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NUCLEAR REGULATORY COMMISSION

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NUCLEAR REGULATORY COMMISSION

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BRIEFING ON ACCEPTANCE BY DOE OF
GREATER THAN CLASS C WASTE

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PUBLIC MEETING

Nuclear Regulatory Commission
1 White Flint North
Rockville, Maryland

Wednesday, March 15, 1989

The Commission met in open session, pursuant to notice, at 10:00 a.m., Lando W. Zech, Jr., Chairman, presiding.

COMMISSIONERS PRESENT:

Lando W. Zech, Jr., Chairman of the Commission
Thomas M. Roberts, Commissioner
Kenneth M. Carr, Commissioner
Kenneth C. Rogers, Commissioner
James R. Curtiss, Commissioner

STAFF SEATED AT THE COMMISSION TABLE:

SAMUEL J. CHILK, Secretary

JAMES TAYLOR, Deputy Director for Operations

MARTIN MALSCH, Deputy General Counsel

ROBERT BERNERO, NMSS

RICHARD CUNNINGHAM, NMSS

JOHN GREEVES, NMSS

MIKE BELL, NMSS

P-R-O-C-E-E-D-I-N-G-S

10:00 a.m.

COMMISSIONER ZECH: Good morning, ladies and gentlemen.

Today the Commission will be briefed by the NRC staff, in particular the Office of Nuclear Material Safety and Safeguards, on the management and storage of surplus sealed radioactive sources.

As I understand it, there are a great number of sealed radioactive sources that are used in various industrial laboratory and medical applications. Some of these sealed sources are now unwanted because they no longer can be reused or recycled. Those sources that have radioactive concentrations that exceed the limits as defined in our regulations, that is in 10 CFR Part 61, for disposal as low-level radioactive wastes, pose a problem for our licensees since there is no other radioactive waste disposal facility presently available.

Today the staff will provide background information on this situation and outline an approach for the interim storage of these materials. I understand the staff has formulated the approach in close coordination with the Department of Energy, and that the staff has recently submitted a paper for

Commission review and approval which forms the basis for our discussions today.

I understand copies of the slide presentations perhaps have just come in. They were not available earlier, but I understand they're available now for general use that involve today's meeting.

I'd just like to emphasize that the paper that we have from the staff is currently under the Commission's review and the intention is that the staff has requested a Commission response, a Commission vote on the paper sometime in the near future.

Do any of my fellow Commissioners have any comments they'd like to make before we begin this morning?

If not, Mr. Taylor, you may proceed.

MR. TAYLOR: Thank you. Good morning, sir. Before turning the meeting over to Mr. Bernero, who will lead the meeting, I would like to mention that one area of licensees from the field that has particularly brought this matter to the attention of the staff have been well-loggers, which are generally small outfits -- and many of them are located in our Region IV area -- that have struggled.

Some of them are only two or three man operations and with the depressed state of the petroleum industry, their sources that have been used have particularly brought this matter to the attention of staff over the last year or two. That, just as a small population, and we have the numbers here with us, but they represent a particular user where the issue of disposition of sources is a very important and real issue out in the field.

I'll ask Mr. Bernero --

CHAIRMAN ZECH: All right. Thank you very much.

You may proceed.

MR. BERNERO: Thank you. Here at the table with me I have Dick Cunningham from our Industrial and Medical Nuclear Safety Division. This is the division that basically has the licensing responsibilities for putting these sources out when they're put into commercial use, as well as, of course, agreement states do the same thing.

Then I have John Greeves and Mike Bell, from the Low-Level Waste Division, who are the principal staff involved with the negotiations in greater than Class C waste and things of this sort in waste disposal.

Last July, we had a briefing for the Commission on the overall spectrum of radioactive material sources. You may recall in that briefing we had an interesting discussion of the distinction between the words "accounting" and "accountability," which really illustrate a concern here about knowing where a source is and, at the same time, making sure that someone is accountable for it, that safety will be preserved by proper care and storage of the source.

As you said, Mr. Chairman, in your opening remarks, we are now here to discuss greater than Class C sources; in other words, a subset of these sources that has fairly high radiotoxic intensity and high activity levels or long-lived radionuclides. And our concern is particular about those whose accountability may lapse since they are surplus.

(Slide) May I have slide number 3 to start with, please?

Keep in mind, we have thousands of sources out there in the field and our problem is that many of them are or may be surplus in the near future. As Jim Taylor just said a few minutes ago, some of the licensees, particularly in depressed industries, small operations can be hard pressed to maintain these sources and they bought these sources for relatively

modest sums, typically $1,000 or $2,000, something like that. And there is no place to get rid of the source now, so that the company which may even have no work to do at all either has to find someone to salvage or take responsibility for that source or they have to hold it and keep it in safe storage themselves for an indefinite period.

We have looked into the transfer to other people. That is where a small businessman might go to a large business and say, "How about you take my source?" That cost, if you can even find such a person, can be very high. There's at least one business does a salvage on these things. I think we mentioned it in the paper.

If you've got a big source with a lot of recoverable americium oxide in it, then there might be an incentive for them to cut it open and take the stuff out and refabricate. It has salvage value. But if it's a smaller source, it can actually cost you more to get rid of it because it really doesn't have enough to warrant salvage value. Or the form, the construction of the source may make it very difficult to recycle it.

COMMISSIONER CARR: Why does transferring it to another licensee cost a lot of money?

MR. BERNERO: Well, the salvager is the licensee.

COMMISSIONER CARR: Oh, is that --

MR. BERNERO: As we mentioned in the paper, if he --

COMMISSIONER CARR: What about transfer to another user? That doesn't cost any money, does it?

MR. BERNERO: Oh, if the user has a use for it. But the other user -- many of these users have well-logging sources they don't use right now. There are probably 500 of them out there or more and there just isn't enough business to --

MR. TAYLOR: Bob, there are examples where that happens --

MR. BERNERO: Oh, yes.

MR. TAYLOR: -- and the license shifts. It's all handled appropriately and that does happen on occasion. Someone who can't use it --

MR. BERNERO: Yes.

MR. TAYLOR: -- finds a buyer and that is handled by the staff.

MR. BERNERO: Now, there have been past incidents of lost or abandoned sources. And, of course, I think we're all fresh in our minds with the incident in Goiania, Brazil about two years ago now.

COMMISSIONER CARR: That's not the kind of sources we're talking about here.

MR. BERNERO: Yes, a few of them are. Some of these sources are Goiania-type sources. Cesium 137 --

COMMISSIONER CARR: Are there any mom's and pop's running Goiania types?

MR. BERNERO: No, no, no. But that wasn't a mom and pop running that -- it was a practice of medical doctors was running that clinic in Brazil. But Brazil has no place to send that source and one thing led to another and it was abandoned.

So, we have that concern and the concern has to be selective toward those greater than Class C sources that might fall into neglect or might fall into abandonment.

(Slide) Now, let's turn to slide 4 and take a more detailed look at what's out there.

The greater than Class C sources covers a number of nuclides, ranging from a few tens of millicuries on up to cesium 137 typically is in a very high concentration. And, roughly speaking, there are about 25,000 sources altogether out there. And about 20,000 of them are in distribution under NRC or equivalent agreement state licenses.

Now, I want to emphasize, not all of those are surplus. The majority of them are in use for some purpose or another.

COMMISSIONER ROGERS: How many are well-logging sources?

MR. BERNERO: Well-logging is on the order of about 500 or 600.

MR. CUNNINGHAM: About 600.

MR. BERNERO: Six hundred greater than Class C, about twice that many counting the less than Class C.

Now, the other sources mentioned on the slide, the 3,000 sources distributed by the AEC and Department of Energy, two-thirds of those are owned by the Department of Energy. They're part of the research program and so forth. Of course, the ones that are DOE owned, like the WESF capsules that we've looked at for the irradiators in four different facilities in the U.S. Those are under control and the Department of Energy is clearly handling those. So, they are not so much the ones of concern.

Our concern focuses on the more than 90 percent of the sources which are privately owned and on those that might fall into neglect.

(Slide) May I have slide 5, please?

COMMISSIONER CARR: And those are all individual licensees?

MR. BERNERO: Well, yes, they're individual licensees, but they vary in size. Some of them are very big.

COMMISSIONER CARR: They're not one of these general license problems?

MR. BERNERO: No, not a --

COMMISSIONER CARR: Specific licensees by name.

MR. BERNERO: These are specific licensees by name.

MR. BELL: Bob, some are gauges and other sources which were distributed under general license.

MR. BERNERO: Wait a minute. Let me look at list here. Yes, they're americium 241 gamma gauges.

Dick, do you want to explain the distinction on those?

MR. CUNNINGHAM: Yes. The well-logging sources and the moisture density gauges, both of which contain americium beryllium are specific licensees. There are a number of gauges that are under general license. I don't have the exact number here. They typically contained americium, cesium 137, and a few of them contained curium. That's the bulk of them.

There are a few other kinds of sources, like strontium 90, beta I applicators to be used for medical purposes. But the well-logging and the moisture density gauges are specific licensees.

COMMISSIONER CARR: So we're not talking about radiography sources at all?

MR. CUNNINGHAM: We are not talking about radiography sources. Radiography typically -- most radiography sources is a radium 192, which is a relatively short half-life, on the order of 90 days or so, as I recall. And then cobalt 60, to a much lesser degree. None of these are above Class C.

MR. BERNERO: Because of the half-life.

CHAIRMAN ZECH: All right. Let's proceed.

MR. BERNERO: (Slide) Now, the well-logging sources have been singled out, if we have slide 5. These well-logging sources, as we said a little earlier, about 600 of them are in this category of greater than Class C.

We received a request for assistance from our Region IV office. Bob Martin wrote me a letter and basically emphasized the problem and recommends an information notice be sent out to alert or emphasize the problem to the licensees. But, of course, an information notice can't solve the problem. It can't

find a home for the source because we don't have a place to dispose of it.

We do recognize that we have these companies out there and we do need a solution. This is a potential safety problem, a potential safety hazard if we fall into neglect.

(Slide) May I have slide 6?

We see a need for a federal facility to accept and store these unwanted greater than Class C sources. And if you look at the distinction of what the nation is doing with greater than Class C waste and with other forms of waste, it seems pretty apparent that the Nuclear Waste Policy Amendments Act of 1985 assigns the responsibility for greater than Class C waste disposal to the Department of Energy. There is some debate needed on it on the detail of that, but it seems clear.

COMMISSIONER CURTISS: Do states have the option under that act to take this material?

MR. BERNERO: Yes, they do. If acceptable, the statute recognizes, if you will, the ability for the state to accept the disposal of such wastes, given, of course, that appropriate safety measures are taken. We have talked extensively with DOE in particular and have a rulemaking in a parallel action

that you will be seeing a rule shortly on how to deal with greater than Class C waste.

We recognize there are two possible alternatives. One is, of course, simply setting aside subtle distinctions and saying, "Put it in a high level waste repository," which is clearly acceptable. Put it in the corner, so to speak. It doesn't control the design and it doesn't control the volume.

On the other hand, there are other ways and depending on the nature of the specific greater than Class C waste form and the proposed disposal of it, it could be disposed of safely in some less remote condition. It could be some sort of surface burial. That could be done by a state if they chose to accept it or by DOE on a DOE facility of some sort.

Now, we have basically thrashed this need with DOE for the past year or so in active dialogue about can we get down to business and get in hand so that unused sources don't linger out there in storage and in possible neglect. We've prepared a letter, the paper we've asked you to look at. We've prepared a letter that would carry us forward, added momentum in the pursuit of this solution.

(Slide) Now, if I could have slide 7, please.

From our discussions with DOE, it appears to us that they, of course, have a complex possibility before them. It appears from our discussions they have four different ways in which they might be accepting material of this type. Mechanism 1 there, accepting material when significant concern for public health and safety is present, that's the classic emergency role where if one of these things was lying at a roadside, DOE is clearly ready and able to pick it up so that the public health and safety are no longer threatened.

When that is done, that is not so much taken as greater than Class C waste. It's taken as radioactive material that's a proximate hazard to someone.

Mechanism 2 is, in contrast, the formal acceptance of greater than Class C waste as such, as that kind of waste under the Nuclear Waste Policy Amendments Act and that entails certain formality, that they would be accepting it in a licensed mode or a licensing mode from us.

Mechanism 3, accepting material for recycle or reuse potential, that's something that they can do, it appears to us, as DOE and it's not the formality of greater than Class C and naturally they can accept

their own material back, mechanism 4.

So, the distinction to note is that under three of these mechanisms, it is radioactive material going into a DOE inventory, into DOE possession. Under mechanism 2, it would be a formal transfer explicitly as greater than Class C waste.

COMMISSIONER CURTISS: For either one or two, would our licensing authority follow the waste if it's NRC-generated waste under number 1?

MR. BERNERO: It's not clear, but it's doubtful that it would. I think under mechanism 1 or 2, the material would become -- would take the character of DOE material. I think it would go into their inventory and stay outside our purview, because it's not greater than Class C waste.

MR. MALSCH: In either case, we would only license disposal of greater than Class C waste, not interim storage.

MR. BERNERO: (Slide) If I could have slide 8.

COMMISSIONER CARR: You don't recommend that the guy leave it by the side of the road to get rid of it?

MR. BERNERO: No, no.

COMMISSIONER CARR: Even though DOE would

have to pick it up?

MR. BERNERO: Not at all.

COMMISSIONER CARR: All right.

MR. BERNERO: Now, the DOE waste program for greater than Class C, in response to the Nuclear Waste Policy Amendments Act, this is just the skeleton of what they're doing. They have a major survey. We're collaborating with them. They have a model for the projections of such waste in the future.

COMMISSIONER CARR: What are they surveying?

MR. BERNERO: The industry, basically the stuff we're talking to.

COMMISSIONER CARR: They're surveying our licensees?

MR. BERNERO: And their own.

COMMISSIONER CARR: How are they doing that?

MR. BERNERO: I couldn't tell you.

MR. GREEVES: Basically make phone calls to generators and talk to them about --

COMMISSIONER CARR: My understanding was we can't find our licensees.

MR. BELL: They're mainly concentrating on the people where they -- it was AEC or DOE who provided the material in the first place. They apparently have records of who those are.

COMMISSIONER CARR: So they're only surveying their 3,000 people?

MR. BELL: That's my understanding.

MR. BERNERO: And then we, of course, have our information for them.

MR. BELL: Our estimates are based on our source registries and such. But as you know from our earlier meeting on accountability, these are only estimates.

COMMISSIONER CARR: So their survey is not going to tell them the extent of the problem?

MR. BELL: Not the entire extent. They're relying on us to provide information and we're making estimates.

COMMISSIONER CARR: We won't have our survey done, the way I read the paper, for a year and a half.

MR. BELL: We're doing telephone calls to source manufacturers, source distributors, asking-- in fact finding out some of them have gone out of business, asking are they taking back sources from customers, how many sources do they have in inventory and --

CHAIRMAN ZECH: Don't we have any requirements for the care of these sources once they're not being used anymore?

MR. BELL: Our rules would require the licensee to maintain the material in a safe condition.

CHAIRMAN ZECH: You're telling us you're not so sure they're doing that, I guess.

MR. BELL: Our concern is, and in fact the letter from Region IV cites an example of a licensee who had gone bankrupt, who let his license expire, and basically was unwilling to take the necessary actions to continue --

CHAIRMAN ZECH: What do we do about that?

MR. BELL: What was done in that case was the source was essentially taken by the Agency and transferred to the state of Oklahoma and the state is still in possession of it. That was the action we took in that case to protect public health and safety.

COMMISSIONER ROGERS: What did they do with it? Where do they --

MR. BELL: They have it in storage. They would like us to work with DOE to get DOE to take it off their hands.

CHAIRMAN ZECH: Well, it's fine as long as we can know where they are and recover it.

MR. BELL: That's our concern, really, here is that without some positive mechanism to get unused sources out of the possession of people who don't want

them, we may not always know that a source is not abandoned or --

CHAIRMAN ZECH: Yes, but don't we have rules when a licensee gets a source material? Don't we have rules that require him to do certain things when he's finished using it or when he changes his business? Do we just let him walk away from it? I hope we don't do that.

MR. CUNNINGHAM: No.

MR. BERNERO: No, we have requirements for the safe control of the radio isotope. The problem arises because he, the licensee, can only get rid of it by selling it as some sort of asset to another licensee. There is no disposal site that can accept these materials, these greater than Class C sources. That's the rub. There is no disposal site.

COMMISSIONER CARR: That can accept them or that will accept them?

MR. BERNERO: That can, that can. Right now there's no one that can accept them.

COMMISSIONER CARR: I didn't read it that way.

MR. BERNERO: That's incorrect. DOE can accept them under emergency. A state can accept them under emergency, but that --

COMMISSIONER CURTISS: Low-level waste sites can accept them.

MR. BERNERO: Yes.

CHAIRMAN ZECH: Don't we require the licensees, when they're finished using a source or when they're unable to use it anymore, to dispose of it in some safe manner?

MR. BERNERO: Yes. We have -- or control it safely until they can.

CHAIRMAN ZECH: We have rules that say that.

MR. BERNERO: Yes.

CHAIRMAN ZECH: That's what they're required to do when they accept the responsibility for the source, this is what they're required to do. Is that right?

MR. BERNERO: Yes. And you see the contrast. In low-level waste, there are disposal grounds --

CHAIRMAN ZECH: Yes, I understand that.

MR. BERNERO: -- and that's going on. In high-level waste, there is not yet a repository, so it's safely stored until the repository is available and DOE can take possession. Greater than Class C is sort of in that latter category.

COMMISSIONER CURTISS: Let me pick up on

Martin's. I gather the concern is limited here to well-logging licensees because of the financial condition of the oil and gas industry. To the extent that that's the case, and if those are all specific licensees, his point or it's implicit in here that what's going to happen is that the licensees will abandon their sources. I think the question the Chairman is asking is, do we have a reporting requirement under those specific licensees where we would know when ownership is transferred or something is done physically with the possession of the source?

MR. BELL: Under the decommissioning rule, when they want to terminate operations, they're required by the rule to notify the Commission and request termination of the license. That's really the best mechanism we have. Also, under the bankruptcy provisions, if a licensee is actually going bankrupt, he's required to notify --

COMMISSIONER CURTISS: But if our reporting and inspection requirements are working, we shouldn't have many cases where they're just abandoned. Is that correct?

MR. CUNNINGHAM: May I amplify on what Mike said? When a license is terminated they are required to file a report specifying the disposition of any

material they have in their possession. They are required to notify us if they go into a bankruptcy procedure. If the license remains in effect, they can transfer the source to another licensee without reporting it to us. They have to record it in their records, but we don't require notification of transfers of radioactive material between one licensee and another licensee. Actually, there are millions of transfers per year when you look at the total picture, not of these kinds of sources, but --

COMMISSIONER CARR: But each licensee has a limit on how much he can have.

MR. CUNNINGHAM: Each licensee has a limit on how much he can have. He doesn't necessarily have to have it though. The problem here is not with the regulatory structure, but one of inspecting to be sure that people are complying with the regulations or having the resources to know that they are complying with the regulations in the situation where licensees, many of these well-logging licensees are small operators, don't have a lot of resources, financial resources. And if they go out of business because of down-turns --

CHAIRMAN ZECH: Well, why do we sell them to them in the first place if they're so small they can't

have any assurance that they can protect this material?

MR. CUNNINGHAM: Many of these sources have been -- are 10, 15 years old, a lot of them.

CHAIRMAN ZECH: Well, I know, but that doesn't mean we should keep doing it. I mean it doesn't seem to me like we've got very good control of this situation. At least that's the impression I'm getting. Why does the staff think we should continue the sale or distribution or use of these materials at all, especially to these small businesses that apparently don't give you the confidence that they can care for it?

MR. BERNERO: And don't have the funds set aside in some way to dispose of the material at the end of the license period.

CHAIRMAN ZECH: That's a big responsibility.

MR. BERNERO: Which now appears to be a number of --

CHAIRMAN ZECH: It could be a public health and safety hazard, right?

MR. BERNERO: Oh, yes, that's why we're concerned. In retrospect --

CHAIRMAN ZECH: Why are we doing this then?

COMMISSIONER CARR: Are we still licensing

them without financial qualification?

MR. BERNERO: Mike, can you cite any qualification requirement in the new decommissioning --

MR. BELL: Most of the licensees would not be caught by the decommissioning rule. The decommissioning rule would only apply if the americium 241 possession limit was above 100 curies and most of these sources are smaller than that and it only applies to cesium sources above about 10,000 curies.

COMMISSIONER CARR: So, if the guy applies for a license, he doesn't have to say he's got any financial qualifications at all then?

MR. BELL: That's right.

COMMISSIONER CURTISS: Well, one alternative here would be to -- since we license the manufacturer of these sources -- to say when we issue that license that the manufacturer is required to secure the return of a source when it's reached its useful life. Is there any activity --

MR. BELL: That would work for the future. I think part of the problem is a number of the companies who have distributed the sources in the past are now out of business. Monsanto, for example, distributed a couple thousand greater than Class C

sources and is no longer in this business.

COMMISSIONER CURTISS: Monsanto still exists.

MR. BELL: But Monsanto's corporation still exists.

COMMISSIONER CARR: But who bought its business?

MR. BELL: They simply got out of that particular endeavor.

COMMISSIONER CARR: Shut it down. Permitted that.

CHAIRMAN ZECH: What do we do in a situation like that? Do we have any rules or regulations or policy that covers that situation?

MR. CUNNINGHAM: On the supplier going out of business?

CHAIRMAN ZECH: Yes. Having sources that he's sold and --

MR. CUNNINGHAM: No.

CHAIRMAN ZECH: -- and now he's out of business.

MR. CUNNINGHAM: He sold the sources. We consider it --

CHAIRMAN ZECH: How about those he hasn't sold?

MR. CUNNINGHAM: Those he hasn't sold he's responsible for. He would have to file -- if it's a licensed operation, he would have to file a termination report.

CHAIRMAN ZECH: But do we keep track of the ones he's sold or does he keep track of them?

MR. CUNNINGHAM: For the specific licensees, we keep track of our licensees. We don't keep track of the number --

CHAIRMAN ZECH: But now we've got a licensee that sells a lot of material.

MR. BERNERO: He keeps track of them.

CHAIRMAN ZECH: Well, he keeps track of them. What happens when he goes out of business?

MR. BELL: In Monsanto's case, I think they've contracted with DOE to send the material to Idaho.

MR. BERNERO: Mr. Chairman, the basic concern -- there are a number of alternatives one can take to deal with the concern. One is scrutiny. That is if we let the status quo, the licensing mechanisms and responsibilities stay the way they are and the NRC take greater and greater scrutiny to deal with the safety threat by knowing as frequently as possible where the sources are and insuring that the

responsible party still has it locked up, stored and safely protected. And, of course, that scrutiny presumes that a disposal mechanism is in the offing, which it apparently is.

The other alternatives are to go after the practice in some way also coordinated with disposal and that is to establish a policy that whenever a source is sold or licensed, like a manufacturer making it and selling it to an individual licensee, that there be an escrow fee perhaps of an appropriate charge for ultimate disposal. Perhaps the vendor can collect that fee and turn it over to DOE or any number of mechanisms could be. But in other words, it would be like a decommissioning cost obligation recognized and incurred in advance so that this thing won't end up an orphaned child.

And then, of course, the other possibility is to narrow -- it's a variation on that, and that is to narrow it so that the vendor of the source, the supplier collects the responsibility and sets aside money for it. In other words, we could have a policy that said, all source vendors from now on are responsible to take back the sources they sell. They can only lease them and therefore --

COMMISSIONER CARR: They couldn't sell them.

MR. BERNERO: Yes. In other words, you're not selling them, you're leasing them. You get them back and you're responsible for disposal and we'll deal with those few big licensees with respect to the disposal options and the costs and set-asides and treat them as the sort of decommissioning or go out of business.

CHAIRMAN ZECH: Sounds to me like we've got two problems. One is a problem that's already created and out there and what do we do about that? The second is, what do we do for the future? Isn't that right?

MR. CUNNINGHAM: Yes.

MR. BERNERO: Yes, that's right. We're working --

COMMISSIONER CARR: It's obviously time to slam the door on the future right now.

CHAIRMAN ZECH: Yes.

COMMISSIONER CARR: The sooner, the better.

CHAIRMAN ZECH: The sooner, the better, it seems to me. We ought to do something to stop this practice of not having better control than it looks like we have.

COMMISSIONER CURTISS: In fact, I think it makes a lot of sense to take a look at returnable

sources. The cost of disposal, if you require that the source to be returned is going to be reflected in the sales price of the source --

CHAIRMAN ZECH: We've got to do something about stopping what's going on and then --

MR. TAYLOR: That's a faceted problem. The staff will do that.

CHAIRMAN ZECH: And then we've got to focus on the problem out there right now and what can we do about it. Are you going to tell us about those things?

MR. BERNERO: Yes.

CHAIRMAN ZECH: What you're telling us is to get a disposal site. I understand that, and that's probably a very responsible thing to do.

MR. BERNERO: Yes, and we're working on that part of the problem.

CHAIRMAN ZECH: Well, I know, but how about the other problem? How about the ones out there that I think you're telling us you're not even sure where they are? What do we do about that?

MR. BERNERO: Okay.

CHAIRMAN ZECH: And yet you tell me it's a public health and safety matter. That sounds serious to me.

COMMISSIONER CARR: We've got a lot of problems here, but it's not 20,000 sources yet. The problem is somewhere in 600 sources and we don't really know how many of those 600 the problem lies in.

CHAIRMAN ZECH: But we've got to get a better handle on that then.

MR. BERNERO: Yes. It's a potential --

CHAIRMAN ZECH: Can you get a better handle on that?

MR. BERNERO: We are -- and this is where it comes into question of where you put your attention and where you put your intensity. As we see on that slide 8, DOE is working towards this disposal option with their first major milestones here in 1989, setting down what they would do, how they would do it, the fee structure, that sort of mechanism. That is something we strongly encourage.

We press DOE regularly and want to continue dialogue with them so that they have a comprehensive mechanism for dealing with the proper disposal paid for. And perhaps if these cases that Bob Martin writes to us about in well-logging, if DOE comes up with a fee method that relates disposal costs to repository-type costs, that's going to be orders of magnitude above low-level waste typical costs and

there could be a situation where people say, "Ah-ha, you gave me a place to send it but I can't afford it. It bankrupts me and I don't have that kind of money and I can't dispose of it."

CHAIRMAN ZECH: All right. Let's proceed.

MR. BERNERO: We have a simultaneous thing to do and that is that we can provide the scrutiny to our licensees, the follow-up -- this can be very resource intensive -- to go through each of our licensees that fits a potential problem category. There are the well-loggers. We've talked about those. There are about 20 cesium 137 teletherapy sources. These are like the Goiania sorts. We could go look at those and screen, interview, visit the licensees. It would be very resource intensive --

CHAIRMAN ZECH: Well, we've got to do it. What's the alternative? You've got to find out-- start with the highest priority, which are the ones that have the highest --

MR. BERNERO: Yes, we have to have some sort of priority, but because of the sheer numbers of these things, portable moisture density gauges --

CHAIRMAN ZECH: Fine, but what's the alternative?

MR. BERNERO: Okay. Well, there are a

number of alternatives possible. One is we escalate our attention to the sources in the field to get a better level of assurance that they're not in neglect.

CHAIRMAN ZECH: We can certainly do that.

MR. BERNERO: Yes. At the same time, we press for a solution at the DOE end where DOE is able to take the sources in a timely way.

CHAIRMAN ZECH: But how about those that are out there that you're not sure where they are?

MR. BERNERO: Yes. That can only come from our scrutiny.

COMMISSIONER CARR: Well, but if DOE solves their problem of their 3,000 sources, they could probably solve our problem. Our problem is really different. If they have a repository -- our problem right now is defining the problem. There's no reason to beat on DOE to store our sources if we don't have any to store.

MR. BERNERO: No. DOE can clearly take their own sources back and forth any time they want and they do that. The WESF capsules are a good example. The Decatur, Georgia facility and so forth, they're shipping those back to DOE routinely. But for DOE to take these other sources, we're back to that mechanism set. You've got four different mechanisms.

COMMISSIONER CARR: But I don't know how many I want them to take. I don't even know if I want them to take one.

MR. BERNERO: No, no. Ultimately they have to take them all or a state has to take them or -- you know, there are different paths of disposal. But ultimately, all of those sources would presumably go into disposal.

COMMISSIONER CURTISS: Makes a big difference though, Bob, if the --

COMMISSIONER CARR: But that's a presumption.

COMMISSIONER CURTISS: If the Department takes the waste that we're talking about here and stores it, I understand that we don't view that as a licensed activity. In other words, the storage is not licensed. At the same time, we have to license the disposal of this material and it has to be disposed of in a licensed facility. So, that this blind spot, from a regulatory standpoint in the middle, where the material goes to DOE, is going to create a tracking problem for us, sort of a chain of possession, if you will, for material that comes from our licensees, has to go into a disposal facility licensed by the Commission and in this interim period we're saying

we're going to send material to DOE.

I guess my question is --

COMMISSIONER CARR: But it's only DOE that can take them in an unlicensed facility. If I want to open up a business of storing these materials, I'd have to have a license.

MR. BERNERO: You'd need a license, yes, from an agreement state or from --

COMMISSIONER CARR: So it's only DOE that can take them in an unlicensed --

COMMISSIONER CURTISS: But, in fact, it's not clear to me the way DOE defines the program that what they're talking about here wouldn't have to be licensed. They, in the materials that you sent up, argue that the program that they have in mind here is an integral part of a disposal program.

MR. BERNERO: Yes.

COMMISSIONER CURTISS: Is that --

MR. BERNERO: The formal program, mechanism number 2 from that previous slide, is this material is greater than Class C waste, it's part of a formal program to receive greater than Class C waste and it would be that integral part, apparently a licensed program.

On the other hand, when they take something

in an emergency or their own sources back, that's just a radioisotope in the DOE inventory, doesn't have that identity track. As I understand it, it would not have a tag on it saying that ultimately this must go into a licensed disposal as distinguished from the seven other curies in the same inventory that don't go to a licensed disposal.

COMMISSIONER CURTISS: I guess I'm not sure I agree with that. I think the '85 Act says that if the material comes from an NRC licensed activity, it has to be disposed of in an NRC licensed facility. Regardless of the mechanism that you define for DOE to take the material, whether it's an imminent health and safety problem or all greater than Class C, if it comes from an NRC licensed facility, it has to be disposed of under the '85 Act in an NRC licensed facility.

COMMISSIONER CARR: Well, I think we're only talking about disposal or interim storage. I don't think they disagree on the disposal.

COMMISSIONER CURTISS: The question I have, I guess, is they define their program here where they envision storage as an integral part of the disposal program. If that's their definition of the program, does that mean that the whole program, from taking

possession to whatever they do with the material at Idaho to ultimate disposal, an integral program, subject that to our licensing authority over the disposal program?

MR. MALSCH: I'd say we would not license the disposal, even though DOE --

COMMISSIONER CURTISS: The storage.

MR. MALSCH: Sorry, the storage. Even though DOE would be necessarily authorized by the amendments to store incident to disposal, it would still be the case that we would not license the storage but only the ultimate disposal.

MR. BERNERO: But I think the further point Commissioner Curtiss makes is that if the waste was generated by a licensed activity in the first place, it would have to have some sort of identity tracking so that full assurance -- and that is an issue with DOE.

COMMISSIONER CURTISS: We need to know what happens to the waste in Idaho.

MR. BERNERO: Yes. You'd have to trace it because DOE generated an unlicensed greater than Class C can be disposed of by DOE without licensing. But if it's commercially generated, it would have to --

MR. MALSCH: Yes, but we have to be careful.

Even if it's commercially generated, but there's no NRC licensing involved in the generation or uses of materials, it is also not -- disposal is also not subject to NRC licensing.

COMMISSIONER CURTISS: I guess my concern here is that I do think we need to have a pretty good fix on how many materials we're talking about here and how many sources that we're asking DOE to take, first. Secondly, it's not clear to me where DOE has taken greater than Class C waste from our licensees in the past under the contracts, that we have a very good feel for how much waste is gone, where it is and when it has to be disposed of, how we're going to track that waste.

Do we know how much material DOE has taken to date?

COMMISSIONER CARR: Of ours.

VOICE: Sources?

COMMISSIONER CURTISS: No, greater than Class C, generally.

MR. TAYLOR: Like in the first case where it's an imminent health and safety hazard where they have accepted --

COMMISSIONER CURTISS: Or under the R&D authority of DOE, the B&W waste or the Monsanto waste

that they've contracted for.

MR. CUNNINGHAM: DOE has taken back some waste, plutonium waste from decommissioning operations. The rationale for that is that it was done under DOE R&D contracts. Now, I don't know if that falls into our obligation as Class C waste or not. I just don't. They have taken some of that back.

MR. MALSCH: I think it doesn't make any difference. I think DOE disposal of greater than Class C wastes generated as a result of NRC licensed activities I think is disposable only in a facility licensed by the NRC, no matter how they happen to have gotten the stuff in the first place.

MR. BELL: I think there are some practical problems in that some of that material was taken before the Act was passed.

MR. MALSCH: Oh, yes, in fact the bulk of it.

MR. BELL: And it was co-mingled with DOE's own material and it's lost its identity.

MR. MALSCH: Yes. I think DOE then has an identification tracking problem.

COMMISSIONER CURTISS: Two of the contracts were in '86 and that's been since the Act was passed.

Of the material that DOE has taken from our licensees since the Act was passed, do we have a good feel for where it's gone, what they've done with it and when it comes time to dispose of the material, that we know that the full volume is, in fact, going into a disposal facility?

MR. BELL: Commissioner Curtiss, my understanding is although they've signed some contracts since the Act was passed, they haven't actually taken any waste.

CHAIRMAN ZECH: Let's proceed.

MR. BERNERO: Now, the question still stands, do we know where it goes?

CHAIRMAN ZECH: Yes, we didn't get an answer for that. Are you going to get us an answer?

MR. BERNERO: Yes, we will get an answer to that.

CHAIRMAN ZECH: Okay. Let's proceed.

MR. BERNERO: (Slide) Well, let me just go to slide 9 and say what we have. We've got a lot of activities going on here and, as is evident from the discussion we've had so far, we've got certainly more than one problem.

NRC activities, this is actually mislabeled to say it's only NMSS. We have the rulemakings that

are going on about the disposal of greater than Class C waste. Attendant to that you get into long-range issues like packaging or alternative requirements for handling greater than Class C waste. The collaboration with DOE on the groping around to find what is the problem, how many sources are there, what is this material, we have been focusing on the sources on greater than Class C, the discreet sources, not the diffuse sources. I think that's an important omission. You will get a separate answer on that.

We are improving our material accountability. We're continuing to work on that. But the issue that was discussed here earlier today about a fundamental change in policy or regulations with respect to establishing discreet requirements, something like decommissioning or disposal requirements on the vendors of greater than Class C sources or directly on the licensees themselves, that is a thing that we have not been working on and we will take that as a separate consideration.

So, to summarize the situation we have, we think that at least for the portion of the establishment of a destiny of a disposal source, that it is important to carry on, to press forward with DOE to negotiate mechanisms and procedures and authorities

for DOE to accept greater than class C waste and the ground rules for it.

At the same time, we have to do our collateral actions of increasing the level of scrutiny on the sources in the field because of the safety threat potential there and carry on with these other activities.

So, the staff would say we still need to carry on with DOE, would recommend that the Commission consider that letter as a way to enhance the momentum of carrying on that activity.

COMMISSIONER CARR: As I understand it, the law requires DOE to accept greater than Class C waste.

MR. BERNERO: Yes, that's --

COMMISSIONER CARR: What good is it going to do to write them a letter and tell them, "You've got to take it"?

MR. BERNERO: The letter is trying to encourage a more rapid and a -- I'll call it a broader scope of approach to earlier receipt.

MR. MALSCH: Commissioner Carr, I think what the law specifies is fairly clear, that DOE is to accept these materials for disposal. It doesn't say when they have to accept them. So, if the problem is to ameliorate a potential short-term safety concern--

COMMISSIONER CARR: Well, I don't know if I can tell them when they have to accept them either.

MR. MALSCH: I know, but that would be the purpose of the letter, to get a program going now for them to accept them. . There's no obligation on DOE now to accept them.

COMMISSIONER CARR: But I don't have any on the table to give them if they say, "We'll accept it today." I don't know what the extent of my problem is.

COMMISSIONER CURTISS: And once we do that, the material goes from its current posture, which strikes me as a little bit unclear -- we're not sure how many sources are out there and where they are and whether they're going to be abandoned.

MR. TAYLOR: You know the problem of the source in Oklahoma which was turned over to that state.

COMMISSIONER CARR: We've got one in Oklahoma that we'd like to give to them.

MR. TAYLOR: Right. Then there are a lot of questions about others that the staff has to work on. But there are examples that are coming up which --

COMMISSIONER CARR: Yes. So I'm saying, we've got a lot of work to do first.

MR. BERNERO: In parallel, we have a lot of work to do. But at the same time, the acceptance of greater than Class C waste for disposal, especially when it appears to be so rational to have, at least as one alternative to the high-level waste repository as a disposal site. It would just be a very simple disposal option then.

The time scale of that is so long. That's ten, 15 years in the future. And we're looking at a population of sources out there now that numbers in the thousands.

COMMISSIONER CARR: Some of which you've said have been out there 15 years.

MR. BERNERO: Yes. They've been out there. You know, we're dealing with a very long half-life. An americium well-logging source has a 500 year half-life. Right now they're unused sources, and that's what we're worried about. They're unused sources. Perhaps that licensee would dearly love to call it greater than Class C waste if he had a place to put it, if there was a mechanism to get rid of it and eliminate that potential for a lost or abandoned source. And that's the problem. It's a lot of material out there, some of which is surplus, and that surplus material has no clear-cut disposal or transfer

path for it. There's not a straightforward way to get rid of it, and that's the essential problem.

So, it behooves us not only to focus on knowing which ones are the greater potential of being lost or abandoned, but also having an activity with DOE to make it more early, an earlier availability of a place to put them to solve the problem. The state of Oklahoma takes possession of that under the emergency prerogative. The states can do that.

COMMISSIONER CARR: I thought I read in here somewhere where DOE plans to have the problem solved hopefully this year sometime.

MR. BERNERO: Oh, no. Their first report is 1989. And that, of course, is going to be -- they're going to be publishing what does the problem look like, what kind of a method for a fee. This is the sort of thing. It won't be, "We're ready to take it and here are all the ground rules."

COMMISSIONER CURTISS: Why would DOE want to take more waste? Do they have the money to address the problem, and do they have a facility? Why in the world would they want to take on more problems than they currently have?

COMMISSIONER CARR: They passed a law, one reason.

MR. BERNERO: The answer, of course, is especially right now to come up with another source of waste to go into any DOE facility. Governor Andrus of Idaho, if you called him up and said, "Hey, I think we ought to send all the well-logging sources up there," I'm sure he would be very distressed. Because he's already been, on the TRU waste, very outspoken.

Now DOE has whatever obligation it has under the Low-Level Waste Policy and Amendments Act, and they also have a certain obligation under their emergency role as the ultimate recipient. So there's a sense of federal responsibility.

COMMISSIONER CURTISS: Well, I'd agree with that.

MR. BERNERO: Certainly it's not a pleasant situation for DOE.

COMMISSIONER CURTISS: It's kind of a catch-22. DOE is obligated to dispose of the material. What we're talking about here is either a disposal program that DOE is obligated to undertake under the statute, in which case it's subject to regulatory jurisdiction. Or, it's a storage program that DOE is not obligated to undertake. It's one or the other. Or at least, it's going to have to fall on one side or the other from a legal standpoint.

And I guess the question I have is, if it's a storage program, A, how imminent is the problem? Through the specific licensing authority that we have, can we determine how many of these sources folks are interested in abandoning or disposing of? B, is there an alternative to the Department of Energy that ensures that the material remains within some regulatory purview? Because once it goes to the Department for storage purposes, it goes beyond the Commission's regulatory purview, as I understand it, until it pops out into a disposal facility.

MR. CUNNINGHAM: I'd like to add just a couple comments on that. First, we do know who our licensees are. We don't know exactly how many sources they would have at any one time under the umbrella of the license.

COMMISSIONER CARR: Or if they've got any.

MR. CUNNINGHAM: That's correct. We do know that some licensees have these sources in storage and would like to get rid of them. We do know that. We don't know exactly how many. We don't know how many would want to get rid of these sources tomorrow if they could.

COMMISSIONER ROBERTS: Are they safely in storage?

MR. CUNNINGHAM: Yes. Well, as far as we know.

COMMISSIONER ROBERTS: How much financial burden is it for them to remain in storage?

MR. CUNNINGHAM: It isn't a financial burden to remain in storage if the company is staying in business. The problem is that we worry about companies going out of business. We worry about sources that are stored in a university somewhere, a cesium irradiator that was used five years ago and is sitting in storage somewhere and people come and go and they tend to lose track of it. Now the rules require them to keep track of it, but that takes a lot of surveillance to make sure that the licensee is doing what he's supposed to do.

The other point I would like to make, it really does -- when we talk about DOE taking these sources, the exact number, when you talk about sealed sources, it probably isn't too important. Because, the actual storage of these things is not a difficult technical problem. And to store 100 as opposed to 500 doesn't make that much difference, once you get past the barriers that you're going to store it or not.

CHAIRMAN ZECH: All right. Is there more?

COMMISSIONER CARR: No. This problem pales

in comparison to the NARM problem with radium out there. I can't get anybody interested in that one, and this one all of a sudden becomes a major problem. I guess I don't understand it.

MR. TAYLOR: Well, it's our -- we feel the responsibility for the material we license. And that's why the staff, I think, has brought this to the Commission's attention.

COMMISSIONER CARR: Well, we don't have a responsibility to do anything with it. It's out there in a licensed holder. He's got the responsibility to store it.

MR. TAYLOR: Right. But we see this emerging problem.

COMMISSIONER CARR: So far, everybody that's applied for help has gotten it, as I can see.

MR. TAYLOR: Those that we know, right. Yes.

MR. BERNERO: Yes. Those that we know of. And the increased scrutiny -- you know, if we talk about getting hundreds or even thousands of licensees, and frequently, with sufficient frequency contact them and perhaps visit an audit sample of them to establish: yes, you still have sources; yes, you are still protecting them; they are or are not surplusing

your operation. That's a major task for us, because we --

COMMISSIONER CARR: Well, we haven't done it. We need to go do that.

MR. BERNERO: We do part of that. We do part of that with our --

MR. TAYLOR: Part of the identification of the problem has come because Region IV has been fairly aggressive at trying to track down the state of some of the well-loggers across their entire region. This has been a growing concern, particularly in the population.

COMMISSIONER CARR: Well, when I read their letter though, I didn't really get a feeling for how many phone calls a day they get saying, "I've got to get rid of my source."

MR. TAYLOR: No, but we can give you more information --

COMMISSIONER CARR: I don't want to go out there and elicit a lot of phone calls. You know, I can make it into a general big problem if I advertise it and say, "You want to get rid of your source?"

MR. CUNNINGHAM: Commissioner Carr, my understanding is, and I need to confirm this, that licensees have gone to DOE and asked them to take

sources off their hands and they have done so because there is an emergency.

COMMISSIONER CARR: Our licensees?

MR. CUNNINGHAM: Yes. That's my understanding.

COMMISSIONER CARR: Does DOE have a record of that that we can retrieve?

MR. CUNNINGHAM: That's what I've got to check further on. I was told this but I need to check it out further.

COMMISSIONER CARR: I don't disagree there's a problem out there that ultimately needs solving. What I'm trying to do is to define the problem so I'll know how urgent it is.

MR. CUNNINGHAM: Yes, and we'll work on that. Let me just comment on the NARM question. By and large, the radium associated with NARM is an environmental nuisance problem in that you're subjected to low-level radiation. There are exceptions for discreet radium sources. But a number of these sources we're talking about you can have acute radiation injury if they --

COMMISSIONER CARR: But these are licensed and legally stored, we hope.

MR. CUNNINGHAM: That's correct.

COMMISSIONER CARR: I mean you tell me they are.

MR. CUNNINGHAM: There is a difference though.

COMMISSIONER CARR: So, there's a real difference in hazard to the public.

MR. CUNNINGHAM: Providing they remain controlled, there should be no hazard to the public.

CHAIRMAN ZECH: Providing they're complying with our regulations.

MR. CUNNINGHAM: That is correct.

CHAIRMAN ZECH: What you're telling us is you're not sure they are.

MR. BERNERO: It's concern of falling into --

CHAIRMAN ZECH: But they're supposed to. That's what Commissioner Carr's point is.

COMMISSIONER CARR: I've got no reason to assume they're not.

CHAIRMAN ZECH: Other than what the staff is telling us --

COMMISSIONER CARR: Well, they haven't got a fact

CHAIRMAN ZECH: -- or lack of confidence --

MR. BERNERO: Rather than anecdotal

evidence --

COMMISSIONER CARR: That's right.

MR. BERNERO: -- they have some sort of statistical evidence.

CHAIRMAN ZECH: That's what we need.

COMMISSIONER CARR: If we had my postcard survey back and the guy said, "I threw it away two years ago."

MR. BERNERO: Yes. Or, "I sold that source," or whatever.

MR. TAYLOR: I think the staff can try to gather the best information it has currently, working with the region on what it has done, particularly in the well-logger area because the staff has been visiting a lot of well-loggers across the south and southwest. We can try to give you a better picture of what we understand the state of the problem --

COMMISSIONER CARR: My concern is, I don't want the Chairman to take a little problem to a big man and make a big problem.

MR. TAYLOR: No, but the staff is worrying about this problem because they see well-loggers who are not getting any business. They know the sources are there, they know these are very small outfits working sometimes out of a trailer and the staff is, I

think, concerned about what they see as an emerging problem and is looking how to solve that.

That's really why Region IV, I believe, has been emphasizing this problem to headquarters and us. It isn't that they can come and tell you if they know of an immediate threat, we've got the ability to act. But we will try to give you a better description of that problem in a subsequent paper. The problem is there.

COMMISSIONER CURTISS: The danger of running these two courses in parallel, the survey and the licensees and asking DOE to makes its facility available is that the results that you get by doing that are going to be biased. You're going to have 20,000 sources that are all of a sudden sources that people want to abandon because they know they have a facility available. I'm not sure you get an accurate impression of what the true well-logging problem is within the 500 or 600 that we have in Region IV.

MR. TAYLOR: Where there's a use for the sources, though, they have no basis to want to abandon. Some of these are fairly expensive. Productivity is going on, the use is going on.

COMMISSIONER CURTISS: That's a good point. You get more than just the ones that are imminent, the

ones that are going bankrupt.

MR. BERNERO: We have to call all 500 well-logging source owners, or however number there are, in order to establish which are still in business, which aren't, which are the potential --

COMMISSIONER CURTISS: My point is, if you ask them, "Is your source in safe storage as required by the Commission's regulations," you're going to get a different answer than if you asked them, "Would you like to get rid of your source?"

MR. BERNERO: Yes, that's correct.

COMMISSIONER CARR: Personally, I see nothing wrong with the information notice. It looks like it's a proper piece of paper to go out and alert those licensees they have a problem and I think that's the proper thing to do, is to pin it on the guys we regulate and say, "You've got a problem and you're going to have to solve it." If it's commercially viable for somebody to open up a storage facility and put these things behind a few lead pigs, somebody will do it. We'll have to license him.

MR. CUNNINGHAM: I understand there is one licensee in Texas that is taking back americium and beryllium sources for recycling.

COMMISSIONER CARR: I read that in the --

MR. CUNNINGHAM: He charges $23,000 for 500 millicuries. The typical well-logging source these days costs about $15,000 for a 20 curie source. So, he's charging roughly $23,000 for 500.

COMMISSIONER CARR: I read that in the Region IV letter about -- this is Nuclear Source and Services?

MR. CUNNINGHAM: Right.

COMMISSIONER CARR: But it didn't make sense to me. It says he accepts them for storage and he charges a lot more for storage. Then it implies that he recycles them all because he can make more money out of the big sources, so he buys them cheaper. But that doesn't make sense. If he's storing them, he's not recycling them. So, I don't understand that piece of the action there. It didn't make sense to me. But it certainly -- storage doesn't cost you a lot, a building and some lead.

MR. BELL: It's not the storage --

COMMISSIONER CARR: Public storage makes money all the time out there.

MR. BELL: By accepting material, he accepts the liability for eventually disposing of the material --

MR. BERNERO: Yes, he's taken title to it.

MR. BELL: -- in a DOE facility that has yet to be developed at a cost that he has no idea what it will actually be. So he has to charge a high enough fee that would cover disposal in the high-level waste geologic repository under repository pricing conditions.

COMMISSIONER CARR: He's no more liable than the guy that bought it for $3,000.

MR. BELL: He's the easiest, most proximate person to send the bill to.

MR. BERNERO: Yes, and I believe the --

COMMISSIONER CARR: So, if it's too expensive, you just keep storing it and never dispose of it.

MR. TAYLOR: Someday that will probably be there then, right, when he goes under.

MR. BERNERO: The perspective on costs is if one talks in terms of low-level waste disposal costs, you're into tens of dollars per cubic foot.

COMMISSIONER CARR: Well then, I propose that we go to DOE, when we do go to them, and ask them about sliding scales for small sources for disposal. It seems dumb to charge the same amount for a small source as it does for a large source.

MR. BERNERO: This is part of the

consideration that has been discussed with DOE. And the possibilities that they have of dealing with whip-like costs which might be hundreds of dollars per cubic foot or Yucca Mountain kind of costs, which would be in the tens of thousand dollars per cubic foot.

COMMISSIONER CARR: I recommend, Mr. Chairman, we put the finger in the dike by making them responsible for manufacture right now for ultimately taking them back and then analyze the problem we've got on our hands immediately to see what we're doing.

CHAIRMAN ZECH: Yes. Well, I agree we've got that kind of a situation. We've got to do something about it now to stop what's going on and get better control of it, as well as trying to take care of the problem that's out there --

MR. TAYLOR: Solve the past, yes, sir.

CHAIRMAN ZECH: -- that we really need to get a better handle on.

Other questions of my fellow Commissioners?

Commissioner Roberts?

Commissioner Carr?

COMMISSIONER CARR: No.

CHAIRMAN ZECH: Commissioner Rogers?

COMMISSIONER ROGERS: Well, it's not so much

a question as an observation. Sitting here and listening to this presentation and our conversation of nearly a year ago, back in July or whenever it was, doesn't sound very different, the same kinds of questions, the same kinds of groping to define a problem and define some type of solution. We don't have a program here, it seems to me. It's a collection of disjointed activities that hasn't really got its arms around. It seems to me that that's really what's got to be attacked head on. Is there a problem, how big it is. We're asking these questions. We're not sure. We need some data.

We need, as the Chairman has said, not only to solve the problem of what's out there, but ways to stop generating more of a problem if there is a problem. And yet, that all ought to be part of an overall approach here that I don't think we're seeing. I'm not seeing it. I'm listening here, trying to see how this whole thing is structured and it just seems to me we're hearing about bits and pieces of something, but somehow it hasn't come together into a well-defined shape and form. I think that's just got to happen.

We don't have dimensions on it. We don't have alternatives that are actions that the Commission

itself can take in the near future. I think the staff has to go back and think more about structuring this thing in some way that we can appreciate its dimensions and the options that we have in dealing with it.

CHAIRMAN ZECH: Commissioner Curtiss?

COMMISSIONER CURTISS: I concur with those remarks. I do think this is --

CHAIRMAN ZECH: Well, it seems to me that what we're asking the staff to do is perhaps to, first of all, better define the problem, take two approaches to it, one, put the finger in the dike, as Commissioner Carr points out, to stop what's going on so that we can have better control for the future. And then the second approach, to get a better handle on the problem we have out there right now, especially if it involves public health and safety in any significant way and to do something about it.

It seems to me that Mr. Bernero mentioned-- at least I think I understood that he's concerned about resources for this kind of a situation. Well, I agree. I understand that. On the other hand, we've got to figure out how to solve that because if it takes contractor support or contractor assistance in a survey or something like that, maybe we should

supplement our own resources that way. We've simply got to get a better handle on the situation, in my judgment.

And working with DOE, I certainly would commend the staff for continuing that kind of approach. But on the other hand, I'm not so sure we're ready to go with the DOE. I'm not so sure we know exactly what we want to ask them to do yet. I do think we've got a better handle -- we must get a better handle on the whole situation before we go to DOE with any specific requests. In the meantime, I would certainly encourage the staff to continue working with them, to get any suggestions they may have.

I think we really should probably step back and commend Region IV for bringing this matter to our attention in the way we have this morning and to commend the staff for bringing the Commission up to date on what would appear to be at least a potentially serious situation involving public health and safety that we should address.

So, I think the meeting has been very important and very useful in that regard. But it does look like we need to get a better handle on it and to --

MR. TAYLOR: We'll do that.

CHAIRMAN ZECH: -- and to try to perhaps give the Commission another paper as soon as you can when you have had a chance, as Commissioner Rogers has pointed out, to give us a better restructuring of the whole situation.

So, I think those are the things that the Commission needs. In the meantime --

MR. TAYLOR: Mr. Chairman?

CHAIRMAN ZECH: Yes.

MR. TAYLOR: Excuse me. There may be-- this is a large number, a large amount of material. We may be able to do a better job at analyzing where the vulnerabilities are, size of outfits, usage, that type of thing.

CHAIRMAN ZECH: I think you're right in that you have to, some way or another, prioritize it.

MR. TAYLOR: And look at the more vulnerable. Some of these are held by licensees with large possession limits who have ongoing operations.

CHAIRMAN ZECH: And those who have sources of greater concern.

MR. TAYLOR: And higher responsibility on their part, just because of size and investment.

CHAIRMAN ZECH: Yes. But also from the

public health and safety standpoint, I think we should focus on those sources that could be a concern to the public. Certainly that ought to be our highest priority. But some way or another to get our arms around it and focus on it in a way that we can take some action that's meaningful and follow through with that action.

Well, I think, again, that you've brought to our attention something that does require further staff action and restructuring and recommendations to the Commission. I don't really personally think we're quite ready to go to DOE yet, but certainly we will when we feel we're ready. But I think we need to have a better handle on the problem, the situation ourselves before we do that.

In the meantime though, I do, again, suggest you continue getting their advice and counsel and working with them. They do have some responsibilities in this area, as we discussed here this morning, and they should be aware of our concerns too on a continuing basis.

Are there any other comments, suggestions from my fellow Commissioners?

Commissioner Carr?

COMMISSIONER CARR: Does the staff plan to

issue the information notice that Region IV recommended?

MR. BERNERO: We were considering that as part of this program. As you recall in the Region IV letter they said they're doing part of their recommendation already with their own licensees. You know, they're warning them in advance --

CHAIRMAN ZECH: It seems to me it would be useful to do that.

MR. BERNERO: It has merit.

COMMISSIONER CARR: We don't normally get into that action. That's your business. I was just curious --

CHAIRMAN ZECH: Unless anybody objects, I think you can see the sense of the Commission would be to get the information out --

MR. TAYLOR: Yes. It alerts people to the issue.

CHAIRMAN ZECH: -- and to alert -- that's right.

MR. TAYLOR: That's what it does.

CHAIRMAN ZECH: And it's a starting point. It seems to me --

COMMISSIONER CARR: That's what we normally do with our licensees, we alert them of potential

problems.

CHAIRMAN ZECH: So, it would seem to be a sensible thing to do.

Are there any other final comments of my fellow Commissioners?

All right. Thank you very much. We stand adjourned.

(Whereupon, at 11:14 a.m., the hearing was concluded.)

CERTIFICATE OF TRANSCRIBER

This is to certify that the attached events of a meeting of the United States Nuclear Regulatory Commission entitled:

TITLE OF MEETING: BRIEFING ON ACCEPTANCE BY DOE OF GREATER THAN C CLASS WASTE

PLACE OF MEETING: ROCKVILLE, MARYLAND

DATE OF MEETING: MARCH 15, 1989

were transcribed by me. I further certify that said transcription is accurate and complete, to the best of my ability, and that the transcript is a true and accurate record of the foregoing events.

Carol Lynch

Reporter's name: Judy Hadley

U.S. DEPARTMENT OF ENERGY STORAGE OF SURPLUS SEALED SOURCES EXCEEDING PART 61 CLASS C CONCENTRATIONS

COMMISSION BRIEFING

BY

OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS

MARCH 15, 1989

BACKGROUND

JULY 5, 1988 COMMISSION BRIEFING ON ACCOUNTABILITY OF RADIOACTIVE MATERIAL USED BY MATERIAL LICENSEES

SECY 88-76

PROBLEM

THOUSANDS OF GTCC SOURCES, MANY SURPLUS

COST OF TRANSFERRING A GTCC SOURCE TO ANOTHER LICENSEE IS OFTEN HIGH

SOME LICENSEES (E.G., WELL-LOGGERS) HAVING FINANCIAL DIFFICULTIES

PAST INCIDENTS OF LOST OR ABANDONED SOURCES

GTCC SOURCES

CONTAIN PU, AM, OR CM ABOVE A FEW TENS OF MILLICURIES, OR CS-137 ABOVE SEVERAL HUNDRED CURIES

ABOUT 20,000 GTCC SOURCES DISTRIBUTED UNDER NRC AND AGREEMENT STATE LICENSES

ABOUT 3,000 GTCC SOURCES DISTRIBUTED BY AEC/DOE (2/3 DOE-OWNED)

AM-BE WELL-LOGGING SOURCES

USUALLY ABOUT 20 CURIES APIECE

MANY SMALL WELL-LOGGING COMPANIES
HAVING FINANCIAL DIFFICULTIES

REQUEST FOR ASSISTANCE FROM NRC REGION IV

NEED

FEDERAL (DOE) FACILITY TO ACCEPT AND STORE UNWANTED SOURCES

STAFF HAS DISCUSSED THIS NEED WITH DOE STAFF

STAFF HAS PREPARED A LETTER TO DOE REQUESTING ASSISTANCE WITH STORAGE

FROM NRC/DOE DISCUSSIONS, MOST PROMISING MECHANISMS FOR TRANSFER OF MATERIAL TO DOE:

1. DOE ACCEPT MATERIAL WHEN SIGNIFICANT CONCERN FOR PUBLIC HEALTH AND SAFETY.

2. DOE ACCEPT MATERIAL AS GTCC WASTE.

3. DOE ACCEPT PU AND POSSIBLY OTHER MATERIAL FOR RECYCLE.

4. DOE ACCEPT DOE-OWNED MATERIAL.

DOE GTCC WASTE PROGRAM

PLANNED 1989 PUBLICATIONS:

- REPORT OF SURVEY
- MODEL FOR WASTE PROJECTIONS
- FEE METHOD FOR WASTE STORAGE AND DISPOSAL

DOE TARGETS 1989 FOR ACCEPTANCE OF GTCC WASTE FOR STORAGE

- CASE BASIS
- DELAYS ARE POSSIBLE
- CONSERVATIVE COSTS

NMSS ACTIVITIES

RULE TO REQUIRE GTCC WASTE DISPOSAL IN A REPOSITORY OR BY OTHER APPROVED METHOD

HLWM INITIATIVE TO ASSESS ADEQUACY OF PART 60 PACKAGING CRITERIA FOR GTCC WASTES

LLWM PROVIDING DOE WITH INFORMATION ON SEALED SOURCES AND GTCC WASTE

IMNS CONTINUES TO IMPROVE MATERIAL ACCOUNTABILITY

SUMMARY

LETTER TO DOE REQUESTING
ASSISTANCE WITH SEALED SOURCE STORAGE

NMSS CONTINUES TO ASSIST DOE'S GTCC WASTE
PROGRAM

NMSS CONTINUES TO IMPROVE MATERIAL
ACCOUNTABILITY