# ORIGINAL

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Nuclear Regulatory Commission

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1992 All Agreement States Meeting

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1	UNITED STATES OF AMERICA
2	NUCLEAR REGULATORY COMMISSION
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4	1992 ALL AGREEMENT STATES MEETING
5	***
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7	Sheraton Baltimore North Hotel
8	903 Dulaney Valley Road
9	Ballroom C
10	Towson, Maryland 21204
11	
12	Wednesday, October 28th, 1992
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14	The All Agreement States Meeting met, pursuant to
15	notice, at 9:00 o'clock a.m., Vandy L. Miller, Chairman,
16	Assistant Director for State Agreements Program, Office of
17	State Programs, presiding.
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2	
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9	Paul Merges, NY
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1	PROCEEDINGS
2	MR. MILLER: The Wednesday morning general session
3	now will come to order. We will call on our Office
4	Director, Carl Kammerer, who will introduce our keynote
5	speaker for the morning. Carl?
6	MR. KAMMERER: I am absolutely delighted this
7	morning to announce there is a Hugh Thompson. Hugh is an
8	Alabama boy. We are not going to hold that against him.
9	He worked for Alabama Power as a Senior Nuclear
10	Engineer early in his career. He joined the Atomic Energy
11	Commission 20 years ago this month and he is still in the
12	regulatory business. He was a Technical Assistant for the
13	second Chairman of the Nuclear Regulatory Commission, Mark
1.4	Rowden.
15	Hugh has been the Director of several offices in
1.6	nuclear reactor regulation including the Planning and
17	Analysis Program, the Division of Human Factors and the
18	Division of Licensing and several other offices as well. So
19	he knows a little bit about what he speaks on.
20	He served for two years as the Director of Nuclear
21	Material Safety and Safeguards, that office being ably run
22	this year by Bob Bernero as you know. He is a graduate of
23	the United States Naval Academy and a former nuclear
24	officer, Officer in the Nuclear Navy as it were.
25	Hugh has a Masters in Nuclear Engineering from

1	Georgia Tech' and a Juris Doctor degree. For the rest of us
2	that is a lawyer. We will not hold that against him either.
3	[Laughter.]
4	MR. KAMMERER: He attained that degree at George
5	Washington University. Today, and since 1989, he is the
6	Executive Director for Nuclear Safety, Safeguards and
7	Operations Support, the number two staff office in the
8	entire Commission.
9	He has had numerous awards over the years, the
10	most notable of which I believe is recently being recognized
11	by President Bush for a Distinguished Executive Rank Award.
12	.lere is a gentleman who has done it all and is doing it all
13	and we are extremely pleased to have him with us this
14	morning.
15	It is our boss, Hugh Thompson. Give him a warm
16	welcome, please.
17	[Applause.]
18	MR. THOMPSON: Thank you, Carl. It is too bad my
19	parents could have been here to hear that. I think my
20	father would have been proud, but my mother wouldn't have
21	believed it.
22	[Laughter.]
23	MR. THOMPSON: It is, indeed, a pleasure to
24	participate in the 1992 All Agreement States Meeting. I

understand this is the 30th meeting we have had. I can

25

1	remember, when I participated in the 25th meeting in
2	Louisville, when I first got involved with the Nuclear
3	Material Safety and Safeguards activities.
4	I see a lot of the names are the same, just the
5	states are now changing behind the names.
6	[Laughter.]
7	MR. THOMPSON: Actually, although I am an Alabama
8	boy, I was born in Key West, Florida so I obviously have
9	some kindred to the vindicator irradiater down there. I did
LO	not stay there long, I left early, before the hurricane came
11	through anyway.
12	Certainly from the agendas you have had in the
13	last couple of days I know this has been a very productive
1.4	and important meeting. Last night, when I can in, I
15	understood one of the real issues was Cathy Allen's
16	undeclared pregnancy presentation.
17	[Laughter.]
1.8	MR. THOMPSON: I thought I could figure it out,
19	but I am not sure why she had it undeclared.
20	Tomorrow we have, I think, probably one of the
21	most controversial topics that may come up, the medical
22	program, the medical regulations. That is one about which
23	the Commission has had a considerable amount of concern and
24	given attention to in the last two to three years, certainly
25	during the time I have been aware of the issue

I think your participation previously in this area
has been very valuable. We look forward to a lot of input
tomorrow from your participation in the discussion of the
issues and really defining where we, are a regulatory
agency, should be going in the area or medical regulation,
which is a very important area.

In this past year, as Carl said, the Office of State Programs has been reporting to the Executive Director of Operations' office, and really reporting directly to me. It has been a very important part of my activities to, one, see how that program gets fully integrated into the Executive Director of Operations' program and to the Executive Director of Operations' staff office, and better supports the activities of the office.

One of the things we periodically do, and I know Carl mentioned this earlier, is hold the periodic meetings with the Deputy for Nuclear Material Safety and Safeguards and for Research. Those are the two major program offices that deal with activities that parallel many of the activities you have there; and, in fact, where in the past we have not had input early enough from the Agreement States and from your program, and often you were not as prepared for the wonderful issuances of the Nuclear Regulatory Commission as you might have been.

However, we certainly have that effort as a focus

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we intend to continue. That really is where the dialogue starts. We started early, and Carl supported very strongly, having rotations between the two offices so that not only is there a clear opportunity to talk at the highest levels, but at the working levels — the people who are aware of items very early — are able to know who to contact in state programs and vice versa, know who to contact in the Office of Research and Nuclear Material Safety and Safeguards for knowledge of what is going on.

Secondly, we also have the Executive Director of Operations weekly staff meeting. Carl comes to this weekly staff meeting and is, therefore, aware of all the activities of the agency. Certainly Carl continues to have access to the Commission, which I think is an important avenue for any key element he feels needs to be elevated to the Commission in a very prompt period of time.

This has really enabled us to focus on our partnership with the Agreement States. We really think this partnership is the key element that we have with you and with our own efforts to protect public health and safety. We have the responsibility for many of the reactors in your states. You, likewise, will have responsibility for the material licensees and there other fuel cycles over which we have something of a dual regulatory responsibility.

I believe your own experience tells you this

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effort we have together is probably one of the best, if not
the best, Federal/State relationships and partnerships in
the Federal Government. I think the level of
communications, the level of commitment, the level of
expertise and the professionalism that both you and the
Nuclear Regulatory Commission have in this area are the key
elements that really make this important.

As you know, a partnership as we look at it is a relationship involving close cooperation between two parties having specified rights and responsibilities. That really is rights and responsibilities on the part of both parties. We relinquish our regulatory authority under the Atomic Energy Act to you and so you have all the rights and responsibilities to protect public health and safety. Likewise, we have a responsibility to work with you in that effort.

The term cooperation clearly defines what the Nuclear Regulatory Commission and the Agreement States

Partnership entails. It is no coincidence that Section 274, which authorizes the creation of the Agreement States

Programs, is entitled "Cooperation with the States".

Certainly from Alabama those of us who have many state right, we also enjoyed the Federal Government recognizing the state aspects and we will do that today.

We look to the states for, among other things,

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1	maintaining an adequate program to protect the public health
2	and safety. To the extent we have identified areas of
3	difficulties and they are obviously not areas of
4	difficulties any of us want it is really the adequacy of
5	staffing of the Agreement States Programs.

with you in identifying deficiencies in training, qualifications or more often staffing. Many times those have been matters beyond your individual control. That is where we try to assist by elevating our concerns -- maybe also your concerns, and I am sure they are -- to the appropriate authorities in the states so we can help strengthen your program and get a commitment at the highest levels in the state to support your programs.

I think that is very, very important, and I think Carl and his staff do a first-rate job in doing that. I really comment Carl for his effort in that and I think it is really helpful.

What do we do in our areas of responsibility?

Some of these obviously have some impact and some changes.

Communications, that we talked about earlier, in regulatory issues is probably the key element. If we can communicate, if we can discuss, if we know what our mutual problems are we will obviously be able to be more effective in doing our job.

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We ha	ive stresse	ed the early	meetings.	The meetings
we are having h	ere today	are a prime	example of	the
commitment we h	ave to be	able to hav	e communicat	tions. We
also have the v	orkshops.			

We also certainly are aware of your issues on matters such as compatibility. We have made a proposal to the Commission that would enhance our abilities to discuss these issues on compatibility, which I believe the Commission will act on in the near future.

We really want to engage you and get your views on the issues dealing with compatibility. We may not agree with every one. Obviously when you have more than one other state involved you may have difficulty getting a full and cooperative agreement with everybody, but we certainly want you to be part of the dialogue and we want to incorporate your best ideas in what ought to be considered compatibility and how to work that.

We do have responsibility for a nationwide program. We have a desire to have consistency throughout the United States in protecting the public. The members of the public in Nebraska are just as important as those in New York and as those in any other state.

It is important to us to have a nationwide program in this area. If you start having different limits and different sets people get concerned they are not being

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protected well, and often these types of programs can be driven to extremely low levels.

Our experience with the below-regulatory-concern efforts in holding nationwide workshops clearly indicated to us these can be done by various approaches and different concerns raised by either attorneys environment groups which, as I will discuss later, ends up in legislation that says "You can set below regulatory concerns all you want to, but we will fix you. We will have another avenue. Let the states set whatever limits they wish below that."

It does create a bit of difficulty in understanding some of the more difficult aspects of risk assessment and compatible risk for the members of the public.

There is one other area from the past on which we would like to do as much as we can: provide technical assistance to the states and cooperation in various and sundry areas. The difficulty we are having these days, as you know we are now one hundred percent fee recovery. Some Nuclear Regulatory Commission licensee for every dollar we spend in supporting states.

Some Nuclear Regulatory Commission licensee is paying for this meeting. He probably does not know who he is right now and he probably would be upset if he did, but that has been an issue.

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We have raised this aspect to Congress as one of
the kind of inequities because we really support this
program and feel that puts an unfair burden on other
licensees, whether they be material licensees in the other
states, depending on w .c specific assistance is being
provided to the states, or it is a more generic issue
involving the nuclear utilities.

You are not the only segment of Nuclear Regulatory
Commission activities that has this anomaly. If we give
some support to the Russians guess who pays for that? Some
Nuclear Regulatory Commission licensee. If we give some
support to other a tivities -- to FEMA or any of those other
organizations -- some Nuclear Regulatory Commission licensee
pays for that.

The fees we have changed materials licensees has driven probably a thousand or so of them out of business. That only says one thing. That means there are one thousand less in the denominator to divide into the numerator, so the fees go up. As the fees go up people are going to complain, and the more the complain the more they are going to come looking at activities we do that don't really support them.

Guess what one of those activities are? Us. That is why we are trying to get the legislation changed to give us some more flexibility to exclude these types of costs from being charged to other licensees.

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Obviously holding workshops. I think we had a very successful workshop down in Mobile. That is Alabama for those of you who do not know where Mobile is.

[Laughter.]

MR. THOMPSON: These types of workshops, I think, are particularly important and being able to get the right folks who have the key interest in the technical issues and be able to work those basically through program reviews we do with you and keeping you informed on your regulatory programs. These are really key issues I think you support, we support and which are essential elements of the communication we feel are important.

I would like to focus on a couple of new issues that are facing us you may be interested in. Some may affect you and some may affect you indirectly because those of us at the Nuclear Regulatory Commission who are focusing our attention on these other issues may not be able to give you as much attention as we really could.

You heard a little bit yesterday, from Jim
Lieberman, on the openness at the Nuclear Regulatory
Commission. Our chairman is committed to have an agency
that is really open because he believes that will establish
the public confidence; and without public confidence neither
our program nor your program will be very well understood or
received.

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Obviously you have many of the same difficulties in communicating with the public that we do. We have a few more that probably are more focused and the environmental groups tend to oppose our activities a bit more.

one of the things that has been a mystery in the past has been these enforcement conferences. The enforcement conferences have essentially been an opportunity for the Nuclear Regulatory Commission to test whether or not their inspection findings really identified violations and deficiencies so significant that we wanted to issue a civil penalty. That was usually this free and frank exchange of information.

Well, we have now decided we will have a pilot program that about every other fourth of these free and frank exchanges will be open. I think today most people will feel comfortable, after this pilot program, in going forward and saying "We are professional people. We can have our differences and we can do it in an appropriate way."

Probably the one thing that will happen is the finger-point to, "Well, it was really Joe Smith that made a bad mistake in this case," which will probably not be said in the public although they may do that on a few occasions.

The other thing we are doing is the Regional

Administrators -- and some of this may have happened in some

of your areas -- are holding public meetings, almost press

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1	conferences, on a quarterly basis to explain all the things
2	that are going on in the states in about all regulatory
3	activities.
4	Typically these have been driven a bit by reactor
5	activities, although they clearly could be driven by
6	fuel-cycle facility problems or you could have a medical
7	facility that has a major problem somewhere and that may be
8	a reason to hold one of these press conferences.
9	Those are a key element. The chairman, himself,
10	meets frequently with the press. I know he met recently
11	with the Cleveland Plains Dealer who is dealing with an
12	issue to come out in the next few weeks, hopefully not too
13	far down the road, on medical mis-administrations.
14	One of the things they have concern about is why
15	are the Agreement States so much better than the Nuclear
16	Regulatory Commission? If you look at all the abnormal
17	occurrence reports it is always Nuclear Regulatory
1.8	Commission licensees that are having all this
19	misadministration and Agreement States are just running
20	great, nobody ever real over-exposed in an Agreement States
21	I think they may be looking at these issues. I
22	know the General Accounting Office is look at this type of

The recent legislation, of which we are still

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concern and they may be involved with some press article on

the medical misadministration area.

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1	trying to evaluate precisely the impact on the Nuclear
2	Regulatory Commission, is the Energy Policy Act of 1992,
3	which was signed by President Bush last Saturday. This
4	particular Act has a number of activities that impact the
5	Nuclear Regulatory Commission.
6	In particular, it would add an additional section
7	to the Atomic Energy Act, Section 276, relating to the
8	states' authority to regulate radiation that is below the
9	levels of regulatory concern to the Nuclear Regulatory
10	Commission. That section provides that" no provision of
11	the Atomic Energy Act or the Low-Level Waste Policy Act may
12	be construed to prohibit or restrict the authority of a
13	state to regulate, on the basis of a regulatory or
14	radiological hazard, the disposal of off-site incineration
15	of low-level radioactive waste if the NRC, after the date f
16	effect of this legislation, exempts such waste from
17	regulation?"
18	I think you will hear, later on, from Chip Cameron
19	about our enhanced rule-making effort to define at least the
20	clean-up criteria. In that, we will invariably get very
21	close to addressing this issue one way or the other.
22	It will not, probably, be called a BRC waste, but
23	it really will those elements in there.
24	[Laughter.]
25	MP THOMPSON: I will probably have to have to

1	wash my mouth three time	s after	this for	r saying 1	those	three
2	letters. It is illegal	for the	Nuclear	Regulato	ry	
3	Commission to say those	letters.				

Anyway, that is going to be an important area. It is really going to be important that your organizations are represented. I think Chip will describe how we are attempting to have a wide representation of all groups and all affected parties in this rule-making activity, both state and Federal, in order to be able to establish a level of confidence that what we are doing is the right thing to do.

I think if we do it in an open way it will be sufficient to withstand the tests and the challenges that will come; and it is going to be a benefit both to you and to us to be able to have such a regulation because the clean-up of these sites is an issue into which we are putting a lot of effort.

If you have not talked about the low-level site clean-up activities, what I am about to say may be redundant. We have a major effort on the site clean-up of at least 40 to 50 plant facilities throughout the United States. I would anticipate that once we have established a pattern of success in this we will be willing to share with you what we think you may need to do.

Some of these are really tough situations where

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1	you have companies that are essentially trying to duck their
2	responsibility, some who think it is probably cheaper to
3	fight you in court than it is to clean up a facility. Some
4	are running into immense opposition with state EPA-type
5	concerns.

It is a difficult problem for us. We are trying to, once and for all, establish a criteria and hold these facilities and sites to clean up those areas.

Another important area for us, probably not so important directly to your program, is the Environmental Protection Agency High-Level Waste Standard. That has been an activity that many of the states have been concerned about. How come we are having difficulty in making progress, or the Department of Energy making progress, in both the WHIP licensing as well as the Yucca Mountain licensing activity.

This new legislation has a provision that is focused on Yucca Mountain and it says we should go to the National Academy of Science, get their technical input as to what criteria ought to be used for the clean-up standard, and then the Environmental Protection Agency should adopt it followed by an Nuclear Regulatory Commission adoption of that activity.

What that would probably is focus from a concentration limit standard and it may, in fact, have a

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1	dose limit. A dose limit could well be the Environmental
2	Protection Agency Drinking Water Standard of four million
3	rem per year.
4	It makes the does calculation and the licensing
5	calculations a bit more complicated, but it does put it on a
6	more balanced basis for eventually licensing these
7	facilities.
8	The one activity that is having the largest impact
9	on the Nuclear Regulatory Commission is the uranium
10	enrichment. As you may know, there are a lot of activities,
11	both national and international, in the enrichment area.
12	The legislation itself establishes a kind of a
13	United States Government corporation and requires the
1.4	Nuclear Regulatory Commission, by 1994, to establish to
15	govern the Department of Energy's gaseous diffusion uranium
16	enrichment facilities. These are primarily the Portsmouth
17	and Paducah.
18	We are to prepare an Annual Report to Congress, in
19	consultation with the Department of Energy and the
20	Environmental Protection Agency, on the status of health,
21	safety and environmental conditions at the Department of
22	Energy's facilities and establish a certification process.
23	We are normally a licensing agency. The only
24	thing on which we really do much certification is

25 transportation casks. We are now going to have a new

1	process probably similar to Alice in Wonderland that
2	certification will say exactly what we mean: nothing less
3	and nothing more, I hope. We are not sure what we are going
4	to say it is.
5	[Laughter.]
6	MR. THOMPSON: he issue obviously is that we don't
7	want to get into a huge licensing activity on this, and some
8	of this still has Category One high-enriched uranium type
9	material. These facilities started up about 40 years ago
10	and have run continuously. It is kind of amazing for
11	anything to run for 40 continuous years without shutting
12	down.
1.3	I think my mother's mouth has been running that
1.4	long, but other than that
15	[Laughter.]
16	MR. THOMPSON: I know why my mother is not here
17	now. For any of the women here, I now apologize for that.
18	[Laughter.]
19	MR. THOMPSON: It is how long my father's mouth
20	has been shut.
21	[Laughter]
22	MR. THOMPSON: I am afraid the butter is going to
23	come out, too, and I will be off this roll here.
24	[Laughter.]

MR. THOMPSON: The other aspects to this

25

1	enrichment, however, which I think complicate matters for
2	us, deal with responsibilities for the laser isotope
3	enrichment facility which, if it becomes a commercial
4	program, would require our oversight and regulatory
5	responsibility. In addition, as you know, we do have the
6	license application for the Louisiana Energy Service in
7	Homer, Louisiana.
8	All of this really points to a fairly substantial
9	capacity to enrich uranium for the commercial power plants.
10	There is a wild card in this issue and the wild card is the
11	Russians, or the former Soviet Union.
12	They have a substantial amount of high-enriched
13	uranium which they would like to dispose of on the United
14	States market. Some of these facilities we are discussing
15	and there are other facilities, NFS Irwin for example and
16	maybe B&W Lynchburg have proposals and programs where
17	they would dilute that high-enriched uranium to make
18	low-enriched, and they would sell it back to the Department
19	of Energy putting it back into the commercial market.
20	It allegedly has this grand scheme of you
21	eliminate bomb material in Russia and you burn it in United
22	States power plants at economical costs. It sounds great,
23	but as always somebody's ox is going to get gored in this.
24	That is why this seems to be such a sensitive area
25 .	internationally and commercially to the United States

facilities who are affected by that. This is one area in
which I would say we will devote a lot of our attention. It
is probably the one area in which we will go to Congress and
request additional staffing in order to be able to have the
capability for oversight.

This is a new area for us, both technology-wise and personnel-wise. We typically would have resident inspectors at these types of facilities. What I say is all preliminary, of course, but the concept is we would have our own resident inspectors at these Department of Energy facilities.

The Commission, as I mentioned earlier, was committed to improving out regulatory interface with licensees, both the reactor as well as the material licensees. A few years ago they had a big survey that went out and talked to all of the reactors, we had teams to around and talk to them, to find out what we are doing right and what we are doing wrong. Actually the survey just found out what we were doing wrong. They were not smart enough to ask two questions.

[Laughter.]

MR. THOMPSON: So they went out there and found all the things that were doing wrong, and we came out with a list of things, published all these comments about how bad Nuclear Regulatory Commission

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1	inspectors were and how we twisted utilities' arms and
2	mis-applied SALPA programs.
3	As a result, they said, "We better go out and
4	survey the material licensees to find out what those guys
5	are doing out there." At least we were smart enough to ask
6	both questions this time. We asked what are we doing right
7	and what are we doing wrong?
8	We are doing it in a kind of two-stage program.
9	There are thousands of material licensees where there only
10	maybe 110 operating reactors at 70-odd sites.
11	This effort is focusing primarily at fuel-cycle
12	facilities, but we will include some broad material
13	licensees, some broad university-type hospitals in the
14	survey. Based on that survey we will then be able to expand
15	fither that survey of say, "Gee, I think we know enough that
16	we will not need to expand the survey."
17	We certainly will want to share the results of
18	that with you and maybe get your own comments as to how you
19	view the results we are getting from our licensees, and is
20	that applicable to your licensees?
21	We basically plan to finish this pilot effort and
22	submit it to the Commission in February. In that time frame
23	we will certainly be working with Carl to keep your informed
24	and get your information on this effort.

Finally, one of the things we have come to stress

heavily is to have the Nuclear Regulatory Commission and the Environmental Protection Agency at least sing off the same song sheet. I think that has been very difficult for us in the past. We usually did not even sing in the same room so getting on the same song sheet is a major effort.

We are at least in the same room now and we did this by two years of negotiating to get a Memorandum of Understanding. The Memorandum of Understanding essentially says that for Nuclear Regulatory Commission licensees and facilities we will not have dual regulation without a process by which the Environmental Protection Agency would identify two the Nuclear Regulatory Commission where our regulatory deficiency existed, and then give us the opportunity to agree. If we agreed, we would change our regulations and then the Environmental Protection Agency would not have to issues regulations and have dual regulation.

I know many of you may face the same type of difficulty in your regulatory scheme. This is an effort to try to minimize that, to keep all the regulations in one place.

Our focus, quite frankly, at first had tried to be to get the same risk basis for regulation: that is, if we were going to use the same risk standard used by the Environmental Protection Agency we thought we could probably

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come up with the same level of protection. We have not been vet able to do that.

Environmental Protection Agency gets driven by various statues and we are driven by the Atomic Energy Act, and we have kind at come at problems with a different level of risk. The Environmental Protection Agency tends to have a program, as you well know, that sets very low standards and they don't enforce it very well; and we set very reasonable standards and enforce them very well.

Therefore, when we did surveys of materials
licensees as well as reactors to determine compliance with
the Clean Air Act it turned out that our licensees, both
material and reactors, fully complied with the ten millirem
limit the Environmental Protection Agency was holding up as
the standard for the Clean Air Act emissions, yet we had a
completely different regulatory program and approach to get
there.

Ours was based on the ALARA concept with the reactors and just on good operating principles with material licensees. As you may well know, we have now issued a revision to Part 20 and it may present some challenge to all of us to implement that regulation. It took us forever to get it out so I guess we will give you forever and three years to --

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1	[Laughter.]
2	MR. THOMPSON: No, we don't. That was a joke,
3	that was a joke.
4	[Laughter.]
5	MR. THOMPSON: I think we will give you forever
6	and a day.
7	In any event it is a fairly comprehensive effort.
8	One of the things that is really important in there is the
9	ALARA program for material licensees.
10	We are about to publish in the Federal Register
11	notice probably by the time you get home it will be at
12	your door steps the Regulatory Guide that establishes the
13	ALARA guidelines for material licensees. It is important
14	you and your licensees get that and provide comments to us:
15	Does this make sense?
16	We are still struggling with a dual approach.
17	Does it make sense to us from the point of view of the
18	Atomic Energy Act? And does it make sense to us in the
19	broader context of meeting the Clean Air Act requirements.
20	As you may know, the recent decision by the
21	District of Columbia Court of Appeals withdrew the
22	Environmental Protection Agency's stay, which had been
23	promulgated in April, that said they would not apply the
24	Clean Air Act regulations for material licensees.
25	Essentially this required that if you made any

1	change to the facility that could make a difference in the
2	radioactive releases from that facility you had to get an
3	approval and a permit from the Nuclear Regulatory
4	Commission, and it also required that from the Environmental
5	Protection Agency.

Protection Agency now to, one, support them, using this Regulatory Guide and other bases, to promulgate by rule-making an effort to stay the effectiveness of the Clean Air Act for Nuclear Regulatory Commission licensed material as well as Agreement States licensees. In the interim we are discussing with the Environmental Protection Agency the issue of enforcement discretion for those facilities which may need to make some changes in the meantime.

This is an area in which are have not completed our efforts to get the guidance together from the Environmental Protection Agency, but clearly it is an important area for establishing how we -- that means the Agreement States and the Nuclear Regulatory Commission -- interface with the Environmental Protection Agency on the Clean Air Act.

We hope to continue the efforts on activities such as low-level waste disposal requirements and in other areas where we jointly have oversight and regulatory responsibility. It is an important on which to get your

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1	input and support for.
2	In closing I would like to say that I really have
3	enjoyed my direct area of responsibility with the Agreement
4	States Programs for this past year. I lock to enhancing an
5	improving our ability to interface with you.
6	It is an area that will present a major challenge
7	in light of the restrictions we have on one hundred percent
8	fee recovery, but you are an important part of the
9	regulatory program to protect public health and safety.
10	I thank you for your efforts to do that job in a
11	fashion that is really well-received throughout the
12	Commission and throughout the agency.
13	I would be happy to answer any questions you have
14	if we have time for them.
15	MR. KAMMERER: Yes, we have time. This is not a
16	shy group here, you know.
17	MR. THOMPSON: Is this to throw water on them as
18	they
19	[Laughter.]
20	MR. THOMPSON: Wayne, you are first.
21	I prefer tomatoes.
22	[Laughter.]
23	MR. KERR: Wayne Kerr from Illinois.
24	Hugh, as the senior representative of Nuclear
25	Regulatory Commission management I think this question is

1	appropriate to address to you. We can come and hear you and
2	Carl and Vandy exhibit what I call an understanding and
3	receptive attitude and approach toward the issues we raise.
4	You have probably read or at least heard we have
5	raised a question, though, of whether or not that same
6	attitude prevails throughout senior management, middle
7	management and even workers among the rest of the Commission
8	staff.
9	My guestion is, do you see the same understanding
10	throughout or is there still work to be done in that area?
11	MR. THOMPSON: There is work to be done in that
12	area. It is like anything, Wayne.
13	If you have an existing pattern of working
14	relationships that have been in place for some years it
15	takes a while to change that. That is why I think it is
16	important we continue to have the meetings at the high level
17	as well as staff interchange and rotational assignments to
18	be able to do that.
19	One of the other programs for which I had
20	responsibility that was certainly more of a challenge than
21	the Agreement States Programs was our Office Investigations.
22	That was a group that reported directly to the Commission,
23	then they had to report to me. That is where all the grey

It has taken a long time -- and we are talking

24 hairs came from, every one of them.

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1	years to get that to the level where you really want it
2	to be. It has its own independent roles and the
3	investigative authorities, I don't know how many. I think
4	none of your programs have this same level of investigative
5	arm, I don't believe any of you do, but it similar to your
6	Bureau of Investigations.
7	It is kind of like I have my own staff of
8	investigators throughout the country. It was a lot of "them
9	and us," much more so than you have even in the past with
10	the Agreement States Programs in other parts of the office.
11	There is always work to do and I think clearly it
1.2	is better. There are going to be differing views on
13	differing issues Wayne, you probably know that as well as
1.4	anyone does however, we are clearly working to avoid
15	those where you can.
16	By early communication I think everybody will
17	understand where we are going, internally in the Nuclear
18	Regulatory Commission as well as with the Agreement States
19	Programs, to be able to make sure that we do have a good
20	working relationship that reflects from the Executive
21	Director's Office down and certainly reflects the
22	Commission's desire for a good working relationship.
23	You have to put up with us a little bit. Jim
24	Taylor and I have not had any direct responsibility, and
25	there is a certain individual here who has been very kind to

put up with us, on being requested to visit a facility. She was very kind to work with us in her state on that. Thank you very much for that.

Yes?

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MR. FRAZEE: Terry Frazee, State of Washington.

I appreciate the earlier opportunity to comment on many of the things the Commission is working on at the staff level. I do find it interesting, though, that once it reaches a certain level it becomes a document that is considered pre-decisional and, all of a sudden, the curtains are drawn and we are not allowe. For instance, in this case the document on compatibility the staff prepared for the Commission's decision.

I find it interesting as a decision-maker that the Commission would not want to receive multiple inputs on a particular issue so they could properly weigh the pros and the cons. That is not to say the staff does not do a good job of summarizing the data, but it is summarized comments and issues that would go before the Commission.

The response I have gotten has been this the Nuclear Regulatory Commission lawyers' decision. In our state I know the response you are going to get depends on how you ask the question of our Attorney Generals.

Is there any possibility of revisiting that issue as far as allowing these types of documents that are

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1	considered pre-decisional either to change that particular
2	focus or somehow allow the states an opportunity to take a
3	look at those documents so we can provide, perhaps,
4	counter-balance to the issue?
5	MR. THOMPSON: I think the issue is you would like
6	to have concurrence or should I say coordination on the
7	papers that go up to the Commission dealing with issues that
8	directly affect the states or that potentially affect the
9	states?
.0	MR. FRAZEE: Directly or potentially. I am not
1	sure I am looking for concurrence. It is a matter of
2	knowing what is going on there so we can see what we can
.3	support.
.4	MR. THOMPSON: Part of the issue is we also have
.5	to have a mechanism to be able to make decisions and to be
6	able to communicate within the agency. I think you would
.7	respect that right the Commission has to have.
18	There are certain issues that clearly are
.9	pre-decisional; and the lawyers have a responsibility to
0 0	identify those.
21	What we typically can do and there may be ones
22	in a particular case when we can say there has been a
23	request for one to go to the public is have the paper
2.4	released to the public. We would not release the paper
25	typically just to the states.

1	Typically if we go public, we go public. We had a
2	special relationship with some of the early work that we can
3	give papers to you. Obviously when we give them out to a
4	number of states we essentially have to believe they are
5	going to go public sooner or later.
6	Certainly we can revisit that. I think as you
7	have this session later on you will get some peer
8	suggestions on how to do that. It is difficult to
9	coordinate twice in this area. We do want to make a
10	commitment to coordinate with you early on in rule-making
11	activities, and we are committed to doing that.
12	We certainly want your input, in a formal sense,
13	on what is sent out for public comment. I think it is very
14	important to have that. If you have another mechanism, we
15	are willing to listen to it.
16	Obviously whatever we do would have to be the
17	blessing of the Commission in order to make sure they feel
18	comfortable with the process.
19	If there are no more questions, I will remind you
20	of Warren Eckel who is from Crenshaw County, Alabama. He
21	was born there and was a farmer down there. He got tired of
22	farming so he went off to Florida, where he was a pharmacist
23	or something like that. He finally made all the money he
24	would ever want to make and he came back down Dozier.
25	Dozier is in the north end of the county, and it

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is a poor county. There really is not much to do. He got a little plot of land there and he decided he would, after a while, make a little more money. So he thought he would raise some pigs, figuring that was a pretty easy thing to do.

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He got him two sows, and then he talked to his brother about how you get the sows bred. He said, "At the right time, just put them in the back of the pick-up truck, bring them on down to the pen over there and we will see if they can't get together."

So he got out that morning, got the pigs in the back of the pick-up truck and went on over. Sure enough when they put those pigs together there was just wild times going on in the pig pen.

He took his sows back to the house and called his brother the next morning and said, "Culmer, how do you know whether or not it took?" He said, "Well, in the morning when you wake up if the pig is lying the sun, it took. If they are lying back in the mud and in the wallow, it did not take, you have to bring them back again."

So next morning he got up early and looked at there and this pig is out there in the mud. He said, "Oh, God, I got to do it again." So me backed his pick-up truck down there and loaded the pigs again in the back of the pick-up truck. This went in day in and day out. Every

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1	morning he would get up and the pigs are out there is the
2	mud. Sure enough, he would have to bring then back down
3	there to Culmer's one more time.
4	Finally Saturday morning rolled around. He said,
5	"I can't do it." He said, "Elizabeth, will you go out there
6	and see where the pigs are?" She said, "Good Lord, they're
7	over there in the back of the pick-up truck."
8	[Laughter.]
9	MR. THOMPSON: I think it is just performance we
10	are looking for here.
11	[Laughter.]
12	MR. THOMPSON: Clearly we are here to carry on our
13	share of the responsibility of the Agreement States
14	Programs. You have a responsibility. We certainly look to
15	you to carry out your responsibility in that area.
16	I think this is an area in which we will work and
17	improve. We will both face challenges and we both need to
18	continue our commitment to communication in order to achieve
19	our mutual objectives.
20	Thank you.
21	[Applause.]
22	MR. MILLER: We certainly want to thank Hugh
23	Thompson for his keynote speech this morning. I must say he
24	said a few things I did not even know myself, but knowing
25	Hugh he is on top of things all the time, 24 hours a day. I

1	certainly would like for him to stay around for a lew
2	minutes this morning.
3	We could take our break now and give Mr. Thompson
4	an opportunity to meet some of the other people from the
5	Agreement States.
6	MR. THOMPSON: Thank you.
7	[Whereupon, at 8:50 a.m. the meeting recessed,
8	reconvened into executive session, and thereafter reconvened
9	into open session at 1:05 p.m., this same day.]
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1	AFTERNOON SESSION
2	[1:05 p.m.]
3	CHAIR [Pro Tem] SOLLENBERGER: We are getting
4	ready to had down the final stretch. We are going to hear
5	now from the Panel on Decommissioned, and shortly after this
6	the meeting will be decommissioned.
7	We have Tom Hill to Chair this Panel. He will
8	introduce the panel members.
9	MR. HILL: Welcome back to the afternoon session.
10	I feel like I just got out from behind this microphone.
11	This afternoon's panel is on Decommissioning. We
12	are going to change the order of the speakers a bit due to
13	some situations that have come up that are very special and
14	important. We will take questions after each speaker and
15	hopefully we will have about 20 minutes for each speaker.
16	MR. HILL: Our first speaker is Francis "Chip"
17	Cameron. He is Special Counsel for Pullic Liaison and Waste
18	Management, and he will be speaking on the Enhanced
19	Participatory Rule-Making on Radiological Criteria for
20	Decommissioning.
21	MR. CAMERON: Thank you, Mr. Hill, for the
22	introduction and the entertainment.
23	[Laughter.]
24	MR. CAMERON: I have to apologize in advance. I
25 .	have to talk and answer questions, and run so I don't have

to end up making a double mortgage payment in November. I apologize for that.

I would like to tell you about a new rule-making the Commission has initiated. The rule-making is to establish site clean-standards for decommissioning Nuclear Regulatory Commission licensed facilities. It would cover reactors, other fuel-cycle facilities and non-fuel-cycle facilities, such as radio-pharmaceutical plants.

The Commission now has no generic standards for decommissioning. For the pas 20 years we have been using criteria, guidance, practices that were developed primarily in the 1970s and 1980s to make site-specific clean-up decisions.

The Commission believes now is the time to establish a consistent, current and acceptable regulations for site clean-up and this is a high-priority rule-making for the Commission.

We are going to be using a different process than we normally use to promulgate these rules. We are calling it an "enhanced participatory process". The objective of the process is to get early comment and recommendation on rule-making issues and approaches from a wide spectrum of affected interests, and to get these comments, these recommendations on the rule-making issues before the Nuclear Regulatory Commission Technical Staff sits down to develop

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the proposed rule for Commission review.

Until the time we do have comment and recommendations from the affected interests the Commission is not going to take a position on the issues. We want to remain objective to various comments and in recommendations, and we want to use the comments and recommendations we get from people to assist us in developing our approach to the rule-making.

This approach is different than a normal approach where the staff developed the draft proposed rule, sends it to the Commission, it is issued as a proposed rule and then the public gets a chance to comment on it in writing and the staff responds in writing to those comments collectively. We are trying to enhance the participation of affected interests in the development of the rule.

It is not a consensus-building approach in the sense we are not trying to forge a consensus, and agreement, on the issues. Rather we have a more modest objective of early input to the Commission's decision-making process. We hope this process will help us to ensure we have identified all the relevant issues we should be considering in the rule-making to solicit comment on those issues, to identify any gaps in the information base that may be necessary for development of the rule, to identify implementation problems with particular approaches, and to try to develop creative

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solutions to the issues and to also identify areas of agreement and disagreement on the issues.

The mechanism we are going to be using to solicit early input from affected interests is a series of regional workshops. The workshop format is important in this regard because we want to use it to develop and allow a dialogue among the representatives of the affected interests on the issues: an environment where representatives of affected interests can question each other about their positions on the issues and also can illuminate what the concerns are that underlie a position held by a particular group on the issues.

The second important factor here is we want to do regional workshops and hear from groups from whom we don't ordinarily have a chance to interact in the regions. The third important factor is balance. We want to have a broad spectrum of interests represented around the table at the workshops. We are talking about state government, local government, tribal government, other Fe \_ral agencies, citizen groups, and professional societies.

We are also talking about various components of the industry: for example, utilities, fuel-cycle companies, non-fuel-cycle companies and also the contractors who actually do decommissioning work in terms of cost estimation, site characterization, dismantlement. We want

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this latter group to be at the table also to provide
practical information on the potential rule-making
approaches.

Right now we have six regional workshops planned, and these basically follow the Nuclear Regulatory Commission regional offices: Chicago, San Francisco, Dallas, Atlanta; and in Region I of the Nuclear Regulatory Commission we are going to break it up into two workshops. We are going to have a workshop in Philadelphia and we are also going to have a workshop in Boston for the New England States.

I would like to express my thanks to Tom Hill and the Executive Committee of the Organization of Agreement States, and to the Organization itself, for helping us try to coordinate Agreement States participation in the workshops.

This is particular important. In order to have a manageable dialogue at the workshops we have to limit the number of people around the table. So each interest is going to have a certain number of representatives there and it will not be possible for everybody to be around the table.

We have been working with the Executive Committee on who actually might be at the regional workshops. The workshops are going to be open to the public. The public can observe the proceedings, and they can also ask questions

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1	and make	comments	during	discrete	periods	over	the	two-day
2	workshop	s.						

We are going to keep a transcript and we are also going to use a professional independent facilitator to help facilitate the workshop discussions.

The seventh workshop we will have is a national workshop in Washington, D. C. for groups that have a national focus. One person asked me, "Is this the mother of all workshops?" It is not intended to be that at all.

It is going to have the same issues discussed. It is not going to be given any more weight because it is a national workshop in the Commission deliberations. It is very simply to give national organizations a forum to participate in this type of exercise. We really do want to save the regional workshops for groups and organizations that function at the regional level.

We plan to focus the discussion of the workshops through what we are calling a Rule-Making Issues Paper.

This is a comprehensive, understandable and, I would emphasize, neutral discussion of the potential rule-making approaches and issues.

We are going to be sending that paper to all potential participants we invite to come to the table Will in advance of the workshop so they have time to prepare for a discussion on the issues. I might add we are looking for

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1	representation from groups that, no matter what their view
2	on nuclear issues, can intelligently discuss the issues and
3	not just bring solely rhetoric or private concerns to the
4	table.
5	We hope that Rule-Making Issues Paper will be a
6	focus for doing that.
7	Don Cool is the lead for the technical aspects of
8	the rule-making, which is going to be the major portion of
9	this rule-making. I am the lead for the process end of it:
10	arranging the workshops. Don's staff has prepared the
11	Rule-Making Issue Paper and I think they have done an
12	excellent job. I will talk about schedule, where we are in
13	terms of that paper and the whole process, in a minute.
14	The last thing I would like to mention is that we
15	feel it is very important we document how the Commission,
16	how the staff treated the recommendations and comments that
17	came in during the workshops when we developed the draft
18	proposed rule.
19	We cannot accept all comments, obviously, because
20	some of them are going to be diametrically opposed to one
21	another, but we think is it important to document how we did
22	consider the comments in our decision-making process. We
23	are going to do that.

The schedule right now is, and has been, dependent upon the Commission approval of a Commission paper we sent

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1	up on the final design for these workshops. Any day now,
2	which is one of my favorite phrases in reference to this, w
3	are going to get the staff requirements memorandum from the
4	Commission.
5	Seriously it will be coming out this week. I kno
6	they are going to approve the final plan for the workshops
7	and they do have some revisions they want the technical
8	staff to make to the Rule-Making Issues Paper. That is
9	going to take a few weeks to complete.
10	When that is done, hopefully towards late
11	November, we are going to issue the Federal Register notice
12	that describes the workshops, we are going to be sending
13	letters of invitation out to potential participants and
1.4	sending along the Rule-Making Issues Paper.
15	We hope to begin the workshops in January,
16	mid-January or towards the end of the month, and we will
1.7	conclude in April of next year. We would like to have a
18	proposed rule out by the end of next year and a final rule
19	out by the end of 1994.

I heard some nasty rumors that Hugh Thompson was up here this morning using the BR word. I don't even want to say the end of that. As you know, when the Commission re-evaluated the BRC policy it put a moratorium on the policy and that moratorium is still in effect, but it is moot at this point since the National Energy Strategy Act

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1	was signed by the President last week.
2	That Act has a provision in it that invalidates
3	the Commission's 1986 BRC policy statement and also the
4	Commission's July 1990 BRC policy statement. The Commission
5	is not equating this rule-making we are doing now with BRC.
6	BRC was initiated as an exemption, a procedure for
7	exemptions. When the Commission tried to address the
8	overall question of how clean is clean enough it broadened
9	that exemption quite a lot.
10	Now that the policy has been revoked and the
11	Commission did have it on moratorium, voluntarily, we are
12	concentrating on promulgating health and safety standards
13	here for site clean-up. We are not equating that with BRC
14	exemptions.
15	I would now like to answer any questions you have
16	and I will be off. Please ask any questions you have.
17	MR. BAILEY: Ed Bailey from California.
18	When you talk about these regional groups do you
19	intend to invite representatives from Friends of the Earth,
20	Earth First, GreenPeace, Physicians for Social
21	Responsibility, Committee to Bridge the Gap, Atomic
22	Veterans, Desert Citizens Against Pollution, the Hollywood
23	League of Women Jewish Voters, United States Environmental
24	Protection Agency Regional Offices, Department of Energy
25	Regional Offices, and/or Goffman, Tamplin et al?

1	MP. CAMERON: I did plan to do that.
2	Don, have you arranged the bus to pick up those
3	people?
4	[Laughter.]
5	MR. CAMERON: Seriously, Ed, we did talk with your
6	people in California about recommendations on who the
7	relevant groups might be. Of course, there is Redwood
8	Alliance, Committee to Bridge the Gap. We have talked to
9	GreenPeace, who we are working with on a national level, to
10	have them represented. There are, of course, going to be
11	some groups from the State of Washington and also Oregon.
12	The problem we have is there are numerous groups
13	out there. We tried to get a lead from talking to the state
14	personnel and also the Nuclear Regulatory regional folks
15	but basically the states because I think you are more in
16	touch with that than we are to see who the groups are who
17	would contribute to an intelligent discussion on the issue.
18	I have heard many of those names and we have
19	considered, I think, most of them including the Hollywood
20	group, which was a suggestion from Carol Marcus actually. I
21	am not trying to be facetious, we did think about that.
22	We had to make some judgments. The main focus we
23	have on groups from California now is on Redwood Alliance
24	and Committee to Bridge the Gap.
25	MP PATIEV. Have you gotten any commitment from

1	them that they will participate? I think that was earlier
2	problem in that the groups don't want to sit down and
3	discuss the issues, and try to reach any kind of agreement
4	other than zero.
5	MR. CAMERON: I think one thing we learned in the
6	BRC consensus process is that the notion of trying to build
7	consensus is, to these groups, very threatening. That is
8	why we sort of dialed down our objectives here.
9	Instead of going for consensus, for agreement, we
10	are going for early comments. We have gotten a lot of good
11	response on the grassroots level with that type of approach
12	I know that Redwood Alliance will be there and I am still
13	talking to the Committee to Bridge the Gap.
14	It is going to be very interesting to see what
15	national groups might come to the national workshop. There
16	may be some reluctance there, but we are getting a real goo
17	response out in the regions. That has been a nice change
18	from BRC consensus where we were pretty much stonewalled at
19	every step.
20	I want to thank all of you I have talked to for
21	your suggestions on various groups that might be good
22	candidates for participating in this.
23	Does anyone else have a question?
24	[No response.]

MR. CAMERON: I am glad I got the opportunity to

25

1	talk to you. If you have any questions or comments about
2	this feel free to call me at any time. Thank you.
3	MR. HILL: Thank you very much, Chip. We
4	appreciate it and we look forward to participating in the
5	regional workshops. Good luck with the meeting this
6	afternoon.
7	Our next speaker, Don Cool, is going to speaking
8	on two topics: Decommissioning Records Retention and the
9	Existing Decommissioning Rule, Including the Basis for the
10	Cost Estimate. Mr. Cool is Branch Chief, Radiation
11	Protection and Health Effects Branch.
12	MR. COOL: Thank you, Tom. Maybe I can convince
13	Lloyd to come up here and play mistress of the slides again.
14	I heard he did an excellent job yesterday.
15	I am going to talk about a couple of
16	decommissioning regulations.
17	[Slide presentation.]
18	MR. COOL: We will see if we cannot move through
19	these slides fairly rapidly. I am not going to spend a
20	great deal of time rehearsing past history with you, but
21	there are a couple of rule-making developments and
22	directions in which we are proceeding we thought would be of
23	interest to you today.
24	As you are probably aware, several years ago
25	Congressman Mike Synar from Oklahoma had the Nuclear

Regulatory Commission before his committee discussing some
of the cases in which there was contamination at sites that
had been there for long periods of time, sites which in a
couple of cases had been released, and asking the Commission
to look at doing some more, if you will, in a regulatory
sense to try to assure we would have a handle on what
material was out of site at the time it was released, what
material was out of site before we went in to do our survey
so as to try to have some additional measure of assurance
that, when we walked away from a site, in fact it we said it
was clean it was clean.
The Commission took that to heart. The Chairman
had said, before Congressman Synar, "We will do that," and
sure enough we did.
The proposed rule came out just about a year ago,
in October. We received a number of comments, although not
as many comments as you might expect, from a wide variety of
places an institutional licensee, a medical licensee or
two, a couple of state agencies, a nuclear power utility
with some pretty good comments.
The final rule, in terms of schedule, is under
consideration by the Commission. That, maybe, sounds like a
vague euphemism. As a matter of fact, to be very precise
the final rule-making package for the Commission to review

25 and either approve or send back to us was sent to them on

1	the 21st	so this	is very	recent	history.	They	have	just	now
2	begun to	look at	it.						

The staff proposal at this time -- and I will emphasize this is still the staff proposal, the Commission has not blessed it, so it is still subject to change without notice -- provides first of all that licensees generate a list of areas which contain radioactive material. The underlying philosophy of this rule was to have in one place, at a single location, a list readily accessible for cross-referencing those areas at which you would want to look when you are decommissioning to decide whether or not you had done the job on each of those areas.

As a result of comments we made the first, and relatively simple, list of restricted area. If you have a restricted area that means you have enough radioactive material you are interested in it from a radiological standpoint, occupationally. So listing those areas was a very simple way to take care of large blocks without saying "List this building, list that building, list that little spot there," which could result in an incredibly large document.

If it is a restricted area we figure, "Okay, we know where that is. That is one place we will look."

The second list. Look outside the restricted areas at places where there might have been spills or

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unusual occurrences. That really, simply, picks up what you already had in the decommissioning rule from back in 1988 where such documentation had to be provided if it was not cleaned up to levels that were acceptable for unrestricted use. So if you have one of those it needs to be on the list.

The third list is particular for Part 40 type licensees, but potentially other types of licensees, includes areas that are perhaps outside the restricted areas, but they contain material such that if you were to decommission it today -- you decide, "Okay, we are going to walk away from it" -- either you would have to remove it and decontaminate in order to make it acceptable for unrestricted use or you would have to come to the Commission or the state agencies and apply for approval for special disposal.

The new Part 20 reference, 20.2002 -- I am trying to rid my mind of all the old Part 20 references, but that of course was also in the old Part 20 -- includes anything that would have required a special approval -- a burial of the site; things we are particularly interested in: those large tailings piles or other piles of material, large areas where there may be drummed material or otherwise it is being stored for various reasons -- that does not have a sufficient, say, external does hazard that it needs to be a

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restricted area but still has enough material around that you want to know where those are so you can go looking for them in the end in order to decide whether or not you have them cleaned up.

The proposal is to have the list maintained by the licensee. It would not be submitted on any sort of routine basis to the agency. Have them update it at least every two years. For a lot of licensees, because the first part of the list is simply a list of restricted areas, that probably is not going to change very much if you are undergoing routine operations you don't undergo a drastic change at a building or something like that. So there probably is not an awful lot of activity that is actually going to have to take place on that.

The time when the list would have to be submitted is when they would send in the decommissioning plan, at least for those facilities that require a decommissioning plan to be submitted.

This really falls along the simple logic that in order to be able to evaluate whether or not the decommissioning plan is adequate to do the job you have to know where the material is. Hence send me along the list so we know whether or not you have covered those materials.

Lastly there is a provision, separate from the listing per se but which has gotten tacked onto this

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1	rule-making, which requires that a list be accumulated
2	during that final decommissioning process and submitted with
3	the final plan, which is that set of equipment large items
4	that was contaminated when you started the decommissioning
5	process was used in process of whatever you
6	decontaminated it and you decided to leave it on site
7	things that are going to remain there, once it is in place
8	there so you have the opportunity to go look and check.
9	One of the things about which we have been
10	criticized is "How do you know all those things have been
11	cleaned up? How do you know a licensee did not leave
12	something there and just did not bother telling you about
13	it?"
14	"In the confirmatory survey," which obviously is
15	not ever going to be a hundred percent
16	square-centimeter-by-square-centimeter, "how do you know it
17	was not somehow missed?
18	The last provision, to have that sort of list with
19	the final termination survey, is so when you go in for the
20	confirmatory survey you once again have a mechanism for
21	looking.
22	Obviously it does not make sense to keep a list of
23	potentially contaminated equipment while you are operating.
24	"Okay, I am using it. Whether or not it is going to be
25	there when I am all done? I don't know." You cannot make

that sort of business decision.

one of the comments we got during the rule-making at the proposed rule was this confusion about whether or not people needed to somehow predict -- they all had to polish up their crystal balls -- what equipment they would leave on site at the end. That was not our intention. Hopefully we will have made that a little more clear with the final provisions.

There are some exceptions that apply to this and some of those changed as a result of the public comment period last year also.

The first is that materials that are of less than a sixty-day half life are exempted from the consideration. by the time you get through with the decommissioning — in which you have expended a year or so to generate a plan, another year and a half or so to actually do the decommissioning — stuff that has a sixty-day or so half life has undergone about ten half lives and is probably not a problem anymore. So that kind of material does not need to be included.

That has the effect of exempting virtually all of the medical facilities. A lot of those facilities have similar sorts of sixty-five-day numbers in terms of dealing with their wastes for storage and release, and we piggy backed on that same sort of criterion. That, I believe,

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reduces the burden of the rule significantly.

The third thing on the list is sealed sources. If you have a sealed source that has not leaked -- and leaks, of course, are dealt with at other places in the rule -- why bother listing it? "Are you going to take care of it, are you going to send me the lovely little Nuclear Regulatory Commission form or disposition of materials that says 'I sent it to thus and so' or 'I returned it to the Department of Energy because it was something greater than Class C stuff that nobody knows what to do with?'" or whatever.

In any case, it was a sealed source, it is gone.

It is not a contamination problem since it has not leaked.

All of those have been exempted. That also was a change from the proposed rule because during the time of the proposed rule only sources at temporary field sites has been exempted.

The listing had included, at the proposed rule stage, the storage facility like the bunker where the radiographer or well-logger held it. We got a comment that said, "Gee, that does not make a whole lot of sense. If they have not leaked, what is the point?" We looked at it and said, "Yes, you are right. Let's exempt them all." So that change was made.

As in the proposed rule, depleted uranium in the shielding or penetrators of unused munitions has been

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exempted from the rule-making. Once again, if you have it
nicely encapsulated and the Army has not shot it off
someplace an blown it through a tank wall or into the firing
range, or something like that, you have a rather minimal
possibility of contamination.

so those are the provisions of that particular rule-making on document additions. I am going to talk about the second topic while I am on a role here. We will then go back and entertain questions on all of my presentation simultaneously.

The other thing that State Programs has asked me to look at a little bit was some work we are doing that looks at the cost basis for the decommissioning, the certification costs: How much money does a licensee have to set aside in order to assure sufficient funding will be available at the time of decommissioning?

As you are probably aware, the decommissioning rule that came out in 1988 has a series of possession limits and costs associated with those. Those were done rather quickly. We said, "Well, we have Appendix C here. That is used for labeling. Gee, why don't we just use a multiple of that?" So it was scaled.

The scaling was based upon some laboratory estimates, that had been made in the new regulation published a number of years ago, which said that to

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1	decommission a single laboratory would cost on the order of
2	\$150,000. We are all talking past history at the moment.
3	We will talk about where we are going to go in a minute.
4	Therefore, for larger facilities we said, "Well,
5	if a single laboratory took that we will scale it up some,"
6	so it took \$750,000-some for larger facilities.
7	That rule-making then included some provisions for
8	more specific plans if possession limits were over a certain
9	maximum that picked most of the fuel-cycle and
10	larger-material facilities which have significant of a wide
11	variety of isotopes. If the possession limits were less
12	than a certain minimum they were exempt from the
1.3	requirements.
14	There was this wonderful little value of \$75,000
15	that we thought it would take care of an irradiator. Yes,
16	enough said.
17	[Laughter.]
18	MR. COOL: Hopefully we have gotten smarter over
19	the course of time.
20	We are going back an saying, "Yes, it has been a
21	few years. We promised we would look at that and update it
22	periodically, and the time has come." There are a number of
23	reasons. For example, 10 CFR Part 20, new Part 20, changed
24	Appendix C. Unless we do something about that at some point
25	all the numbers would sort of change de facto; and we did

not want really to do that without knowing what the impacts
were going to be.

And we believe there is some additional information, some new information we are attempting to generate, on what it actually takes to decommission a facility because the previous estimates were sort of, "Yes, that looks about right for the numbers."

obviously there is a lot of variation and we are finding out that it takes a lot more. As I was talking a few minutes ago before we started, you take what you think it is going to cost, multiply it by a factor of somewhere between two and ten, and maybe you are close. So we are taking a look to see if we can come up with some better estimates.

How might we change the rule? Potential approaches. There is a multiplicity of ways we could do it. One of them that is being looked at is to take it in a couple steps, which would be simply to first adjust the values for inflation -- because that is a relatively simple process and would get the numbers updated to at least some extent -- and then separately go back, when we have the additional information available, and readjust all the values again.

While that makes conceptual sense from a standpoint of let's do something to fulfill the promise we

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made in the Federal Register five years ago, on the other hand it does not make a whole of sense from the stardpoint of why do something and go around and do something again. That would inevitably mean that about the time you folks were looking at what you were going to do to match it we would move the target again. That is not a good regulatory process either.

The second approach that is being looked at is whether or not we can succeed in pulling all this together and do it in a single type of rule-making package that would not only provide some adjustments for inflation, but take some of these other factors into account.

I wish I had a crystal ball that was sufficiently precise to be able to tell you which of those will, in the end, prevail on timing. Unfortunately what I have on my desk at work is a crystal ball which is very cloudy and swirly, and you cannot tell anything about it.

We do have some work ongoing which is to attempt to provide us with the background information and it comes in two phases. The first phase, which is work already contracted and underway, is to update the basis for the certification for large irradiators: to go back and do a cost and technology new regulation, similar to the ones that were done back 13 or so years ago, specifically looking at irradiators, hopefully getting a bit smarter as a result of

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the things that have happened in the last few years in terms of what it would take to decommission one of those types of facilities; to look at the certification amounts for other materials facilities, mostly in terms of inflation; and particularly to look at the inflation formulas which might be used to provide some sort of more reasonable periodic update.

The decommissioning rule certification costs for reactors had built right into the rule a lovely little formula that said you have to include labor and you have to include waste disposal costs, and these couple of other factors. Those set adjusted every year when a new regulation is published on waste costs and a variety of things. So those are constantly-changing values and people have a moving baseline which keeps up with reality.

the rule has a number, it was a lovely number at the time -and nothing has changed. There has been no basis to be able
to go in and adjust it. One of the things we want,
hopefully, to be able to do is put in some way to account
for inflation over the course of time, what things need to
be considered, so I don't need to go back and do this
rule-making again in another three or four years and another
three or four years after that.

The second thing we are doing -- and this is an

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effort we hope to get underway shortly -- is to go out and develop the information base of decommissioning costs. The idea is to go and look at the wide variety of docket files that are available, things that have now been closed out and decommissioned and, on the basis of those, try to determine what licensees, or more precisely former licensees now, might have some good cost information available that will 7 allow us to correlate how much they spent with what they had 8 on their site as a way of estimating what it actually costs 10 to decommission a facility.

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We have arranged a contract with P&L to do the leg work for us. We are working with our friends down in the Office of Management and Budget in an effort to get them to allow us to come out and ask the question. That is a serious problem, as a matter of fact.

In these days when we don't, as a Federal Government, want to be going and burdening licensees you would be amazed at the amount of flak you get when you go out and you want to ask some questions so you can hopefully do a rule which will reduce the burden to licensees.

Despite how circular that sounds, we have gone through four or five iterations of that process and we are not there yet. Assuming we get there we will have our contractor contact some of those facilities to go out to them to collect the data so there is a minimal impact on

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1 them.

They will be talking to some of our regional offices. They may come looking to some of you folks for some help on things that have gone on in the states because we want to try to get a broad-brush look at what is going on.

The effort, as at least contracted, would place all of the leg work on the contractor. We will call up and ask what you have, some relatively simple questions. On the basis of that screen, for those licensees we think have information that will prove useful, we will go out and do a site visit, browse through the files and try to get the information.

That is a lot less burdensome than saying, "Gee, Mr. Licensee, you used to be licensed for us and, because of that, we think you have some information. You are hereby nicely requested", arms up behind the back, "to send me all this information." That is one of the things to which the Office of Management and Budget said, "No, no, don't do that." Our hope is to try to gather that kind of information.

We will use that in a way to try to break down types of facilities, types of costs, to try to organize a model for how we might best appropriate the kinds of moneys that are associated with these types of decommissionings,

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1	looking at perhaps the infamous licensing fee structure as
2	one approach, although that is probably much to complex, and
3	in the end develop some sort of categorization for the
4	purposes of rule-making.

Whether or not that would, in the end, still follow some sort of possession limit, whether or not it would rollow a particular class of licensees -- all of you that are of broad scope A are in this type, all of you that are medical-types of licensees are this type, and all of you that are fuel-cycle type of facilities or have large quantities of uncontained material are over here in this other type -- to try to put together some sort of rational basis for those certification costs.

That completes what I had to tell you on those two topics. I will be glad to try to answer questions on those or -- I hate to say it, but I guess I will volunteer -- if there are other questions you did not manage to throw at Chip Cameron on the enhanced rule-making, where we are going on the rad criteria, I will try to answer some of those also.

MR. FLETCHER: Roland Fletcher of Maryland.

This is part comment and part question. Recently, within the last year, we were called upon to evaluate an area of land that had been released for unrestricted use by the Nuclear Regulatory Commission back in about 1978. It

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1	was part of a General Services Administration facility.
2	A lot of administrative telephone calling and
3	gyrating went on until finally we were told that "We don't
4	have the information, the Nuclear Regulatory Commission
5	does." To make a long story short, the county in which this
6	property was located had decided they wanted to build a
7	confinement facility there. Of course, as soon as you make
8	a statement like that in a residential or commercial area
9	both the NIMBY and the NOPE groups come out: NIMBY, of
10	course, being Not In My Back Yard, NOPE
11	MR. CCOL: And NOPE being not at all.
12	MR. FLETCHER: being Not On Planet Earth.
13	[1 ghter.]
14	MR. FLETCHER: They came out and they were looking
15	for any reason whatever that this facility could be declared
16	not useable. It turns out that in 1981 the criteria for
17	which the facility was released in 1978 was changed. So
18	this year some people from Oak Ridge went cut and did
19	another survey, and said this property is on longer
20	available for unrestricted use.
21	[Laughter.]
22	MR. FLETCHER: I am bringing this up for two
23	reasons. One, I am sure Maryland does not have the only
24	facility like this in the country so all of you should be
25	aware of this. Second, I don't see that situation addressed

1 1	in your presentation.
2	How do you address a situation like that?
3	MR. COOL: Run like crazy.
4	[Laughter.]
5	MR. COOL: Actually there are a number of those,
6 I	Roland. Some of them have been identified in the way yours
7	came about. Others have been identified by virtue of the
8	fact that the Nuclear Material Safety and Safeguards has
9	gone back and is trying to do a rather comprehensive
.0	examination of what it had released and "Gee, should we have
1 1	really done that?"
.2	The two rule-makings I talked about here really
.3 (	don't get to the question of the criteria for release or
4 1	what do you do when it changes. Those are things we hope to
.5	address with the enhanced participatory rule-making for
6	radiological criteria for decommissioning. You cannot say
.7	that fast more than once or twice.
. 8	There is a plan to try to go in and, when those
19	criteria are established, to look at whether or not previous
20	sites would be grandfathered or what would be done.
21 1	Hopefully by then we will have that reassessment of previous
22	dockets completed and work is ongoing with the Environmental
23	Protection Agency in terms of trying to clean up those
24	sites.

25

So the place where it is going to be addressed --

1	and it is going to be addressed is going to be in the rad
2	criteria rule-making what number do we set and why, and
3	what does it mean? rather than the documentation
4	rule-making.
5	The documentation rule-making or the certification
6	amounts are the procedural aspects ongoing so that when we
7	get all done we have some idea where to look. The question
8	then become: Knowing where to look what criteria am I going
9	to apply? The retrospectively, now that Jim Berger and his
10	friends have been up and said "No, we found some stuff", to
11	what extent are we going to go back?
12	John Austin, when he gets up here in a little
13	while, may want to address that particular subject, also.
14	The sites like the one you are talking about are the very
15	sites that form the wonderful core of the Cite
16	Decommissioning Management Plan: all of the wonderful cats
17	and dogs that no one has ever quite figured out what to do
18	with.
19	MR. AUSTIN: will make it crystal clear.
20	[Laughter.]
21	MR. GODWIN: Autry Godwin, Arizona.
22	I am not sure exactly how this might fit into your
23	thinking. It is one of those series of issues you might
24	need to start playing with.
25	For the sources that are gauges who subsequently,

1	through non-accountability by a licensee and somebody
2	melting pot and then you have either a hot product,
3	steel, or a wonderful collection of hot dust the
4	clean-ups are notoriously expensive. I am not sure
5	decommissioning is the proper answer. It may be more of a
6	liability insurance approach of some sort.
7	That particular problem is getting to be more
8	frequent, unfortunately. I suspect some of them will turn
9	out to be general licensees, which further complicates the
10	issue.
1	The other part of it is: What about sources a la
12	the industrial radiography and well-loggers where essential
3	use is pretty well kept up with, but occasionally some sort
14	of accident will happen resulting in the source integrity
15	destruction followed by a rather nasty clean-up of somebody
16	else's property.
17	MR. COOL: Yes.
18	MR. GODWIN: I am not sure how to approach these
19	particular subjects or even whether or not this is the
20	proper area, but it is something you need to be aware of.
21	MR. COOL: A funny thing happened on the way to
22	the meeting. That is another of the issues with which we
23	are dealing. In fact, I have one of my staff people
24	attempting to pull together that information and prepare a
5	namer which we hope to submit to the Commission about the

1	end of the year, that deals specifically with what kinds of
2	liability insurance or assurance, or various things, might
3	you ought to have for contamination on sites or accidents
4	that have happened exactly like this.
5	The variety of circumstances: the source is down a
6	hole and the guy drills through it or it melts it.
7	That is one aspect that is going on.
8	We have attempted, on the other hand, to avoid in
9	these decommissioning documentation rules getting into what
10	amounts to an ongoing health/physics material control and
11	accountability issue, not that that does not need to be
12	reinforced in everybody's mind consistently. One of the
13	easiest things for all of us to do is to get a little bit
14	relaxed, gradually, with the stuff we are using and not
15	worry so much about it anymore, which causes some problems
16	like that.
17	However, as a conscious decision for this
18	documentation rule we avoided things which were, in fact,
19	the ongoing material control and accountability.
20	MR. GODWIN: As a consumer issue, apparently the
21	particular homeowners' insurance companies have revised
22	their nuclear exclusion clause so it no longer just applies
23	to the nuclear insurance group. It really excludes anything
24	radioactive.

MR. COOL: Yes.

25

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1	MR. GODWIN: You may find some of the industrial
2	policies going the same way.
3	So as you look at these insurance operations you
4	have to look at the wording closely.
5	MR. COOL: That is one of the difficulties we have
6	run smack into, what will work and what will not work. You
7	are exactly right, there are a lot of things that simply
8	will not work anymore.
9	No, no, State Programs people are not allowed to
10	ask questions.
11	[Laughter.]
12	MR. SOLLENBERGER: Dennis Sollenberger, State
13	Programs.
14	I wanted to clarify something because a question
15	did come in from a state. When Part 20 was revised Part
16	30.35 was revised also to make the reference specific to
17	Appendix C of the old Part 20 after you adopt the new Part
18	20: that the new Appendix C, which was on totally a
19	different basis than the old, is not to be used as a
20	reference level for determining decommissioning funding.
21	You were talking about the different between the
22	new and the old Appendices Cs. I wanted to clarify that the
23	new Appendix C is not to be used for decommissioning funding
24	levels.
25	MR. COOL: That is right. The numbers are

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1	specific to the old values and if we attempt to hold course
2	and go single rule-making, do it all at once, one of the
3	things we will have to do in the interim is find a home for
4	those numbers so they don't vanish from the Federal Register
5	in another year and a half.
6	MR. RATLIFF: Richard Ratliff from Texas.
7	We have found two things. We have the same
8	criteria you do. If you had non-leaking sealed sources we
9	did not worry about it. Then we started surveying down-hole
10	storage sites that had 20 Curie americi and beryllium
11	sources for some time and they were all hot. It surprised
1.2	us we would have as much activation as we did.
1.3	Then we had a radiography license. Yes, go ahead.
14	MR. COOL: That was activation from the neutron
15	sources?
16	MR. RATLIFF: Right. It is not a lot, but it is
17	enough that we felt it was worthwhile making the licensee
18	remove those down-hole storage pipes.
19	MR. COOL: Interesting, okay.
20	MR. RATLIFF: The second thing we had was a that
21	had radiography licensee who had never had a leaking iridium
22	source, but we did not realize. We inherited this licensee
23	from the Atomic Energy Commission and he had had a leaking
24	cesium source he was ordered to bury, and then unbury.

[Laughter.]

25

1	MR. RATLIFF: So when we call Joe Lubenau, at the
2	time, Joe said, "Oh, we messed up at the Nuclear Regulatory
3	Commission, we did not destroy the file." So they had the
4	file and we were able to track it down.
5	[Laughter.]
6	MR. RATLIFF: For some of those you have to look
7	at the whole history, I think.
8	MR. COOL: I agree. No other comment.
9	[Laughter.]
10	MR. CASE: Dave Case, the Air Force.
11	Don, I am aware and you are too that the
12	Environmental Protection Agency is in the process of trying
13	to put together a standard on residual radioactive which is
14	going to follow the more traditional rule-making process.
15	How is your rule-making and theirs going to
16	interface, if at all?
17	MR. COOL: Hopefully just like that. We have
18	several interactions going on and it is almost frightening
19	to say that we actually have a reasonably good working
20	relationship with the Environmental Protection Agency folks
21	on this right now.
22	There are, in essence, going to be three things
23	running in parallel. One is an effort, which is led by the
24	Environmental Protection Agency, to develop Federal

guidance: that grandiose overview piece, similar to the

1	Occupational Guidance that came out in 1987, first for
2	public exposure and that process was started a couple
3	years ago and died for lack of people, and the Environmental
4	Protection Agency got sued on too many other things which
5	has been restarted and that is proceeding and that will come
6	out.

Then there will be an overriding Federal guidance dealing with residual radioactive to deal with everything from the Department of Energy stuff to the Nuclear Regulatory Commission stuff to what do we do about NARM and some of the other things which are not under any of our controls or under your controls.

That is one piece.

The second piece in the puzzle is the Nuclear Regulatory Commission participatory rule-making for which we hope, and believe we will have, Environmental Protection Agency representation at the table at every single workshop: that they will there as a partner with us in the process.

That workshop process then funnels out into two branches: one, our rule-making where we will actually codify it for Nuclear Regulatory Commission licensees; and what I expect will probably be a parallel running Environmental Protection Agency general standards-setting rule-making, which would apply to everything else.

The tacet agreement here, which is sort of a

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1	slightly shifting line but which I think everyone has more
2	or less agreed to at this time, is if we can keep those
3	things running in parallel the Environmental Protection
4	Agency standard would then not apply to the Nuclear
5	Regulatory Commission facilities, and the state facilities
6	that have adopted it, because the Nuclear Regulatory
7	Commission standard establishes the sufficient regulatory
8	base. Therefore, we would avoid dual regulation.
9	That is the process that is set up. Only time
10	will tell whether or not we will succeed in keeping them
11	together.
1.2	MR. CASE: That was my only question.
13	MR. QUILLIN: Bob Quillin, Colorado.
14	I think it is the Office of Technology Assessment
15	which is doing a study on nuclear decommissioning of power
16	plants. How is their work tracking with yours and what is
1.7	there major focus?
18	MR. COOL: I have no seen their report. They are
19	focused on the power plants. Congress gave them a number of
20	mandates which I don't remember off the top of my head.
21	Out interaction at this point has been they keep
22	calling me up and I keep sending them stuff. Although they
23	have promised they will send me what they are preparing at
2.4	this point I have not see that.
25 .	So other than to say, yes, I am clearly aware of

1	that and am talking to them in fact, I talked to them a
2	couple of times this week I don't know, or at least
3	cannot give you off the top of my head, the entire scope of
4	where they are going.
5	Steve, did you have something quick?
6	MR. COLLINS: Yes, I think it is real quick.
7	Steve Collins from Illinois.
8	Is there anything in your decommissioning
9	rule-making that would tie into the revision of your Part
10	our source-material regulations that would get rid of your
11	BRC number of 150 pounds a year you dump in the local
12	dumpster of whatever you want to do with it, it is
13	unregulated with regard to disposal?
14	MR. COOL: Not directly in this rule, but once
15	again there is something else going on. Watch the Federal
16	Register. It will be there very shortly in advance notice,
17	coming to a place near you.
18	[Laughter.]
19	MR. COOL: The Commission has, in fact, approved,
20	and it is on its way to the Federal Register, an advanced
21	notice of proposed rule-making for revision of Part 40 that
22	opens up all of that for questions and input on that exact
23	topic. That is underway, but again a separate forum.
24	MR. COLLINS: Thank you very much.
25	MR. HILL: Our last presenter is John Austin. He

1	is Chief of Decommissioning in the Regulatory Issue Branch,
2	Division of Low-Level Waste Management and Decommissioning.
3	He speaks on the Status of Decommissioning Management Plan
4	Activities.
5	MR. AUSTIN: Thank you very much, Tom.
6	Decommissioning always seems to come last. I see
7	we are here today doing that.
8	[Laughter.]
9	MR. AUSTIN: When I became involved in
10	decommissioning and the Environmental Protection Agency
11	interface about two and a half years ago I had very dark
12	brown hair.
13	[Laughter.]
14	MR. AUSTIN: I am really only 30 years old and I
15	sometimes feel I am being decommissioned faster than the
16	sites out there.
17	[Laughter.]
18	MR. AUSTIN: I will tell you a bit about the
19	Branch. We have responsibility for the decommissioning of
20	large power reactors, we have responsibility for
21	decommissioning complex sites from the materials licensees,
22	and we serve as the primary interface with the Environmental
2.3	Protection Agency on isches such as the Clean Air Act,
24	Resource Conservation Recovery Act, CERCLA, Water Programs,
25	et cetera.

1	I will be talking about the Site Decommissioning
2	Management Plan, what we call affectionately the S-dump,
3	program and an action plan we issued earlier this year, and
4	then briefly about one of the major activities have ongoing
5	with the Environmental Protection Agency.
6	Don mentioned the Synar hearing back in 1989.
7	That is not a pleasant way to learn about where contaminated
8	sites are. What came from that was the Commission decided
9	to pull together all of the issues that had been impediments
10	to the timely clean-up of complex contaminated sites as well
11	as pull together what was known about sites that had been
12	basically inactive for, sometimes, ten to twenty years with
13	nothing happening on the clean-up.
14	At the time I think we found somewhere between 38
15	and 40 sites that were problem sites. Today is the number
16	is 46, going in the wrong direction. However, in early 1990
17	that became the Site Decommissioning Management Plan.
18	We started the process of trying to compel
19	clean-up. Then just about a year ago this time Chairman
20	Selin looked into what was going on in decommissioning and
21	he joined the rest of us in becoming extremely frustrated
22	because not a whole lot was happening.
23	We were asked to put together an aggressive action
24	plan that would compel timely clean-up. That action plan

25 was issued in April and it addressed seven, I think, key

1 areas. One of them was the clean-up criterion.

up a site if they did not know how clean is clean enough; and the Commission has multiple choices on what they could do about establishing some kind of clean-up criteria. It could have picked one number or it could pick some of the guidance that had been developed, as Chip said, in the 1970's and early 1980's, or it could adopt all of them.

The Commission seemed reluctant to pick a new clean-up goal without a thorough analysis of what is the justification for it, the rationale for it; what costs would be associated with that kind of a number. So they opted for experience.

We had significant experience with the Branch
Technical Position of 1981 for uranium and thorium; we had
regulation guide 1986 for reactors, which we applied to
materials licensees; there was a fuel-cycle guidance issued
multiple times, I think the last was in 1987; and we had
letters talking about, for structures, five micro-hour above
background at one meter and for soils it was ten micro-hour
above background at one meter.

So the Commission said "In the interim use all of those as well as ALARA" without exactly saying what constitute an ALARA analysis. We are wrestling with how to go about ALARAs. In the reactor space it is somewhat easy

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1	to do it for emissions, but when you are talking about
2	buried contamination or surface contamination on soils for
3	very long-lived half-lives, long-lived radionuclides, how
4	many generations do you consider exposed to calculate a
5	person rem? Is it 1,000, 10,000 years out into the future?
6	So we are plowing through that trying to figure
7	out what is the most practical sensible way of going about
8	ALARA analyses in making these clean-up decisions.
9	You brought up the issue if finality. That was
10	another issue that the industry used as another reason why
11	they should not clean it up. If they clean it up today are
12	they going to have to come back ten years from now?
13	The Commission said that if a licensee cleans up
14	its site in accordance with a Commission-approved
15	remediation plan and they do it faithfully the Commission
16	will not revisit that case unless material is found there
17	that has significant health and safety concerns or if it is
18	learned the licensee did not, in fact, clean it up in
19	accordance with the approved plan.
20	This seems to help a little in resolving the
21	concerns among the licensees, but candidly I think many of
22	them are looking to the Environmental Protection Agency and
23	what the Environmental Protection Agency might do.
24	As many of you know, under CERCLA the
25 .	Environmental Protection Agency looks to clean-up of a ten

1	to the minus six lifetime risk to as many in the population
2	as possible, which translates to a dose rate of .03 millirem
3	per year. For the reasonably maximally-exposed individual
4	they seek about a ten to the minus four lifetime risk, which
5	translates to about three millirem per year.
6	We have some sites, particularly involving
7	thorium, where depending on the scenario you have one could
8	calculate, under reasonable contamination criteria, doses in
9	the order of a few tens of millirem. Now we are starting to
10	talk about a departure from an Environmental Protection
1.1	Agency standard of factors of six and seven, and some think
12	that is significant.
.3	So the concern is, yes, Nuclear Regulatory
4	Commission, we may satisfy you, but will the Environmental
.5	Protection Agency come back later and hit them on the
.6	CERCLA?
.7	But Don is going to straighten that all out in the
.8	enhanced participatory rule-making effort.
9	The third issue is timing. Our regulations say

The third issue is timing. Our regulations say that these sites must be remediated to an unrestricted use standard, but they don't say when. There is little, if any, incentive to clean up the sites now. It is spending large sums of money for no profit to the licensee. So there is an incentive for them to postpone fulfilling their obligation.

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In the action plan the Commission expressed its

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1	view that these complex contaminated sites should be cleaned
2	up within about three years, taking about a year to
3	characterize a site, a couple of months to prepare a
4	remediation plan and then a year and a half or so to
5	actually carry out the remediation.

That is what we are trying to do now: insert into the license conditions that are enforceable on the timing of the steps that would be carried out in decommissioning.

One of the things we found frequently in the past was that decommissioning dragged out because the licensee initially did not characterize the site completely. They would attempt to clean up; we would go in, we would find more; then they would go back and clean it up; and this process was going on and on and on.

So the Commission identified some relevant documents on how to carry out an appropriate site characterization.

The fifth are of the action plan discussed was the enforcement options: very complicated. We believe most of these sites do not present a significant threat to the public health and safety now. Over the long term, though, they do contain unacceptable quantities of radioactive material.

So how can we, on the one hand, say there is not a threat to the public health and safety and, on the other,

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justify an order, for example, to effect clean-up?

The regulations allow the staff to issue immediately-effective orders based on public health, safety or interest considerations. We believe we can put together an argument, based on latent conditions — that is, if they are conditions that over the long term will get worse: that the material could migrate off-site, people could inappropriately go onto some of these sites and that the licensee possibly could disappear, go bankrupt, such that the public taxpayer would have to pay the bill for cleaning it up — that there is a public health, safety and interest consideration that would justify immediately-effective orders.

We have issued one immediately-effective order to the Chemitron site in Ohio requiring them to submit a site characterization report by a particular time. They immediately requested a hearing not only on the substance of the order that modified their license, but on the immediately-effectiveness aspect of the order.

The attorneys then got together and negotiated a consent order that did not replace, remove or modify the immediately-effective order, but it supplemented -- I think was the word we chose to use -- that order. That in itself led to guite a few of our sites on the Site Decommissioning Management Plan calling us as opposed to us having to call

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They saw the Commission was taking a direct and strong interest in the program, that Congress was taking a direct and strong interest in the program and it is time for them to carry out their obligations.

The final thing the action plan addressed was how we could create financial incentives to the licensees to clean up their sites. Fining them does not help because a fine going to a licensee takes money way from what should be going to clean up and puts it in the Treasury.

Therefore, the Commission told us, if appropriate, to order a licensee to set up an escrow fund into which they would pay certain sums of money to be held and spent for site remediation. Again, because of the success we are having with many of the licensees on the Site Decommissioning Management Plan we have yet to try that.

We have already alluded to the fact we are going back and look at all the licenses terminated since 1965 to see if there is an adequate record to justify the unrestricted use determation. That does not sound consistent with the commitment of the Commission to make decommissioning actions the final action.

However, what we are finding in many cases is that some sites were not remediated even to the standards that existed back then and that is fair justification for

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1 revisiting them.

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On the Environmental Protection Agency front, in April of this year Chairman Selin and Administrator Ryland signed a Memorandum of Understanding regarding the principles under which the two agencies would go about responsibilities that are jointly held or that have 6 ramifications on the other.

It lays out some principles for the interactions. It lays out criteria for when the Environmental Protection Agency or the Nuclear Regulatory Commission would or would not issue additional regulations in a mutual area. The last part of that Memorandum of Understanding, Section D, directs the staff to work with the Environmental Protection Agency to harmonize risk assessment methodologies and to harmonize risk goals.

That is a very high priority with in the staff now. It is very complicated. When I look and see that the Department of Energy, that has sites that are on the Super Fund, is using a clean-up standard of less than 100 milligrams per year, the Super Fund standard being something on the order of three to four milligrams per year, there is factor of possibly 25 difference between the two agencies and they are still getting along, I ask them, "How can you do that? A factor of 25 is significant."

Their explanation is "It is how you go about the

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1	risk assessment." CERCLA says you use current land-use
2	patterns to calculate out into the future and the Departmen
3	of Energy says, "Well, gee whiz, even though this is an
4	industrialized area we are going to assume agricultural
5	activities on the site," and they start calculating rather
6	large doses relative to what the CERCLA folks would
7	calculate.
8	It is to avoid these kinds of differences and
9	confusion over what the two agencies are trying to
10	accomplish that we are now working on a paper to identify
11	the differences in risk assessment approaches between the
12	two agencies. There is a meeting between Mike Shapiro, of
13	Air and Emergency Preparedness in the Environmental
14	Protection Agency, and Bob Bernero to talk about the
15	significant differences in the approaches that could
16	influence the decision.
17	That is late in November. Following that we will
18	have the enviable task of talking about harmonizing risk
19	goals. I think that will be a very interesting exercise
20	with the Environmental Protection Agency.
21	With that I would be willing to answer any
22	questions you may have.
23	MR. KERR: Wayne Kerr, Illinois.
24	John, have you any good advice for how you deal
25 .	With recalcitrant licensees licensees that are bankrunt or

1	near bankrupt, and those non-licensee situations? I read
2	you have some of each in the Plan, I think.
3	If you have any advice it would be appreciated.
4	We have one or two which might fit in one or more of those
5	categories and we are not sure how to handle the situation.
6	MR. AUSTIN: Say a lot of prayers first.
7	We are facing all of those. On former licensees
8	we are continuing to negotiate trying to get them to come
9	back. Sometimes they do, sometimes they don't. We have yet
10	to reach a point where we have given up hope that a former
11	licensee will go back.
12	Threat of Super Fund is always a possibility. The
13	Branch is putting together a management plan on how, over
14	the long term, to better manage the decommissioning process.
15	One of the options +hat I will put into that plan
16	is to seek something like Super Fund authority. The great
17	value of the Super Fund authority is that the Environmental
18	Protection Agency does not care who is the primary
19	responsible party: anybody that was there is responsible.
20	Those responsible parties either work it out among
21	themselves and clean it up or the Environmental Protection
22	Agency will do it and can seek three times the cost in
23	recovery. That is a very strong threat to get the
24	responsibility parties back to carry out their obligations.
25	We are inclined to issue orders. Even if they are

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1	non-licensees, if they are responsible although our
2	attorneys don't relish when I come in with an order in hand
3	particularly for a non-licensee for licensees an order
4	modifying the license saying "I don't care what permits you
5	need, you either clean it up in two years or your are
6	guilty." We have a couple cases like that on which we are
7	preparing orders.
8	Setting up these financial incentives, such as an
9	escrow account, could be another useful way.
10	Anymore questions?
11	[No response.]
12	MR. AUSTIN: Thank you.
13	MR. HILL: I think we need to give our panelists
14	good round of applause for a job well done.
15	[Applause.]
16	MR. HILL: That was our last presentation and we
17	are a bit ahead of schedule. Vandy, have you any comments?
18	MR. MILLER: I just wanted to make sure everybody
19	recognizes what a good panel we had.
20	MR. HILL: Okay.
21	[Whereupon, at 2:20 p.m. a recess was taken after
22	which the hearing reconvened at 2:55 p.m., this same day.]
2.3	MS. MAUPIN: Greta Dicus, who is from Arkansas,
2.4	will be the Chair of this session.
25	MS. DICUS: Welcome to the final session of our

1	1992 Agreement States Meeting. By virtue of the fact it is
2	the final session I promise you will be on time and we will
3	be out timely.
4	This is called the Miscellaneous Issues Panel, or
5	otherwise known as the potpourri session. Here we have the
6	issues that did not seem to conveniently fit into some other
7	sessions so they are in this one.
8	We have some diverse issues to discuss, such as
9	one, near and dear to my heart, the radioactive waste
10	systems, both sealed-source and device, which is a
11	continuing project, as well as radiography and then our
12	beloved cesium chloride as we get into our discussions here.
13	There will be a change in the schedule. Jay
14	Ringenberg has asked to go first in order to be able to try
15	to get an earlier flight. Lincoln, Nebraska is not the
16	easiest place to get to and I can assure you, since I go
17	there about once a month, getting from Little Rock, Arkansas
18	to Lincoln, Nebraska puts an entirely meaning to the
19	statement "getting there is half the fun."
20	[Laughter.]
21	MS. DICUS: I think Jay has already been
22	introduced to you so I will not go back over that. He is
23	going to talk about the Non-Radiological Aspects of
24	Licensing a Compact Low-Level Waste Site.

25

1	MR. RINGENBERG: Thank you, Greta. I do
2	appreciate the opportunity to go earlier here and catch a
3	flight home that arrives on some semblance of today instead
4	of tomorrow.
5	I am going to talk about the non-radiation aspects
6	of license review. Miscellaneous subjects is probably a
7	good place to put that. In talking to a radiation group
8	about non-radiation, I asked my staff what I should tell
9	them. They said, "Well, the first thing to not tell them is
10	that radiation is not important, everything else is
1	important. So don't tell them that." So I did not tell you
1.2	that.
13	Also, it is not an issue of which is more
1.4	important at any given time, a radiation or non-radiation,
15	it is really a timing issue of which portion do you do first
16	and how do they marry together.
.7	I am going to try to talk a little bit about that
18	here and give you some examples of some of the non-radiation
9	review things we are doing on the Central Interstate Compact
20	Facility.
21	As a reminder, we have two regulators in Nebraska:
22	the Department of Health and the Department of Environmental
3	Quality, even though it says Control up there. We have been
24	around long enough they finally changed our name here in the

last session of the legislature. You have to be around 20

years, I think, before they decide you are old enough to have a new name.

The Department of Health is the radiation agency and has been the traditional Agreement States agency some 25 years. Environmental Control has been in existence a little over 20 years. It does the other non-radiation-type work.

We have in the State of Nebraska a team that involves both agencies as well as the University of Nebraska. Most everything coming out of the university is all non-radiation work, coming out of the Geology and Conservation Survey or the State Geology Departments and other state agencies, such as Rhodes and Gayman Parks, and water supply type agencies.

We have a whole series of consultants, as we discussed briefly yesterday, that work in these general program service areas that do some project program management; do scheduling, both in terms of review and overall scheduling; site characterization, both on-site during the site characterization phase when data is being collected as well as analyzing that data quality assurance, both internal and external audits; develop licensing plans for SAR/ER; help us develop whatever license conditions if the license would be issued; and construction services, being construction oversight of the developer's on-site work as well as quality assurance on that construction.

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	This tells a little bit about how we tried to
organize	the review. We tried to organize some of the
review to	put the radiation and non-radiation in separate
functions	al areas so we would ensure we had the right
expertise	e, particularly for our review managers, during the
review.	

General information has some radiation in it,
mostly in terms of qualifications of the applicant to
operate a site. Site characterization has the bulk of the
non-radiation. I think most of the items in site
characterization all talk about that in greater detail here.

Design and construction is a lot of non-radiation and once you have quite a lot of the issues on engineering figured out then you can go back and review much of it for the radiation components. Performance assessment is heavy into radiation. It takes the information out of the site characterization and the design and construction to use for modeling and dose assessment, mostly radiation work.

Facility operation is in really two types: how you are going to do the radiation safety program and operate the facility on a day-to-day basis, as well as all the auxiliary activities on a site which are traditionally non-radiation; and I will be detailing those.

Quality assurance covers both areas, radiation and non-regulation. Environmental issues is non-radiation in

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this case as we have identified it. It is most all the issues that go in the ER and the environmental impact analysis. Financial assurance primarily is non-radiation.

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normally in a licensing review you would not be dealing with. One would be mixed waste. This project does not have mixed waste. The applicant has indicated they will not build a facility for mixed waste or handle mixed waste on the site. So most of the review work we had initially done is now on hold and will not be reviewed for a mixed-waste facility.

We have licensing, which is the actually radiation licensing work. This is a broader term, however, we use to include all permits and licenses required from whatever source, such as NPDS on water and those types of licenses and permits.

The facility, if built, will have a State of Nebraska facility on the site that would involve the on-site inspectors, on-site laboratory, meeting areas and those types of things. Currently the state would be doing the design of that, to some degree, and providing that to applicant to be built on site.

Financial planning and management is in terms of the things like South Carolina does in relationship to fees, surcharges: that type of management of the operating system

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if the facility is built.

Design review? Much of the design review initially is non-radiation and then there are radiation components, and I will detail that. Contract administration is not contract for the facility, but actually to look at the construction administration on the site.

This lays out the technical review, a traditional-type review. All items, radiation and non-radiation, are combined in the review. We have currently finished round two comments to the applicant. We are expecting round two answers any day and I will have some statistics here to show you what categories those comments come out of.

This is an subject on which we had a slide yesterday that talked about the process. The main point here I would like to bring up is we have the box that is called "NDEC Overview".

This is the area where, really, the radiation and the non-radiation components of the technical review come together, an example being if you have had a review on the structural concrete of the cells and it has been determined you need three feet of concrete for structural support to hold the roof you also may have additional comments that come in that for shielding for radiation purposes you need four feet of concrete.

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	This over committee then has to come to some
resolution	of what is the prevailing technical analysis,
which one	overrides and how we do that. So far that has
done guite	well in resolving those types of technical issues
between th	e two sides.

This slide shows what we did on the first round and where the comments really came from. It has something to say really about these categories of radiation and non-radiation and how they fall out in the process.

This is a case where I think hindsight is better than foresight. We can look back at them, see what the numbers tell us, and make some interpretation. I am not sure we would have predicted some of this in advance.

These are first-round comments. Out of the total of 473 the bulk are in cite characterization and design and construction. There were 200 questions virtually out of design and construction, 125 out of site characterization.

Most of those questions are in the non-radiation categories, an example being site characterization. You have all of your "ologies", as I call them: your geology, hydrogeology, geohydrology and geochemistry, all your surface-water issues, in our case wetlands and flood plain issues. All those questions came very early in the site characterization portion of the first round.

That was in order to come to some resolution on

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those technical issues that relate to site suitability and site characterization that then can be used as a baseline for further review, such as a radiation review and performance assessment.

Design and construction had a number of questions. The involved, like on the cells themselves, looking at the structural integrity of the concrete and that type of construction and foundation work. The cells themselves have cranes in them for handling waste.

One of the questions we had to deal with was before we start worrying about the exposure to the crane operator on the radiation side we better make sure the crane fits in the building and the crane will operate. Once you have some conclusions about whether or not the crane is acceptable for actual waste handling of the loads and that, then you can look at the exposure to the operator.

The other areas are the HVAC systems on the cells. That has both a radiation and a non-radiation component on air movement: how much, how much you are going to release, what type of filters are going to be put on there, what are the levels, and the safe issues on inside the cells.

Other questions on the design and construction centered around the cap construction. You neard Ed
O'Donnell talk yesterday about the fact those caps are not easy to construct. I think many of our questions relate to

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1 that.

If that is a very large cap, particularly a
multi-engineered-layer cap that contains layers of concrete
in particular, we are asking questions like how do you
propose to pour a foot and a half concrete continuous cap
over a 50-acre site? How do you physically intend to do
that?

I think many of the issues on the non-radiation relate to construction methods and processes. Can you do what you put on paper and show us a diagram that can be done?

non-radiation in some of the other areas are environmental reviews and permits, such as potable water source. In this case where you have a site that has very little ground water you have to go get water. They are going to build a forced main to the neighboring town and pump water two or three miles.

You have access issues, you have potable water sources, you have industrial water on site, fire systems, sprinklers. You have to have sprinklers if you are going to disturb areas. In some dry areas you may need to water new grass for erosion control.

We have waste-water issues that involve sanitary waste, either septic tanks or above-ground. Laboratory

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1	wastes. Are you going to mix laboratory wastes with
2	processed wastes?
3	All types of storm water. Under Environmental
4	Protection Agency regulations, under storm water, are we
5	going to issue a NPDS permit for the site for storm-water
6	run-off both during construction and closure? There are
7	cells and ponds on the site to contain storm water.
8	Some of the non-radiation issues are: Will they
9	be allowed to discharge? Are they complete retention?
10	Under what conditions can they discharge? This is in
11	addition to setting the limits of discharge for
12	radionuclides.
13	There are some issues on size and construction
14	methods.
15	Air emissions, fugitive dust as the question is
16	related to construction. Do you need an air permit for
17	that? Solid waste.
18	Construction-site rubble. This particular site
19	has no farmstead on it. What are you going to do with all
20	the rubble coming off there? What are you going to do with
21	concrete that does not meet specifications and you tear it
22	up? How are you going to dispose of it, where are you goin
23	with it?
24	Particular in a remote area, you are not going to
25	pull up to the small-town landfill and bring a thousand

1	cubic yards of concrete in any given day. This is an issue
2	we are interested in on an overall environmental review.
3	Domestic garbage? How are you going to pick that
4	up? Where is it going to go? Who is going to take it?
5	Storage tanks. There are tanks on site: fuel
6	tanks, water tanks, above-ground tanks. Do you need spill
7	prevention control and countermeasure plans for those tanks?
8	Do they need to be bermed? Underground tanks for fuel
9	storage, above-ground safety issues.
10	Transportation. Road access from the highway.
11	How do you design and add additional lanes? Who pays for
12	the additional lanes? Where are you going to park trucks
13	that come in in the middle of the night?
14	All those types of non-radiation real-world
15	operating issues and a lot of those questions come out of
16	the operating category here.
17	Another big area of interest is a batch plant.
18	This college is proposing to put a concrete as well as an
19	asphalt batch plant on the site, make their own concrete and
20	asphalt for construction.
21	Questions come. Do they need a permit for water
22	discharge? Do they need an air permit? Do they need a
23	solid-waste license? There are numerous permitting
24	activities that go with that type of construction method.
25	In addition to all those types of reviews you have

1	your traditional areas on codes, all the codes in the world,
2	from plumbing to fire to electrical to foundation to
3	mechanical. All those types issues are normally radiation
4	issues and we have tried to ask many of the up front to come
5	to resolution for the basis of design that then can be used
6	in the radiation review for performance assessment and other
7	types of activities.
8	This shows the other half of round one, which is
9	for the environmental report, starting out with 322
10	questions. The overview committee deleted and combined 73
11	of them and issues 249. Most of them have to do with

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impact.

The site characterizations ones on here are particularly related to wetlands, flood plains, ecosystems. One of them I found of interest is the proposal to put a fence around this site, a rather large 8-foot chain link, reversed barbed-wire type fence.

straight biological issues, some social-economic, some site

characterization that relates to overall environmental

One of the questions from Gayman Parks was "How is this going to affect migratory animals?", "What happens if you fence them in?", and all kinds of other issues I don't think anybody had really thought about until those types of questions started coming forward.

There were a lot of questions that related to

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environmental monitoring. I think most of you from the
health/physics business tend to think of environmental
monitoring at being regulation, only, and being really the
system to establish the baseline for the radiation levels,
for action levels in that long-term baseline and that is
absolutely true.

There is also an interest, as well as a need, for a non-radiation environmental baseline program, particularly for ground-water parameters, surface-water parameters and for non-radiation parameters.

Inorganics. Particularly if any of you are working on a site that had mixed waste involved there would be a great need for a non-radiation environmental program.

The last thing I think jumps right out at you when you start looking at what we are doing in non-radiation as well as radiation is an issue of public participation in hearings. Traditionally the Environmental Protection Agency type permits require a hearing process as well as a public notice process for comments.

I think traditionally radiation licensing has not had that broad a based public involvement. When you combine to do a license like we are here, a license review, both of those come together in the same public participation process.

Lastly is the decision-making process. As we

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1	mentioned yesterday, we have two agencies. You have to
2	ensure that both the radiation and the non-radiation review
3	are matched together, and that both have their commensurate
4	rate of importance based on the issues.
5	I think a process where you look at the
6	non-radiation first and then take it into the radiation
7	arena will work and without too much duplication of effort.
8	That is the last slide.
9	I would comment I have a current handout, on the
10	back page, that looks at the public participation process.
11	Cathy has it back there if you would like a copy. It lays
12	out some of the time frames and how that proceeds.
.3	We will be going to public notice ultimately I
4	would assume on a draft SER and an ER. We do intend to
.5	public notice the SER and take comments on it. We will have
6	a process probably similar to the non-radiation process for
7	public participation.
8	Hopefully the first round laid out a lot of the
9	non-radiation. The second round had a lot of regulation
0	issues, particularly on performance assessment and on
1	environmental monitoring.
2.2	Out of the 500 questions we sent in round two
3	there are over 100 questions on environmental monitoring on
4	radiation alone. So it does show some emphasis as we go

into it and probably more radiation detail as we go on.

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1	With that I would be glad to answer any questions
2	Thank you.
3	[No response.]
4	MS. DICUS: The title of our next paper is Update
5	on Nuclear Regulatory Commission Guidance on On-Site
6	Disposal by John Austin. John also has to leave immediately
7	after his paper so if you have questions you should be
8	prepared to ask them while he is still with us.
9	He has already been introduced as he gave a paper
10	in the previous session. Let me simply add he does have a
11	Bachelor of Science degree in Chemical Engineering from
12	Purdue, his Masters in Engineering Science from the
13	University of California at Berkeley, and a PhD in Nuclear
14	Engineering from North Carolina State University.
15	Mk. AUSTIN: Thank you, Greta.
16	Some say I could not make up my mind in school.
17	There is a long story behind why three different majors.
18	If I could back up to the last session on
19	decommissioning I forget to mention we are going to have an
20	Site Decommissioning Management Plan workshop on November
21	the 19th in the Rockville area.
22	We are preparing letters to the Governors of the
23	states that have Site Decommissioning Management Plan sites
24	in them noting the need to coordinate such that we don't go
25	down a decommissioning process, ready to make a final

1	decision, only to learn there are some state permits or
2	authorizations that are needed which would require another
3	year or two to obtain.
4	The second purpose of the letters, that should be
5	signed by the Chairman hopefully within a week or so, would
6	be to inform the Governors of the Site Decommissioning
7	Management Plan workshop and invite state participation in
8	that.
9	We are trying to bring the Site Decommissioning
10	Management Plan licensees together to share common issues,
11	common problems and hopefully common resolutions. We are
12	also inviting all the congressional delegations, their staff
13	representatives, from those states that have Site
14	Decommissioning Management Plan sites in them.
15	On to 20.302, you might ask why is a
16	decommissioning person here to talk about 20.302 disposals.
17	In the last two years we have begun to view 20.302 disposals
18	on licensees' sites as a decommissioning action. That goes
19	for prior 20.304 disposals.
20	You may recall that up until 1981 20.304 allowed
21	licensees to dispose of certain quantities of radioactive
22	materials at a certain depth and at a certain frequency, but
23	they did not have to report that to the Commission.
24	Several of the sites are on the Site
25 .	Decommissioning Management Plan because of 20.304 burials.

1	The standards back then would allow up to about 500 millirem
2	per year of exposures and we are revisiting them under the
3	100-milligram-per-year standard.

On the 20.304s we have been advised by the Office of General Counsel that when those burials were made the Nuclear Regulatory Commission did not relinquish jurisdiction over the material. We are in the final stages of an analysis of one of the 20.304s involving a thorium disposal and we should be making a decision on whether or not to urge exhumation of that material or to allow it, under some condition, to continue to remain where it is.

We are also preparing what we think will become an information notice to licensees reminding them of their obligation to have records on all disposals at their site. The important issue there is that -- you heard Don Cool earlier today talk about a record-keeping rule-making -- we expect a decommissioning file to stand on its own so that ten, twenty years from now if a question is raised there would be a file that would document the adequacy of the decommissioning action.

20.302's and .304's are on the table because we view a site as having like a bank of millirem per year. If one wants to use it up on on-site burials then all the structures need to be decontaminated essentially to pristine conditions.

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1	So there is a trade-off between what can be left
2	behind in a structure and what can be left behind in the
3	soils. We would do a ground-water analysis for all material
4	on the site and compare that pathway to the
5	four-millirem-per-year Environmental Protection Agency
6	drinking water standard.
7	The issue of 20.302's is becoming more

complicated. You may recall that a couple years ago the Commission started a rule-making in which it would take back the authority from the Agreement States to authorize 20.302 burials at reactor sites. My guess is that rule-making is going nowhere. I think there is a stronger basis for that guess given the Energy Policy Act of 1992 in which Congress addressed the BRC issue.

My understanding is that bill signed, now law, says that "No provision of the Atomic Energy Act or the Low-Level Radioactive Waste Policy Act may be construed to prohibit or restrict the authority of a state to regulate, on the basis of radiological hazards, the disposal or off-site incineration of low-level radioactive waste if the Nuclear Regulatory Commission, after the date of enactment of this legislation, exempts such waste from regulation."

A 20.302 authorization may or may not be an exemption determination, legally. Optically it is an exemption. So that would suggest that Agreement States and

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non-Agreement States could have veto power over a 20.302 disposal. More will come on that.

There is one other issue we wrestle with as we seem to be seeing more and more 20.302 requests. What is the rule of the compact in either saying it may or it may not be buried on site? One could argue that for economic reasons all radioactive materials within a compact ought to go to the compact site, and we are still learning what roles those compacts, for sited states, may want to play in 20.302 burials.

Most of our requests for burials involved relatively small quantities. They frequently involve, in essence, a source they cannot get out of the well or that there is a greater hazard if they try to clean up the radiological problem than if they left it behind. However, on the Site Decommissioning Management Plan the sites have soils contaminated that are in volumes of a few hundred cubic feet, and now we are talking about big bucks.

If a licensee chooses to use option two of the Branch Technical Position of 1981, which is burial four feet beneath the surface, we in essence treat that as a 20.302 request and go through a full pathway analysis: ground-water, human intrusion, et cetera.

So, again, the compact role and the role of the Energy Policy Act raises big questions about what the

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1	Nuclear Regulatory Commission can and cannot do on 20.302
2	disposals.
3	My Branch tends to be focal point for all 20.302s
4	including reactors in non-Agreement States, although NORR
5	takes the action they coordinate with us because we are the
6	ones who are the keepers of the hydrogeologists, which is
7	one of the basic issues in a burial like that.
8	With that, I would be pleased to answer any
9	questions you may have.
10	MR. COLLINS: Steve Collins from Illinois.
11	It is my understanding that when a nuclear power
12	plant is finally decommissioned it will be turned over to
13	the state, most likely. If there is any radioactive
14	material left there at all and if that state has a policy of
1.5	a law or a compact that has a policy you will minimize the
16	number of waste sites than something you might have
17	previously approved, it might have to be dug up and moved.
18	It seems like it would be better to make sure you
.9	had the state on board and concurring with your decision if
0.0	you asserted, and won that assertion in court eventually,
21	that it was your are and not ours to avoid having to spend
22	money to do it twice.
23	MR. AUSTIN: I agree. I personally am very

disinclined to stiff-arm a state or another Federal agency.

I like to have as many people on my side, including the

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1	lawyers, as I can whenever we sign an official document.
2	Reactors must decommission to unrestricted use.
3	From what we are seeing in the growing business of reactor
4	decommissioning it is that most of the utilities want to
5	achieve the objective of unrestricted use so they can use
6	the site for other purposes, like another power plant,
7	whether it be nuclear or fossil.
8	They are finding great difficulties in getting all
9	the permits and approvals for sites, so why not re-use the
10	site. Therefore, it is not clear they would want to or need
11	to turn the site over to the state. Again, if they meet our
12	standards we would say that they can do whatever they want
13	with it.
14	However, that reminds me that when an Agreement
15	State approves a 23.302 at a reactor in an Agreement State
16	we would revisit that under the concept of treat the site as
17	a whole. So that will be, would you please coordinate with
18	us.
19	[Laughter.]
20	MR. TEDFORD: Chuck Tedford, Alaska.
21	Just a point of clarification. I thought that
22	Nuclear Regulatory Commission got out of the business,
23	somewhere around 1980, of authorizing all of these multiple
24	low-level waste sites across the country to which you
25	alluded earlier: that is, putting a curie in six feet deep

and four feet wide, whatever.

Then you slipped in another comment that I did not understand, that however on site for reactors you could bury radioactive material four feet. Would you clarify that a little? I don't understand it.

MR. AUSTIN: On the first, we do not view 20.302 authorization as creating a low-level waste site. Generally when we review these proposals we do very conservative analyses, assuming human intrusion, put it all in the ground-water, sink a well, drink the ground-water, grow crops on the site, frequently no credit for a cap. We assume, if it is long-lived material, that erosion could take place.

For those that we have approved, that I am aware of, the doses under those conditions would be in the order of a few millirem per year or much, much less.

Therefore, we think it is defensible to make these continued kinds of authorizations. We factor in the half-life and factor in what it would cost to, say, remediate the site and not allow the 23.302 disposal.

We have one case, at one of the military sites, where there is some promethium 147 contaminated in the soils. We modified their license, told them to go in and clean it up. They started to do that until they learned there were live shells on the range still.

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1	So we treated that as a 20.302 authorization and,
2	in the end, concluded that the better good was to allow the
3	material to remain. It is that kind of thing we are tending
4	to do under the 20.302. It is not at all trying to
5	circumvent the need to go to a Part 61 site.
6	With regard to reactors, they do have sometimes
7	some complicated issues. I know Illinois is looking at one,
8	I believe at the Dresden sites, where there is a huge
9	quantity of contaminated soil because of leaks in pipes and
10	tanks. My understanding is Commonwealth Edison would like
11	to have a 20.302 authorization to dispose of it on site.
12	It is not long-lived material, generally, but we
13	referred them to the State of Illinois.
1.4	MR. GODWIN: Mr. Godwin, Arizona.
15	You said something, sort of in passing, about
16	wells. Are you implying there is a possibility of
1.7	re-looking at all the sources that have been disposed of in
.8	various types of wells around the country. If you are, do
9	you have a list of all these places?
0	MR. AUSTIN: We are now generating a list of all
1	20.302 disposals: one, to be able to response to inquiries
2	as to how often we do it. One aspect of preparing this list
3	will be to take a look at whether or not we would deem it to
4	be acceptable.

We would not on first blush use the clean-up

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1	criteria today, rather we would look at the situation, the
2	practicality of recovering the material, the cost of
3	recovering the material and factor that all into an ALARA
4	analysis.
5	However, in preparing this list we have not
6	started, and do not intend to start in the near future, a
7	reassessment. It will, at first, be a eyeball: is there
8	anything glaring there?
9	Will there be a systemic review of all the prior
10	disposals? I very much doubt that even on the terminated
11	licenses, which could present a significant problem, we are
12	not looking absolute proof that the sites were
13	decommissioned to an acceptable level.
14	We tend to us the work pragmatic occasionally.
15	If there are no other questions, thank you very
16	much.
17	MS. DTCUS: Just when we thought it was safe to
18	come out we understand they are coming back and our next
19	speaker will talk to us about the Waste Encapsulation and
20	Storage Facility Cesium Use.
21	I asked each of the panelists to provide me with a
22	brief biographical so I could make a proper introduction,
23	and I suggested all I really needed was just enough
24	information to fit on the back of a business card. So Bob
25	did, he put it there for me.

1	[Laughter.]
2	MS. DICUS: He has his Bachelor of Engineering in
3	Engineering, Master of Science in Engineering, and a Master
4	of Science in Public Health, specifically Radiological
5	Health. He is also a certified Health Physicist.
6	He brings a wealth of experience to us today. He
7	has been both a Federal and a state employee; he has been
8	both a licensee a regulator; and he has been a program
9	manager in both a non-Agreement State, that being Ohio, and
10	an Agreement State, which is his current position in the
11	State of Colorado.
12	MR. QUILLIN: That just goes to show I cannot make
13	up my mind.
14	I assume everybody knows what WESF, Waste
15	Encapsulation and Storage Facility, capsules mean so I don't
16	have to go into the history of that. I am going to be
17	discussing today a series of letters that were exchanged
18	with the Nuclear Regulatory Commission by Tom Hill and
19	myself of which you saw one-half, which was the reply half.
20	It originated when I saw an article I cannot
21	even remember where now earlier in the year which said
22	that Hanford was going to be selling cesium chloride to
23	Canada, to Nordion, and this was going to be a good deal for
24	both Hanford and Nordion.
25	I thought the WESF capsule issue was dead, but I

Regulatory Commission. I also called Tom and Tom wrote another letter to the Nuclear Regulatory Commission.

On April 3rd the Nuclear Regulatory Commission sent an All Agreement States letter titled "Medical Use of WESF cesium 137" which says "This is response to letters from Robert Quillin of Colorado and Thomas Hill of Georgia questioning the use of cesium 137 in WESF capsules for medical applications.

"We appreciate the concern raised by both individuals, especially light of problems experienced in the past regarding the use of the WESF capsules. Contrary to trade newspaper stories, cesium 137 from WESF capsules will be recovered, reprocessed and re-encapsulated by Nordion, Limited.

"The medical use mentioned is actually for self-contained irradiators used in hospital blood banks.

Nordion, Limited has been manufacturing these source for the past 30 years and they are approved and listed in the sealed-source evaluation system.

"Our inquiries of the Nuclear Material Safety and Safeguards and the Atomic Energy Control Board of Canada confirm these sources are doubly encapsulated to meet the international and U.S. Department of Transportation special form standards."

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1	Based upon that All Agreement States letter I
2	called the State Programs Office and asked what the
3	documentation was they had to send out this letter, and they
4	sent me a copy of a letter that came from the Atomic Energy
5	Control Board of Canada dated March 27, 1992, addressed to
6	Lloyd Bolling, in which they said, in part:
7	"From the information supplied to the AECB by
8	Nordion, International the cesium 137 is purchased from
9	Westinghouse-Hanford Company in capsules manufactured by
0	Nordion and welded by Hanford," and I think that" welded
1	by Hanford" is very important. "These doubly-encapsulated
2	sources are certified," et cetera.
3	Based upon that I wrote another letter to the
4	Nuclear Regulatory Commission asking five questions. On

September 24 of this year we got another All Agreement States letter titled "Use of WESF cesium chloride in Nordion Sources, See Enclosure", and they answered my five questions and one additional question, which probably came from Tom, also.

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Without going into detail of all the guestions and answers, the focus here is the statement "Almost all cesium chloride distributed by either Hanford or Oak Ridge," National Laboratories, "has come from capsules manufactured by the Waste Encapsulation and Storage Facility, WESF, at DOE Hanford": that is, from WESF capsule capsules.

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1	They go on further to say "Nordion has used cesium
2	chloride from both Hanford and ORNL. Cesium chloride is
3	only used in category one irradiators. In addition, J. L.
4	Sheppard and Associates and CIS-US, Incorporated,
5	manufacturing sources for devices which incorporated cesium
6	chloride, both were contacted. Both indicated they only
7	used cesium chloride in category one irradiators.
8	"J. L. Sheppard indicated they had not bought
9	cesium chloride from Hanford, but had purchased cesium
10	chloride from ORNL. ORNL had encapsulated the cesium in a
11	capsule designed by the manufacturer.
12	"CIS-US indicated they had bought WESF capsules
13	from Hanford as well as other suppliers. Their parent
14	company in France is reprocessing the cesium for use in
15	their capsules.
16	"Nordion has distributed over 100 category one
17	irradiators containing cesium chloride since the early
18	1970s. J. L. Sheppard stated they had distributed over 1600
19	sources for use in category one irradiators since 1967.
20	Sheppard indicated that only two non-useable sources were
21	returned: one that was dinged because of improper
22	installation and one that had a contaminated weld."
23	So it looks all well and good. However, I would
24	like to share with you some information which was part of an
25	administrative claim filed against the United States

Department of Energy in July of 1990 and later filed in
Federal Court because the United States Department of Energy
did not act in a timely manner upon the claim. I think it
is still pending in Federal Court.

It is my thesis that, disregarding the issue of whether or not you should use cesium chloride, just talking about the manufacture of cesium chloride, it is obvious that capsules containing cesium chloride manufactured by the Department of Energy have failed.

Even assuming the bias you might find in an administrative claim like this exists, the record strongly indicates there were one or more possible contributing causes for that failure and they may be as follows: A, inadequate capsule testing; B, the presence of impurities and their effect on phase transpiration; C, double pouring of capsules; D, failure to assure capsules met manufacturing and transportation specifications: in other words quality assurance; and E, inappropriate operational limits recommended for the capsules.

It is unclear to me that the Nuclear Regulatory
Commission has independently evaluated, using appropriate
experts, the manufacture of other Department of Energy
cesium chloride sources. The Department of Energy is now
selling cesium chloride to other vendors, namely Nordion and
Sheppard, and in those sales the Department of Energy is

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acting a	s a	manufac	ctur	er by	loading	and	by	welding	the
capsules	fu	rnished	bv	those	vendors				

This administrative claim includes an afridavit by a gentleman by the name of John Buck, who has a PhD in Nuclear Physics, who worked at Oak Ridge for seven years, and who for 15 years was Administrative Judge and Vice Chairman of the Atomic Safety and Licensing Appeal Panel of the Nuclear Regulatory Commission. So I think he has some notable qualifications.

I would like to share with you some of Mr. Buck's statements which I think will be resurrected if any of the capsules containing cesium chloride in use now or any future capsules do fail.

He says, "DOE did not conduct an adequate review of available technical information before leasing the WESF capsules containing radioactive cesium to IOTEC;" and IOTEC is the Colorado licensee who filed the claim, "DOE did not perform or require adequate testing of the cesium capsules for use in commercial irradiators where thermal cycling would occur; and DOE did not assure that the WESF capsules met the required manufacturing and transportation specifications before leasing them to IOTEC and other private companies for use."

He says, "As a result of the above items DOE did not properly consider the effects of impurities on the

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1	behavior of the cesium/salt mixture in the capsules. DOE
2	also did not properly consider the effects of thermal
3	cycling on either the capsules or the cesium/salt mixtures.
4	"In addition, I found specific problems indicating
5	the quality assurance was inadequate and no evidence of an
6	overall quality assurance program for the manufacture and
7	filling of the capsules.
8	"Finally, if DOE had conducted an adequate review
9	and considered the conditions of actual of the WESF cesium
10	capsules in commercial irradiators DOE could have predicted
11	that some of the capsules would very likely fail in response
12	to the repeated thermal cycling."
13	He goes on to say, "It is my expert opinion that
1.4	in nuclear licensing and regulation full assurance of the
15	integrity of any container for high-level radioactivity has
16	always been a primary necessary requirement for its use in
17	commercial operation."
18	He goes further to say, "I see no evidence of an
19	overall quality assurance program for the WESF cesium
20	capsules. My review of available information leads me to
21	conclude that qualify assurance for the manufacturing and
22	filling of the capsules was inadequate in several respects.
23	"First, Westinghouse-Hanford Corporation reported
24	to DOE in 1989 that many of the capsules did not meet

specifications. DOE shipped all the WESF capsules to IOTEC

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and RSI as special form sealed radioactive sources.	DOE
later found that many of the RSI capsules could not	be
shipped back to Hanford without special safety equip	ment.

"Westinghouse-Hanford Corporation reported to DOE that over half of the capsules that DOE had leased to RSI could not be shown to be safe for transport as special form capsules." This is the same issue with which we are dealing now in Colorado because they cannot produce records on whether or not the capsules in Colorado qualify as special forms.

"Second, after the leak at Decatur, some capsules were found to have been improperly machined or to contain inner capsules that had been inserted upside down. Capsule 1507 was found to contain an inner capsule that showed surface discoloration and pitting and a significant cesium contamination at the bottom weld area.

"Finally, it appeared that little attention was given to the possibility of overfilling when the molten cesium chloride mixture was poured into the capsules. Based on a description and a recent report for DOE, however, it appears that the emphasis during the pouring was on ensuring that the capsules released were 75 percent full and that the capsules that did not were returned for additional filling.

"It appears that the only means to determining whether or not the capsules were full was by visual

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1 observation.

"Without additional testing of the failed WESF cesium capsules, including destructive testing, it is not currently possible to specify the precise sequence of events that cause the leak at Decatur. Based upon my review of reports prepared for DOE and related materials, however, it appears that one or more capsules contained sufficient impurities to cause the inner capsules to swell in response to repeated thermal cycling.

"Once the inner capsules were broached the outer capsules could also be broached. This could occur as a result of increased corrosion from the inside out, a crack or a pinhole as a result of manufacturing, or increased pressure from within or a defective weld.

"Records indicate that the batch of cesium that was used to fill Capsule 1504 and the second port of Capsule 1502," Capsule 1502 leaked, "contained unusual high levels of impurities: sodium, potassium and rubidium."

In conclusion he says, "DOE did not perform an adequate review of available information, and relied upon inadequate testing and quality assurance. If DOE had conducted an adequate review and considered the conditions of actual use of the WESF capsules in commercial irradiators DOE could have predicted that some of the capsules would very likely fail in response to repeated thermal cycling.

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1	"As a result, DOE would have concluded that WESF
2	cesium capsules should not be used in commercial irradiators
3	generally."
4	My thesis here, as I said earlier, is that it is
5	unclear whether or not a complete and adequate review has
6	been done of the use of cesium chloride in capsules for
7	irradiators that are manufactured by Nordion and Sheppard.
8	We have here a record of failure to do quality assurance
9	testing. Records are missing or absent, incomplete; and
10	there is a clear record of inability to do appropriate
11	welding in certain cases: contaminated welds, et cetera.
12	To me, this leaves open the ques ion whether or
13	not it is advisable to use cesium chloride in current
14	irradiators such as is being done today.
15	That is all I have. Thank you.
16	MR. HILL: Tom Hill from Georgia.
17	One of the points I would like to make is that the
18	cesium chloride going into sources today for the
19	manufacturers we have had some word has been purified, but I
20	don't know what that means. I don't know many impurities,
21	what kind, what was taken out, and what kind of condition
22	that cesium chloride is in.
23	So our position is if it is cesium chloride from
24	the Waste Encapsulation and Storage Facility we will not
25	license it.

1	MR. COLLINS: Steve Collins from Illinois.
2	It is my understanding that as of yet there has
3	been no publication of the actual cause of the failure in
4	the Georgia capsules, is that not correct?
5	MR. HILL: That is correct.
6	MR. COLLINS: So even though we suspect it is
7	impurities we are not really sure yet?
8	MR. HILL: cannot be proven.
9	MR. COILINS: Okay.
10	Nordion is a foreign distributor into the United
11	States, right? So they should r under the import
12	provisions so that the Nuclear Latory Commission should
13	be able to evaluate or approve or disapprove distribution of
14	these in the United States, is that correct?
15	MR. QUILLIN: Can somebody from the Nuclear
16	Regulatory Commission answer t question?
17	[Laughter.]
18	MR. McGRATH: Steve, I will take a stab at it.
19	Normally for sources that are imported into the
20	United States it depends on the location of the initial
21	distributor. If the initial distributor is in an Agreement
22	State then the Agreement State would perform the evaluation
23	of the source, device or whatever.
24	MR. HILL: Who is the state, then, that has
25	approved distribution of these? Who issued the

1	sealed-source sheet?
2	MR. McGRATH: You mean for Nordion?
3	MR. COLLINS: Are these capsules currently being
4	used
5	MR. McGRATH: The Nuclear Regulatory Commission
6	has for Nordion.
7	MR. COLLINS: in irradiators in the United
8	States.
9	MR. RICH: This is Tom Rich from the Nuclear
10	Regulatory Commission.
11	To clarify some issues here, we do inspect
12	Nordion. We have inspected the source you are talking
13	about, the one in question, recently. We went out to
14	Washington State as an audit and inspected their program.
15	We have done evaluation, and it is used in a
16	Category One irradiator, which is a dry-storage irradiator.
17	Most of the problems are still leading back to having the
18	water there for the impurities, causing the swelling. The
19	Category One irradiator also does not have thermal cycling,
0 2	it stays at one temperature, pretty much a mean temperature,
21	so you don't have those problems involved with it.
22	Nordion has established extensive procedures on
2 3	chemical purity and construction of the capsules which the
24	Hanford people go by. We inspected against those
25	procedures. I clarify, we did not inspect, we did an audit.

1	They are Department of Energy.
2	The final report has not come out on the audit,
3	but if you would like a copy you may want to contact Charlie
4	Haughney who is my Branch Chief. I can tell you there were
5	no significant findings and everything seems fine with their
6	construction, their ability to make these sources.
7	As far as I know, it has been allowed these
8	sources be used in a wet facility again.
9	MR. GODWIN: Has the sealed-source sheet been
10	modified to indicate they should not be licensed for a wet
11	facility?
12	MR. RICH: The sealed-source sheet in question is
13	a C3000/1000, if I recall. That is only to be used in
14	Category One irradiators. We also incorporated QA/QC
15	procedures that we looked at.
16	MR. QUILLIN: The letter indicated some of this
17	manufacturing was being done or ORNL.
18	MR. RICH: It was originally, yes. It is no
19	longer being done
20	MR. QUILLIN: It is no longer being done there?
21	MR. RICH: No.
22	MR. QUILLIN: It is only being done at Hanford?
23	MR. RICH: That is correct, and possibly France.
24	MR. COLLINS: Do I take it, then, that the Nuclear
25	Regulatory Commission would no longer twist the arm of an

1	Agreement State not to issue a license for dried and
2	pelletized cesium in sealed sources by saying something like
3	"If it were us we would not issue that license?" or that
4	authorization?
5	[Laughter.]
6	MR. RICH: I would suggest you write it in a
7	letter and ask the appropriate people. I say that because
8	we have approved the source, we would allow it.
9	If you have good belief not to do it send it to
10	us. We can send some notice out to Agreement States to
11	whoever is involved.
12	MR. COLLINS: I am just wondering if I got opened
13	up for a lawsuit by this getting approved when I turned one
14	down.
15	MR. RICH: I cannot a swer that.
16	Let me reiterate it is a Category One irradiator.
17	I am not sure whether or not everyone has seen one. It is
18	self-contained, it is a solid steel construction. Even if
19	the source were to leak you would have no contamination
20	problems inside of the device itself. They would not spread
21	through the facility and over the product, and so forth.
22	MR. BAILEY: I would like to alert people, since
23	we are talking about medical irradiators from J. L.
24	Sheppard

Corus Medical, which apparently does blood

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1	irradiator, has gone bankrupt. We found out their blood
2	irradiators are owned by people like Prospect Leasing in
3	Missouri and Phoenix Leasing in San Rafael, and Lord only
4	knows what other companies.
5	J. L. Sheppard, if you would like, will take back
6	his blood irradiators, at least for these people, for \$5,500
7	plus \$200 a month storage fee. So we are in the process now
8	of determining how many of these blood irradiators may be
9	not actually owned by the company that is operating and has
10	a license.
1	There is some potential problem there. There has
2	already been a lawsuit filed because a leasing company
. 3	claims they did not know they were buying something
4	radioactive.
5	MS. DICUS: The last two papers of the meeting
6	will be given by Tom Rich. Tom has his Bachelor of Science
7	degree in Mechanical Engineering from the University of
8	Maryland. He has a Masters of Science in Mechanical
9	Engineering from John Hopkins University and the emphasis
0	was in Materials Engineering.
1	He has been with the Nuclear Regulatory Commission
2	since January of 1986. He is also a member of the ANSI
3	Committee on Radiation Gauging Devices and he currently
4	works with the Nuclear Regulatory Commission in the
5	Sealed-Source Safety Section.

1	Tom will talk to us about the Computerization of
2	the Sealed-Source and Device System as well as the
3	Radiograph Cross-Reference System. He will go from one talk
4	into the other talk.
5	He has also asked me to encourage you if you have
6	questions during his presentation to interrupt him and come
7	forward with your questions, if you like, during his
8	presentation. Tom?
9	MR. RICH: Thank you. Good afternoon. I plan to
10	talk about two projects that may assist you in doing your
11	job that the Sealed-Source Safety Section has developed, the
12	first one being the Sealed-Source Device Registry Program,
13	the second one being the Radiography Cross-Reference
14	Program.
15	As some of you recall, the Sealed-Source Device
16	system in the old days was basically a catalog: listing of
17	the devices out there. No real evaluation was done, it was
18	more for the purpose of just knowing what was out there.
19	As the years progressed we started adding more and
20	more detail to the certificates and started standardizing
21	the format. In 1983 we decided to set up a contract to have
22	the data on the first page input to a computer system at a
23	main frame located at the National Institutes of Health.
24	Last summer we had an All Agreement States
25 .	workshop in which we had a test sample of the Sealed-Source

1	Device Program to see if it was useful to you people and we
2	got a very positive feedback.
3	In 1991 I was asked, as a consultant to IAEA, to
4	set up a worldwide registry system. In doing so we have now
5	developed the current Sealed-Source Device Registry Program.
6	I intend, with the sample screens, to give you an
7	insight on how the program works and whether or not it is
8	useful to you. I apologize for the following screens. I
9	tried to put them in color, but the printer failed to do so.
10	[Slide presentation.]
11	This is what the computer screen will look like.
12	It will be in color. The different shadings correspond to
13	different colors. It does work on a portable PC: XT, any
14	computer you may have that accepts DOS. The version needs
15	to be 3.3 or above. If you need details you can see me
16	later.
17	This is the first screen you are presented with,
18	and these are the options you have available. As of this
19	time the system was designed basically for printout purposes
20	only. That was to assist IAEA. They have a lot of member
21	states there who want to have access to all the work the
22	Agreement States have done as well as that done by the
23	Nuclear Regulatory Commission.
24	There are a lot of states that have no regulatory
25	authority in place states being countries: a term for

	501
1	member states in which there is no regulatory body there.
2	They would like to know if a device coming into their
3	country is safe or has been evaluated by anybody before. We
4	established the system for that use.
5	This screen gives them all the available printout
6	options we typically give you when you ask for printouts.
7	The first one, "Manufacturer/Distributors", is known as our
8	SSD-4. You can print that out by vendor code or by
9	manufacturer's name.
10	The next one is "Registration Certificates". In
11	this case you can print out the entire data base, which will
12	print out all the first page of all the information
13	available. The second one is by principal use code. This
14	is for like medical teletherapy. If you want to find out
15	all the sheets that are registered under medical teletherapy
16	you can do so. The third is the registered number. If you
1.7	want to pull up the individual sheet you can pull that up.
18	We are trying to totally computerize the system.
19	This is the first phase. It is available to you whenever
20	you would like it. If you would like to get a copy of it,
21	see State Programs and probably talk to Lloyd Bolling.
22	From here once we establish the printout option we
23	will go to the guery mode and to the update. The update

will be done by the Nuclear Regulatory Commission as it has

been done in the past, but the other options will be

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1	available to you.
2	Secondly, we have a LAN now and we are putting all
3	the registration sheets on the LAN with drawings. It is
4	quite a big resource-intensive project, but we are slowly
5	getting there.
6	If an emergency occurs or an incident, or if you
7	just want information, we plan that you can go to LAN, you
8	can pull up that sheet with its attachments and see
9	everything you need to know at that time.
10	As I said, the third option is registry number.
11	You will notice it has changed a little bit from the past
12	for those of you who have used the system. It has a
13	five-digit code at the front instead of a two The
14	two-digit code used to stand for NR for Nuclear Regulatory
15	Commission sheets or the Agreement State abbreviation. That
16	is who created it.
17	Now it has a country code in the front so if you
18	see "USA" it was done in the United States. It may be done
19	by another country in the future. That allows that option
20	to be there.
21	Everything else in the system has been consistent
22	with the old National Institutes of Health system, but much
23	more user friendly.
24	As I stated before, one of the options here is you

can pull up a principal use code. This is particular

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1	valuable to IAEA. When they have incidents they try to
2	track down whose device it is. They know it is a medical
3	teletherapy device, but that is all they know. They can
4	call up the principal use code and generate all the sheets
5	that belong to that use code.
6	The other printout option is the same you get now:
7	the SSD-3, SSD-3A, B and so forth. We have multiple
8	choices, you can choose. You can get it by vendor code
9	listed by model or by type, by manufacturer or by vendor
10	code and so forth. You have all types of options here.
11	As I said, this is the first phase. We do have it
12	completed. It comes in a nice manual. It does have disks.
13	It does work on most PCs. We have not found any on which it
14	has not worked. It is IBM-compatible.
15	It is still at the point it can be changed if need
16	be. If you get a copy of this, give us feedback. If you
17	have any problems with it let us know. We are happy to try
18	to correct them if possible.
19	Are there any questions on this program.
5.0	MR. TOPPAN: Clough Toppan from Maine.
21	Is this program one that is compiled?
22	MR. RICH: Yes.
23	MR. TOPPAN: What was the source code in this?
24	MR. RICH: This program was done in D-BASE for the

25 data base structures. That was compiled using CLIPPER. For

1	IAEA, since they may want to add their own data at this
2	time, I have put a program in there that allows them to
3	index and create the same indexes that CLIPPER does.
4	The same thing would hold true for you. If you
5	guys would like to have the responsibility of maintaining
6	the updates yourselves once you receive this program you can
7	use any program that accepts D-BASE-compatible files, update
8	them and then run the secondary program called REINDEX, and
9	then you would be back in business for using the program.
10	MR. TOPPAN: In a case like Maine's where we use
11	D-BASE and CLIPPER could we just basically do what we want
12	with it?
13	MR. RICH: Yes, if you wanted to. We encourage
14	you to keep the same data, but we cannot control that.
15	MS. ALLEN: Kathy Allen from Illinois.
16	We took your program and we loaded it into
17	DATAEASE, and we have been very happy with the results. As
18	we issue Sealed-Source Device Sheets we are putting the data
19	into our system so we can search on all the different
20	parameters you have in it.
21	It has been very useful.
22	MR. RICH: Great, thank you.
23	Any other questions on this program?
24	[No response.]
25	MR. RICH: This next program is generated by the

Agreement	States	and	Nuclear	Regulate	ory Com	missior	regional
people.	In the	past	radiogra	aphy has	always	been a	problem
for compa	tible d	evice	s, chang	gers, car	meras a	nd so f	orth.

We tried many years ago putting together a list that was basically combined from manufacturer's sheets and some of Sealed-Source Device Sheets. The list worked for a while, but since a new Part 34 came in place it is no longer valid.

So we tried to get a draft version out here early to see if the Agreement States would like something like this. Once again it was introduced at the workshop in Texas and we got positive feedback.

We are now ready to introduce version 2.0. It is near completion except we have some conflicts in data we have to settle first. At that point it is ready to go out.

This is the first screen you are presented with.

Again it is very similar to the SSD program. We are trying to keep all the programs consistent so that once you learn one it is very easy to learn the others.

The available options right now are you have the query screen so you can look up model numbers and get all the information for that, and then you can also print them out if you want for a license purpose or whatever you use it for.

This is the query option. It comes up with the

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1	screen. The first field is the manufacturer. You can put
2	in whatever part of the manufacturer's name you know
3	starting from the beginning. You don't have to know the
4	full name you can just say AM for Amersham and so forth
5	and it will start for every match that starts with those
6	letters.
7	The same is true for the model number. The
8	approval code is one of three values. It stands for R,
9	which is registered. That means the data that was found to
.0	in the registration certificate has been evaluated.
1	The second code is C, which means it has been
2	found to meet Part 34 requirements. The other one is a U,
3	which means it is unknown how it was registered and we are
4	discouraging you from registering them again on the license.
5	These are older sources. A lot of them don't
6	exist, but we have no documentation to prove how they were
7	evaluated or if they are compatible and if they meet Part
8	34.
9	This program is very user friendly. Throughout
0	the program you can push an F1 key and get help, it will
1	tell you how to use it. You don't really need the manual,
2	there is a manual that comes with it. This is an example of
3	the HELP screen.
4	On the query screen we typed in Company A and this

is what we came up with. At this point you can scroll

through the choices on the top part of that screen. This is the model you are looking for: Company A, Model Camera A.

If notice, at the bottom, at this point you can start a new search if that is not the model you want or you can scroll through those records and find the model you are asking about. Since it is a camera description it will list all the compatible sources that go with that camera by pushing the F5 key.

Well. If it was a source you would have both options, a list of compatible cameras and the compatible changers. The old document that Steve Baggett, I think, put out cross referenced changers and cameras. That is no longer valid.

Just because a source goes in a changer does not necessarily mean it goes into the camera. So this program is solely based off the source.

At this point we decided to pull up a changer called Company A. As you see on the bottom, we listed the compatible sources. This is a different view than what you saw before as the first version. It is much more user friendly, you have fewer input keys.

When these sources come up, it tells you where you are. It lets you know, as in this case, you are at record 6 of 8, there are 8 records there. You can page up through and see them. It lists the manufacturer of the compatible

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1	sources.	It	lists	the	status,	whether	or	not	it	is	actively
2	being man	ufac	ctured								

approval code. The license code is what I talked about before and that is an R, meaning it was registered, you can trace it to a registration certificate; there is a C, meaning yes it is traceable to a registration certificate and it is compatible to meet Part 34 requirements; and three is a U, meaning unknown. Once again, we recommend you not license the unknowns.

The approval code is whether or not it can be cross-referenced on a registration sheet as being useable with that other device. In this case, for the first and the source model BCO it is approved to be used with Changer Model CA. This is false data so we don't bias any of the manufacturers. The real program has actual matches.

We have some in there that have nos. That is because either on the source sheet we could not find a listing of the model number changer or the changer sheet did not list the model number source. This program is going strictly off registration certificates. Therefore, we have a paper trail and we know it is compatible, we know it can work with that camera changer.

This is the printout option. The previous slide also allowed you to print out the compatible list for your

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1	license if you need to. This is the query option in which
2	you can print out the entire data base if you want
3	everything on record. You can get a quick list of those
4	models that meet Part 34. So at the point your regulations
5	are compatible you will know exactly what meets Part 34:
6	what can be licensed, what cannot.
7	It lists all those models that are registered so
8	if you decide to find out what has been registered you can
9	easily go to that list, make the determination and then have
10	the option to return back to the main menu.
11	As I said, this program is near completion. We
12	have a couple data lines that need to be corrected. We have
13	some conflicts with the manufacturer between the

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Anybody else who wants a copy needs to see Lloyd and request one. These are controlled copies. We have no problem copying for more people, but we like to keep a record who has them so we know to whom to send updates.

Sealed-Source Device Sheet and the letters they submitted to

us. Once that is finished we will send copies out to

everybody who got the draft version automatically.

We are trying to make this, for our regional office, a policy and guide structure where they must follow this so we know when they input licensing data it is correct. So it is very important we know who has these things so if we can find errors or have additions we know

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1	who to get them to.
2	Like the Sealed-Source Device Program, in the
3	future we are going to put this on the LAN and have periodi
4	updates to it that are accessible to everybody. At the same
5	point, this is the first version to officially go out. The
6	other version was a draft version.
7	If you have any loading problems with it or user
8	problems with it let us know. We will try to incorporate
9	those problems into the next version.
10	Are there any questions?
11	[No response.]
12	MR. RICH: Thank you very much.
13	MS. DICUS: I would like to have a round of
14	applause for our panelists today.
15	[Applause.]
16	MS. DICUS: We are about to come to the end. Is
17	there anything anyone has to say?
18	[No response.]
19	MS. DICUS: Anything from the Nuclear Regulatory
20	Commission?
21	MR. KASYK: George Kasyk, New York State
22	Department of Labor. I am not commenting on the
23	computerization, but I would like to say a few words about
24	the whole Sealed-Source Devices catalog.
25	The alphabetical index is now almost completely

1	useless because of changes of names of the companies. There
2	are about four or five places in the first catalog, starting
3	with an A, interspersed with all the other names.
4	There are sloppy model numbers, and dates and
5	spaces are omitted. There is lack of sticking to
6	paragraphs, use of abbreviations and logos of companies.
7	If anybody can do something about these problems
8	it would be most welcome.
9	Another thing is the sheets have numbers on the
10	pages. The drawings are not listed. If they come to you,
11	you have no idea whether or not there were any drawings. I
12	think the drawing should be also numbered as pages in part
13	of the catalog.
14	That is all.
15	MR. RICH: Thank you. You brought up a good
16	point.
.7	We are trying through the year to get a consistent
8	format between all the Agreement States. We do not feel
9	obligated to change an address for a sheet that comes in
0	from an Agreement State unless they request us to do so.
1	The Nuclear Regulatory Commission files have been
2	checked for accuracy and correctness three times in the last
3	six months. You will see that data reflected in here. We
4	are aware there was a problem, but we cleaned that up the

best we could when we went over to IAEA.

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1	The problem with the spaces in the printouts was a
2	limitation of the National Institutes of Health system. It
3	was basically a word-processor-text-based system, not a
4	computer program. It had only search capabilities. So you
5	were limited to 256 characters. A lot of things had to be
6	abbreviated and not fully explained. That has also been
7	taken care of in here.
0	1985년 12일 1일

For those Agreement States who have old sheets and have not inactivated them we request you do so. There is a lot of confusion out there for other states that use these sheets as to whether or not the manufacturer is around -- in most cases, they are not -- and whether or not the model can still be licensed.

One example is Gamma Industries. Their sheets are still listed as active.

We put the data into the system for the Nuclear Regulatory Commission. We take full responsibility for the system. We do not take responsibility for the Agreement States' data. That is their responsibility.

If you find problems with Nuclear Regulatory

Commission data please inform us and we will correct that.

I notice that Steve Collins has sent a letter, as has Mr.

Duso, and we spent about a year and a half and got it back to them.

We are more than willing to correct the data we

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1	are aware of. Please send to us any corrections you have
2	for your states and we will put them in the system.
3	Thank you.
4	MR. MILLER: Any other comments?
5	[No response.]
6	MR. MILLER: We are about to bring out All
7	Agreement States to closure. I would like to thank all of
8	the chair persons of the various panels, all of the
9	presenters. We really tried to get a good mixture of
10	presenters and I think we were successful.
11	If we count the number of presenters we think we
12	got more state people than we did Nuclear Regulatory
13	Commission people. That is a good mixture.
1.4	Certainly we want to thank this last panel because
15	this is the panel where we felt anything we could not slip
1.6	into any of the other panel sessions we could put it in the
17	Miscellaneous. I could not think of a more-qualified person
.8	to be able to handle any kind of a topic than Greta Dicus.
9	We certainly want to thank Ms. Dicus because she
0	has been very close to all of the things having to do with
1	the Agreement State matters, and certainly handling this
2	panel is a cross-section of things we just could not get
13	into the other panels. We were, nevertheless, prepared to
4	add onto this which we did not have to do.
5	Tomorrow is a big day still. If I had know we

were going to be 40 minutes early we probably would have
started tomorrow today. Tomorrow is going to be real busy
day.

Let me explain how we plan to handle our public meeting tomorrow. I had asked the various program officers to get to us, in sufficient time, to get information out to you so you will be able to make contributions in the public meeting.

We ended up sending you some things we put together ourselves in order to get something out to you, but we are going to do better. I guarantee you that. We made a special note that we are going to fix getting things out to the states within 30 days.

Any time Carl says something is going to be fixed you bet your bottom dollar it is going to get fixed. This means we are going to have to get some support from other program officers.

Last year at the public meeting they gave me things as I was coming on the platform they wanted to discuss at the public meeting. This time we do have everything we are going to discuss and you do have it.

Did everybody bring their packages with them? The first hour or so we are going to discuss all the regulations we are thinking about doing something to. If it is a matter of a new regulation or a revision that will take place

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1	first.	The rest	of	the	day	will	be	spent	in	talking	about
2	medical	issues.									

We have been having workshops, we have been talking about the quality management rule and a lot of things. They have a lot of things to discuss with you in this area. We need all the time we can muster to make sure that all of the medical issues get put on the table tomorrow at this public meeting.

I cannot guarantee how many people will be here from the public, but we will have an opportunity to have the public participate, however we certainly want the states to take the lead in discussing things with the various program staff members as they present their issues tomorrow.

Are there any questions on how we are going to handle tomorrow's public meeting?

[No response.]

MR. MILLER: We are ready then to call the two-and-one-half-day All Agreement States Annual Meeting to a close. Again, I would like to commend the Agreement States chair person, who is just going out of office, Tom Hill. It has really been a pleasure working with him over the last two years.

I have called him on many occasions and he said, "Well, I got to get back to you." So I know he is calling his elect and that makes me feel good because I know he is

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not making all the decisions by himself.

The great thing about it is he always responded back. That was a great help to me because I could always say to Carl, "Yes, the Agreement States know about this. They do have some concerns. Here they are," or "They don't have any concerns and we are moving on down the road with the issue." So he certainly have been a great help there.

I am delighted to see Mary Clark as the new Chair, with whom we have worked with over the past year on a lot of issues, the vindicator in particular. We look forward to working with her and maybe, now, get a chance to visit the State of Florida. I have not had an opportunity to visit that State's Capitol and meet the program managers in the State of Florida. I did get a chance to do that while Tom was the Chair so that is now another invitation for me to get to Florida.

Agreement States. My job is really out with you. I don't get a lot done sitting behind my desk. I must admit I was out a lot in these last two months. I don't want to do that again because that pushes me too much in getting ready for this meeting, which is our most important meeting of the year.

Does anyone have anything they would like to say before we close?

### ANN RILEY & ASSOCIATES, Ltd.

1	[No response.]
2	MR. MILLER: Hearing no comments, the official
3	meeting of the All Agreement States for 1992 has come to
4	closure. Thank you ever so much.
5	[Whereupon, at 4:20 p.m., the meeting was
6	concluded.]
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#### REPORTER'S CERTIFICATE

This is to certify that the attached proceedings before the United States Nuclear Regulatory Commission

In the Matter of:

NAME OF PROCEEDING: 1992 All Agreement States Meeting

DOCKET NUMBER:

PLACE OF PROCEEDING: Towson, Maryland

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

Official Reporter

Ann Riley & Associates, Ltd.

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