens in the United States. 100 millirem is naturally occurring background in the East, 200 in high elevations and on up with altitude.

They attribute this to indoor radon. Indoor radon is not naturally occurring background radiation as a problem for public health. It is a consequence of indoor exposures. It's been there in the background all along, and it is highly improper for the NRC to base its decisions for the deregulation of low-level waste on a 360 millirem supposed background radiation exposure to individuals when 200 is indoor radon. It's not naturally occurring, part of the background outdoors.

Some of us in the US are now measuring. Some of us in the United States will now be able to call the NRC upon its putative claims that background radiation has increased so markedly. I want to see the evidence, certainly, before any action whatsoever is taken on BRC.

Now, of all the significant aspects of BRC, perhaps one of the greatest is the matter of federal preemptive authority. And in its policy statement, the NRC attempts to extend its authority such that my state of Pennsylvania and five other states, Virginia, Iowa, Minnesota, Maine and Vermont, will be prohibited from regulating low activity waste that the NRC may decide to call BRC.

We believe that this will initiate a constitutional crisis of major proportion. The states must have the authority to go beyond regulations and standards of the NRC, which has so totally abysmally failed in its charge to protect the public health and safety.

(Applause.)

DR. JONSROOT: This policy results in environmental loading, environmental loading of non-recoverable radioactivity which some day, somewhere, affects some person's health. It is unconscionable.

In my opinion as a geographer, we

are facing the reality of nuclear energy that the NRC needs to comprehend. We have put our faith in technology. There is no technological solution for the management and isolation of radioactive waste for the full duration of its hazardous life.

Rather than planning to close the public out of new reactor licensing, rather than planning for a new generation of nuclear reactors, we contend and we charge the NRC to hear our contention that it is time for us to put a boundary on the problem and to the best of our ability to control all radioactive waste that has already been generated, release none to the environment from these activities and halt the generation of any additional amounts.

(Applause.)

DR. PAPERIELLO: I would call upon -- I apologise. Dan Prusaitis? You are on the agenda. Next person on the agenda.

We will go on. The individual isn't here. Catherine Quigg.

MS. QUIGG: My name is Catherine Quigg, and I am research director of the Illinois Safe Energy Alliance.

Mr. Chairman and members of the committee. When the Russians beamed radiation at the US Embassy in the 1970s, Americans were understandably alarmed. Now comes the US government with new ways to beam radiation at its own citizens.

Under its new expanded BRC policy, the US Nuclear Regulatory Commission has found a way to give each American citizen the radiation equivalent of up to five chest x-rays each year, causing up to 12,500 extra cancer deaths each year.

The NRC views the additional cancers as being of little concern to most members of society. We might well ask the NRC why the American public would be so concerned about the cancer risk to a few embassy employees but feel no concern when thousands more face the risk of cancer deaths, to say nothing of cancer

injuries, under its new policy. Which brings up the fact that the NRC fails to discuss risk of cancer injuries from its expanded BRC policy.

Cancer deaths and injuries impact not just its victims. Families and friends of victims suffer emotionally. The economic cost alone can devastate a family.

The present radiation protection system fails to take into account multiple exposures. Radiation regulations treat each source of radiation as though it were the only source, rather than considering the cumulative impact of all sources on individuals or on the population as a whole.

The same individual could be subjected to overlaping radiation exposures from a number of NRC-exempted practices, each contributing up to 100 millirem, and thus suffer a cumulative exposure far greater than 100 millirem.

And if you doubt the 100 millirem, read the NRC policy statement, Page 8. They

only talk about 1 millirem or 10 millirem, but their limit is 100 millirem.

Because the NRC has no monitoring plans or equipment in place to enforce the BRC policy, it will have no way of knowing individual or collective radiation exposures for any of its exempt practices.

(Applause.)

MS. QUIGG: The proposal to allow certain radioactive waste to be reclassified as ordinary garbage for landfill burial is fraught with hazards to the public health and safety. The drinking water of the nation will be at serious risk of radioactive contamination.

Moreover, sales personnel, garbage and landfill workers will be at great risk from occupational radiation exposures, especially since there will be no monitoring of radioactive merchandising quantity, declassified radioactive waste or the workers themselves.

Workers unions should be up in arms at this new policy if they aren't already.

(Applause.)

MS. QUIGG: Opposition to the Bartlett balefill landfill in Illinois should take on a whole new dimension when activists realize that their feared toxic waste dump will also be radioactive.

Considering the mounting evidence that low doses of radiation cause significantly more cancer injuries and deaths than previously conjectured, the NRC should busy itself with changing its regulations to lower the public's radiation dose rather than plans to increase that dose.

(Applause.)

MS. QUIGG: There should no federal preemption of state laws against BRC waste and no exemptions of radioactive materials for disposal in the marketplace or in ordinary landfill.

Just because the NRC failed to properly regulate the disposal of radioactive smoke detectors and got away with it does not

mean that the public is willing to accept a stream of radioactive consumer products in the marketplace and at their local landfills.

(Applause.)

MS. QUIGG: The camel should never have been allowed to get its nose under the tent.

The expanded BRC policy proves the ethical and moral bankruptcy of the NRC and those in Congress --

(Applause.)

MS. QUIGG: -- who passed the Low-level Radioactive Waste Policy Act of 1980 and its 1985 amendments mandating the expanded BRC policy.

Both laws should be repealed. The NRC should refuse to implement any law which contradicts and interferes with its own primary mandate to protect the public health and safety, a mandate which should supersede the ill-conceived and dangerous Congressional legislation.

There is no way the NRC staff can

protect the public health and safety by putting it at greater risk of cancer injuries and deaths from increased radiation exposure with this new policy. They should so inform Congress.

Thank you.

(Applause.)

DR. PAPERIELLO: I would call upon David Kraft.

MR. KRAFT: My name is Dave Kraft, and I represent the Nuclear Energy Information Service of Evanston, Illinois, a non-profit energy education organization with 3000 members.

While we strongly oppose the NRC policy of Below Regulatory Concern, we must congratulate the agency on its strategy of scheduling a public meeting without proper advance notice or education on the issue and then requiring people to sign up in advance to speak at this public meeting.

(Applause.)

MR. KRAFT: A public meeting inconveniently scheduled in the middle of a

workday has minimized ability of the public to participate in this process.

This amazing insensitivity shown the public by the NRC provides one of the reasons why NEIS and over 20 other organizations around the country are currently suing the NRC on its BRC practice.

(Applause.)

MR. KRAFT: The recent intention of the Nuclear Regulatory Commission to classify a substantial portion of what is now considered to be hazardous low-level radioactive waste had its beginning in another failed radioactivie waste policy, the Low-level Radioactivity Policy Act of 1980 and its subsequent 1985 amendments.

And just as other parts of that law have shown to be poor policy, so too has the concept of deregulating this radioactive waste.

The NRC's notion that hazardous radioactive waste can be, quote, "acceptably," unquote, disposed of in landfills, incinerators such as those proposed for Robbins and Beford

Park, down sewers, along roadsides, in recycling and scrap metal centers, has been challenged vociferously by the current scientific thinking on the hazards of exposure to low levels of radiation, by national and international agencies of stature equal to or exceeding that of the NRC, by numerous state and local governments, whose task to protect the health and safety of their citizens is threatened by such a reckless policy, and by hundreds of private organizations nationwide who argue that a policy that defines "acceptable" the additional deaths of between 2,800 and 12,000 people each year so that the nuclear industry can save some money is not only unacceptable but it's criminal.

(Applause.)

MR. KRAFT: Objections to this policy are legion, both from within and without the NRC. Proposed NRC standards for BRC radioactive waste of 10 millirem per year per waste stream are below those standards deemed acceptable by the

International Atomic Energy Agency, the National Committee for Radiological Protection, the Environmental Protection Agency and also the Illinois Department of Nuclear Safety.

The proposed 10 millirem standard was severely criticized in a memo from Robert Denero, then acting director of the Nuclear Regulatory Commission's own office of Nuclear Material Safety and Safeguards in a memo dated September 8, 1988.

This memo was sent from ONMS&S to the legendary Victor Stello. The DEA's Office of Radiation Programs found seven major criticisms of the NRC policy and standards and stated unequivocally that, quote:

> "This standard of 10 milirem is too high a level for a blanket deregulation criteria and is not protective of the public health."

The NRC's own Victor Stello even states that, quote:

"The dose to an individual will be a

function of dose rate, occupancy times and pathways of exposure. Depending on the assumptions made, dose estimates can often vary by a factor of 100."

The NRC decision of deregulating this waste comes six months after the National Research Council concluded in its Bureau 5 report of December, '89 that hazards from exposure to low levels of ionizing radiation had been underestimated by a factor of between 4 and 14, four months after the International Committee on Radiological Protection concluded that worker exposure to low-level radiation should be reduced about 250 percent, and after studies on exposures to airline pilots and stewardesses concluded that they may be exposed to excessive amounts of radiation.

Good timing, NRC.

Although this tremendous amount of information indicates that the policy is flawed, it is important to note that the policy does not truely meet the NRC's own professed goal of,

quote, "reduced cost and overall risks to the public from managing certain types of slightly radioactive waste in a manner commensurate with their low radiological risks," unquote.

This indicates the true reason for the policy: To save the nuclear industry money, resulting in another dose of subsidized, socialized nuclear energy policy.

(Applause.)

MR. KRAFT: This policy would actually drive up the cost of low-level radioactive waste disposal and compacts where the cost for future LLRD disposal will be fixed, such as is the case in Illinois, offsetting any perceived savings from reduction in waste designated for low-level radioactive waste disposal.

The NRC inconsistently states elsewhere in the policy that, quote:

"The Commission will not consider whether a BRC practice is justified in terms of net societal gain."

Again proving that BRC represents

not a cost savings to society but, further, another subsidization of the nuclear power industry.

Although money is the least important concern for NEIS, using the NRC's number of 3.5 cancer fatalities per 10,000 people, which the EPA estimates state are three times too low -- and figuring that Victor Stello is right and that may be up to 100 times too low -- a rough calculation of cost to society reveals that the BRC will result in several things: As much as $250 million in medical treatment costs for the last year of life alone of the expected 12,500 cancer fatalities; as much as $109 million in lost wages from deceased wage earners among this group, not including the lost money of the economic multiplier effect; increased cost of medical treatments for the fatal and non-fatal cancer resulting from the BRC policy; increased insurance and worker compensation cost to individuals and employers; and finally, an incalculable amount of money

lost in wages and productivity for those people who develop non-fatal cancers or other radiation induced medical problem such as depressed immune system functioning.

NEIS has seen figures that indicate that as many as 4,100 Illinoisans may die from cancer if the maximum amounts of this policy are allowed, with an equal number expected to contract non-fatal cancer from the BRC policy, which will not even achieve the NRC stated goal of reducing costs for low-level radioactive waste disposal in Illinois.

Even if we subscribe to the notion of such mercenary tradeoffs, this would be totally unacceptable.

In 1945 after World War II, the victorious Allies tried, found guilty, imprisoned and then executed people whose job it was to inflict random pain and death on unsuspecting civilian populations. This was called justice.

In 1990, the NRC wants to inflict

from 2,800 to 12,000 additional cancer deaths and many more non-fatal cancers on the American public so that the nuclear industry can ostensibly safe a little money. This is called American nuclear policy.

(Applause.)

MR. KRAFT: How will history judge these actions and us as a people if we do not oppose the BRC policy?

I know my remarks have gone a little long, but I hope in the spirit of glassnos and peristroika you will heed my remarks today.

Thank you.

(Applause.).

DR. PAPERIELLO: At this time, the agenda shows that we are going to shift to an hour of questions and answers. We have a bunch of questions up here, and then we will go back to complete the statements.

I have had a request from a couple of people to take just a very short break. We

can take five minutes and then reconvene, and we will go with the questions and answers.

(WHEREUPON, a recess was had.)

DR. PAPERIELLO: Can we resume? Can we resume, get started again?

I'm going to -- I have had a couple requests to change the agenda. I guess if there is enough people who are willing I will, slightly.

Two things. One, I have a representative from the State of Massachusetts Low-level Radioactive Waste Management Board who cannot make the meeting and who has to go to a Department of Energy meeting right after this, and I have agreed to let her speak next.

I have also had a number of requests from individuals who asked us to cut the questions and answers down to half an hour to let more people get their -- to make their presentations, as they have other commitments.

If there is a show of hands to have the statements and cut down the number of

questions? We will resume questions after we get them.

(A show of hands.)

DR. PAPERIELLO: What's the feeling? How many people don't want -- how many people want us to keep an hour of questions?

(A show of hand.)

DR. PAPERIELLO: Well, I hate to say it. The other side has it. Okay. I am trying to thank everybody for their patience.

I will now call upon the State of Massachusetts. I am sorry.

MS. AMICK: Thank you very much. I am Carol Amick, the Executive Director of the Massachusetts Low-level Radioactive Waste Management Board.

The Massachusetts Low-level Radioactive Waste Management Board is the lead agency in the Commonwealth of Massachusetts charged with the responsibility of managing low-level waste.

The board was created by the

passage of general law Chapter 111H, the Low-level Waste Management Act, and the board is aggressively taking actions consistent with the Governor's Milestone '90 certification to fulfill the mandates of federal law, Public Law 99-240.

The management board is comprised of nine persons who are charged under the law to act in the pubic interest as they fulfill their low-level waste planning and management responsibilities. The professional training and experience of board members explicitly mandated by our law includes such areas as local government administration, engineering, radiological health, business management and environmental protection.

Some board members have expertise, technical expertise, in the use of radioactive materials and others do not and reflect different interests and concerns on this issue.

Because of this diversity of backgrounds and views, each board member

represents the public's interest in a different way. It is difficult for this diverse board to reach 100 percent agreement on BRC, but with honest input and discussion they make every effort to derive an educated consensus opinion.

The management board has a baseline position on BRC which was communicated to the Commission in a letter to Chairman Carr dated M.. 10, 1990. The letter explains that Massachusetts law contains several provisions allowing the state to manage materials and practices of all waste currently regulated as low-level waste, including waste which may be declared BRC in the future.

These provisions of our law are founded on the principles of managing low-level waste on the basis of the state's economic concerns, such as matters of facility utilization and allocation, and on the basis of guarding against the potential liability of the Commonwealth for personal injury and property damage.

And the board was pleased that Chairman Carr's response acknowleged the Commonwealth's authority to manage and regulate waste for non-radiological health purposes. And Chairman Carr's letter states -- and I'm going to turn in this testimony, but I will just pull some sentences out -- that:

> "The need for uniformity of basic radiation protection standards does not affect a state or locality's ability to regulate radioactive materials for purposes other than radiological protection or to choose a site or technology when acting in a non-regulatory proprietary capacity."

While the management board has its fundamental position on Commonwealth regulatory and management authority over all waste, other BRC related issues remain perplexing. However, the board does agree 100 percent that to have thrust this new policy upon the states at a time when states are trying to accomplish the goals and fulfill the mandates of Public Law 99-240

are unnecessary complications to an already extremely complicated issue.

Other state low-level waste board agencies and authorities share this opinion.

The BRC policy complicates the activity of our state national board in the following ways: Number one, the BRC issue has drawn the board's attention away from other aspects of low-level waste management.

Unfortunately, the board's staff is very small, and we are constantly responding to numerous daily inquiries on BRC from citizens and elected officials. And this public inquiry response has taken valuable time from our major task of meeting the 1990 milestone commitments.

Massachusetts is having financial difficulties, as are many other states; and as a result, this has meant a temporary reduction in our state appropriations for low-level waste programs.

The situation clearly demonstrates the necessity of directing my staff, the

management board staff, to concentrate on those activities which will enable Massachusetts to fulfill the mandates of federal law.

Number two, the BRC issue has generated significant confusion and misunderstanding among the public. The public is confused and perplexed. This confusion is causing greater distrust of the NRC and misunderstanding, anxiety and distrust of our activities in the Commonwealth of Massachusetts.

Increasing negativism on the part of the public will complicate our ability to meet the objectives of Federal Law 99-240, especially in the extremely difficult phase of siting a disposal facility for low-level waste in Massachusetts.

Number three, the BRC issue has created a political environment in which rational discourse of the board's mandates are more difficult. We have communities in Massachusetts who are -- are considering and

have adopted by-laws and ordinances against putting BRC waste in local landfills, even though our state law already prohibits the disposal of BRC waste in local landfills.

This is causing confusion on the part of state elected officials who believed that they passed a law that had this prohibition in it several years ago and now are faced with this confusing issue.

Another example. The differences of opinion on the BRC have divided instead of unified state leaders among states. Governors must talk to governors. State low-level waste leaders must communicate with their counterparts in other states. But the BRC issue creates very different standards for waste acceptance, and it will reduce the cooperation among the states rather than enhance it.

In order to fulfill the mandates of federal law, Massachusetts, like many other states, has many important issues to address. For example, we are looking now at evaluating

the economic validity of constructing a disposal facility for an annual volume of 25,000 to 30,000 cubic feet of waste which is predicted to be our annual volume in the future.

The state's fiscal situation has slowed the completion of all the tasks outlined in Milestone '80 and Milestone '90.

In addition, an anti-tax group in Massachusetts has succeeded in collecting enough signatures to put a tax and fee rollback initiative petition on our November state election ballot.

Approval of that petition by the electorate may threaten the passage by the legislature of capital bond authorization that we need for further low-level waste management activities. Approval of this referendum may lessen the chance for passage of legislation which we feel is very important in Massachusetts which assesses a fee on those who use radioactive materials and generate the waste to run our program in our state.

The need exists to inform the public about the activities of the Commonwealth in fulfulling our federal mandates, in siting facilities and meeting all our other statutory responsibilities.

The process of any future political -- future negotiation with local communities selected to host a disposal facility requires further preparation. We need to be working on that, not dealing with the BRC.

These are some of the management board's concerns; they are not all. And I have shortened my testimony because you have put me out of turn, so I will turn in the full testimony to you.

The board does not need to be saddled at this time with another problem, BRC, which will continue to cause confusion and damage to the state's low-level waste management activities.

We, therefore, urge you to go back to the drawing board and to rethink your action

on BRC with respect to each of the parties, including all of the states who must fulfill responsibility under federal law.

Thank you.

(Applause.)

DR. PAPERIELLO: Thank you. I will now start looking at some of these questions. I am going to try to put several of them together so we can cover a couple concerns.

I have a number of questions I'm going to put -- I will answer together: What is the motivation for establishment of a policy? How much money does the NRC expect to save by this policy? If these materials are of no danger to the public, why are they now or initially under regulatory control?

The purpose -- once something is radioactive, theoretically it is never not radioactive. If I start up with a certain amount of material with a certain half-life, at the end of that period I will have half of it. At the end of another -- another same period of

time, I will have half again.

So in principle, in fact in physics, once something is radioactive, it decays and gradually decreases to a point -- well, that a scientist can't detect it.

My job for a number of years in New York City, when somebody says something is non-detectible, was to move the decimal point over a couple places.

I can in fact detect radioactivity either -- not just man-made but made by cosmic rays that will give you doses in the order of microrems per year. You can argue about whether that's below regulatory concern.

We have never told licensees on a systematic basis when you can give up. So there's one motivation for a policy.

When is clean clean enough? We have had practical limits. We couldn't detect them. Well, what couldn't detect ten years ago you might be able to detect now. What you can't detect for a hundred dollars maybe you can

detect for a thousand dollars.

So there is an element of practicality.

Another motivation, the exemptions. We have exempted consumer products over the years. They have been done for a variety of reasons and a variety -- it's not clear at this point whether or not they've been on a consistent dose basis. That has to be relooked at.

We did have Congressional direction.

So a variety of motivations. Was there economics involved? Yes, there was economics involved. There is some, and a number of existing exemptions today have economics involved.

If you go to the hospital and have a scan, a nuclear medicine scan -- I have had one. My wife has had two of them. It is done on an outpatient basis. You go home, and you have radioactivity in you. If you have less

than 30 millicuries of radioactivity in you, you can go home. You do not have to remain hospitalized in a protected environment to protect other people.

The primary motivation for that is economic.

Is there an exposure to people around you? Sure, there is. It is small? Yes. What is it? I don't know, because that particular exemption was made up 20 years ago, before my time; and at this point I don't know what the -- I don't know what that dose is.

So there were -- there have been exemptions that have been generated over the years that need to be relooked at.

There is another one. There is a standard. A thing is not source material. In fact, the words we use are "unimportant quantities" -- that's taken from the Atomic Energy Act -- uranium and thorium less than .05 percent by weight. This particular -- that particular limit was based 35 years ago on

material that would be diverted for weapons.

It's not clear to me that there is a consistent radiological basis for that exemption.

So there are things that we really need to relook at. The questions is -- you can say, hey, we don't want any of it. There is a practical problem. There is thorium and uranium in the soil in our backyards. You can't say license it all because that means I'd have to license everything in the world: Cement, bricks. So therefore, somewhere along the line, I got to say, hey, I am not going to license it.

You can turn around and say, but if it's naturally occurring. Well, that wouldn't -- that will get you into trouble. If I burn coal -- if I burn coal, which has uranium and thorium in it, I am going to enrich it. The EPA and everybody that I have -- I have been reading a lot of books lately in preparation for this meeting.

Everybody has looked at what comes out of coal stacks, coal plants. Nobody has looked at what happens to the ash. They have documented wonderfully all the radioactivity remains in the ash. That's exempt from licensing because of the .05 percent by weight and not because of any dose consideration.

These are all the things that the Commission needs to look at.

So there are things that deal not just with economics but are practices. That's the reason, I see, that we put forth this policy and the motivation.

I don't know what we are going to save in money. Maybe we will save nothing. Certainly it will make a decision on what is worthwhile -- we think, at least, we will make a decision these things are worth worrying about and other things aren't.

Don, why don't you answer a practical question that deals with the implementation of the policy.

DR. COOL: The question that was raised had to do with whether there are reference scenarios for pathway analyses that will be used and whether those pathway analyses models and computer codes are available.

The answer to the question is that, yes, there are certain types of scenarios that are generally used: Direct exposure, intake of radioactive materials by inhalation or ingestion.

There are a wide variety of models which have been used in the past and may be used in the future to model those particular things, models which are used by the International Commission on Radiological Protection, models that have been used and endorsed by the Environmental Protection Agency in their federal guidance.

Those are the models which we will use to look at the specific cases. Some of those are directly available to the public. Others are available through the Department of

Energy.

DR. PAPERIELLO: There have been a number of questions on why we ran the meeting at this particular time and the way we asked the questions on cards.

Both of the decisions were ones that you can blame on me personally. I held the meeting at 1 o'clock in the afternoon because I had no better time to hold it, and considered that I was concerned -- wait a minute. I will take the blame. So you can throw rocks at me.

The consideration was we were supposed to hold a meeting for the entire region, which is eight states. People had to come from out of town; and I wanted, frankly, to avoid the cost of paying the room rent in the hotels in this area.

So I figured people could fly in in the morning, have a meeting in the afternoon, and fly out in the evening. You can say I was wrong, but there wasn't any sinister -- no other sinister motive in it.

MR. FONNER: I have had a few questions dealing with some legal issues, and I will try to answer a few of them at this point in time.

First question asked whether the language in the policy statement -- says, "Assuring that there is adequate protection for the health and safety of all members the public really means the same as saying that the policy will ensure adequate protection?"

I think the answer to that is yes. The linguistic variations are immaterial. The concept of adequate protection, that comes out of the Atomic Energy Act and sets an absolute standard for the Commission to follow in licensing and rule-making.

Another question is: Will public input to rule-making and classification of waste as BRC occur before rulings are issued? The answer to that, again, is yes.

Rule-making requires public comment under the Administrative Procedure Act. The Commission always will publish a notice of

proposed rule-making. That notice will go into the Federal Register. It may receive other forms of publicity.

We are required to solicit public comment. Public comment is received, and each comment is analyzed.

And we have had rules of apparent simplicity where we have literally analyzed thousands of issues that have been raised by members of the public, and we respond to each issue that is raised and publish a response in a document that is publicly available.

Those comments are taken seriously and considered and evaluated in the formulation of the final rule.

DR. COOL: Another one of the questions that was raised related to the dose criteria. I will read the question for you.

"The one in 10 millirem standards are per person per waste stream per year. What's to prevent people from being exposed to multiple waste streams?"

The Commission considered very carefully the potential for multiple exposures and multiples practices and, as a result, put a number of specific mechanisms into the policy statement, and plans to implement that policy statement to deal with them.

Those factors include that each practice which would be considered for exemption will be defined broadly so that you don't have waste from one hospital being considered a practice and the next hospital down the street being a separate practice. Those will be aggregated on a regional and national basis to assure that you don't have multiple practices from that.

The Commission established a 1 millirem criteria such that even if an individual were a member of the critical group from several practices, that the aggregation would not approach values that would be a significant fraction of the internationally recommended dose limits.

The analysis that will be conducted by the NRC will include all of the possibile pathways and the possibility for aggregation or concentration of materials once it has been released.

A VOICE FROM THE FLOOR: I can't stand this. Are you going to tell us how you are going to control that? Who is going to enforce it? How are you going to know how much anyone is exposed to?

DR. PAPERIELLO: I would ask you at this point how does the NRC know now?

(Applause.)

DR. COOL: I will respond to specific questions.

The Commission has stated, if you recall the presentation I made at the beginning of the meeting, that it is going to establish conditions and constraints that it intends to inspect and enforce on meeting those conditions and constraints and --

A VOICE FROM THE FLOOR: At every landfill

and incinerator in the country? You are going to have the nuclear police stationed at every facility in the country, at every recycling center, testing every piece of metal that's sold on the market?

DR. COOL: Commission intends to inspect and enforce the conditions and constraints they establish on its licensees.

In dealing with multiple -- the NRC also plans to look at the exemptions which are issued and which have been issued and determine whether or not at future times there have been built-ups such that there could be multiple exposures and, if necessary, go back and relook at those conditions.

A VOICE FROM THE FLOOR: Long after the damage is done.

A VOICE FROM THE FLOOR: How many inspectors do you have? How often will they go out? What are their criteria?

MR. FONNER: I am sorry. Lady in the peach dress there. I didn't hear the question.

A VOICE FROM THE FLOOR: I want to --

MR. FONNER: I want to respond to an earlier issue.

It's come up over and over again in the course of the statements made by people and I think in this last issue of questions about disposal of waste in sanitary landfills.

It's the position of the General Counsel's office at the NRC that the fact that the NRC might under its policy release from regulatory control certain low-level waste because of the minimal health consequences that that waste embodies does not preclude states or municipalities or private operators from taking steps either through legislation or regulation or the way they operate the landfills from precluding that waste from going into the landfill.

We know for a fact that some national waste disposal companies already monitor waste that they are picking up to go to landfills, and they reject that waste. And that

does not present a problem to the Nuclear Regulatory Commission. That is a use of real estate, real property, that's within the competence of the states.

A VOICE FROM THE FLOOR: But agreement state policy will precluded the states from doing so due to compatability requirements; and moreover, it so states in the BRC policy.

MR. FONNER: That is a question which is asked of me, and I will get to answering that when I get to the question. Will you wait?

A VOICE FROM THE FLOOR: Answer it now.

MR. FONNER: Mr. Owen, who was the administrator of the radiological health program in Columbus, Ohio, has asked that precise question, and I will read to you his question:

> "In what manner will the NRC resolve the issue of compatibility given that the Low-level Radioactive Waste Policy Amendments Act of 1985 shifts responsibility for low-level radioactive waste disposal to the states and wide

latitude for implementation of same by the states?"

First of all, I will read to you the answer that was given by the Commission to Congressman Martin, who raised the same question in a series of questions presented to the Commission this summer.

The answer states:

"The regulatory authority of an agreement state could be affected by future NRC rule-makings implementing the BRC policy. However, in order for agreement state authority to be affected, the particular BRC rule-making would have to be sufficiently important for NRC to make the rule a matter of strict compatability. If this were to occur, agreement states would need to adopt conformity rules. The basis for requiring compatibility in agreement state programs is Sections 274(e)2, 274(g) and 274(j) of the Atomic Energy Act."

Now, in the context of the Low-Level Radioactive Waste Policy Amendments Act of 1985, that does not mean that the waste is deregulated from the standpoint of the state's obligation to provide disposal capacity for that waste. And if the state has access to a low-level waste disposal site for that waste, and if that state chooses to preclude the use of landfills for that waste, the waste will perforce be required to go to that low-level waste disposal site licensed either by an agreement statement or by the Commission.

I think that is the clear answer, the clear implication of what the Commission is saying and what the law presently requires.

A VOICE FROM THE FLOOR: Where is that stated in the policy?

MR. FONNER: I don't think that's stated that expressly in the policy.

A VOICE FROM THE FLOOR: It isn't.

(Laughter.)

MR. FONNER: But the policy does not

answer all questions that might come up.

MR. HICKEY: I have one specific question: How does BRC apply to mixed waste? The question is referring to waste that is not only radioactive but contains chemical hazard, for example benzene, that might be contaminated with radioactive material.

And as background, a hazardous waste has to be disposed of in a hazardous waste disposal ground; and radioactive material has to be disposed of in a radioactive waste burial ground. And there are no facilities where you can dispose of material that is both radioactive and hazardous.

The answer is that if the hazardous waste is classified as BRC, then it will considered no longer radioactive; and so it could be disposed of in a hazardous waste ground.

A VOICE FROM THE FLOOR: Which is linguistic detoxification.

MR. HICKEY: There are also some questions

related to consumer products:

"Assuming BRC goes through, will products which contain low levels of radioactive waste be labeled? Will I buy my son a nuclear bicycle for Christmas? And if you are going to allow the reuse or recycling of contaminated equipment into products, how can I be made aware of these awful products?"

In some cases, the consumer products are or will be labeled. Smoke detectors are labeled now. But we recognize that in some cases that will be -- will not be practical because if the material is recycled, the label cannot go along with the recycling material.

So in some cases you will not know that the material has slight radioactive contamination, and the primary criteria will be our decision that the material is of a low hazard.

The labeling question will be

addressed where it's practical. If it's not practical, then you will not have a label.

DR. COOL: There were several questions related to the background values that were presented earlier for radiation exposure. This question, which was multiple-part, dealing with what the background is of our industrial -- and I assume you mean applications, background levels at the present time, percentage of background increase to the general population if reclassified low-level waste enters people's home via recycling stream and statistical increase in total cancers attributable to this increase.

In addition, there were other questions dealing with what was included within background and in particular what -- whether the exposures from fall-out from weapons tests conducted 20 or so years ago were included.

The answer to the last question, I will take that for the first order. The background exposures which we have presented in

a slide for you which are included within the policy statement booklet which was available at the desk were assembled by the National Council on Radiation Protection and Measurement included fall-out exposures from the nuclear weapons testing program. It included various industrial applications. It included nuclear fuel cycle powerplant effluence and various other miscellaneous contribution which I can't elaborate on in detail.

That report is available from the National Council on Radiation Protection and Measurement which is an independent Congressionally chartered group.

In terms of the percentage of increase of exposure for potential recycling streams is really impossible for us at this time, as it would be impossible for you, to predict what sort of proposals might be made for the recycling materials.

No one has asked the Commission to consider recycling of radioactive materials.

Should such a proposal be presented to the Commission, we would have to consider that kind of rule-making process through public comment; and that proposal would have to meet the criteria of the policy statement, which would mean that the maximum individual under very conservative calculated scenarios would need to be less than 1 millirem per year. And any sort of average individual as a result of that would be significantly less than that.

MR. HICKEY: Question:

"If the NRC changes its mind about what level of radiation is BRC, if they decide they should tighten restrictions, how will they track down and survey the radioactivity of dump sites, consumer goods and landfills? The NRC plans to maintain no record of the fact of BRC materials, so how can they correct the problems that the current BRC levels may cause?"

We have to acknowledge that once the material is released into the unregulated

status in public domain, that it's unlikely that that it can be tracked down. So the enforcement has to be at the front end.

A VOICE FROM THE FLOOR: What about enforcement? You haven't said anything. Did you beef up the fines and sentences? Right now in Illinois the maximum is $500 for certain things. And the guy -- it's cheaper for him to dump than it is to pay that $500 -- or it's cheaper for him to pay the $500 than it is to dump. So he dumps.

So what are you doing with nuclear waste? Is it going to be the same route as regular dumping? And the Mafia has big control over this dumping.

What are you going to do with s stuff that's thrown all over the highway wi you are not looking?

MR. FONNER: I am going to try to answer your question. I don't know. What is Illinois law and Illinois imposes as penalties is a local issue.

If you don't like the Illinois penalty, you think it's too low or not strict enough, your remedy is with your state legislature.

A VOICE FROM THE FLOOR: I want to know how yours is any better.

MR. FONNER: Under the Atomic Energy Act, violation of the regulation of the Commission -- we have a regulation that says you have to take certain safety precautions in transport; that there are limits on radiation and how you use the materials. Violation of our regulation is a felony subject to ten years in prison and a $10,000 fine.

A VOICE FROM THE FLOOR: Who goes to jail? I want to see somebody go to jail.

(Applause.)

A VOICE FROM THE FLOOR: If I steal a loaf of bread, I go to jail for the rest of my life.

MR. FONNER: We have not sent anybody to jail yet on low-level waste conditions. We have sent people to jail who supply fradulent polls

for nuclear power reactors, who falsify records of training and in certain other instances of that nature.

A VOICE FROM THE FLOOR: The whistle blowers get pushed out.

DR. PAPERIELLO: At this point we will resume the statements, if we could.

I just want to make something clear with the transcripts. The availability has been noted at the door on the agenda that I passed out.

There will be eventually all of the transcripts in the five regional meetings, the questions, all the issues will be identified; and there obviously will have to be a response to it.

There will be an executive summary that is available on the main report if you ask for it, if you sign up for it at the door.

I anticipate that all the questions -- there's a lot, obviously, we didn't get to. A lot of them are repetitive or they reflect the

issues that you have already made in your statements.

The common issues that have been identified will be discussed in the -- will be identified and discussed in the report.

I will call -- I will ask you at this point to please stay within the five minute constraint or other -- some people here may not get an opportunity. They will just give up and leave.

I will stand up after four minutes to give you an identification that you have a minute remaining, and I will apologise if I pronounce anybody's name wrong. I am good at this.

Jeff Balch.

MR. BALCH: Good afternoon. My name is Jeff Balch. I have written a song for the occasion. I don't have my guitar with me. I don't have the nerve to sing it a cappella, so I'm going to recite it to you.

It's called "Below Regulatory

Concern."

I was strolling to the soda shop to get me a malt when I got mugged and robbed. Got my head stepped on. There was a cop on the corner. He witnessed the assault.

He walked on over when thieves were gone. He had a big old gun. His shades were black He was calm and tough and taciturn. He said, I would have jumped in but it looked like this attack was below regulatory concern.

When I asked him what he meant, he said, You hurt real bad? I said, Some bruises and my head feels strange. He said, How much stuff did you lose? I answered, My credit card, five bucks and some change. He said, The department's got a new mugging policy now. It may strike you as little bit stern, but if the injuries are minor and the theft is small, it's below regulatory concern.

So I went to my savings and loan to get some cash to replace the cash I did lose. I said, Let me have my money. Well, they just

looked at me funny and said, Buddy, ain't you heard the news? All across the nation there was thrift deregulations. Your deposit cannot be returned. This savings and loan was sucked dry as a bone. It was below regulatory concern.

So I walked along and passed a kid who wacked me in the knee with a baseball bat. His dad was standing just a couple feet away. I said, You just going to let him get away with that?

The dad said, Hey, the kid's still young. Give him some time; he will learn. But for now, since he hasn't killed anybody, he's below regulatory concern.

Well, I moved back home, and from the end of the lane I saw flames shooting out of my house. There was a fireman there. He asked, Who's inside? I cried, My two kids and my spouse.

Well, the fireman says, I am sorry, pal, but we are going to have to let the thing burn, because with less than one spouse, four

kids, two pets, it's below regulatory concern.

Now we are gathered here today to discuss deregulation of some kinds of nuclear trash, and the NRC says that the deaths will be few and that BRC will save them some cash.

Well, I think we ought to answer them very clearly before we all adjourn, that nothing that causes people to die is below regulatory concern.

(Applause.)

MR. PAPERIELLO: I would ask Bruce Macking, Bruce Macking.

MR. MACKING: My name is Bruce Macking. I am the coordinator of the Chicago based environmental group TERRA. A lot of things have been said, and I just want to restate a few things very simply. The NRC is basically saying this is a low risk policy. It's true that there is nothing that is going to be no risk. But I think that a lot of the radiation standards that have been put out are lower than the standards that are being promulgated by the NRC in the BRC.

And one thing we need to keep in mind with radiation is that there, and it is what people thought in the 50's with radiation, is that there was a threshold and once you got through that magic threshold, there was no radiological damage that would occur. And we know not only is that not true, but it is very obvious that in some ways very low radiation could be more damaging than higher doses of radiation in certain ways.

And there have been studies that

have warded out some of this. There is the report that was analyzing the Nagasaki survivors and there was the study that was recited earlier by Judith Johnson done by Dr. Stern and George Nielson in England where they found that the vast majority of childhood leukemia came from exposure to the in utero radiation.

And the fact is, and this is to the NRC, is that people are going to die. They're not going to die in the same way you see a bunch of people killed by a serial killer on the 10 o'clock news, but they are going to be just as dead. One out of twenty-five people die of cancer here over a, well, over a lifetime and this will not make a huge blip on that death rate, but it's still going to be people, extra people who will die. We don't want a bunch of extra people dying. And that's what the Nuclear Regulatory Commission should be looking toward.

It's like some people are going to die from background radiation. Of course, that's true. But we need you to keep in mind that

we want as few people to die as possible. We don't want to say, "Let's forget about this." It's kind of like sweeping it under the rug or something. I find it very ironic that there is another Illinois State Law that you can't put your grass clippings or your leaves in with your trash. But now radioactive waste will be able to go out with the trash. It's one of life's little ironies here and it's very ridiculous.

I think the commissioners of the NRC need to reflect on what's the right thing to do in terms of public health. And I also would say the same thing of people that are NRC staff members. I think you need to really, really consider this and if you really feel that this is not a good idea, and I know for a fact that not everyone in the NRC thinks that this policy is a good idea, I think that you should speak out. I mean, this is not Iraq where Saddam Hussein has people that disagree with him dragged out of the room and shot right at the moment.

The bottom line is we have had

environmental problems that we created, either through ignorance or just turning blind eye to things and we were stuck trying to figure out how to clean up those. This is one that has not yet quite happened, and it doesn't need to happen. And I would like to see the NRC reflect on this again so that it doesn't have to happen.

Thank you.

MR. PAPERIELLO: Thank you. Robyn Michaels.

MS. MICHAELS: Good afternoon, ladies and gentlemen. My name is Robyn Michaels. I am a graduate student of Urban Planning and Policy at the University of Illinois at Chicago. I was a founding board member of Uptown Recycling Station, one of the first community based recycling centers in the country.

I did't go to college until I was thirty because I was making a good living and owned my own home. I had a lot of security. It was a trip to Africa in 1985 that made me decide to attend college. I wanted to know how people made decisions about protecting their natural

environment.

I majored in cultural anthropology because of its holism; that is, I knew there were psychological, economic, historical, philosophical, sociological, and political factors behind most communities' decision-making. Although my minor ended up being international intercultural studies, I took fifteen credit hours in environmental science.

Thus, my education and knowledge is recent. I learned about habitat and natural area conservation, solid waste and, the bottom economic line, energy issues. I had a prior interest in factors causing population growth, and that is an issue intertwined with all the others.

My gut reaction to allowing the disposal of low level nuclear waste as though it was non-hazardous was amazement that someone involved in the profit from low-level waste got this far with this dangerous scheme. I have been taught that all landfills leak at some point. Usually, they start leaking after the operator is

no longer legally responsible. Yet, even the idea of being legally responsible for citizens being harmed by toxins is an oxymoronic thought.

My specialization in planning and policy is educational policy in community development. In my research, I found that politicians and administrators have been gravely concerned about the low level of scientific literacy of US citizens for about thirty years, since the USSR launched Sputnik. Our leaders, and I use the term facetiously, hope that by making Americans scientificly literate, we will come up with a cure for natural laws. That is, we will come up with solutions that go beyond the bounds of nature, like making poison nonpoisonous. The knowledge we get from knowing science is that matter is neither created or destroyed, but we can make matter poisonous and, due to laws of physics, there is a net energy loss in making poisons nonpoisonous.

To put the matter simply, nuclear waste in any concentration comes as close to being

a universal solvent as we can get. It can't be contained and shouldn't be produced. We really don't need poison to live. The perpetrators of this industry have taken advantage of a nation kept ignorant of the real danger of nuclear materials. Yet, many of the people you see here managed to survive the education they were given. They educated themselves.

In a way we speak as representatives for our communities which are generally less informed. We have torn ourselves away from our TV sets and Madonna, our jobs and mundane aspects of our lives, to tell you that we don't want to glow in the dark and we don't want our children's children to glow in the dark and we don't want our friend's children, many of whom are struggling in developing countries, to glow in the dark. We don't allow drug dealers to poison us. Why should we allow the nuclear industry to do so?

This is a matter of real science and appropriate technology. Because we have the capacity to produce as much poison as any other

country or more, it doesn't make us intelligent. For the amount of money the nuclear industry spends on flimflaming us, they could have developed solar and wind products to satisfy many consumer needs.

When I was in Africa, I saw televisions powered by the sun. If they can do it in places with no technology and no infrastructure, we can certainly do it here. And if the issue is the amount of products that have to be produced to satisfy the number of consumers there are, it is then a population issue with economic theory. Industries will soon have to get comfortable with the concepts of zero and negative population growth if they want to have any consumers. But that is yet another issue.

To sum up, I am aghast that such a policy as Below Regulatory Concern would be considered seriously. I can only imagine that you have very poorly trained scientists on the staff of the NRC, and that none of you drink or bathe in water.

MR. PAPERIELLO: P. Hasbrouck, and I apologize again.

MS. HASBROUCK: Hi, my name is Phyllis Hasbrouck. I am the Director of a Chicago based Environmental Group, TERRA. But I'm speaking here mostly today as a mother of two small children because they are among the most vulnerable to the increased radiation exposure which your BRC policy is going to let loose on us.

Your scientists tell us that only 3.5 out of 10,000 people will die of cancer from your policy. Well, who gave you the right to say that thousands more people should die an agnonizing death. And what about birth defects, miscarriages and damages to the immune system, which you don't even address in this policy.

Have any of you ever had a child with a birth defect? Have any of you ever stayed up all night with a crying, hurting, sick child? The anonymous list of individuals which you so easily dismiss are real people with real families. How many people in the audience have lost a family

member to cancer? Raise your hand.

(Whereupon the audience signified by raising their hands.)

Look at that. How many have lost a friend or colleague?

(Whereupon the audience signified by raising their hands.)

We say enough is enough. One of the NRC speakers was at pains to reassure us that only a few individuals will receive the full dose of radiation under this policy. Are you implying that garbage men's and truckdrivers' and steelworkers' lives are not worth as much as other people? Should we be prepared, as you apparently are, to accept their agony and their death happily because it's not us?

If you on the NRC could somehow be given a list in advance of all the names of your victims and you approve this policy anyway, you would quite possibly be arrested and tried for

premeditated mass murder. But what difference does it actually make that you don't have those names in advance? The people will be just as dead and their orphans, their widows and widowers will be just as bereaved. How different is this BRC policy from premeditated murder?

I am not willing to sacrifice this precious child to put more money into the coffers of the nuclear industry. And I will do everything I can to mobilize other parents that don't want to see their children fall victims of leukemia and all the other diseases that are likely to happen from this policy. I urge you as parents, as you probably are, to reconsider what you are about to do to the children of this country.

Thank you.

MR. PAPERIELLO: Thank you. I call upon Helen Denham.

MS. DENHAM: Hi, my name is Hellen Denham and I am a national coordinator with the Student Environmental Action Coalition. SEAC is an alliance of over 750 student environmental

organizations and 2,300 individuals dedicated to creating a just and healthy planet.

We seek a voice in the decisions that affect our lives and the environment within which we exist. We are dissolutioned by the disregard for human health and for the democratic process that the NRC has shown in issuing a new BRC policy. Today we face a future in crisis. Environmental catastrophe does not remain a remote possibility in the future. It is here now.

Never before has there been an extinction rate comparable to today's. We are radically destroying acute forests, rare species and indigenous people. Not only are we devastating biological earthlings through habitat destruction, pollution and the slaughter of other species, but for the first time we are having a systemic impact on the life support system on earth through the destruction of the ozone layer, the greenhouse effect and world wide radioactive and toxic waste.

These examples of destruction are

symptoms of a maladapted civilization that we award short-term economic gain over sustainable growth that serve the wants of the few and the needs of the many and excludes our presence under represented groups in society.

As young people with our whole lives before us, we are appalled by the state of the world we are inheriting. Decision makers seem to have no qualms about using our earth, our air, our water as a dumping ground for wastes of all types. Our job is to act as caretakers of the planet for future generations, and we wonder what type of people can leave these poisons for their own children.

We have come to understand that the system is not working. People are dying today as results of current policies. Those who are most affected often have no say. This disregard for democracy is shown in the hearing process we see today. Look around us. For a matter of crucial national importance, a total of only five public hearings have been scheduled, with no hearings in

New York, Los Angeles or Washington DC, the media capitals of the nation.

Today's hearing is held in the middle of a workday during the summer in the middle of the week and in a relatively inaccessible location far from the city's center. This is virtually guaranteeing a low turnout--although I was pleased and excited that there was as many people here today as possible--and a low turnout of working people and students.

The impact of the BRC policy will be felt by many sectors of society, but once again the hardest hit sectors will be those communities primarily with low income and minorities where landfills or incinerators are sited. The federal and state regulators consistantly shirk their responsibilities to listen to the concerns of those communities, choosing instead the side of the industry, favoring backroom deals rather than public participation.

In a country and increasingly a

world community dedicated to ideals of democracy and individual liberties, the NRC's tactics stand out as a painful anomaly. The NRC has rejected the recommendations of its own staff, worldwide nuclear and environmental regulatory bodies, congressional leaders and local communities. This shows nothing but disrespect for the due process of representative government.

We also find it curious that the new policy has been issued at a time when decades of mismanagement of nuclear weapons production sites have been uncovered. For the first time, the levels of contamination surrounding such places as the Rocky Flats has been uncovered. And the necessity of attempting a cleanup has been acknowledged by the DOE. At such a time the loosening of restrictions on radioactive wastes should be looked upon with great suspicion giving incentives to government regulators to issue policies which will lessen the cleanup costs.

The NRC efforts to reclassify significant portions of hazardous low level

radioactive waste as below regulatory concern are a step in the wrong direction. As students, we demand that our futures be protected, not sacrificed for the benefit of the nuclear industry.

Thank you.

MR. PAPERIELLO: Thank you. I call upon Rosemary Quillan.

MS. QUILLAN: I didn't prepare a-- Well, I didn't prepare any written thing. I'm just going to do this ad-lib. I have no watch, so if somebody will tell me when I'm done. I've had two cancer operations, one in 1988 and one in 1989. Then I had angioid displacement, and I had to go into the hospital for a transfusion from August to December every month.

Every time I went into that hospital, they wanted to give me a chest x-ray. I had to refuse. I had to fight for my life. Because I would have been getting a chest x-ray for six months every month. And that helps me get more cancer. I don't know if my original cancer

came from chest x-rays or if the government gave it to me because my mother, nobody in our family ever had cancer like that. So, I really think I got it from somewhere in the atmosphere.

But the point is that these people, I don't know if they have ever had any experience along these lines or if they ever had the insightfulness to look and find out what the reasons might be, but the only thing I know is that this literature that they have prepared sure doesn't tell me what I want to know. For example, they say that here-- Oh, I don't know.

Okay. But like when Dr. Cool was talking, he didn't say who he was talking about. He said that certain people would be dosed in certain ways, wouldn't be allowed to do it or something. But he wouldn't tell you who he was talking about. How are they setting up these measurements? How are they limiting the dosage? Who do they limit it to? And when they give the stuff out to people to dispose of, how do they regulate it? How do they say, "Well--

And, oh, here is another thing that's very important. The way I understand it, low level waste contains high level waste. When they talk about low level waste, all they are talking about is they are excluding spent fuel rods. But the whole other stuff is lumped together. So when they give it to somebody, how do they sort out the real low level waste from the high level waste?

And what are they talking about? All this man mentioned was thorium and uranium. We don't know what else he is talking about and this is supposed to be a public hearing that happened after the fact where they are giving this information. And I can't get any. And I'm going to go and sit down because I can't think of what else I have to say.

UNKNOWN VOICE FROM THE AUDIENCE: If you guys think it's safe, why don't you guys hold onto it a while until you and decide it is safe?

MR. PAPERIELLO: Well, people are complaining that they are not going to have time to make

statements. If I don't turn around and take them, they are not going be able to make them. They are going to have to go home.

MS. QUILLAN: Do I still have time, because I just thought of something?

MR. PAPERIELLO: Sure.

MS. QUILLAN: The way I understand it, Congress gave them the responsibility for decommissioning these nuclear sites where all this stuff is spilling out into the air and into the water. And just recently, the Rocky Mountain Flats which was one of the most notorious back in about the 40's or 50's was supposed to be giving a lot of people trouble with radioactive iodine in thyroids.

That just went back into operation and so did the one down in South Carolina where they were doing thorium. Furthermore, I understand there is a whole bunch of them all across the United States. There are two in Ohio alone. I wouldn't want to be there. But the point is Congress has only appropriated money for

four sites, four defense sites for this year.

I would like to know from these people how they are moving ahead with this decommissioning business of cleaning up the mess we've already made and I would also like to know: Why is there no environmental impact statement required when they do the nuclear tests underground. Now, we've had a lot of earthquakes and other kinds of phenomena this year and what I'm wondering, in California too, what I am wondering is those are a whole lot more megatons. I think it's one and a half times what leveled Hiroshima and Nagasaki is what they are spilling out when they do the tests in Neveda.

And the thing is, I don't think that that just stays there. If it can't go up into the air it has to go around making circles and maybe it disrupts the ground and causes some of these earthquakes, but yet you are not allowed to have any environmental impact statement. I don't know if Congress has any oversight over it, and it looks to me that it's running wild and they don't

give a good God darn. Excuse my French.

MR. PAPERIELLO: Thank you, Ms. Quillan. As a point of information, the NRC does not regulate DOE facilities, not by law. And just again another point of information, a point of information. There are a lot of sources of radiation. By law, we regulate a very limited number of these. Just by law.

I mean, Congress gave x-ray machines to somebody, radium balloons with the states, accelerators, frankly belong with the states, not with us. We regulate the material, provide the fuel for a nuclear reactor, the nuclear reactor and anything that is made radioactive incidental to the use of the nuclear reactor.

I can't change that. You can. You can go to Congress and Congress can right the law any way they want. But I cannot suddenly say, "Hey, I'm going to do x-ray machines." I can't do that. That is just a question or matter of law.

Okay. I would like to call on--

UNKNOWN VOICE FROM THE AUDIENCE: They are not

likely to give you more regulatory power over more sources of radiation, believe me.

MR. PAPERIELLO: I understand. I understand. Dan Ballocult. Is he here?

(No response.)

William Tour.

MR. TOUR: Hello, my name is Will Tour and I am a national counsel member of the Student Environmental Action Coalition. I represent one of thousands of students around this country who have a personal stake in the Nuclear Regulatory Commission decision on the Below Regulatory Concern policy.

I keep hearing that students of this country are our future. Well, it seems to me that unless we take the future in our own hands and start acting now, there isn't going to be a future for us to inherit. Over the last couple of years as we began to realize the things that are facing our earth, students began making their own changes in their own lives.

A lot of us try to drive less. We

recycle our waste. We conserve energy. But I think a lot of us realize that the time has come and we need to do more. Now we need to tell the corporations that are polluting our future that we won't buy from them and we will shut them down. And we can tell the legislators who are voting our future away that we are going to vote them away.

Looking at the policies that we are discussing today, I see basically no reason for them. The nation's increasing reliance of nuclear power and entrustment in the BRC policy are consistent with the lack of energy that this country has, the same lack that is leading us to war in the Middle East.

As students, we're beginning to learn what we can and what we cannot expect from our government. What we can expect is disregard for human heath and what we cannot expect is the effective control of polluters. In this policy, which will lead us to a thousand bolts of light isn't the thousand bolts of light which I remember people voting for a few years ago. It would lead

to increased danger to recyclers to consumers and people all over the country.

It is used for this generation of the world, the leaders, teachers, policy makers. Now, in a ludicrous turn of events, we start seeking in terms of preparing the earth for the next generation. If we don't act quickly, I am afraid we may face in many ways a barren and desolate future.

Today I'm here as one voice in protest. I want to send a message to decision makers in this country and their new policies, be it BRC or other policies which not only affect my future and the future of other students, but the future of our children and grandchildren: What kind of message are you sending to us when you tell us that corporate profits are more important than our health?

It's time that we start holding our government and the corporate world accountable for their decisions and it's time that as students we get a voice in the decisions that are affecting

our environment and our future and we basically demand that the NRC rescind this policy.

Thanks.

MR. PAPERIELLO: Thank you. Mr. Richard Kassanits.

MR. KASSANITS: Hi, my name is Rich Kassanits. I am cofounder of a group called the Thorium Action Group out of West Chicago. We were-- We have some experience with the NRC and, well, with one of their friends, Kerr-McGee and the policy concerns us directly in West Chicago and we think of the people in West Chicago as being sort of a prototype group.

The AETNA lady here from the southeast side was also involved with direct radioactivity in the proximity of her home. And all the people who live around nuclear power plants face the same concern as we do and that's that this policy will allow companies like Kerr-McGee and nuclear power industries to clean up lands that will be open for public use to a higher level than it would before, thus saving the

company money.

Kerr-McGee I'm sure intends to do that too. And let me tell you about my biggest fear is the loopholes in this policy, the BRC policy. You read it and it says that a lot of these issues won't be discussed. They will be hammered out in rule making in the future. They use-- They give you basic numbers, but they say that those numbers could change during their rule making and the future.

So that means if an industry asks for something, a higher level, than that will become the standards to be applied to other industries around the country. And in this case if Kerr-McGee would get away with climbing up to a higher level, that level then, as I understand what I heard here today, that level would then be the standard under the rule making process that other companies could follow.

It's interesting to see this graph that was displayed on the screen over here as part of the package. They have the exemptables as

being 10 millirems per year per person and they have the possible exemptables as being a hundred. The collected dose that they possibly would exempt go off the scale here. I think it was out to a 100,000 person rems which add at the dosages that they are talking about, they could very well consider giving a hundred millirems dose to every person in the State of Illinois. And that's just a rough outline.

I, you know, I hve to agree that there are protective limits and there are some line that should be drawn. But the line that the BRC policy isn't really drawing, is just conjecturing at, is way out of line. You have to-- You have limit amounts of resources that you can clean up to.

But one BRC policy statement that I got when commissioner, commissioner of the NRC, one of the NRC commissioners, said that the ten millirems dose is ten times too high and that the thousand a person rem is ten times too high. Well, that tells you something. I mean, one of

their own commissioners of the NRC is saying that this whole policy is ten times too high. That level is drawn way to high, and the level that they would allow the companies to apply for is at a hundred times what the international community would allow in normal practice.

So I agree that there is a limit that is below regulatory concern that is right at a limit of detection. But this policy goes way, way beyond that and the loopholes that it allows companies are staggering. The whole policy is one big loophole. It doesn't hammer anything out. It doesn't set everything. It says, "Everything will be allowed in rule making."

Now, if I have a minute, I just want to give you my personal observation about what the NRC is willing to do as far as loopholes go for the industry. There is a rule about siting nuclear waste dumps of the type that's in West Chicago and the first criteria says that, first of all, it has to be remote from the population, from the public. There are homes directly across the

street. There are schools a block and a half from this site.

The second part of this is they have to protect the ground water. The ground water is 90 feet below that site. There is nothing but sand over it. The site has to minimize erosion and the option would be below ground burial. Well, they can't do that because the water table is so high. So they put it 47 feet up in the air and the EPA says, "That's not going to minimize erosion."

Well, I agree. Criteria one, that whole criteria protects the public health. There is a little bit in that preamble to the effect that says that the existing sites require more leniency. So this first criteria, one of maybe a dozen was the one that they threw out, literally threw out; and in the environmental statement, they do not advise criteria one to West Chicago.

They do not apply the health and welfare of the people, of the drinking water, of anything to the people to their own rules. That's

the kind of loophole that they will allow a company like Kerr-McGee. Now, if they are going to allow that, I'm sorry, but I just don't believe that the NRC can be trusted with this BRC policy, which to me looks like a loaded gun. I got a lot more to say, but I'll stop here.

MR. PAPERIELLO: At this time, I call upon Toby Brown.

MR. BROWN: Thank you. My name is Tony and I am a recovering pollute-oholic. And I'm also, I am a student here in Chicago and I am based at the University of Chicago, I mean, University of Illinois at Chicago organizing for SEAC. And I think we should talk about sustainability today.

You know, to me sustainability means, "pay as you go." Pay everything up front as you go, cash on the barrel. If you can't afford it, don't buy it. I think we should have sustainability in our industrial activities, sustainability in our research and development, sustainability in medicine, sustainability in our energy production, sustainability waste handling.

I think we should have sustainability in all of our human behaviors. And if the cost for handling radioactive materials are becoming prohibitively high, then good. That's approaching the true costs. Maybe we can't afford it. The cost, really, we're just pushing it onto other life forms and other people at other times.

And besides that, the cost in dollars isn't even the true cost. The true cost is the damage to the environment and human health. You can't even count that in terms of dollars anyhow. And I just want to say that the government/industrial complex has been running at status quo of unaccountability now for too long and there is a movement to stop this. The people are outraged.

They say-- I have heard this saying, and I don't mean this as a threat to anybody in the NRC, but I've heard that, I mean, this as encouraging for the people in the audience. They say that the 90's are going to make the 1960's look like the 1950's, and I am beginning to think

it's true.

The students are getting together. People are getting together and we got to stop this right here and now. And I would just like to share, like, a word of wisdom that I picked up this summer out of Redwood, a Redwood summer in California where they are trying to stop the logging of the last few redwood trees. I learned this from some of the people that are involved. Try as best as possible. Whenever you're deciding what to do and the earth is involved, consider the earth first.

Thank you.

MR. PAPERIELLO: Thank you. I call upon Mary Sumner. Marry Sumner.

(No response.)

Okay. I call upon Betty Johnson.

MS. JOHNSON: Hello, my name is Betty Johnson. I am from RockFord, Illinois and with these statements I am representing the League of Women Voters in Rockford, Illinois and I'm going to skip part of them.

It is commendable that the Nuclear Regulatory Commission is holding these public hearings to receive comments from the public on it's Below Regulatory Concern policy. I think that earlier involvement with the public would have been more valuable.

Because the BRC policy as stated poses an unacceptable risk to the health and safety of the public, it is my recommendation that the NRC should halt all efforts to classify generically certain radioactive waste as below regulatory concern. I also think that the NRC should not preempt state's rights to regulate disposal of radioactive waste within their territory. As Commissioner Curtiss stated, there is no public health or safety justification to forbid states from requiring all radioactive waste be disposed of only in landfills.

I'm going into some problems with the BRC risk assessment and I am skipping part of this. In 1990 the BRC policy admits that, as the EPA has said, instead of one fatal cancer, the ten

millirem per year standard is equivalent to 3.5 in 10,000 lifetime cancer risk. But the NRC has not adopted any upper limit on exposure. Widespread deregulation resulting in exposure on the order of 100 millirems per year would equal 3.5 in 1,000 lifetime cancer risk, or about one cancer death among 285 Americans exposed.

In fact, the NRC will be able to grant approval to licensees to release radioactivity up to the dose equivalent of 500 millirems per year and will allow special exposures to workers that are much higher than the current limit. This exposure is not optional for workers.

Risk as defined in this policy statement is fatal cancer. Risk being lifetime fatal cancer risk. And in this risk, the NRC needs to include other known health effects of radiation, such as, non fatal cancers and noncanerous effects, such as, damage of cells, genetic and birth defects, and low birth weight in babies, as well as decreased immunity to diseases,

which would greatly increase the number of people affected by radiation and the risk.

The policy agrees that risks for children and neonatal infants are much greater, but does not calculate or include these effects in its risk assessment. Other people at greater risk are the elderly and those already ill with other diseases.

BRC lists several consumer products that may not be exempted under the new rule because deregulating those items which involve external or internal contact with the body would be socially unacceptable regardless of how trivial the resulting dose rate might be. These considerations should also be included in relation to other kinds of waste covered by deregulation which can get into the environment via the food chain and groundwater contaminated from insecure landfills and/or through releases into the air.

And I'm going to-- Serious problems may arise when the NRC uses background levels of radiation as a standard by which to declare

man-made radiation levels safe. As more long lived radiation materials enter the environment, the background radiation continuously increases and it is difficult to distinguish the source of the radiation without ca.eful and extensive monitoring.

I am going to read you a brief part of an editorial that I wrote for the League of Women Voters which was published in February 1980: "Because of recent reported releases of the radioactive gas Krypton-85 from the Three Mile Island Nuclear Power Plant and ensuing statements from the Nuclear Regulatory Commision minimizing the danger of these releases, the League of Women Voters of Rockford, Illinois thinks it important to clarify the long-term danger of releases of Krypton-85.

"A complete review of the hazards of Krypton-85 are detailed in the League's petition for leave to intervene in hearings on the operating license for the Byron Nuclear Power Plant." Okay. I am going to skip that part.

"It is important that Krypton-85 be contained because it's ionizing radiation can cause cell damage, cancer and genetic defects in future generations. Krypton-85 has a radioactive half-life of 10.7 years, which means that it remains dangerous for over 200 years. When released into the atmosphere, it has worldwide distribution and build-up with no means of removal except by decay.

The problem this presents is illustrated by the fact that ordinary Krypton, an inert, non radioactive gas that has been widely used for years in industry and medicine has become so contaminated with Krypton-85 from nuclear facilities and explosions that radiation protection now must be provided workers using this gas." This is part of the background radiation for these releases.

Back to my comments here. Another thing, I need to say something also about the monitoring which I think it is very, very poor. The commisson says, "From time to time, we will

conduct studies as appropriate to assess the impact of an exempted practice or combination of exempted practices," and so forth. It also says that most monitoring will take place at waste sources where records will be kept and probably keep track of destinations or any combinations of waste at specific sites, though they won't inspect disposal sites except at the start.

And as they said, most of the things will be from the source. I say past experiences at waste sites such as Sheffield, Illinois, Maxey Flats, Kentucky and West Valley, New York, as well as DOE sites for low level radioactive wastes and bomb manufactures leave serious questions and doubts about how well this will be done. A thorough analysis-- No, a thorough analysis of multiple and cumulative exposures and synergistic effects needs to be made to ensure the health and safety of the public in relation to any BRC policy implementation.

Ionization type smoke detectors show the dangers of BRC deregulation of consumer

products. Again I want to read something that I wrote for the League of Women Voters of Rockford in 1980. I find that in three minutes I'll try to get through it.

Because of recent sales promotion of ionization type smoke detectors in Rockford, the League of Women Voters of Rockford would like to restate some of the hazards of ionization smoke detectors. The League of Women Voters approves the use of smoke detectors as a means of minimizing and preventing fires, but believes that the citizens of Rockford should realize that there are two types of smoke detectors.

Both the photoelectric and the ionization smoke detectors are available in battery and plug-in styles. We believe that photoelectric smoke detectors are preferable because: One, seventy-five percent of fires in the home begin as smoldering fires and photoelectric smoke detectors react faster than ionization smoke detectors to this kind of fire.

Two, Ionization smoke detectors

contain radioactive Americium-24., which is similar to plutonium in its toxicity as a carcinogen at extremely low levels of exposure. The uptake of americium in plants from which it goes into the human food chain, and absorption from the human gastrointestinal tract is greater than for plutonium.

Americium-241's radioactive half-life is 450 years. So it poses a long-term hazard to future generations. The official maximum permissible body burden for Americium-241 is fifty nanocuries for an adult and the average ionization type smoke detector contains 3,000 nanocuries.

Workmen producing these units and anyone handling them are exposed to radiation, as are firemen when they are present during fires and cleanup workers. The alpha recoil action on Americium surfaces inside the detector foil forces small clusters of atoms to break away from the source, releasing particles of respirable size inside the metal foil covering from which they may

escape if the covering is damaged or melted.

Four, fire damage to these detectors and product defects have not been adequately tested and they are not clearly labeled to warn of potential hazards and to insure proper use and disposal. Now, I have heard that they are labeled. I still say they are not labeled and that the warning is not there. Because of the concern about the dangers of this type of detector, the NRC should put their labeling on the outside of the package.

Five, Americium-241 should be disposed of in a repository for radioactive waste and not in some local landfill or elsewhere in this community, where a buildup can cause serious health defects of cancer and genetic defects. Ten nanocuries per gram is the maximum waste level of Americium-241 that could have been disposed of in the low level radioactive waste dump at Sheffield, Illinois before it was closed down, according to Michael Hines of the Illinois Department of Public Health.

And to me this shows absolute insanity of allowing this to be deregulated. They had no business deregulating this type of material or putting in landfills. Now--

MR. PAPERIELLO: Ma'am, you have gone ten minutes. I'm going to ask you to pass it on to the next person.

MS. JOHNSON: That's it. I said most of the things I wanted to say. I do have a copy of this that I will turn over to you.

MR. PAPERIELLO: Thank you. I will call upon Jonathan Goldman.

MS. GOLDMAN: Hi, my name is Jonathan Goldman. I am a student at the University of Chicago and Chicago area coordinator for the Student Environmental Action Coalition. I just would like to say that it's no accident that there are so many of us here today and that we are being heard and that we will be heard for the next four hearings around the country. And we are here to stay, and we will be heard.

This country was founded on certain

ideals. Preeminent among them is democracy and the protection of individual liberties. For 214 years, people have fought and died to protect these ideals and to try to help nations around the world develop these freedoms for themselves.

The NRC's BRC policy helps show that they have forgotten or simply disregarded what this nation stands for and why. It is forgotten that a government exists to protect its people, not to harm them. It is forgotten that a government exists to carry out the collective will of the people, not to override it. We hope these truths to be self-evident, that all men are created equal.

This is one of the basic beliefs in our society. It is the reason that we have a representative system of government. It is why we have one person, one vote in elections. The NRC does not appear to believe this. The NRC makes a mockery of participatory government, of government of the people.

Why are there no hearings in New

York, Los Angeles or Washington DC. Why are millions of citizens in those areas denied their chance to participate in the process, to cast their vote on BRC. Does the NRC deem that its members are more equal than the citizens of those cities?

The NRC has consistently brought out expert opinions on the BRC and the health risks of increased exposure. Its own staff members, as well as the EPA and other worldwide regulatory groups, have all been severly overruled. Is the NRC more equal than those groups?

And what about the five that are being held? The time and location of today's hearing makes it largely inaccessable for people who would like to attend. The NRC should study its history books. In 1776, this country was founded when common citizens refused to hold with King George's tyranny. One of their complaints itemized in the Declaration of Independence was the following: He has brought together legislative bodies at places unusual,

uncomfortable and distant from the common area of their public records." For the sole purpose of keeping them in compliance of these measures, these words could easily have been written today about this hearing.

But let me say this: I may be fatigued, but I will not comply. That they are given by their creator with certain inalienable rights that among these are life, liberty and pursuit of happiness. What is the NRC's approach to life? The implementation of BRC to cost the lives of several thousand people a year. These deaths will happen in the name of money. The American people will give their lives to freedom and democracy. They will not give their lives to increase nuclear industry dividend checks.

What is the NRC's approach to liberty? To take it away from the states and individuals where it should reside. And who can even think about pursuing happiness when we have to worry about radioactive waste in our earth, our water and our air.

For the NRC to put BRC into practice must take tremendous courage. I must ask each and every one of the commissioners to look deep within yourself and see if you really have what it takes and see if you are really prepared to play God on this issue.

Thank you.

MR. PAPERIELLO: Thank you. I call upon John Calabrese.

(No response.)

Okay. I will call upon Mike Duer.

MR. DUER: Hi, my name is Michael Duer. I'm not really an official representative of any group on this day. I'm engineer and I am going to talk a little bit what is going on here. My school's motto was on knowledge and darkness, and I would like to see if these two ideals were specifically embodied in this policy formation.

The BRC policy, it is a deregulation. It's a, you know, a member of that Regan legacy, socialism for the rich and deregulation as a general class of policy seems to

have failed. We deregulated the SCC and we got the merger takeover of the 80's which has thrown thousands of people out of work.

We deregulated the Federal Home Loan Bank Board and we got the S and L mess. We passed the Motor Carrier Act and it caused the Interstate Commerce Commission to cease regulating truck traffic. As State Senator Welsh noted, truck accidents have just about doubled in Illinois.

We deregulated the Intelligence Agencies and now the CIA is back to its methods of winning friends all over the world. Deregulation fails because of the lousy irresponsibility of corporate bottomline thinking to override everything else, including the health, safety and welfare of our population. And I think we should cease this deregulation mania.

This is not the Nuclear Deregulatory Commission. It's the Nuclear Regulatory Commission. Deregulation, what this means, this means that instead of government of the people, it means, "Let the market decide." Deregulation

means that midnight dumpers can do whatever they want with nuclear materials.

Deregulate land waste means generators of this waste strain can pass it off, pass the buck, wash their hands of it and walk away. And the people that they hire to handle their wastes will probably be short lived companies. They won't be required to keep records and when the going gets hot, they will get out of business. There will be no one to blame and the public will pay the cost, just like they paid the cost of the S and L. And this time it won't be just money. It will be lives.

Deregulation means that waste will be disposed of by the lowest bidder. Think about that. In some of these slides here we've seen statistics, expert reports, quoted numbers. Well, you know, I question that. I worked in an industry, the defense industry. They used to get a lot of government contracts, and I guess they will again.

And, you know, I've seen the kinds

of smoke that goes up, the kind of nonsense. Not only this, but I need you to consider the history of the ADC and the NRC and what their experts have said. Now, their experts, these are consultants that work in the industry. Their very jobs depend on the continuing existence of nuclear power. Their experts are exploiting the revolving door policy. They say something, you know, and then they get a good job because of this. It's payoffs is what it is. They have a serious stake in this industry.

You know, this is the kind of thinking that led to the Shuttle Disaster basically. The NRC, it's interesting that you examine some of their reports in 1967 they came out with a Washington report on, it's not a low level waste but about reactors in general. But this whole, that case is also the same sort of modus operandi.

What they did is they have a report which the preliminary drafts of farming it are in an area the size of Pennsylvania and that it would

be at risk if there was a nuclear accident. But later asked which higher brass when they had an opportunity to review it said that qualitative conclusions have a greater validity than any America wants. And so they left out any substantive assessment of possible risks.

In 1964 and 1965 National Labs US Government undertook to review the Wash 740 Study. Apparently they didn't like what they came up with, because nothing from that was ever released. Congress was interested in seeing something. They were promised separate reports in June of 1965 later. These studies never materialized. Finally there was an NRC study.

That was the famous Rasmusin Report This is the report that concluded that nuclear power was safe. They concluded, for instance, that power exertion accidents don't happen. They have, as a matter of fact, the ESL-1 test reactor in 1961 suffered a power exertion. It blew up in a nuclear style explosion, killed three maintenance workers. It was a government test

reactor and results were sort of swept under the rug.

Well, there is an example of, you know, the NRC and before them the ADC's regard for the reports. There is another report that PTR-738 from the National Reactor Testing Station in 1965 concluded that catastrophic reactor fails could occur, that large forces there for existing small scales could not be extrapolated and therefore recommended a six year minimal theoretical research and expendable research program.

This report was never published, never referenced. It didn't even leak out until ten years later that this report had been written. Instead what the ADC elected to do was commission four or five reactors over a five year time, the very type of plan that this report recommended against.

So this is what you see basically. Unfavorable statistics and unfavorable reports are ignored and instead they will find some experts somewhere that they can pay to say what they want

and that's the basis for the BRC policy.

Thank you.

MR. PAPERIELLO: Thank you. I call upon Hazel Johnson.

UNKNOWN VOICE FROM THE AUDIENCE: She is not able to come.

MR. PAPERIELLO: Pardon me.

UNKNOWN VOICE FROM THE AUDIENCE: She is not able to come.

MR. PAPERIELLO: Okay. Carl Perry.

MR. PERRY: Hello, my name is Carl Perry. I am from the Illinois Prairie. We work in conjunction-- We are a stablized environmental consumer group. We work in conjunction with Prairie across the country and Washington DC and we are here today because we are also disgusted with the Nuclear Regulatory Commission's Below Regulatory Concern Policy, which poses an unnecessary and unjustified threat to the health of the people of Illinois.

And in their eagerness to save a little money for the nuclear power industry, the

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commission has ignored the objections of several states, including Illinois, and the recommendations of their own staff and the guidelines of the Illinois Protection Agency and the International Atomic Energy Agencies.

The Public Interest Research Group has just released a new report entitled Below Regulatory Concern, but Radioactive and Carcinogenic. And this report shows that nuclear reactors produce over 90 percent of so-called low level radioactive waste in Illinois, which in 1988 totaled over 110,000 cubic feet and over 8,000 nanocuries of radioactivity.

And under the NRC scandalous BRC policy, thirty to sixty percent of this nuclear waste is going to be treated like ordinary garbage and be put in leaky landfills or disparaged into the air through incineration and mixed with our water by dumping it into sewers. In addition, when Illinois' nuclear power plants did not meet the provisions, the BRC policy would permit incomplete decontamination.

As if deregulating radioactive waste were not bad enough, the NRC also wants to incorporate radiation into consumer products and to recycle radioactive material into such items which would not necessarily be labeled. And the commission has specifically suggested frying pans and jewelry as good candidates for deregulation.

We have a message for the NRC. Don't recycle radiation. Your job is to minimize the risk that radiation poses to the public's health, not to search for ways of spreading more harmful radiation into our communities. The NRC statement about the BRC policy you made available says that we will be receiving more than 100 millirems of radiation a year from the nuclear fuel cycle.

The NRC itself admits that a lifetime canidate getting this from 100 millirems of exposure annually is 3.5 to 1,000. The commission believes that the death rate will be 285 and it is Below Regulatory Concern, but we find it appalling. Is the NRC's rational or this

NRC's rational for it's BRC policy based on health considerations, not at all. Instead the commission has used background radiation as their guide deciding that since people already die of cancer, there is nothing to keep the government from inflicting further death and disease on the unsuspecting public.

Is the comparison to natural hazard going to be the new standard for guiding government policy. For example, does the fact that some fires are started by lightening, justify the legalization of arson? You can only be thankful that the NRC has not been put in charge of the Chicago Fire Department.

Unfortunately though, the NRC is in charge of radiation protection and it intends to preempt any efforts by state and local government to do the job that the commission has refused to do. As Tom Schwartz, the director of Illinois Department of Nuclear Safety said in testimony made on July 26 at a congressional hearing, Illinois vehemently objects to the NRC's BRC

policy statement.

The NRC has attempted to tie the hands of the state that wishes to accept the demands of their citizens that low radioactive waste be disposed of in the safest manner possible. Although the commissioners have tried to dance around the issue of state regulations, it's clear that the NRC will not allow states to step into the regulatory void.

An internal NRC document was obtained, a December 14, 1989 memo from James Taylor, the NRC Executive Director for Operations states that the commisson intends that its regulations defining exemption will preempt state regulations or local ordinances.

And another internal NRC memo feels that the NRC's Chief Spokesman for the BRC policy actually tried to get radiation bills accepted by the commissioners. In fact, he supported a bill that was one-tenth adopted by the commissioners and arguing for the lower limit he observed that once waste streams and products are exempted, it

will be difficult to exempt problems they create in the environment.

The NRC assertion was summed up by Chairman Garr on July 11, 1989 that said, "I happen to be one of those guys that don't necessarily believe a little radiation is harmful." Well, Chairman Garr, the scientific community is virtually unanimous in agreeing that there is no level of radiation exposure that is now known to be safe and you have no business basing deregulation decisions on your own eyes and what is totally unsupported by scientific evidence.

Illinois Prairie is strongly urging our state congressional legislation to just say no to the NRC and put a permanent end to the threat of radiation materials being disbursed throughout our communities and to seek an amendment that removes the NRC's authority to deregulate. We also ask our Members of the House of Representatives in a similar fashion to expand its provisions so that Illinois will be able to set

its own standards for low level radioactive waste.

Thank you.

MR. PAPERIELLO: Thank you. I would like to call upon J. Aronov.

MR. ARONOV: I pass.

MR. PAPERIELLO: Pardon.

MR. ARONOV: I pass. I am going to submit something in writing.

MR. PAPERIELLO: Okay. I would like to call upon Dr. Lou Marchi.

DR. MARCHI: Hi--

MR. PAPERIELLO: Can I make a comment? The doctor is the last speaker that called in advance and he's been placed at the end because he asked for a longer period of time to speak and I agreed that he could if he wanted to come at the end. After he is finished, I have other individuals that did not sign up in advance but did sign up at the door and we will continue with them.

DR. MARCHI: Thank you. My name is Dr. Lou Marchi. My degree is in Chemistry. I have been retired for about ten years, but it seems that I'm

extremely busy. Part of the reason is that I've been called up by various colleges in the university to teach courses for them and in my weak moment I said yes, and it's addictive and I can't stop.

I would like to explain why if you put radioactive material in municipal garbage dumps, why this has not been looked at by the Nuclear Regulatory Commission. I have to give a little bit of a background here. First, as you probably well know, all garbage dumps will leak. Some will leak in two years, some in eight years, some in twenty years.

I don't know of any garbage dump that hasn't leaked in a period of time of more than thirty years. In other words, in thirty years or less, they will leak. And if somebody has information for what has lasted for more than thirty years, please let me know because I'm making a tabulation of those.

Okay. Once a garbage dump leaks, it will contaminate the groundwater and there is no

way to clean up the groundwater. Once it's contaminated, there is no way to clean it up, despite the fact that the EPA has attempted and has failed in cleaning groundwater contamination.

There is another fact that you may have not heard about and I would like to present that to you. Back about three or four years ago, Dr. Kirk Brown at Texas A and M checked the leachate from various dumps. Some of the dumps were garbage dumbs. Some of the dumps were hazardous waste dumps. He did a chemical analysis checking the leachates of both dumps.

The result of that, there was a big suprises. The leachate in the municipal garbage dumps had the same toxicity as the leachate in the hazardous waste dumps. We as individuals say, "Over here we are going to have municipal dumps. Over here we are going to have hazardous waste dumps." But the reality is that the leachate has the same toxicity.

So now if on top of all of that you add radioactive ionizing radiation, materials that

will cause ionization, you now will have what has been termed as mixed waste. The waste will contain various organic molecules, whether they have Benzene or Toluene or Trichloroethylene or a long, long list of hundreds of various possible compounds that could exist in municipal leachate.

We now add to that if you follow the belief that the below regulatory concern is indeed, okay, you will now have mixed waste. Now, Benzene, for example, will cause leukemia. If in addition to the Benzene, you have ionizing radiation, you now have a situation where free variables can form because of the presence of these radiations. When that happens, the free variables now are even more reactive than the original parts of the setup.

Now, so far as I know, no tests have been run to determine if there is an interaction or a synergism due to the fact that you have both ionizing radiation and a hazardous material at the same time. An experiment that I would suggest would be to run four tests. One, let's say, with

100 laboratory animals as a control. Another, would be, a second one would be, you would run another 100 with Hazerdous Material A. "A" could be any material, so long as it is hazerdous. The third one will be 100 animals with some ionizing radiation producer, and then the fourth one, and that's the important one that has not been done, is you run the 100 animals again with a combination of A and B, make it the mixed waste.

This is the real life situation. These folks are talking about below regulatory concern material as if it was totally isolated. And in life, it is not isolated. They are together. And so if they make decisions based on the isolation that they are talking about, you're not facing reality. And one of the things that we have to do in this life indeed is to face reality. So I say to myself, how can they make scientific decisions without the results of these experiments that I have just described.

Okay. On top of this, or as a side really, it seems to me that Below Regulatory

Concern is really an attempt to find a solution to pollution with dilution. Because they told me that the nonradioactive garbage will dilute. In realty perhaps I ought to remind you that the solution to pollution is delusion rather than dilution.

One thing that has not been mentioned here that I certainly want to stress is the biocumulation that takes place as you go up the food chain. Assume for example that some radioactive material has fallen to the ground, and it can come from many possible sources. The microorganisms in the soil will incorporate some of this material. And as it goes up the food chain in general it will biocumulate about ten times. So if one microogranism eats another microoraganism, the second one will have ten times the radioactivity of the first one.

If then a cornplant goes over and [illegible] up the remains from that particular microogranism and incorporates it into the cornplant, it will be another ten time

multiplication. If now you feed this corn to cows or pigs or whatever animal, a cow in particular, it would get a sixteen time multiplication, because it takes about sixteen pounds of vegetable matter for a cow to produce one pound of meat.

So you can, by multiplication here, you can get 1,600 times, perhaps even 16,000 times of radiation by biocumulation. And I haven't heard one word from the folks who spoke here on this particular matter. It's especially dangerous, the biocumulation from a garbage dump some of that leachate should get out and go into the service water.

Fish are particularly good at biocumulating. Some fish can biocumulate anywhere from 10,000, 30,000, 40,000 times their original concentration. Now, we're talking important numbers that will produce damage. Don't anybody eat that fish. So I would urge the NRC to check into the whole matter of biocumulation.

Another matter that is of importance and that I think you ought to know. Here in

DuPage County, the county workers are talking about making a municipal garbage dump of 2,000 acres. This is beyond anything that's been thought of in this area. But if you think 2,000 acres is large, in the run of the mill, there are companies, no need to mention their names, that are thinking in terms of 10,000, 30,000 acres, as high as 40,000 acres.

Why is this of concern to me? Very simple. You are now concentrating that the BRC not become a policy. You will now be concentrating on the radioactive materials in this 10,000, 30,000, whatever size megadumps that we're going to have in the future. So the concentration here is of great concern to me and I think it ought to heard by everybody in this room.

We have talked about risk, and I would like to make a comment about that as a society here. One of the cleverest, most diabolical techniques worked out to violate individual human rights by pollution is the socially acceptable Risk Doctrine. This doctrine

holds that there is a social good which must take precedence over individual rights.

Thus the government intercedes on behalf of an industrial technology, not only by using taxpayers money to fund the research and developmentthat industries should do for themselves, but also by adopting the, "benefits," and I put benefits in quotes, of certain industrial technologies and make the "risks" of these same technologies to determine appropriate, "standards," of pollution which shall be acceptable to the public in exchange for the so-called benefits the public will reap.

This course of agency-- Government makes these decisions for us and we must obey them for the social good. Once one concedes that the risk benefits doctrine has any validity at all, one has conceded the whole ball of wax since there are no limits to the application of the, "Benefit Risk Doctrine." I'm reminded, and I would like to pass this onto you what the twice chief of EPA once said, "The risk assessment is like a captured

spy. Torture it enough, and it will say anything you want."

I do want to make a point on sustainability, and one of the previous speakers did mention sustainability. To me, it is extremely important. The kind of sustainability I'm talking about is you have to ask yourself, "Whatever I'm doing, can I do this over and over for ten years, a hundred years, a thousand years, ten thousand years? Can I do it?" And at the same time, "Will it be safe?"

And so I have to ask the NRC, ask yourselves folks, if we employ BRC for 10,000 years, will that be safe? I don't have the answer, but I can estimate what the answer will be. I will say no. It will not. That procedure is not a sustainable procedure. And if it's not sustainable, I would say let's not do it at all.

Somebody said earlier that the public is confused about ionizing radiation in general. If that is the case, I would like to point a finger to the NRC. It seems to me it's

their job to educate the public concerning ionizing radiation. I don't think they have done much of a job along that line. I would urge them to have an education department so that indeed we can begin to educate the public in a technologically very complex world. And if they haven't done it, let me urge you that you should.

Somebody mentioned earlier that in Illinois as of July 1 of this year you cannot put grass into a garbage dump for various reasons, but it's okay if we have a BRC policy and put radioactive material in there. Well, I have a solution for that for those folks who don't like that particular policy: Make the grass radioactive, then it's okay to put it into a garbage dump.

MR. PAPERIELLO: Okay. Thank you. I will now proceed to the people who have signed up at the door. Patricia Nied is that?

MS. NIED: Yes.

MR. PAPERIELLO: Could you spell your name for the court reporter?

MS. NIED: N-i-e-d. Okay. I would like to thank you very much, gentlemen, for letting us speak here today. I am from the Kingery East Community Association and I have a docume / in my hand here that is from the Environmental Protection Agency. It's a chemical analysis report from May of 1986.

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In our public drinking well in 1986, levels of strontiumwere found at, on this page they read 2.53 milligrams per liter. We're not talking nanocuries. We're not talking picocuries. We're talking milligrams per liter was in our drinking water in 1986. We were never informed. We don't know how long it was there. We know we were on that well for nine years until they switched us last year.

First of all, this will give you an idea of where we're at. We're in Southeast DuPage County. Here is O'Hare where we are now. This would be Argonne National Laboratory. And this little thing over here would be the illusive Red Gate Woods. We are equally distant between

the two. I am here today to speak for all the communities surrounding Argonne National Laboratory and Red Gate Woods.

We have been doing some house study surveys on our own. We've been sending our children to doctors. There is a lot of cancer in our area. Our children are coming down with cancer. We are finding high levels of strontium in our children's hair. I would like to draw your attention to a 1945 report.

Now, this is 1945. It is called the FRANCK Report, F-r-a-n-c-k. It is a document issued to the Secretary of War and signed by the original scientists working on the Manhattan project. It's preamble states: The scientists on this project feel it our duty to urge the problems arising from the mastering of nuclear power be recognized in all their gravity and that appropriate steps be taken for their study and the preparation of necessary decisions.

Now, I will get on with my presentation for the NRC. Gentlemen, as chairman

of the Kingery East Citizens Advisory Committee, I consider it an outrage that you would sink to acquire the classification "BRC," Below Regulatory Concern. In this, you are saying you are not concerned. As you should well know, Kingery East is located midway between Red Gate Woods and Argonne National Laboratory in Southeast DuPage County. The neighborhood is older than the Manhattan Project and is currently experiencing its share of water and health problems.

We are presently working with the DOE to establish some type of testing procedures for our health and water. Refusal to monitor all potentially fatal radioactive contaminants does not make these substances any less dangerous, and severally hampers the investigations of our problems.

I view BRC as a deliberate attempt to withhold vital health impact information from the public. The NRC cannot stand any more bad press. Please be advised that attempts to change regulations before scheduled well testing results

are released-- And these are scheduled tests. These tests are going to go happen. Let me go for that again.

Be advised that attempts to change regulations before scheduled well testing results are released or the Willow Springs, Burr Ridge and Hinsdale areas, will be proof that the NRC is still reverting to underhanded practices. Any attempts to mislead the American public or deny vital statistical information to that public is unlawful and will be dealt with as such.

Know you will be held accountable for your actions from a new younger generation of Americans who care about their lives and threats to the well-being of their children. BRC is a tactful loophole created by the NRC. We, the people, as tax paying citizens of these United States have the right to such information through the Freedom of Information Act. Your efforts to dodge the real issues have been exposed. I advise you to clean up your own act first before you attempt to clean up America.

You would be wise to follow in the footsteps of the DOE and its new efforts to involve the community in future planning and cleanup procedures. Why not put the question of BRC on the November ballot? This is a democracy in case you forgot. Let the people decide. Down with NRC.

Carbon copies of these are sent to Aldo Bott, Republican Candidate for DuPage County Board President and John Tolbert, Supervisor of the Downers Grove Township Board.

I thank you for your time.

MR. PAPERIELLO: I will call upon Venus A. Klautz.

MS. KLAUTZ: I think a minute will be ample time. My degrees are in Chemistry from Northwestern University. I live in Glenco, Illinois and Winchendon, Massachusetts. I am a member the of Materials Research Society and have attended most of the society's symposiums on a scientific basis for nuclear waste manage. I do not speak for the society.

This new policy is both cruel and a charade. The low level waste problem is beyond solution without a laborstory basis and with poorly conceived computer modeling. Therefore, to claim to be sparing resources of more, if I may point a term, concernful waste is down right wrong to the public. Your policy is an admission of past failure. I was in Massachusetts when I learned of this new policy. There was disbelief by hospitals, utilities and politicians.

Why do you not tell the public that rat waste is an article of commerce? Will it be imported from the far east? You are burdening the victims. Tell us also about the proposed return to atomic testing in the Pacific. Shall we add that to this risk discussion?

MR. PAPERIELLO: Thank you. I call upon Bill Lukens.

MR. LUKENS: Thank you very much. Members of the commission, my name is Bill Lukens. I serve as Executive Director of MichRad, which is the Michigan Coalition of Radioactive Material Users.

Previously I have distributed comments to the NRC. In the interest of time, I will simply highlight several points which we would like to make.

First of all, our organization represents the interest of about 700 individuals and organizations in Michigan who are licensed to use radioactive materials. As generators of radioactive waste, we support the Nuclear Regulatory Commission's policy on BRC. It is important that a consistent and rational procedure be adopted by which certain forms of Class A low level radioactive waste may be disposed of in the general waste stream.

The dose of criteria being proposed are true and prudent and within the national variation of background radiation to which we are all exposed. This policy we believe will provide tremendous benefit as an alternative disposal mechanism for universities and medical centers generating very low concentrations of radioactivity by redirecting funds and resources to medical care and research rather than to

unnecessary waste disposal cost.

There has been a lot of discussion here this afternoon about the issue of death. I think we need to place in perspective use of radioactive materials as they apply to the health and the preservation of life. Radioactive materials are an essential element for the development of new medicines in the universities and in hospitals and in research facilities in the country.

That is an issue. I do not want to undermine the issue of dealt. I think that's a very difficult issue which the Nuclear Regulatory Commission has to deal with. But the alternative is the development of new medications which can preserve additional lives.

I would like to urge the Nuclear Regulatory Commission to continue the education and political leadership efforts of this policy and that it will be applied on a case by case basis and that it does not exempt generators and such by controls and monitoring to concern the

public health and welfare.

Thank you very much.

UNKNOWN VOICE FROM THE AUDIENCE: Put it in your backyard.

MR. PAPERIELLO: I note the people who signed up late the note said one minute. I've been giving them more time because we have time to do this. We're not trying to restrict anybody's ability to speak. It's just that we want to give everybody an opportunity.

We try to do this by asking people to sign up in advance. If we have any time left over, people who wish to speak again may. I'm just trying to get through everybody.

I'll call upon Jane Collins.

UNKNOWN VOICE FROM THE AUDIENCE: Jane Collins had to leave she asked me to read this: She had to catch a train to get home in time to do chores. This was an absurd place and a poor time to hold a meeting.

MR. PAPERIELLO: Okay. I would like to call upon Henry Peters.

MR. PETERS: Good afternoon and almost good evening now. It's a pleasure to be here to address you. My name is Henry Peters. I come from Ontonagon County in Michigan and my area is, that I live in, is the nonexcluded area for perpetual low level radioactive waste dump. And so in dealing with that issue, I have become involved with the organization called Don't Waste Michigan and some other folks, a statewide organization trying to deal with the, trying to find an appropriate way to deal with low level radioactivity.

And I guess this brings in BRC. But I don't really have too much too serious to add. I shouldn't say it that way. What I really mean is there is maybe some absurdity in my questions that I have. And I apologize for burdening you with any more absurdity. But my feeling is that it's at least not as absurd as the BRC policy.

And, well, the question that flashed across my mind recently is, for example, in regard to the vectors and the pathways of which radiation

travels, and transportation in particular. Now, in transportation or in radioactivity and other toxics, I don't think it's the explosions and the, "crash, crash," and the, "boom, boom," that's really the major problem, although it is a big one I think. It's really the, "drip, drip, drip," and as the gentleman spoke before about the biocumulation through the food chain and so forth.

But my question is: What about a kind of a crash that will hopefully try to illustrate a point? The question is: What are the chances that two sizeable vehicles carrying BRC or any other kind of radioactive materials would smash into each other? And-- Well, I'll just go on. And then what do we do? Do we count the corpses per milligram or per millirem?

And perhaps to the BRC what is not legally dead, if they die from a slow delivered radiation. So that addresses maybe the health issue about the death here. And another question that's been troubling me is about the water waste, BRC, the water waste. The area I live in is

basically a swamp, a marsh. I have a beaver pond in my backyard. I have a creek through that flows into a riverway that flows right into Lake Superior.

So I started thinking one day about mosquitoes since we got a lot of them. And there is the question about insects living in waters that are polluted with radiation that the fish would eat and then, of course, the people eat the fish and so forth. But there is another aspect of that. I was wondering whether mosquitoes if anybody knows or if there has been studies if a mosquitoe bites you that has been living in radiation, radiated water, does that affect, does it transmit the radiation? Is that a pathway. And if so, I have heard no discussions of it.

But I think in answer to the type of a probable answer of my first question about the the crash. I would say here on earth what were the chances that two atoms would collide and explode? Not much until human beings deployed enough of them to make it happen.

And one other comment. I have been studying some of the works of Dr. John Golfman, and he says something to the effect that if the idea of a safe dose of radiation prevails, he estimates approximately one hundred million or more unnecessary premature cancers or deaths over time worldwide will happen and he does not discuss even the inheritable genetic question today.

So that being said, I'm happy to say that Ontonagon County has passed a resolution against Below Regulatory Concern dumping. And in closing, I am happy to say that it is illegal to dumb BRC in Ontonagon County.

Thank you.

MR. PAPERIELLO: Thank you. I would like to call upon Sidney Bild, Dr. Sidney Bild.

(No response.)

He's not here. I would like to call upon Gina Gamboa, Gina Gamboa.

(No response.)

Venous Klautz, you asked for more time.

MS. KLAUTZ: I don't need more. A minute was enough. I think I covered most of the important points.

Thank you.

MR. PAPERIELLO: Okay. Is a there a Mary Lee Tart still here, Mary Lee Tart.

UNKNOWN VOICE FROM THE AUDIENCE: She had to leave.

MR. PAPERIELLO: Okay. Is there somebody else who wants to say something?

MS. OLDERSHAW: Me.

MR. PAPERIELLO: Okay. We'll take you, but would you go to the podium and give your name to the court reporter, please.

MS. OLDERSHAW: My name is Carol Oldershaw, and I'm with Don't Waste Illinois. Thank you. Don't Waste Illinois is a coalition of the grass roots group from across the state who are working on radioactive waste issues. Before I read my statement, I would like to present to the commissioners a resolution against deregulation of radioactive wastes from the Downstate Grass Roots

Group Individuals for a Clean Environment, a group fighting the siting of a low level radioactive waste dumb proposed for the East Central part of the State of Illinois.

Today I am speaking on behalf of Don't Waste Illinois, myself, friends and family. The approved Below Regulatory Concern Policy is yet another accommodation by our government to the atomic power industry at the expense of citizens in the environment and further proves that the Nuclear Regulatory Commission is not an effective regulator of the industry, but merely its minion.

The nuclear power industry is in deep trouble. It has long promised Congress and the American people that a solution to the safe disposal of radioactive waste generated so thoughtlessly at an atomic power plant was imminent. The nuclear industry, ie, the utilities, the reactor vectors, the energy corporation are desperate to stay in business.

The BRC policy is an industry attempt to show Congress and the public that there

are indeed solutions to one of those profound, moral dilemmas of our time: What to do with the millions upon millions of tons of radioactive waste which have accumulated over these many years?

Waste, by the way, generated not only by commercial power plants, but also from the the government's atomic bomb factories situated all across the country. Well, guess what? After some forty year's time and countless millions of taxpayers' dollars, the atomic industry still hasn't a clue. Why? Because there is no answer. None. Radioactive waste and radiation once produced and released into the environment are here to stay well into the next Ice Age.

In light of recent scientific evidence that exposure to radioactivity of any level and duration is potentially harmful, the approved Below Regulatory Concern policy scam flies in the face of all that is moral and right. The Nuclear Regulatory Commission is clearly out of control and seriously remiss in its mandate to

take the lives, health, and welfare of citizens from the acknowledged dangers of atomic power.

These industries should be stripped of their authority to impose any such BRC policy. To allow the release of more radioactivity of any amount into the environment is criminal. The approved Below Regulatory Concern policy is legalized, premeditated, random murder.

I want this commission to hear that risking the health and safety of human beings is not an option here. And you should also hear that neither my life nor that of my families is negotiable. I demand that there be no exemption from regulatory control and I further demand that the Nuclear Regulatory Commission and its relationship to the rich, powerful, politically influential atomic power industry be investigated by Congress.

MR. PAPERIELLO: Thank you. Was somebody else back there? Again could you identify yourself for the court reporter so she can get your name.

MR. DUER: Yeah, my name is Michael Duer. I

spoke earlier. I have another comment I want to make. And that was to appeal to these five gentlemen that are up here and also to the gentlemen and the people that generate this waste to listen to that still small voice of your conscious, that little nagging doubt that maybe what you're doing is a policy that's going to kill people. Is it really the right thing?

Now, I realize a career change is difficult and you may find some financial loss. I speak from experience. I used to work in the defense industry and it gnawed away at me a little bit. It wasn't weapons that I made, per se, electronic warfare and intelligence type things. But eventually I started working on systems that hookup to telephones and it was US telephone standards that we interfaced to non-European and that told me a little something.

And my conscious spoke up and I quit and I was unemployed for a while. But I was willing to take that consequence and suffer that penalty for what was right and I urge you to do

the same.

Thank you.

MR. PAPERIELLO: Okay. Dr. Marchi, would like to speak again?

DR. MARCHI: Just for the record, my name was spelled wrong in the list. I would like to correct it. It's not N-a-r-c-h-i. It's M-a-r-c-h-i. Like the month of March with an I on the end of it. But it's pronounced Marchi.

MR. PAPERIELLO: I apologize for that. Ma'am.

MS. JOHNSWIT: I'm going to try it this way. Judith Johnswit. I would like to make two small corrections to statements that have been made I believe from the platform in both instances.

First, with regard to dose assessment, I hope it is clear for the record for all of us that the Nuclear Regulatory Commission does not measure real doses to real people. I'm sure you gentlemen are all aware of this. But perhaps the public is not. They do not do so and they do not intend to do so under any circumstances to my knowledge.

Secondly, I believe Mr. Paperiello has stated that the ash from coal fire plant in comparison with nuclear facilities has not been investigated and I would like the record to show that this issue has been exhaustively discussed in nuclear power reactor licensing, both in the Hartsfield Plant and the Three Mile Island Plant too.

I would also like to second Mr. Duer's comment. As I have sat here the whole afternoon watching the faces of this panel of NRC employees, I have been very uncomfortable by the lack of apparent, I would have to say comprehension of the statements that you have heard from many well-informed citizens.

This is a hard job for you and we've been very tough on you. I do believe that the time has now come in the United States for those who are entrusted with regulation to take the initiative as individuals to respond to their conscious as many of us have done. You can do it. I think you will find the freedom and the sense of

self-respect well worth any financial cost.

MR. PAPERIELLO: Yes, ma'am.

MS. KLAUTZ: A while ago in Illinois, the Illinois Tenth Congressional District and my representative to Congress has done work that was on the Appropriations Committee. His wife works for the DOE. He had a forum in North Chicago, Illinois on July 21. And North Chicago is near Abbott Labs and a lot of the nuclear medicine establishments, Veteran's Administration Hospital, University for Health Sciences of the Chicago Medical School, etc.

I asked them about BRC and whether he would challenge it. He said he had not heard of it. Now, I learned here that this all originated in the Congress five years ago. Either this issue is causing my Congressmen to publicly lie and deny knowing about this or he honestly doesn't know about it. And I'm not sure which is scarier.

Ten days ago my representative to the legislature here, Grace Mary Stern, the very

well-informed lady also admitted she had not heard of it and additionally she didn't plan to because she had other fish to fry, more important things. Now, I agree this is important. And maybe there is even a connection. Well, I resent this matter causing my representatives to lie to me or to maintain this kind of thing. This is an education job and more of that is required.

MR. PAPERIELLO: Okay. Mr. Bob Richard.

MR. RICHARD: Okay. Good evening, everybody. My name is Bob Richard, and I am from Broken Arrow. Broken Arrow is a grass roots organization concerned with our local environment and namely the world's first nuclear dump.

Now, I had not planned on speaking here today and I have nothing prepared. But the worlds' first nuclear dump is located by Red Gate Woods just outside of Willow Springs. Right now, there are twenty radioactive elements leaking out of that dump into groundwater, into the stream.

And Patty Nied here had spoken earlier. She lives right in the area and

strontium is in her water, and that's one of the problems. So if the Atomic Energy Commission which is no longer with us, but we have the Nuclear Regulatory Commission. Now, if they couldn't handle the first nuclear dump right, how in the hell are they going to do it now?

Thank you.

MR. PAPERIELLO: Ma'am.

MS. NIED: Thank you. I waited so long to speak before I forgot a little bit of what I was going to say. I have a list of the radioactive elements that were found in the ground stream at Ray Gate Woods. The Site Survey Report from the Department of Energy states that these elements are in our groundwater and please don't tell me that you're not going to monitor them.

Americium 241, Californium 249, Californium 252, Curium 242, Curium 244, Cesium 137--which causes cancer in the ovum of the female--Hydrogen 3, Neptunium 237, Plutonium 238, Plutonium 239, Potassium 40, Radium 226, Strontium 90, Thorium 228, Thorium 232, Uranium 234, Uranium

235, Uranium 238. Please, you guys, don't tell me you are not going to moniter these things.

Now, I would also like to recite something that I wrote in 1986 and I was thinking about myself, I was thinking about the people at Three Mile Island. It's also a song that I'm not going to sing, but I will recite it for you:

Years ago they had no place for all their toxic waste. They buried it, cement encased in a very hurried haste. Well, I just bought some family land. They said that's a natural creek. I got a feeling their uranium enclosure sprung a leak. Because the ears have grown uneven on my crop of corn and the water I won't drink that I've been drinking for so long. My grandchildren will probably be born deformed. And I'm supposed to be happy living in my home.

We were dirtbike riding near Argonne Lab, restrictive property. We couldn't believe our eyes that night, yet mine still plainly see. Back in November of '65, steel drums laid on their sides. Caution, toxic waste. It said uranium was

inside. Back to the well the ears have grown uneven on my crop of corn, and the water I won't drink that I've been drinking for so long. My grandchildren will probably be born deformed. And I'm supposed to be happy in my home.

Now, that was written in 1986. I finished in 1990. They dump this stuff on our clean land and we know the effects of strontium. Our cancer rate is through the sky and the surgeon general says tobacco is why. It's time to fix the power plants before they eradicate us all like ants.

Thank you.

MR. PAPERIELLO: I think we have time for one more statement.

MS. QUILLAN: I Just want to make a reference to what she just said. My foot's asleep. This is Rosemary Quillan again, Q-u-i-l-l-a-n. And she says that cesium has cancerous characteristics. And I would just like to point out that our environment is being eradicated with cesium and there is nothing that has to be on line and these

gentlemen are telling us the same thing is going to happen with this BRC stuff and we should be looking out for it.

MR. PAPERIELLO: You there.

MS. FAY: I've been here all day too, but I would just like to hear if your guys opinion has been changed at all and how this has affected you.

MR. PAPERIELLO: Could you please step up to the microphone and state your name?

MS. FAY: My name is Sarah, with an H, Fay, F-a-y. I've been here all afternoon too, and I really honestly would like to know if all of you guys, I watched your faces. You look like you are tired. Has your opinion changed? Have you been affected by what we've had to say?

MR. PAPERIELLO: I don't know how to give you an answer. This has been mostly bureaucratic, so I am afraid I can't.

UNKNOWN VOICE FROM THE AUDIENCE: Does that mean no?

UNKNOWN VOICE FROM THE AUDIENCE: It means no comment.

MR. PAPERIELLO: Ma'am.

MS. LABNO: My name is Kimberly Labno, L-a-b-n-o. Okay. This is to you, my friends here that I don't really know that well have said basically everything. But I would like to assure the Electric Power Research Institute and the Nuclear Management and Resource Council that the concern about BRC is not a trend. It's a commitment.

And I think myself I've been here since 12:30. I'm aching. I'm tired. But you can give them a personal message because I'm sure there is some backscratching and handwashing going on. And just, you know, tell it to them. Tell them to start thinking of another solution because, you know, this one is not going to work.

MR. PAPERIELLO: Okay. I think at that point we will adjourn. There will be additional meetings in the other parts of the country as noted. The additional meetings were the meetings that were announced in the Federal Register Notice in the other regions. Atlanta, Dallas, Fort Worth

and the San Francisco area.

Whether or not the commission will hold meetings, additional meetings beyond that, I don't know. There were at one time commissioner's assistants here at this meeting and I'm certainly sure what they said and what you said will be thought about.

Thank you for your participation.

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(Which were all the proceedings had at the hearing of the above-entitled cause.)

STATE OF ILLINOIS)
) SS.
COUNTY OF DU PAGE)

We, NANCY PARKS, C.S.R. and CHRISTINA M. DURASKI, C.S.R., Notary Publics duly qualified and commissioned for the State of Illinois, County of DuPage, do hereby certify that we reported in shorthand the proceedings had and the testimony taken at the hearing of the above-entitled cause, and that the foregoing transcript is a true, correct and complete report of the entire testimony so taken at the time and place hereinabove set forth.

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