sh 1
tape 13

ORIGINAL

BEFORE THE NUCLEAR REGULATORY COMMISSION

- - - - - - - - - - - - - - - - - x
:
In the Matter of: :
:
LOW LEVEL WASTE MEETING :
:
- - - - - - - - - - - - - - - - - x

Grand Ballroom
Hyatt Lake Tahoe
Incline Village, Nevada
Thursday, February 21, 1980

The meeting was reconvened pursuant to recess at 8:45 a.m.

BEFORE:

DR. RALPH DI SIBIO, Chairman
Director, Nevada Department of Human Resources

BRYAN NELSON, ESQ.
Deputy Attorney General
State of Nevada

P A R T I C I P A N T S

Dr. Ralph DiSibio, Director (Chairman)
Nevada Department of Human Resources
Room 600, Kinkead Bldg.
500 East King Street
Carson City, Nevada 89710

Governor Robert List
State of Nevada

Thomas Gray
Thomas Gray Associates
815 N. Main Street
Orange, California 92668

Cal Brantley
New England Nuclear
549 Albany Street
Boston, Massachusetts 02118

General Mahlon E. Gates
Manager
U. S. Department of Energy
Nevada Operations Office
P. O. Box 14100
Las Vegas, Nevada 89114

Bruce Church, Chief
Radiation Operations
U. S. Department of Energy
Nevada Operations Office
P. O. Box 14100
Las Vegas, Nevada 81994

Al Neumann
Transportation Officer
U. S. Department of Energy
Nevada Operations Office
P. O. Box 14100
Las Vegas, Nevada 81994

Edgar D. Bailey, Administrator
Radiation Control Branch
Texas Department of Health
1100 West 49th Street
Austin, Texas 78756

I N D E X

PARTICIPANTS, CONTINUED

Robert Nelson, Chief
Waste Isolation
U. S. Department of Energy
Nevada Operations Office
P. O. Box 14100
Las Vegas, Nevada 81994

Gerry Hill
Southern States Energy Board
One Exchange Place
Suite 1230
Atlanta, Georgia 30338

Lee Santmann, Director
Materials Transportation Bureau
U. S. Department of Transportation
2100 Second Street, S. W.
Washington, D. C. 20590

Dr. Barry Koh
Hittman Nuclear & Development Corporation
9190 Red Branch Road
Columbia, Maryland 21045

Holmes Brown
Energy Project
National Governors' Association
400 North Capitol Street, N. W.
Washington, D. C. 20001

Edmund C. Tarnuzzer
Yankee Atomic Company
20 Turnpike Road
Westboro, Massachusetts 01581

James N. McLeod
Senior Licensing Engineer
Southern Company Services
P. O. Box 2625
Birmingham, Alabama 35210

Leland Cooley
Radiation Safety Officer
University of Maryland at Baltimore
660 W. Redwood Street
Baltimore, Maryland 21201

PARTICIPANTS, CONTINUED

Bart Weller
National Conference of State Ligislature
Suite 2300
Executive Tower Inn
1405 Curtis Street
Denver, Colorado 80202

Ms. Mary Whitman
Western Interstate Energy Board
2500 Stapleton Plaza
3333 Quebec Street
Denver, Colorado 80207

Thomas S. Baer
Vice President
Nuclear Engineering Company, Inc.
9200 Shelbyville Road
Suite 526
P. O. Box 7246
Louisville, Kentucky 40207

Vernon Apple
Nuclear Engineering Company, Inc.
P. O. Box 638
Richland, Washington 99352

Senator R. Ted Bottiger
Washington State
405 Public Lands Building
Olympia, Washington 98504

Dr. William Briner, Chairman
Committee on Government Relations
Society of Nuclear Medicine
Duke University Medical Center
P. O. Bos 3304
Durham, North Carolina 27710

John Vaden, Supervisor
Radiological Health Section
State Department of Human Resources
505 East King Street
Carson City, Nevada 89710

Robert Bishop
North East Utilities
P. O. Box 270
Hartford, Connecticut 06101

PARTICIPANTS, CONTINUED

Herb Oakley
Chem-Nuclear Systems
P. O. Box 726
Barnwell, South Carolina 29812

Don Clawsen
Legislative Relations
Washington State Energy Office
400 E. Union
Olympia, Washington 98504

R. William Darmitzel
General Electric Company
Vallecitos Road
P. O. Box 460
Pleasanton, California 94566

Senator Joe Neal
304 Lance Avenue
N. Las Vegas, Nevada 89030

Senator Lawrence Jacobsen
P. O. Box 367
Minden, Nevada 89423

Assemblyman Tod Bedrosian
181 Wagon Wheel Circle
Reno, Nevada 89502

Assemblyman Paul Prengoman
1510 Model Way
Reno, Nevada 89502

Sam Holmann
Legislative Counsel Bureau
Office of Research
Legislative Building
Carson City, Nevada 89710

Fred A. Mettler, M. D.
Department of Radiology
University of New Mexico
900 Camino de Salud, N. E.
Albuquerque, New Mexico 87131

PARTICIPANTS, CONTINUED

Herbert E. Book, Chief
Office of Inspection and Enforcemant
Fuel Facility & Materials Safety Branch
Nuclear Regulatory Commission, Region V
1990 N. California Boulevard
Suite 202
Walnut Creek, California 94596

Robert Engleken, Director
Nuclear Regulatory Commission, Region V
Office of Inspection & Enforcement
1990 N. California Boulevard, Suite 202
Walnut Creek, California 94596

Lidia Roche-Farmer
Office of Nuclear Material Safety and Safeguards
Nulear Regulatory Commission

Richard Cunningham
Director
Office of Nuclear Material Safety & Safeguards
Division of Fuel Cycle and Material Safety
Nuclear Regulatory Commission
Washington, D. C. 20555

Emmanuel Gordon
Atomic Industrial Forum
7101 Wisconsin Avenue
Bethesda, Maryland 20014

Steve Carpenter
Site Manager
Nuclear Engineering Company
Beatty, Nevada 89003

Heyward Shealey
Chief, Bureau of Radiological Health
South Carolina Department of Health and Environmental Control
137 J. Marion Sims Building
Columbia, South Carolina 29201

Elizabeth McCarthy
Office of State Programs
Nuclear Regulatory Commision

Al Grella
Office of Inspection & Enforcement
Nuclear Regulatory Commission

PARTICIPANTS, CONTINUED

Jim Hanchett
Office of Public Affairs
Region V
Nuclear Regulatory Commission
1990 N. California Boulevard, Suite 202
Walnut Creek, California 94596

A. E. Smick
Seante Commerce Committee
Room 709
119 D Street, N. E.
Washington, D. C. 20510

P R O C E E D I N G S

DR. DI SIBIO: Good morning. We are happy to see all of these smiling, sunshiney faces this morning. Did you look out the window? I think we have about nine or ten inches of snow.

It was very difficult to open my eyes this morning. I was reminded of the old Nevada expression about staying up with the owls at night and being unable to fly with the eagles in the morning, or some nonsense like that that someone made up once. I am a little stiff this morning. I think it is the weather.

We're going to do several things this morning. We're going to hear from the rest of our agenda from yesterday, which means in effect the federal government, the Department of ENergy, the Department of Transportation and the Nuclear Regulatory Commission. Then we will break into three groups and I will give you directions concerning that. That should be the most exciting part of today's agenda. With any luck at all, we could finish relatively early to give all of you a head start in terms of either recreational activities or more importantly, finding a way home in this weather. We'll try to give you an opportunity to do that.

I'm going to just backtrack a little bit with regard to the agenda, and have Herb lead us off this morning for the Nuclear Regulatory Commission because we have some visual aids that we have to get set up for some other groups. So if we will

hear this morning from the Office of Inspection and Enforcement, Region V, California, Herb Book.

STATEMENT OF HERB BOOK, NUCLEAR REGULATORY COMMISSION

OFFICE OF INSPECTION AND ENFORCEMENT, REGION V

MR. BOOK: Thank you, Mr. Chairman, ladies and gentlemen. There was some discussion yesterday about Dick Cummingham. Everybody knows Dick Cummingham. But I work for NRC and everybody doesn't know me, so I'm going to at least let you know who I am.

As Dr. Di Sibio says, my name is Herb Book. I have worked for NRC for a long time, principally as a branch chief out here in the western inspection region. So that means that the crew of health physics radiation safety inspectors who do most of the radiation safety inspections of NRC licensees out here in the West report to me.

Our office out here in the West is in Walnut Creek, California, and that handles the seven western states, and of interest to you folks, principally Nevada and the State of Washington are included in our region. So that the NRC work at the two waste disposal sites out in the West is handled out of my office.

As far as waste disposal and transportation of radioactive waste, NRC has two major programs going right now. And I want to tell you a little bit about what we're doing. One of these programs is aimed directly at NRC licensees. We have

issued bulletins, issued information circulars to all of our licensees instructing them to do certain things associated with a waste disposal and transportation program. And this is a lot of rather important things, like get a copy of the NRC regulations, get a copy of the state license at the disposal site, get the DOT regulation, set up an organization that has assigned responsibility to handle this waste and repackage this waste, and get a little bit more businesslike about handling all of your waste.

Now in association with that, we, NRC, we are conducting inspections at those licensees to make certain that they are doing those things and they do have a reasonable program operating We have already made that type of inspection at essentially all of the nuclear power plants. At all of our larger NRC licensees, those will have been completed by the first of April, and the smaller licensees, we are accomplishing in conjunction with a regular routine inspection, which means it will be two or three years probably before we get around to all of them.

Now these inspections, by the way, do involve the opening of some packages. They are accomplished at the licensee's facility, which means he at least has some packaging knowhow, for presumably he will also have the means to safely open packages.

Now I don't know. I don't have a whole lot of confidence in finding a lot of defective packages with this program. I think

it is principally an educational missionary-type function. It gets the licensee's attention, making him realize that this is an important aspect of what he's doing, and hopefully improving his performance in the waste and transportation areas.

And I say this does involve opening some packages, and I think this is a very important point because the bottom line, no matter how you cut it, it seems to me the quality of those packages depends on what is done when they are being packaged. Now you can say all kinds of things about transportation and storage and so on, but if the original packaging is no good, you're no good no matter what happens to the package after that.

Now the other program we are doing is at the burial sites, and we are spending a lot of time at the disposal sites. I want to talk only about the two western disposal sites, the one in the State of Washington and the one in the State of Nevada, because that is where my experience has been.

Beginning in about July of 1978, we have had inspectors at the state licensed burial grounds in the State of Washington and the State of Nevada. Now the early operations there amounted to about one day a week or one week a month or something on that kind of an average. It was a spotcheck sort of thing.

But we have been at those sites, we have had an inspector, an NRC inspector at those sites on a continuous basis since November 28 at the Richland site and since December 10 at the Nevada site. Now this is with the exception of a few days

around the holidays, either Christmas or New Year's, when we did not have people there.

So that we have had people there whever the sites have really been open for business. In that regard we have spent 192 inspector days at the two western sites since July of '78 and we have of course upgraded and increased our efforts there in December, and 90 mandays of that inspector time has been spent there since the first of January.

I want to add that those figures do not include the considerable inspection time that has been put in by the state inspectors, the State of Nevada, the State of Washington, the DOT inspectors who have been on site part of this time.

We at the burial sites, we have examined approximately 150 shipments of radioactive waste, and there has been a lot said about experience here and I am just going to give you sort of a broad picture of our experience this morning and not get into specific cases or anything like that.

The 60 of those 150 shipments originated at NRC licensees and the other 90 originated at agreement state licensees. Of those shipments, we observed 37 significant items of noncompliance.

Now many of the shipments had more than one. 37 significant items were involved in about 15 shipments total. So what we are seeing is a problem with about one out of every ten shipments, and I think that is about the same magnitude that was

reported from South Carolina.

ABout a third of the shipments of noncompliance was originated at NRC licensed shippers, and the others originated at agreement state or Department of Energy facilities. I don't know quite the reason for that. You can theorize a little bit. I think on the average the NRC shippers tend to be larger facilities. They're nuclear power plants, fuel fabrication facilities, large distributors of radioisotopes, and that means that they are more likely to have more resources and someone with the assigned responsibility, probably a stronger control of the packaging and operations at the facility.

Just a few of the types of things that we see and what I talk about, an item of noncompliance or a deficiency with a shipment, I am talking about that shipment -- when I talk about a shipment, that is essentially a truckload. These are almost always a truck loaded with radioactive wastes.

And a deficiency, if I say there was a package there that was not a strong type package, this may mean that there were more than one of those packages, but that was the deficiency. And I only count that as one problem with one shipment, even if there were five individual packages of that type.

So really, the most common thing that we are seeing, and this is of course in association with our new regulations which we essentially adopt, the DOT regulations and specs to those requirements, there were eight instances where the package was

judged not to be a strong type package.

Some of these problems were with 55 gallon drums and some of them wooden boxes, though it isn't limited to any particular kind of package.

There were six instances of liquids in the packages. These might be liquids, free liquids observed as a leaker, or they may have been free liquids in the package that was discovered as a result of opening packages, because we are opening a few packages at the waste disposal site.

I am not too pleased to say this. I think there some hazards involved here we are taking. It is a little bit of a problem, but we are selecting very carefully those packages. For instance, this last week there were some packages that came in, rather light packages. You shake the barrel and they rattle. They were listed as obviously scintillation liquid, but it was decided, in conjunction with the state people and with the site operators, to open one of those. And sure enough, here was all of the scintillation vials in plastic bags but no absorbent whatsoever in the package.

So our package opening is limited to a few suspicious packages, that we are fairly confident that we're not going to run into a problem when we do open them under field conditions.

We have had six instances of improper marking or labeling. We have two cases -- a lot of these cases I am talking about are the same ones that were discussed earlier -- two cases

of dose rates in the truck cab were two high, and two cases where the dose rates on the exterior of the vehicle were too high.

Now on these inspections, we do develop formal inspection reports in all cases, and we distribute those reports to everybody that we can envision who might take enforcement action. If the load comes from -- pick a state. There is a Texas man here. If the load comes from the State of Texas, we -- and it had package problems -- we would send a copy of our report to DOT and to the State of Texas, and if it was apparent that there was an NRC licensee involved, we would send it to our NRC office that has responsibility for the State of Texas. We would hope that all agencies can use this information to some degree. My personal hope is that we can -- other inspection and regulatory agencies can take some enforcement action.

I see the site operators in the states where the sites are located taking a lot of rather strong and effective action, but in my opinion that action is not complete until the regulatory agency that has the jurisdiction ove r the shipper or the broker or whatever also takes some enforcement action. And that is one of the points that I submitted here for discussion later on. Hopefully we can work out some sort of an arrangement or agreement so that the information my inspectors furnish to you is of value to you and you will in turn furnish information to me that I can use.

So I want to talk just a little bit more about that.

There is a terrible waste of manpower at these waste disposal sites.

Now when you are talking about inspection manpower, I look at what is going on at the State of Washington site, for instance, where it is not unusual at all to have two NRC inspectors on site, two State of Washington inspectors on site, a DOT man there, and whoever else might think they have business there. But you can have five or six inspectors looking at the same shipments and almost looking at the same requirements.

The same thing to a lesser degree is happening at Beatty, Nevad. We have an inspector there. The state has an inspector there, and I would hope that we can eventually at least make some sort of arrangement so that the one inspector can do what has to be done at that site.

I recognize our work at the sites has been of twofold approach. First of all, we do want to look at NRC shipments that are coming in, shipments that originate at NRC licensees. But in addition, we are helping the states. This is an assistance program. We have the people there sometimes when they don't. We are training their people to some degree, and it is an assistance to the states.

Now eventually again, I would hope that we can reduce that assistance. The actual NRC authority at those sites is rather limited. The site at Beatty, there is no NRC license there at all. That is strictly a State of Nevada license. So our only

interest then is if a shipment comes in from an NRC licensee.

At the State of Washington, there is an NRC license in existence there in addition to the state license. The NRC license authorizes only the burial of special nuclear material, and that is probably less than 10 percent of their business.

Now our authority and our work there is rather limited, but we are hoping to be of help to everybody in this present situation.

I am working here from notes. I saw my place on the program and I sort of guessed that there were going to be an awful lot of things said that I would say if they haven't been said before. So I'm a little bit informal here.

I want to make a few comments on some of the things that were said earlier. I'm not sure that I can stay. We have to get back to the San Francisco Bay area by tonight, and the way the weather and the roads look out there, it might be a good idea to get a fairly early start. So I don't know how long I'm going to be around.

There have been some early discussions here about the medical profession in particular, and it might do for some other people, too, about holding radioactive waste for decay. Now the problem that I see there, and I think it was mentioned, is a lack of storage space. Particularly in the older hospitals, space is a real problem. If you've got a new hospital, generally the space problem is not nearly as tight. But in the older

hospitals, some -- the nuclear medical program was an afterthought It wasn't even envisioned when the hospital was built. So the space situation is kind of tight.

But other than that, it is a practical thing to do. We have licensees who do it. It isn't mainly out of necessity. For instance, there are a couple of hospitals on the island of Guam, and if you think you have problems for waste disposal here, they've really got them. The only thing that is practical is storage and disposal through the normal trash after a period of decay. And we say that is okay. We tell them sure, give them instructions on what they do. It is a matter we do require surveys of the material before it goes to the trash, and we do require records of those surveys, and we require or we demand or we insist or something -- I don't know how much jurisdiction, how much authority we have here -- but we twist arms, again, to deface labels and that sort of thing because that is just a continuing problem if that stuff shows up at the dump.

Another possibility that is being done in some of the places is hold for decay and then incinerate. There are a lot of hospitals who incinerate their waste anyway. And this works very nicely then.

One other comment that I want to make, and this is not so much from a regulatory standpoint as from a health physics standpoint. I recognize what the states are doing and what the site operators are doing. It is a very effective mechanism, and

that is a non-conforming shipment being returned back to the shipper. But from a health physics radiation standpoint, that kind of a situation is kind of hard to justify. If you say this, if there is any hazard in this at all, it's tough to say well, we ought to send it 2,000 back to where it came from.

So I don't know how we're going to work around that, but if we are honest with ourselves about radiation safety, I think we have to face that problem.

One other situation I just want to mention, and again there has been some discussion here about conflicting requirements and site specific requirements and that sort of thing, which complicate everybody's lives. And I heard I think a comment from the State of South Carolina related to the integrity of packages after they end up in that burial trench, and if that becomes a problem, we are getting ourselves back into this problem of seven different requirements.

I think up to now, the rule has been if it is a legal DOT package, it is legal to put in the burial trench. And if we are going to say it also has to last for 30 years after we put the dirt over the top of it, I think that is another problem, that it could be a real problem.

DR. DI SIBIO: Questions?

MR. BOOK: Questions?

MR. TARNUZZER: I always thought it was the understanding that the burial trench was so designed to act as the container,

and what has been taken for the packaging, once it has gotten into the ground. If you're going to require a 30-year container, this is something we haven't faced before.

MR. BOOK: That is why I said that. You must understand, NRC originally licensed all of these sites, I believe. Is that true in South Carolina? It certainly was true out here in the West. They were originally licensed by the NRC, and subsequently the states became an agreement state and took over the authority and jurisdiction. And at the time those places were licensed, the philosophy was once it is in the trench, there is no concern for whether the package -- whether it has integrity or dissolves the next day. There was no credit taken for that.

MR. SHEALY: I think maybe I can clarify that. South Carolina was one of the first -- we were of the licensing agency that licensed the Chem-Nuclear Barnwell site in 1971, and just to clarify, the geological aspects of that site were determined to be adequate based on what we proposed to put in the site.

But this package integrity question I believe has caused some confusion here. Maybe I can shed a little light on that. We wanted to consider packaging integrity in lieu of solidifying some resins. It was strictly a question of managing spent resins at the site, and it is certainly not being considered for other types of waste, and we were giving special attention to resins. In lieu of solidification of these resins, we have to consider packaging integrity when you go to dispose of this type

of material.

The site was designed to contain, and it is containing the material that we are presently putting into the site. Maybe that will clarify that.

MR. BOOK: Yes, it sounds more like it is a specific thing, not a general --

MR. SHEALY: That is correct.

MR. BOOK: For the whole industry, and probably it's not necessary to spend much time on it today.

MR. EASON: You made one statement in your formal remarks that I would like to comment on. You indicated that NECO had an NRCO license in the State of Washington. We believe we do not, and let me explain why.

A number of months ago we reapplied for the renewal of our license, and in December we received a piece of paper which NRC called a license. We called it a counteroffer because it had no resemblence at all to our application. And we just did not accept that offer.

Now I know this is a legal matter, but I thought it would be well to keep the record straight from our point of view. We don't believe we have the license up there from the NRC.

MR. BOOK: I won't argue with this.

DR. DI SIBIO: You do have a license there, Charlie. They have given it to Guam.

Our next speaker was originally scheduled to be our

16

first. We'll now call on board from the Nevada Operations Office of the Department of Energy, General Gates.

XXXXX STATEMENT OF GENERAL MAHLON GATES, MANAGER, NEVADA OPERATIONS OFFICE, DEPARTMENT OF ENERGY

GENERAL GATES: Thank you, Ralph. In point of fact, I will introduce the speaker.

Let me say that we are very pleased to be here, and I would like to introduce the members of my team. Right in front of me here is Bob Nelson, and I'll tell you what they do in a minute. Bruce Church and Al Neumann.

We are very much involved in not only low level waste but also spent fuel problems and possibly commercial high level waste, if you differentiate that from spent fuel. Bob Nelson is my project manager on two aspects of high level waste. One has to do with the geologic examination of the Nevada test site to determine the suitability of a disposal area. The second has to do with the research and development program for the encapsulation of spent fuel from a reactor, and the storage of that spent fuel for a temporary period of three to five years, generally on the surface of the ground or immediately below the surface, to determine the heat and radiation effects on the media in which it is stored.

In addition to that, we have been involved for a long, long time in low level waste that have their origin in national security programs. That is what Bruce Church worries about.

Now all of these things of course involve a certain amount of transportation problems and so on, and that is what Al Neumann worries about.

Af you might guess, our primary business is underground nuclear testing, so by virtue of that role, we I think fit the definition of a generator, a packager, a broker, a shipper and a site operator. So we're going to tell you about that this morning with respect to the handling of the defense low level waste.

Now is your name Al, sir? Are you Al?

MR. BAIETTI: Yes.

GENERAL GATE: I think you will detect, Al, in the presentation you are about to hear a point where we differ from the philosophy I was espousing yesterday. But if you detect that difference and want to ask about it, we will be prepared to ask about it.

Bruce Church, please.

XXXXXXX STATEMENT OF BRUCE CHURCH, CHIEF, RADIATION OPERATIONS, DEPARTMENT OF ENERGY, NEVADA OPERATIONS OFFICE

MR. CHURCH: We have a series of about 18 viewgraphs that hopefully we can quickly give you an overview of their operation concerning defense low level waste. Our program took a significant turn l:ce this fall when the departments made a significant policy change where heretofore all of the DOE contractors not 'aving waste disposal facilities at their site

were required to ship their low level wastes to commercial facilities approximately in the November time frame, and it was during the period that the commercial sites were undergoing I would say a period of time of internal introspection.

The department changed its policy and we have had a number of contractors now given permission to go to DOE sites and viewgraphs will indicate those contractors that have formally requested disposal permission at our site. We will go into some of the policies and criteria that we have developed in terms of our expanded operation.

For the first slide, I would like to cover the four items briefly outlined on this first slide, and we did that trying to address somewhat the discussion questions that we saw in our initial invitation.

Next slide, please. This first slide indicates our cumulative volume since we began keeping records in 1961 up through the close of calendar year 1979, and this volume was estimated when we prepared the slide in the early summer and peaks at approximately one million cubic feet.

We are receiving currently approximately one half million cubic feet a year. Next slide.

This shows the cumulative curies. This is not decay-corrected. And it shows that we have put in their disposal facility approximately six million total curies.

Next series of slides will show some of the facilities.

This shows what we think is somewhat of an innovation, and we call it a continuous trench. We started operation in this facility or this particular trench approximately two years ago, and you can see in the foreground some of the smaller trenches that are now closed, and the concrete monuments placed at either end of those trenches. This continuous trench will grow towards the foreground to where it will approximately intersect the old trench, and that will be the completion of that trench.

The next slide will show somewhat the relative size and the sort of uniqueness in that we can operate right in the trench with the unloading. It makes it very convenient and very efficient in placing the packages received in an efficient manner.

The next slide shows the unique facet of the test site of Subsidence Crater, where we have for the past period of time, something like eight to ten years, used this crater for fault disposal. This has primarily been used because of cleaning up many of the old atmospheric test sites, individual test sites where there was a lot of debris, tower debris material placed there for experimentation, such as army tanks and halftracks and jeeps, et cetera, which makes for a lot of bulk. And we have elected to use this type of disposal for those bulk items.

The next slide will show our current generators and our anticipated generators. Of the list on the right, we have now prepared and are preparing letters with exception of Savannah River, giving them permission to ship their low level wastes

to the Nevada test site.

The next slide, I would like to address briefly in terms of our experience. For the last few years I have to say that our experience in handling packages has been very good. And I think that for the reasons listed, this is the case. We do have a small number of generator shippers, and because of that and because they are all DOE contractors, we have some control of both the shipping and receiving points. We can negotiate with these contractors and their subsequent DOE field offices prior to shipment on waste types, packaging, expected volume, projected budget, et cetera.

And by and large, and I guess I should not even use by and large, the DOE contractors do have experienced personnel in these operations. And I think that has also been a reason for what I think has been a fairly good record.

Next slide. We are caught up in the paperwork like everyone else. A few years back, the headquarters invented a system called SWIM, Solid Waste Information Management system. Many of you perhaps are familiar with that. We participate in that. As a result of not only that system, but our own requirements, causes information such as these listed to be brought with the shipments to the Nevada test site.

The next viewgraph is just a quick example of one of the computer sheets of the data that is put on and goes into our computer system which allows us to do lots of data

manipulation for reports and management purposes.

The next viewgraph is also an important part of that system, possibly again something a little bit unique in that we have tied the waste area into the Nevada grid coordinate system. And each row and tier of those packages you saw in the earlier slide is given a coordinate and we believe we have -- we haven't really tested it yet but we believe that we have a resolution of about three feet if we ever for whatever purpose wanted to reenter that trench for recovery. And that recovery is possibly based on someone putting material accidently in the container that has some value in the future and we need to recover it, and/or for resource purposes, going back and seeing how time has affected the disposed waste.

The next series of slides I would like to go over and perhaps for the benefit of those of you in the back who may have a hard time reading it, I will read some of this criteria. Some of it is new, and I know unique and somewhat controversial, at least with our generators.

We subscribe to of course DOT, our own manual chapters or orders and item 2 is a manual, and the 15 copies I intended to bring are still sitting on my desk, but publication title NV-185 is really our bible wherein we list all of the criteria that the generators have to comply with, our policies, plans and requirements, and one particularly in there that I will mention is that we do not allow any liquid waste into the

disposal facility. And I will address and go over this towards the end.

The next slide goes into some specific policy requirements that we have levied on our generators. We are trying to conform to uniform packages and that is what item 1 addresses, because this makes for a much more efficient system of disposal and efficient use of the space in the trench. ANd we are trying to encourage just a few sizes of packages to be used.

As we get into disposal with some of our new generators, we are going to have to take some odd sizes, just because they are already packaged, but over a period of time we hope to have them conform with this sort of standard package, just because it helps efficient operations of the disposal space and helps reduce costs.

Item 2 is the sort of new item that I mentioned earlier. We are requiring each one of the generators to affix a certifying label on each package. and I will pick up and read some of those. "This will certify by the certifying official's signature on each package that an inspection is in accordance with DOT and NV requirements. The purpose of this is to provide a highly visible confirmation that a knowledgeable, responsible person has made proper certification of an attendant radioactive shipment package."

Each shipper generator is to provide the REECO Environmental Sciences Department, their field office and my

branch, the name of the knowledgeable responsible individual as the certifying official. Each sticker label must be legibly signed manually. The operating contractor personnel will observe or monitor compliance of all requirements and provide to NVO documentation of any breach of DOT or NVO requirements with a 24-hour period after discovery.

Something also a little bit new here, we have espoused an enforcement policy: if upon evaluation, the documentation NVO judges that action should be taken, the shipper generator will be requested through the field office to replace the certifying official. If two violations are noted in any six-month period, the shipper generator shall be denied disposal privileges until the problems can be resolved with that field office personnel and the shipper.

Next slide. This is the certification label that we're requiring to be placed on each package, giving the date certified, the title and organization. This certifies that this package and its contents are in acceptable condition for transportation according to DOT and DOE NVO requirements.

Next slide. In addition, we're requiring the standard operation procedures, if they're not already established, be established and be documented for their entire packaging and shipping operation, that a package and shipping QA program and audit be performed by the shipper generator at least on an annual basis. Documented training for all personnel shall be

available by inspection by any DOE official. And certification of the additional shipping papers an containers shall be made by similar administrative responsible personnel that we have previously mentioned.

Next slide. Regulation listed under basic criteria shall be made available to the shipper management and to all personnel involved in the packaging and shipping process, hopefully to plug some of the gaps that we heard mentioned yesterday with respect to communication and information.

Inspection in conjunction with the DOE field office shall be conducted as required to make sure that shipments are made in accordance with all applicable DOT regulations and to the greatest extent possible, that carriers adhere to DOT approved routes. Prior to departure, each shipper is required to notify their consignee of time of departure, estimated time of arrival at the Nevada test site, and of delays if any en route.

For defense low level waste shipments, the shipper is to notify our operating contractor of the pending shipment, and this is for our operational planning purposes.

I think that brings us to the next slide. In addition to these policies and criteria, and because we feel some responsibility in increasing low level waste traffic in and around Los Vegas, which is sort of becoming a hub, and because of our memorandum of understanding with the State of Nevada, we are taking some additional steps to enhance our emergency response

and the posture of our radiological assistance team. Instead of having just a phone list to activate the team, we are going on a more positive schedule where each of a RAT team captain can be located with a beeper and he is on a weekly assignment, so with one single phone call we can activate the team. And by that method, and having equipment present in an automobile, we feel that we can provide much more rapid response to any potential accident scene.

We plan to provide back-up equipment at the Nevada test site to speed rapid control and clean-up in case of an accident on any of the interstate routes or any other place.

The services that our management has discussed with Dr. DiSibio and we have generally offered some of these as long-standing offers, is trained to our Nevada state, county and city officials such as firemen, policemen, highway control, et cetera, for first on the scene actions. What do you do, who do you call, et cetera.

The second phase of that is to provide on a loan basis monitoring equipment for any particular state designated monitors. ONe word about that. We have learned from hard experience when we have people who set up monitoring programs, that it is to our advantage to make sure that they have high quality equipment in that we have had call-outs based on an old Civil Defense meter, where the meter from spurious readings activated a lot of people and it was all false. Many of you are familiar with that type

of instrument and know the quality of it, and it has been our position and experience that providing high quality equipment and a system of periodic calibration and repair is something that most groups such as highway patrols, et cetera, don't readily have at their hand, and it is well worth the advantage to both ourselves and any other state group.

We have some problems yet to be worked out, like everyone else, but because of the new generators, we now have the liquid scintillation vial problem. Heretofore it has been pretty much a minor problem. It is now taking on new significance. It is a significant problem presently because our policies state that we will not accept any liquids at the site for disposal, and we are now working with those generators to see what kind of procedures we can work out whereby that material can be handled in an acceptable manner. Biological waste has many of the same kinds of concerns.

That concludes my presentation. I'd be happy to entertain any questions.

MR. SMICK: I am from the staff of the Senate Committee on Commerce, Science and Transportation. Did your manual NVO-183 cover procedures dealing with both low level waste and with high level spent fuel assemblies?

MR. CHURCH: It deals with low level waste only.

MR. SMICK: Do you have any equivalent instructions and procedures that do deal with high level waste?

MR. CHURCH: Bob can address that specifically, but let me say that the only thing we are doing now is in the research and development capacity. I know Bob and his contractors have many procedures for handling those in the research mode, both from the safety standpoint and his research data-gathering standpoint.

MR. SMICK: I was leading up to this question, whether the recent Turkey Point shipments of commercially generated spent fuel assemblies for the test program at the Nevada test site, whether that shipment was subject to all of the equivalent controls and procedures for safety in both packaging and transportation, comparable to the very excellent ones you have summarized for the low level waste?

GENERAL GATES: The answer to your question is yes. This was a very thoroughly investigated and documented procedure between the headquarters of the Department of Energy in Washington and the headquarters of Nuclear Regulatory Commission and the attorneys on both sides got into this program. And the decision was made that the procedures which we had postulated and indeed which were followed were appropriate to the exercise.

MR. SMICK: Thank you.

GENERAL GATES: As you probably realize, sir, there were a great number of -- at least there was one article in the Washington Post which was quite critical about this, but we think we were really right in this case.

Let me make another comment. Do you know Bob Leachman?

MR. SMICK: I do not.

GENERAL GATES: I think Bob is a staffer on the Technology and Science Committee. He would have the reports, but we will send them to you anyway if you'd like to have them.

Bob, can you address specifically the number and title of the report that the gentleman is looking for?

MR. NELSON: We prepared a safety analysis document for both of the tests that we are running. One is in the granite deposit in the northern part of the test site, which involved 13 spent fuel elements, 11 underground, and that is the recent set of shipments from Turkey Point, which was the subject of concern in the Washington Post.

And another one for the earlier test at the EMAD Building, we had both of those safety analysis documents, and more recently -- well, involving those shipments we have a security plan which involved and described how we went about assuring the proper shipments of the spent fuel from Turkey Point to the Nevada test site, and we can make available any of those to you.

MR. SMICK: All right, I will get in touch with you afterwards.

MR. NELSON: I have the security plan here which we provided to the legislative committee in the State of Nevada, and we could give you the same document. I can give you that right now.

MR. SMICK: Fine, thank you.

MR. BERNSTEIN: Steve Bernstein, NRC. Have you ever reentered any of these trenches, and if so, what did you find?

MR. CHURCH: No, we haven't had any reason to, yet anyway.

MR. GALLAGHER: AS of February 29, I believe Hanford was no longer being able to accept Americium 241 for burial above certain site criterial limits. Does DOE at the Nevada test site expect to take on materials from non-DOE contractors for burial at levels higher than are presently going to be allowed?

MR. CHURCH: No.

MR. GALLAGHER: Are you familiar with this?

MR. CHURCH: The operation that I have just described has not entertained any thoughts at all from non-DOE contractor waste.

MR. GALLAGHER: Do you know whether DOE -- we have heard indications that some of the DOE sites might be doing this. Are you familiar with it?

GENERAL GATES: Yes, we are. DOE intends to have a study out in the public domain in the next few months on this issue. I think the bottom line succinctly will be that A, this is a problem of the states. The federal government will help to the extent possible, but it is a problem for the states.

A part of that will include a possibility that in an

emergency situation, such situation to be declared by NRC, that the DOE would on an interim temporary basis handle some commercial low level waste.

MR. BAIETTI: Al Baietti, ICN. I have a comment and a question. Looking through the window of 12 years of experience with the U.S. Naval Radiological Defense Laboratory and being rather personally aware of all of the radioactivity at that sprinkling ground and the Nevada test site, I am really surprised that you have any concern at all about what you accept at the burial site in that particular system. And I'm not quite sure that I know what it is that all of this involved kind of control is really trying to do. I mean that is just a comment.

Let me ask a question. On the basis of recognizing that this is a DOE sort of thing and dollars just go from one pocket to the other and the taxpayer is really paying the freight on everything, do you have any order of magnitude as to the terms of what your cost per cubic foot is to put stuff in your trench?

MR. CHURCH: Yes. Let me address the latter. We are assessing the current generators $1 a cubic foot. That pays for all of the waste handling, the excavation, environmental monitoring. It doesn't pay for a lot of things, also.

We are anticipating next year for that cost to be doubled to tripled.

MR. BAIETTI: Do you know what the present cost is by

commercial suppliers?

MR. CHURCH: I'm somewhat familiar with that, yes.

MR. BAIETTI: Are we getting it to your system or getting down to $1 or $2 a cubic foot?

MR. CHURCH: There are a number of significant things that we don't worry about. We don't worry about the perpetual maintenance fund. We do not have to procure the ground. Some of the security in place is also not costed. So those are at least three significant things right off the top that are not part of that overall cost that you would immediately have in a commercial venture.

MR. BAIETTI: You don't have to make a profit.

MR. CHURCH: THat is correct. However, we do try to manage as effectively and efficiently as we can, to keep costs down. For example, Rocky Flats is pretty well contingent in terms of volume, in terms of their budget. They would like to handle as much as they can in terms of volume with respect to what the budget allows. By keeping costs down, it maintains a volume for them that is much more effective than if costs were significantly higher.

I think we do as much as we can to try to keep the costs down.

MR. BAIETTI: Well, at $1 or $2 a cubic foot, I think you are doing tremendously well. My own concern is that maybe not all of your charges are being really reflected in that,

because I don't think the items you have ticked off are that expensive in terms of cost per cubic foot.

MR. CHURCH: Outside of those particular ones, like you said, most of the costs, for example the recordkeeping, I did not mention that. But those costs are reflected in that $1 per cubic foot.

Any other questions?

GENERAL GATES: Excuse me. Let me address this comment that this gentleman made. You did not ask me a question, but you made a comment that I want to comment on. The comment was why do we go through all of this kind of difficulty and rigorous system when the Nevada test site is so much itself subjected to radioactive fallout and that sort of thing?

We are currently spending about $900,000 a year and we have been for five years, it will go on for a couple more, to identify the precise location and the precise characteristic of the fallout that currently exists on the Nevada test site. The study includes not only that identifying location and luke glides if you will, but includes also studies on pathways to man, the animals test test, the flora, the fauna, et cetera, leaving some day to a possibility that we will clean up some of these areas.

We recognize that the Nevada test site will be under federal control probably forever. But nevertheless, we think it behooves us to take whatever action we can, at least to know

where it is, and should money become available some day to clean it up.

Now to the other part of the comment with respect to more specifically why are we worried about this. By virtue of our location in the State of Nevada and the work we do there, we have very intimate and cordial relations with the governor and the executive side of the administration of the state and indeed also with the legislative. We all know each other. They know my problems. I perceive theirs, of course, through their political arena of the state, the newspaper reports, and they are pretty nitty-gritty sometimes in the Las Vegas press, either about him or about me.

It is our desire to have the best possible system available. We think we are in a position to do that, and we do things at the Nevada test site that are done nowhere else in the world or in the United States, and that is put off the atomic bombs, and that is not the most popular thing in the world. And indeed there is no other state in the United States that will let us do that today.

So we owe Nevada something. They are good to us. We need them, and we think they need us, too. But we want to be the best possible neighbor that we possibly can be. And the point I made before Bruce talked, and you got that point, that while yesterday I commented we've got every Tom, Dick and Harry making rules and regulations, how does the poor SOB that is going

to ship something know what to do?

Well, we avoid that in our case and we think it is proper because we are dealing one, with the defense waste only. We've got a small population of shippers. It is defense waste only. We are DOE contractors so we've got clout. We can screw them to the wall, and we want to do that to convince this fellow and his boss that we know how to do it.

MR. WOOD: General Gates, if I may ask you a question before you sit down, I'm Jack Wood, director of the Washington State Energy Office, and the statements you made relative to the study you are doing, relative to the question about Americium brings a situation in mind that I think that one federal agency is placing a problem upon the states another federal agency is causing, and it relates to your statement that the handling of TRU is in your study going to be classed as a state problem. And the State of Washington is following some direction from NRC in developing their state license.

Now what I see is one federal agency, NRC, encouraging banning TRU above 10 millicuries per gram, and if what I heard you say, your study is going to conclude that the handling of TRU from commercial sources is going to be a state problem.

I would like to make a recommendation that if that is true, I would recommend that your study conclude that DOE and NRC get together and solve the problem with an answer that the states can live with. Is that possible?

GENERAL GATES: Well, I believe that is inherent in the whole study. In point of fact, when I identified what it is my understanding that the Department of Energy is doing, it is my understanding only. It is an echelon up here with respect to me. But I do think that the Department and the NRC are in cahoots in making this study.

MR. WOOD: That is what I am hoping, and I am hoping to hear you say that the two departments are working together.

GENERAL GATES: I believe that is the case. I too would be disappointed were it not.

MR. WOOD: Thank you. I hope so.

MR. GORDON: Gordon, AIF. I probably should have asked this question yesterday, but you raised the point about you would not take liquids at your site. Is that correct?

MR. CHURCH: That is our policy, yes.

MR. GORDON: And in listening to the people talk yesterday, the kinds of quantities of liquids that we have been talking about have been like a gallon out of a container and a half gallon out of this container. It seems to me that there is an undue accept placed on the business of liquids. Why don't you take liquids in this small quantity?

MR. CHURCH: Our experience has been that liquids give us all kinds of problems, and it has been a particular assessment that this particular quantity is small. We have had a number of on site users that have generated vast volumes of liquids.

MR. GORDON: I can understand vast volumes, but we are talking about violations from utilities and from other sources. A violation consists of a gallon, and this seems to be an undue penalty. Maybe somebody from NRC or from the burial sites can answer that question.

MR. CHURCH: I will answer from my own standpoint. As you can see from the viewgraphs showing how we operate, we leave our packages uncovered for a fairly long period of time. And one of the immediate concerns is that liquid tolulene and so forth dripping out of packages creating fire hazards, and at this particular facility that is something that we worry a great deal about in that we don't have a lot of water immediately available. We do have planning for that contingency, should it happen.

MR. GORDON: All right, I understand flammable liquids. How about water?

MR. CHURCH: We just have chosen not to differentiate between one kind of liquid as opposed to the other. And there are various kinds of radionuclides in those liquids that tend to give you lots of problems. And from our experience, we have chosen to enunciate a policy that makes our work at our site so much more easier, and I think for sound reasons, to where that we have come up with a policy of solidification of all liquids. Until we hear a lot of kicking and screaming from our generators that that is something that they can't live with, that policy

is going to remain invoked.

MR. GORDON: Thank you.

DR. DI SIBIO: Thank you, General Gates. A partnership we have in Nevada with DOE is an extremely important one and just one further comment with regard to it. I think DOE is a classic example of, or at least DOE in Nevada is a classic example of how state and federal government can live in true partnership and be beneficial to each other, and they're a fine citizen of the State of Nevada.

I'd like to hear from ..- this is the last speaker. At the close of this talk I will give some instructions regarding A, the coffee break, followed by the three separate groups. If all goes well, we should be out of here completely prior to 2:00 p.m. That is what we are targeting for.

I'd like to hear from the Material Transportation Bureau, Lee Santman, Director, Department of Transportation.

XXXXXXX
ape 15

STATEMENT OF LEE SANTMAN, DIRECTOR, MATERIALS TRANSPORTATION BUREAU, DEPARTMENT OF TRANSPORTATION

MR. SANTMAN: Thank you. I wasn't sure we were going ahead with this stage of the program before we reach the absolute absorption rate of al.. the exposure that we've had in the last day and a half.

I would like to convey to you, to the extent I can, a sense of where my agency that carries a responsibility, pretty much a central responsibility for the standard-setting

transportation that affects the subject matter here, and shares with other federal agencies a monitoring, compliance and educational role, of where it is that we come from and what biases we carry in to the tasks that we perform in this field.

Basically, our overall task and objective, before it gets innundated with the other side considerations, is to set and seek compliance with standards that reduce to acceptable levels the risks associated with hazardous materials and transportation.

Now to put it in a bit of perspective, in terms of radioactive materials against the background of other hazardous materials, things that are poisonous, that burn, that explode, our data system indicates that during the period, nine-year period 1971 through '79, we received reports of some 90,000 incidents in transportation involving these kinds of materials. Of that, the total number concerned with highway movements of radioactive materials, virgin materials, waste materials, incidents were a total of 323. And a large portion of those, 275 of that 323, were reports of suspected but proven not correct leakage, or very minor amounts of contamination.

So leaving down out of the total over a nin-year period of some 90,000, roughly 10,000 a year, our documents indicate about 4850 incidents that had some reason for concern or corrective activity. Associated with those are zero deaths, zero injuries attributable to the material concerned.

In contrast I might point out that of the 90,000 total, roughly half of them, 45,000, involve flammable liquids, our favorite friend the gasoline truck, for the most part.

Now in establishing standards and approaching seeking the goal of compliance with those standards, we operate on the premise that except for a handful of materials that are so unstable in transportation as to be totally unacceptable in transportation in any form, that indeed hazardous materials, including all forms of radioactive materials, are going to move commercially. It's an accepted given to us in our approach to establishing standards, seeking ways of achieving compliance with them.

The standard-setting activities that we engage in are aimed at meeting transportation considerations and transportation conditions. They are not as a starting point intended to achieve other desirable results of other interests. Consequently, some of our standards may be completely compatible in the radioactive materials field with storage or disposal requirements of other operations, other organizations. In other cases, they may not be. The needs of a particular disposal or storage activity may place different demands, than our perspective of what the transportation environment places on packages that move.

We do have to recognize that historically, transportation considerations have caused standards to come into being in advance of other activities. For example, we live now

40

with the transportation standard that describes pretty much the universe of compressed gas cylinders. That's borrowed heavily by the mobile home regulators. It's borrowed upon by those who regulate tanks for skindiving.

In all those cases, in the case of fire extinguishers, a transportation standard that was originally designed to provide for safe movement of compressed gasses by rail and by highway has now been incorporated by reference and adopted and applied as the standard for a wide range of other activities. There it has worked very well, probably because in our standard for transportation, we have so overregulated it, so overstated it, that it can stand up under most of the rigorous exposures in other arenas.

Our second role is that of seeking compliance with the standards. This involves the whole range of things that have been discussed here the last day and a half of inspection activities, enforcement actions being done through federal agencies, through state agencies, through contractors, through regulated entities' own educational QA QC practices, and the various educational and training aids that each of those levels put in to the picture.

These things are true from our perspective with respect to the entire range of hazardous materials, of which radioactive materials is but a small element. Much misunderstood at times, but still a small element.

It is our sense that the transportation standards that we have established that have applications to low level waste generally meet the transportation needs. We do not foresee great major overhauls of the transportation regulations as they affect low level waste.

As with most other of our regulations, there is room for tune-up, adjustment, clarification. These are on-going activities. We do not contemplate changing the standards for packaging to achieve the objectives or the goals of any particular disposal operation, disposal activity.

We would, of course, recognize any standards that are needed to achieve that purpose, and would expect them to continue to embody within them the necessary levels of safety to accomodate the problems that we see in transportation.

We generally see that the areas where the greatest productivity improvements can be realized in transportation safety low level waste is really in the performance that's being sought against the existing standard. The entire range of shipper activities, whether you're talking generators, brokers, utilities, whatever the choice of label may be, and the carrier activity, we believe have from the transportation perspective in front of them a thoroughly adequate set of standards to achieve a totally acceptable level of safety in the movement of low level waste. It's a matter of how we achieve performance of those standards.

Again, this is not a problem that we see limited to radioactive materials. As a representative from the State of Washington so accurately observed yesterday, Jack Wood, that in the State of Washington, their entry into their current wrestling with low level waste transportation concerns really was an offshoot of their peaked concern and activity looking at the movement of commercial truck traffic generally in the State of Washington. Hazardous materials is a subset of that, and then radioactive materials, low level waste, is a subset of that, even.

That I believe, from where we are looking at the picture, is the correct perspective.

The area in which we feel, from my hazardous materials agency's perspective, we feel the greatest need is to find ways of supplementing the rather limited federal inspection capabilitym not just in radioactive materials, but in the whole range of hazardous materials and ultimately in the whole range of highway safety.

Consequently, you'll find many people from my organization and sister organizations in the Department of Transportation speaking in terms of encouraging states to adopt as their own the federal standards with respect to highway safety, the federal standards with respect to transportation of hazardous materials, arguing to them that the benefits are these: national uniformity of standards, the lack of a need for state investment in the technical skills required to go into

standard-setting, thus allowing available state resources, energies and interests to be directed in the areas where the federal government is the weakest. That is looking at the actual operations that are subject to these regulations and causing compliance to come about, whether it's through cajoling, kicking them in the behind, imposing civil penalties, shutting down operations or what have you, or combinations of all of them, which is probably the wisest way to go.

Again, referring back to comments of Mr. Wood yesterday from the State of Washington, this is a path that clearly the State of Washington has chosen to embark on, and as our part of the partnership, we are striving to supplement financially to the extent that we can through various means of sharing in radiation monitoring costs and primarily through training of state inspection personnel in how to use the federal standards.

There are obviously problems of processing individual cases. You've heard this from the NRC representative this morning. You heard some comment on it yesterday from other state representatives. The matter of inspectors from three different agencies being at one place, duplicating each others' activities. The problem of inspectors of one organization, one government entity handing off cases to other government entities for purposes of processing and taking appropriate enforcement action.

These are problems, but they're not insurmountable

problems in the search that we're making with the individual states to share with us the inspection, the compliance-seeking role, applying federal standards.

With respect to the specific findings and observations of our inspection activities, our Bureau Motor Carrier Safety inspectors that have participated jointly with state and NRC officials at the three waste disposal sites and at various roadstops along the way, I can only endorse and verify as correct the observations that have been laid before you by the NRC representative this morning, by the state officials in each of the states yesterday. Their analysis of where the problems are, the percentages of them, the nature of them, we can verify and attest to.

But we can also add to the mix that we're out there shutting down a few trucks here and there too until they get the brakes fixed, and imposing a few civil penalties and collecting a few dollars, some from a few of you who are in the audience here today.

So to those of you who are operating facilities and are in states where you're concerned with whether or not there is enforcement action being taken, indeed there is. There was of course a flush of activity as a result of the letters from the three governors last year. That shook the trees and a lot of inspectors came running out in all directions, and I think that the NRC observation this morning that we seem to now perhaps be

congregating at places like Beatty and Hanford does suggest that a redeployment to get maximum coverage may be in order. And obviously the end result will be better if the problems are picked up at the front end of the transportation stream instead of at the back end.

It was convenient in initiating this effort starting last fall to focus at the three waste sites, but it is preferable to, as you have observed, to stop the shipments that are problems, correct the problems at the front end of the transportation movement. And I believe that there are indications here in the last two days and other activities that I'm aware of that are tending to back up the compliance correction program for that stage.

I'd like to digress from the general subject of low level waste and speak to you for a few moments on a more general radioactive materials matter, and that being the matter of highway routing radioactive materials, and outline briefly for you what it is that we have thrown out in the street in the form of a notice of proposed rulemaking on January 31 on the subject of highway routing of radioactive materials.

As a brief item of background that I'm sure there are very few of you in here who aren't sensitive to already, in January of '76, city ordinance in the City of New York had the effect of barring the movement of radioactive materials from Brookhaven Laboratory in Long Island to any of the places south

or west, because the route through New York City was cut off. Through various legal proceedings that involved coming to the Department of Transportation for our views as to whether or not this New York City ordinance was inconsistent with the federal scheme of things or not, we, after much agony, concluded with some reluctance that the New York City ordinance was not inconsistent with the federal regulatory scheme that we had. We plastered it with all kinds of conditions and caveats, but the bottom line at that point was that we felt that we had rulemaking authority with respect to highway routing in the whole realm of hazardous materials, but had not exercised it in the past, rather defering to reasonable and responsible local and state traffic control regulation.

Having concluded and publicly announced that we did not see that as being inconsistent with the federal scheme of regulation, we proceeded to fill that gap and undertake a rulemaking to indeed prescribe a routing regime for radioactive materials by highway.

Through an advance notice proposed rulemaking, asking a wide range of questions of should we and how should we and how elaborate should it be, we worked out a proposal that was issued in the form of a notice of proposed rulemaking at the end of January. We're looking forward to a series of public hearings, probably five in number, during the period end of March, first week or so in April. We have tentatively settled upon five

cities. Somebody back in Washington may be changing my mind about this time about which ones they are, but we've tentatively settled on Seattle, Denver, Chicago, Philadelphia and Atlanta during the last week, week and a half of March, first two weeks of April.

Public comment period closes the end of May and we will scramble like hell to get a final rule after that time.

The basic features and considerations that are embodied in this proposal I think should be put on the table at this meeting because a number of the things that have been suggested and a number of the items that I notice was on Dr. DiSibio's shopping list of group therapy treatment items for later this morning fall in this field and perhaps are headed toward some sort of conflict with what we have proposed. In many ways I think they're compatible, though.

The first thing we tried to do was to examine the entire range of radioactive materials that are moving by highway, and try to give recognition to the proposition that there are indeed a wide, wide range of risks associated with the different kinds of radioactive materials.

Then our proposal in its approach to this thing had kind of looked at them in three groups. I hate to use groups or categories or classifications because we have overworked those terms, looking at radioactive materials so many times, but I know of no other way to lay this out.

The first grouping, ones that are extremely low level

radioactive materials, and we have not, we have looked at and decided not to require in the past any kind of outside marking, placarding on the outside of the vehicles carrying those. These of course include the small quantity packages of radiopharmaceuticals. These materials would not be covered by, or rather they would be excluded from any routing requirements that we would establish.

The second category also includes low level materials, but these are packages where the way they're packaged and the combinations of them do indeed under our existing regulations require a placard on the outside. These materials under our proposal would be subject to a general routing requirement that emphasizes the selection of a route to minimize radiological exposure to the fewest people and to encourage the use of interstates or state-designated preferred routes, and I'll speak more to that later.

The decision, the basic decision there would be with the carrier, following guidelines that are included in the proposal.

Now in the third category, where the more toxic radionuclides are included, we would under the proposal, and these are identified under our existing regulations as large quantity shipments, we would require these materials to be moved over a preferred highway system, basically the interstate system.

The features of this routing requirement for the large

49

quantities have about four elements to them. The use of preferred routes, first of all. Carriers would be required to use interstate highways or routes designated by states. Where you have a circumferential choice of interstate systems at an urban area, the choice would have to be the one that goes around rather than through, if you have that choice.

Route plans would be required to be prepared for these kinds of shipments by the carriers, a copy carried with the vehicle, and that copy supplied to the shipper. And the shippers on a quarterly basis would be required to provide to us description of the routes used and what materials were moved. Again I'll get back to the purpose of this and what we would expect to do with this.

The fourth element of the requirements with respect to large quantity shipments would be the requirement that the carrier carry out a driver training program to meet certain specific elements of the minimum requirements spelled out in the standard.

There's one special case involving large quantity shipments, that of the radiated reactor fuel, where we have recognized in the proposal that consistent with our working arrangement with the Nuclear Regulatory Commission, that they indeed would operate an override in the name of security, that where their security requirements imposed some variation on our basic proposal of sticking with the interstates and filing the route plans for this, we would recognize that there was a

degree of override and adjustments would be made.

I think the area that is probably most noteworthy to concentrate on with this audience in considering the background of this particular get-together is a state involvement that we envision. The notice of proposed rulemaking emphasizes the involvement of the states in the highway routing business, particularly in view of the fact that state and local agencies do indeed bear the first round responsibility for emergencies.

The proposal recognizes that a single federal routing rule cannot resolve all of the possible situations that may arise in the highway system throughout the United States. It also recognizes that the basic responsibility historically, politically, past and probably forever, in terms of building and maintaining and managing operations on highways, is essentially a state operation.

The notice of proposed rulemaking encourages states to assess peculiar local situations and after appropriate consultation with local officials, grand words, to designate additional routes for these large quantity shipments.

The notice includes a set of guidelines to be followed in the state route selection activities. States would be invited by the proposal to designate additional non-interstate highways to add to the preferred network, but also be authorized to remove from the preferred highway network segments of the interstate system which they perceive to have peculiar problems,

but only under the conditions that an equivalent substitute route be put in place.

No absolute ban of radioactive materials would be permitted under the scheme that we're talking about.

With respect to the orderly filing of route plan information and shipment information, we perceive another importan element of our activities that relate to this and that relate to the federal-state relationship under this proposal, would be the establishment of an historical data base pertaining to the movement of radioactive materials.

There are other ways that we are pursuing to collect and distribute in a comprehensible manner information on radioactive material flow, normal flow. The question from the floor yesterday from the state representative from South Carolina about accessing their data is partially prompted by my department's desire to make available to all interested levels of activity, state, local and industrial, better information on the overall commodity flow descriptions of radioactive materials.

We believe that the data that would be made available by the description of the route plans and the commodities, the shipments that have been made by that, is an integral and important part. It is particularly important since among the other things that we are saying in this notice of proposed rulemaking is that we do not believe, and we would intend that our rulemaking in this field would preempt prenotification at

state and local level.

Taking that position, we recognize, we appreciate that there is the need for information, and we are pursuing, as I've indicated, a number of ways of trying to acquire and provide this information in as painless and useful a manner as possible.

In summary, the major features of the proposed rule-making that we have put out, the basic underlying premise is that radioactive materials should be allowed to be transported by highway. It recognizes that there are substantial differences in the hazards associated with the various kinds of materials. It favors the use of the inter-state system because of its much better accident probability statistics. It allows states to assess peculiar local conditions and designate additional or substitute routes. It places an importance on minimizing the travel time as the key to reducing total risk in the transportation of radioactive materials.

It places importance on avoiding population centers unless operational necessity for delivery or pick-up, or other safety considerations, dictate a different result. It requires the use of the interstate or the equivalent beltway if available in the case of large quantity shipments. It allows the overriding exception where NRC's physical security requirements have some application. It clearly establishes a routing policy across the whole spectrum of radioactive materials, and it seeks to establish a data base for providing information to states in emergency

response planning.

It says to the readers that we would find inconsistent with this approach state and local restrictions that would completely prohibit travel between any two points serviced by highway. We would find inconsistent the prohibiting of the use of interstate highways, including prohibitions of travel based on time of day, without the designation of a preferred alternate highway.

We would find inconsistent the requiring of the use of a preferred highway that did not meet state guidelines. We would find inconsistent requiring prenotification or escort requirements except as those may be a part of physical security requirements brought about by NRC requirements. And we would find inconsistent any state or local requirement for special personnel or equipment because we believe that the proposal as we have shaped it addresses and provides an acceptable balance in each of these areas.

With those remarks, I wrap up and conclude what I have to offer.

MR. GALLAGHER: Bob Gallagher with Nuclear Sources. If you have accepted a certain degree of consistency with federal regulations, in the case of New York City, how can you find inconsistent under the proposed rulemaking a decision by the City of El Paso, Albuquerque, Colorado Springs, to do the same thing?

MR. SANTMAN: Well, what I was trying to tell you was the history of how we got where we are. At that point in time,

we had in front of us in the legal proceeding a very narrow question: is that New York City ordinance inconsistent with what you have -- is it inconsistent with the federal act that you people are administering? Is it inconsistent with the regulations you have issued under? We had an act that said the Secretary of Transportation may prescribe routing requirements. We looked around in our regulations. There was very little in there in the way of routing requirements. It was hard in a legal sense to say that the federal government had so fully occupied this field that there wasn't room for a state or local ordinance of the type that was enacted in New York.

And I know that since then, since we reached the conclusion we did, there have been other ordinances, in many cases using the same language as New York. In fact, they almost forgot to strike out New York and put in new whatever it is.

And the effect of the document that I am describing today is in the notice of proposed rulemaking stage. So in a legal sense, the situation is still as it was when we said the New York City ordinance is not inconsistent; we do not see that it is preempted.

Clearly, what we're moving in the direction of is preemption.

MR. GALLAGHER: Would it be -- if the proposed rulemaking goes through as you have proposed it, would the New York activites be found inconsistent at that time or can you do this

after the fact?

MR. SANTMAN: Well, one of the things we are doing in this rulemaking that we have never done in a rulemaking before, and it's partially reflecting back on our experience there, is that we are including right at the end of the rules a shopping list of things that we are finding inconsistent. Our pattern in the past has been as we implemented the law that was enacted in '75 that said something that is inconsistent is preempted, and we did not have much in the way of guidance as to what the Congress meant in terms of inconsistent. Did they mean did you hold them up to the mirror or to the window and if the letters are identical, they're not inconsistent if there's any variation?

So we fashioned the process. We hope the one that was manageable that we didn't have a legislative drafting review service. We couldn't afford to do that. So we dealt only with hard issues, whether it was actually -- we said we're only going to offer our opinion on something as to whether it's consistent or inconsistent. If it is in place, there's a real confrontation, there's a shipper carrier who feels that this local ordinance is inconsistent, then we'll offer our opinion, recognizing that judges all over the country can come down on top of us.

So we chose a very narrow field there. Since then we have really only dealt with about four or five of those situations. We do hope, with what we're saying here, to give the

answer ahead of time, though.

MR. HOWARD: Would you like to shed some light on the IAEA situation, please, with the DOT?

MR. SANTMAN: I'm not sure what you mean.

MR. HOWARD: Well, the IAEA rules and regulations are up for rulemaking now I believe, also, and you have right now all of us as packagers and shippers are going to come under a whole new gambit of rules and regulations as far as shipping and labeling. It's going to be a whole new process of learning.

Where does the DOT stand on that right now?

MR. SANTMAN: It's an open rulemaking, shared jointly with NRC. There are a pair of rulemakings that are open on it. Extensive comments have come in. We and NRC are jointly examining the comments. It's just an open rulemaking. I don't know how else to describe it.

There is a benefit to having a degree of consistency between domestic and international standards. In fact, we spend an inordinate amount of our staff time in the international arena. Ninety percent of it has nothing to do with safety. It's to keep the Europeans from putting into safety standards non-tariff trade barriers that would adversely impact on a very favorable balance of trade situation.

So our general look at the matter of international standards and domestic standards on packaging and handling and identification of hazardous materials is that we do see a benefit

to U.S. interests by having compatibility. I say that cautiously because there are some areas where we just flat-out disagree with the Europeans and end up with a caveat that goes off in a different direction.

tape 16

MR. BAILEY: Ed Bailey. I have a little bit of difficulty in your requiring shippers to provide routing information to the federal government, but being opposed to certain shipments being required to prenotify a state of their shipping routes. I think shipments such as we have about four or five times a year that involve upwards of a million curies of cobalt in a single shipment, it is sort of nice to know where they're going to be in case they have an accident.

I think the states have repeatedly asked for prenotification, and NRC and DOT apparently now by this rule will by regulation say we can't get it.

The second point that I think DOT is going to have a problem in is in the adoption of the AEAE limits because essentially you will put into the routing notification requirements every industrial radiographer and every well logger by the lowering of the limits on the amount of material. In Texas alone you will have 2,000 shipments a day which will require routing information on.

The other thing that I think ought to be looked at by DOT when it is redoing all of its regulations is looking at the special situation where the material is transported by an

industry in their trucks with trained personnel driving it, the survey equipment on the truck, and the individuals driving the trucks monitored. Because some of the requirements of DOT in these situations appear to many people to be very ridiculous in view of the type of equipment and personnel that you have involved

MR. SANTMAN: THat was an interesting inventory of observations. Let me start with some of the ones at the top.

I fully anticipate that our views on prenotification will be one of the much talked about features in the hearings and in the rulemaking that we are going into.

Secondly, I disagree with you that we will be picking up 2,000 well-logging operations with the route plan requirements.

Thirdly, one of the purposes of having the route plan on the vehicle, and one of the purposes of having states share in designating highways for the large quantity shipments is aimed at providing emergency response kinds of predictability and information to state and local people.

MR. BAILEY: I mentio. in your comment that you will not pick up well-logging in your routing because as I understand it, Americium will go down to eight curies, and the common well-logging source now is about 18 curies of Americium, so I am very interested in that interpretation.

MR. SANTMAN: I'm not prepared to play the numbers game with you, but it clearly is not our intention to reach well-logging operations, and in the notice of proposed rulemaking,

we did indicate I think as one of the examples that would not be in the large quantity arena with mandatory routing --

MR. BAILEY: THat's true now, but if IEAE limits are adopted, they will be. I was just trying to point out that you're getting yourself into a box.

MR. SANTMAN: Well, we obviously have a lot of things to wrestle through in the other rulemaking that involves the question of adopting the IAEA standards, and the comments have been extensive and there's a lot of work ahead of our health physicists in working those comments over and arriving at a final rule or amended notice on that subject.

MR. PRENGOMAN: Paul Prengoman, Nevada Legislature. I've got an article that I would like to read a short paragraph from that appeared in our paper about your proposed rules. And this will strictly be related to low level waste.

It says -- you are quoted earlier in the article, but this quote is not attributed to you. It says, "The government envisions virtually no restrictions on the routing of the low level wastes except to say trucks should take a route that presents a risk to the fewest persons. Even that guide can be interpreted differently and ignored in some cases, officials said."

The implication here I think is that the rules governing low level routing are number one, going to be vague, and number two, going to be arbitrary. And I think that in light of what we

were told yesterday by Mr. Wood and the people from Washington, that the public does not distinguish between low level and high level. The effect of these rules in terms of low level waste are going to encourage more bans by localities on nuclear shipments and radioactive material shipments than discourage. I think these bans already exist in some eight or nine states.

But I just can't see how by not restricting the routing of low level shipments that you hope to discourage these bans.

MR. SANTMAN: Well, I believe that -- I suspect that that story was an AP story, and I frankly felt when the gentleman called me on the phone, from then on to the time that he spent a half hour in my office, that he had made up his mind how he was going to head that story, and by God, that's the way it came out. And I could have talked for three days and it still would have been the same.

There is a middle ground in this, and that's why I indicated in the beginning the discussion that we kind of grouped things into threes. A large quantity, the spent fuel, the large quantity questions were absolutely mandatory on the interstate or designated preferred highway, except for access directly on and directly off, and then in accordance with a route plan that is with the vehicle, subject to being examined by any enforcement officer.

Then the middle ground, which is the difficult one, where a vehicle has got a level of radiation associated with it

that indeed requires a placard but it's not really up high. In those situations, we are saying to the operators, if you stick with the interstate system, if you do the same thing that the large quantities are required to do, you're all right. You're doing the right thing.

If you deviate from that, you've got to have some good reasons, and here are criteria that you as the operator of that truck or that group of trucks are responsible for.

It's a difficult thing, as I'm sure you experience in doing any kind of a regulatory activity, of where you draw the line. Do you draw it at six, eight, ten? And it is in this range of activity where there's enough radioactivity on the truck that a placard is required, but not really a large, great amount, that the vehicles tend to need to do drop-offs, pick-ups, deliveries. Not everything is going to be a low level waste vehicle that has a placard on the side that goes from one distinct origin to another separate discrete destination.

In many cases vehicles that fit in this category are involved in the delivery of pharmaceuticals. Many of them are engaged in the activity of picking up waste in a major metropolitan area, taking it to a collection point before it gets batched together for a major shipment to a Beatty or a Hanford.

And in those situations, we did indeed wrestle with it. And I can tell you that having a Secretary of Transportation who brought with him a lot of people from a mayor's office

caused us to look hard and wrestle with just this proposition, of should we indeed require in this proposal everything that has a placard on it to use nothing but the interstate, directly on, directly off? And it's our conclusion it was an overdone thing.

Now one of the questions that we've thrown into this notice of proposed rulemaking is the question of should we seek some distinctive identification for the large quantity shipments? I think part of the public perception problem that we've been wrestling with is that that sign on the outside of the vehicle says radioactive. Once you get that word, people do not discriminate. I've even heard it facetiously suggested by the managing director of the National Tank Truck Carriers organization that's concerned with propane and gasoline trucks that if we put a radioactive placard on the side of our trucks whenever they were involved in accidents, we wouldn't have the crowd control problems that we do now. Everybody likes to come and watch a fire, but if they saw that on there, we wouldn't have any problem getting the fire trucks to the scene.

There is that public perception problem associated with the break that we've made, that some placard vehicles would be under this mandatory go on the interstate system and others would be in a more loosely regimented regime. And we have thrown into this series of questions here, should we make a distinctive placard for the large quantity as opposed to the others?

MR. PRENGOMAN: I would think that you would have to stress that the preferred route system is to be used by all, both low level and high level, as you've just mentioned. Because we're stuck with the public perception, and a lot of times those are what we have to make laws.

You know, we get the pressure and --

MR. SANTMAN: I would suggest that if this system went in as it is now described, that anybody who is moving a placarded truck, radioactive placarded truck and was questioned or encountered by a state or a local law enforcement official as to what are you doing down here on this street, that the local law enforcement official would have considerably more leverage than he has right now to extract from that truck driver some good, solid answers as to why he was not up on the interstate, why he was parked down here, why he was wandering around in this area.

There is embodied in this proposal a list of guidelines, not hard, rigid ones, but guidelines on this middle ground of trucking activities, on what would be justifiable deviations from an interstate system.

MR. PRENGOMAN: Thank you.

MR. NEUMANN: Al Neumann, DOE. I have one question.

The proposed rulemaking, if it goes into effect, let me ask you this question. What is this going to do now to the NRC's ruling of July 16, 1979 as far as the spent fuel?

MR. SANTMAN: Well, it will not disturb that.

Technically, it will not disturb that. That's what I was saying, that that would continue as an override.

Now as a practical matter, as a practical matter, I believe that with respect to route selection, conversations that I've had with people at NRC on this point, I believe that we are selling them on the interstates a little more than they had been in the past.

MR. NEUMANN: Right now they have a ruling, as you are well aware, that it is not the interstate. This is not for secure reasons.

MR. SANTMAN: I understand, but there are security considerations that go into a few other things, too. There are operational activities that they would impose in the name of security in addition to picking the route. But I do believe that you will see that NRC's view of what is a good route for security purposes will be moving closer to our view of what is a good route when you are considering only transportation.

MR. NEUMANN: Realizing it doesn't affect us, but on the promotion side.

DR. DI SIBIO: I'm sorry, we have to close you down as quickly as possible because I do want to get you out of here in some reasonable sense of time.

Would someone please call the folks who are outside? I want to split up some groups. Essentially we are going to break into three separate entities, each of which will have two

questions to deal with, each of which will have a chairperson who will explain clearly to their group the mission.

Upon completion of the mission, you may go to lunch, and only upon completion of the mission. After lunch you will return here, which will be at 1:15. If you don't complete your mission by 1:15, you will report here at 1:15 and go to lunch after that.

Group One will meet in the interroom next door. That's the inside room next door. Captain Briner will be the chairperson of that group. Captain Briner, why don't you come up here? I will give you your list. And here is all the material you need.

The following people will go with Captain Briner outside, pick up your coffee, and into the room: Robert Bishop, Al Neumann, Lee Santman, Mr. Weller, Barry Koh, Senator Jacobsen, Herb Book, Al Grello, Jim McCloud, Steve Bernstein, Jim Harvey, Darlene Garvin, Al Western, Walt Hipsher, Richard Russell, Bernard Quinn, Rock Reiser, Terry Hanson, Bruce Owen, Bill Shepherd, Merrily Kronberg, and Kenneth Gablin. All those folks can leave now.

The second group will be headed by Lee Cooley. After I complete the list, those folks may get their coffee and meet in the outer room next door. Cal Brantley, Bruce Church, Ed Tarnuzzer, Tom Baer, Herb Oakley, Senator Joe Neal, Dr. Fred Mehler, Lidia, Emmanuel Gordon, Robert Nelson, William Cromwell, Al Baietti, David Zimmerman, Orville Crose, Chining Gerber,

66

Samual Hohmann, Gregg Young, Roy Post, Ed Jennrich, I believe it is, from EGNG, John Stewart, I believe it is Pat Serie from EGNG, and Sue Hobart from Quadrex. Those folks may leave, get your coffee, and meet in the room next door.

The next group will be headed by Thomas Gray. This group will remain in this room. Because you are here now doesn't necessarily mean you are going to remain here. Allow me to read the names, first. Those folks in Tom Gray's group will be Ed Bailey, Robert Engelken, James Hanchett, Assemblyman Prengoman, Assemblyman Bedrosian, John Vaden, General Gates, Boward Mays, Wally Budke, Robert Gallagher, Ed Brooks, Charles Eason, David Howard, Lou Reynolds, Jim Russell, Laurie Gray, Walter Wagner, R. L. Stetson, Frank Steinberg and Emily Wacks, George Trigilio, Michael Grand, C. Skorupa from Nuclear Packaging and Larry Hansen from Nuclear Packaging.

Now whose name did I not call? Did I call everyone? These folks will meet in this room and you can all forward to see Tom. If you want coffee, get that first.

(Whereupon, at 11:00 a.m., the meeting recessed, to reconvene at 1:15 p.m. the same day.)

AFTERNOON SESSION

(1:15 p.m.)

CHAIRMAN DISIBIO: If you will take your seats, please, we are ready to begin.

A couple of housekeeping announcements, has anybody got a definitive answer as to whether --

With regard to the proceedings, as they are being reported, everyone who was a participant or an attendee as a matter of actual fact will receive a summary, an edited summary of all of the things that are occurring here, or not all of them, all of the things that occurred in the public meeting rooms.

If you desire a complete verbatim transcript, you may write to Betsy and receive one. Let us not deluge her for requests for those, however, because they are very expensive and we know that the government does not have a lot of money.

We will also generate a list of attendees, which Tom will address also in his report in terms of some commitment I have made with part of the communications that will help us all, I should hope.

Beyond that, again the rate of attrition has been phenomenal. I really appreciate those people who have ng in there to the bitter end, as it were, to provide us your expertise and your input.

I have heard a lot of good things from folks with

regard to the value of the conference to date; that is to say, even though we have to come up with finalized conclusions or actions, but generally speaking I think it has been a good valuable experience for all of us.

But unless we implement some of the things that are generated, their concepts and ideas, then it won't be too valuable.

It is a whole lot like a reminder of the story of the two fighters in the ring. One little tiny kid in the corner went like this, and the rabbi looked at the priest and said what does that mean? And the priest said not a damn thing if you can't fight.

Now that is what the conference will mean if we don't generate some things. It will go for naught, save for the fact that we have had a lot of comaraderie, save for the fact that we have gotten to know each other and save for the fact that I think a natural network of communication will evolve from this, even if it is only a select group of people who select another group of people to contact and stay in contact with with regard to this issue.

So without further ado, we will hear from each individual group as to the results of their conclusions. If there are any dissenting reports from group members, please let us know that as well.

Captain Briner is group number one. Would you like

to give us --

DR. BRINER: Thank you, Dr. DiSibio. I want to thank you for providing me of the leadership responsibilities, because it was probably the most maverick of all three groups. But as an aside, I will agree that perhaps one of the major values of this assemblage has been to bring under one roof a really representative group of people in that it covers all segments of the total industry in which we are speaking.

And I find it particularly valuable from the medical standpoint to be rubbing elbows at the slots for tots with the nuclear power people, other people who meet the definition of generator, of which I am certainly one.

So I want to thank both the State of Nevada and Nuclear Regulatory Commission for providing for this sort of dialogue.

The particular group that I am reporting for had two major topics to consider, one of which was enforcement, the other being transportation.

The first mistake I made, I suppose, is in suggesting that we consider the easier of the two first because we certainly occupied a great deal of time talking about the transportation phase of this thing. With regard to concise definitions of the problem I think they are probably represented in the -- if you want to attach definition to the scope of the problem to the types of things you had each of the groups

consider.

In any case we considered transportation first, and the first thing we were to consider under transportation was the routing requirement or nonrequirement as it may be. And I think that was the only area in which there was a truly unanimous decision that simply said that rulemaking procedures of DOT with preferred routing, utilizing insofar as possible the interstate system, while still taking cognizance of state preference, or an alternate routing pattern so long as it was an equivalent to the interstate system.

So there was unanimous opinion within the group regarding that part of the DOT proposed rulemaking procedure. With regard to prenotification, there was no consensus, except to say that we believe a common sense approach probably should be operable in this area, if indeed the intent is to provide, as is the case in everything we are considering for the public health and safety of everyone involved. Then a common sense approach would indicate that where that can be demonstrated where the need for the information from a public health and safety standpoint is operating, then perhaps prenotification could be arranged on an informal rather than a formal basis.

On the other hand, if one is looking at patterns of transportation to see what is moving over any of the 50 states' roads, there is probably adequate documentation already existent regarding that, in that the records of three operating commercial

low level waste disposal facilities are certainly open to all states as far as who is sending what to whom.

So other than the common sense approach there was no consensus regarding prenotification.

Vehicle inspection was, well, uniform vehicle inspection criteria was another area where there seemed to be a unanimous approach on the part of the work group.

Every one indicated that that would be very, very valuable if there were uniform requirements with regard to vehicular safety inspections throughout the 50 states.

There are obvious advantages to this.

That concluded our consideration of the transportation area.

On into enforcement. Which one might categorize as a real Pandora's Box or bag of worms, as you may wish to address it. Under that heading there were some five subtopics relating to quality control or quality assurance for industry inspection, responsibility, mechanisms of enforcement and reciprocity.

The group in general supported very strongly the quality control and quality assurance program which is emerging from the Atomic Industrial Forum.

It felt that quality control and quality assurance really has to start at the generator of the waste. Without it occurring there, no matter what you do downstream from that

point it is going to have a very salutory effect.

This would include inspections at the generators of waste, at their sites, by appropriate duly authorized personnel. But certainly QA or QC has got to start right at the beginning of this chain. And in its absence the whole thing is going to collapse on our heads.

So we very strongly applaud the efforts of AIF in bringing this to the public domain.

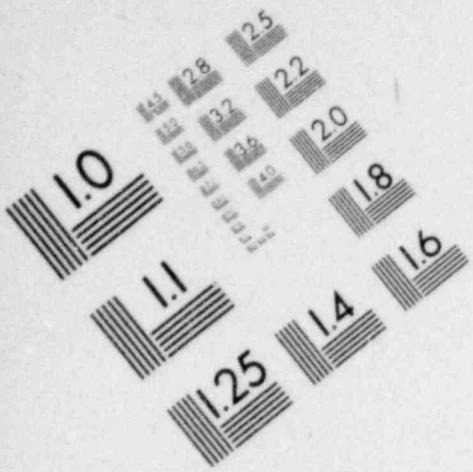
Now with regard to inspection we chose to look at that in terms of quality control and quality assurance and again said we think inspections of waste generators are important, again by inspectors whose perhaps statutory authorization or authority permits them to do that.

We do not feel strongly that there should be third party inspections or audits of any generating site.

With regard to responsibility, consider that from any of a number of avenues. However, it quite clearly has to originate at the generator of the waste; that is, at his site. Responsibility for at least beginning this chain of events that results in something appearing at Beatty, Richland or Barnwell, has got to be in with the guy who is generating the waste.

From that point on it would seem that in most cases a common sense analysis should apply as far as the siting responsibility for untoward incidents in the total chain.

Responsibility or the allocation of the responsibility



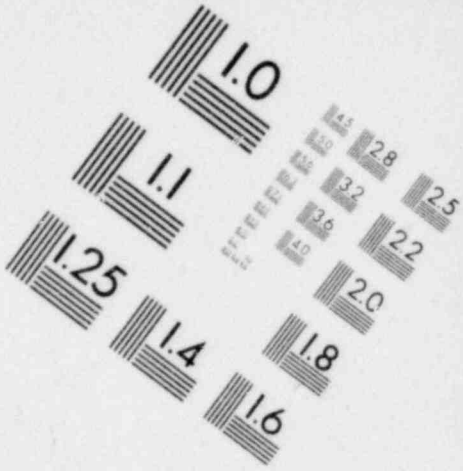
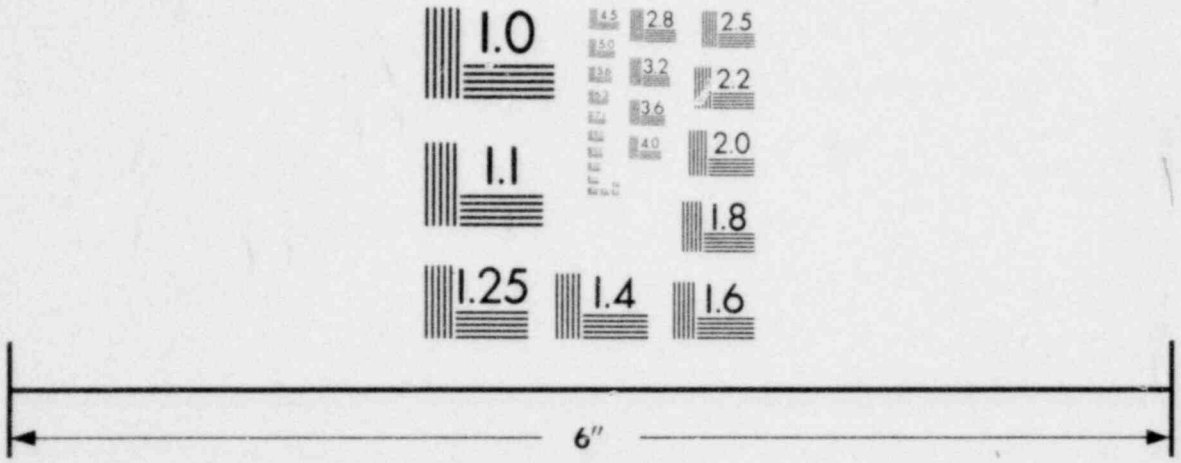
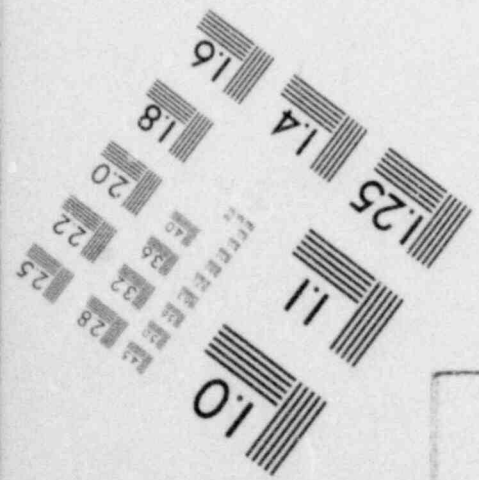
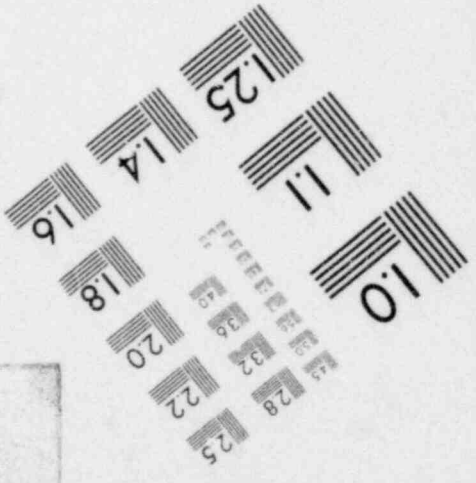


IMAGE EVALUATION
TEST TARGET (MT-3)



MICROCOPY RESOLUTION TEST CHART





could very well be accomplished or assigned to the agency which issues the license all along the way. And by approaching it in that fashion we will probably come as close to properly assigning the responsibility for very proper assessments of the responsibility for incidents as they occur, which will be much more probable under that chain of events.

Enforcement mechanisms we very judiciously, and I use that term "judiciously," avoided the legal considerations of enforcement mechanisms because there not being any legal counsel available to the group -- in fact none of us had any legal training beyond that which the average guy on the street has -- we avoided the legal issues or the legality of enforcement actions in its entirety.

However, there were certain interesting things that occurred from the discussion or arose as a result of the discussion. I think most people feel that the embargo was perhaps the singlemost effective way of, first of all, drawing the attention of everyone concerned to the problem. And it was also, or is also quite effective in correcting deficiencies wherever they occur.

The problem that arises from an embargo system is perhaps, or the problems that arise are perhaps twofold. First of all, all of us believe that if an embargo is to be assumed or is assumed to be a punitive action, then the embargo act should fit the crime. It should be used judiciously where,

for example, the repetitive violations not affecting directly and immediately the public health and safety of anyone. But if there is a repetitive history of even minor violations, perhaps an embargo is the best of all answers in correcting them, these deficiencies.

It was suggested that perhaps a system similar that which applies to state driver's licenses for example might be operable here, whereby a point system and points being assigned according to the severity of the violation or infraction.

But certainly there was unanimous agreement that the embargo as an act, not in the legal sense but as a tool was probably the singlemost effective way of gaining rapid compliance with not only the site disposal requirements but also the Title 49 and Title 10 requirements from the federal standpoint.

On the other hand, fines as such were deemed rather questionable as far as their value as an enforcement mechanism, particularly where it affects large corporations. And one cannot be discriminating according to size of an offendor, what the fine will be. That violates the intent of most common law in the United States. So they did not order for a fine to be truly meaningful to a huge corporation, in other words.

You would also be catastophic to someone of lesser financial backgrounds. So fines probably would not be a very effective tool except where criminal penalties may be involved.

I think the key questions with regard to fines is

that first of all, there must be a threat, whether immediate and catastrophic or perhaps demonstrable over the long term. The immediate or long-term effect of the public health and safety before that could ever be considered.

Currently it was noted that both NRC and the DOT haven't presently exercised their ability to fine violators or offenders with their own regulations.

Reciprocity was the final thing we dealt with. We looked upon reciprocity either from a state to state level or state to federal or federal to state level as a very valuable tool to support the compliance effort of what someone chose to call the receptor state; that is, the state in whose backyard is located the low level disposal facility.

We would recommend that communications channels should be developed by the respective agencies within all states to kind of grease the skids in this reciprocal adventure or exercise, or whatever it is.

But certainly we thought it not only valuable but perhaps valuable from the standpoint of corrective action for the State of Nevada or Washington or South Carolina to communicate with a state, or in the case of the federal government, if it is an NRC state, a lack of compliance by one of their own licensees and suggest that maybe they might like to do the respective state or Nuclear Regulatory Commission might in fact like to look at that operation on an inspection basis to assure compliance with

them, with the regulations that are already on the books.

One other point, if I may backtrack a moment, on the question of embargoes, we thought it was certainly a valuable, almost invaluable, tool for the kinds of things we are trying to get corrected.

There was strong feeling, and I certainly concur in this as the chairman of this group, that there should be an established formal mechanism for terminating an embargo. If someone is embargoed it should not be to time and infinity, unless their noncompliance was of such catastrophic nature as would indicate permanent embargo.

But there clearly should be a well-defined mechanism for terminating that embargo on the part of any state that issues an embargo.

I think that rather briefly sums up our considerations, and, Dr. DiSibio, thank you.

CHAIRMAN DISIBIO: A few things quickly by way of response, number one. Number two, by way of specific actions and responsibilities.

The three states, Washington, South Carolina, and Nevada, have committed to put together theoretically by June 1st a handbook of embargo, which will in effect say this is how you get embargoed, this is how you get back on the good list, as it were, and trying to be as reasonable as we can with regard to it and using it judiciously.

I don't think it has been used too judiciously in the past, but I think it will be in the future, and we have taken that assignment on. And as a result of this meeting, that kind of a pamphlet or booklet will come out and be distributed to all of the people present here as well as obviously all of the brokers in the nation and so forth.

So that everybody feels comfortable with where they stand and where the states are coming from with regard to embargo.

I would like to get a reaction if I may quickly with regard to should the states or what would your reaction be if the states, the three states asked brokers, broker-shippers, and agreement states to provide us three states with an affirmative action plan of onsite inspection of the generators.

What problem does that cause? In other words, Tom already does that essentially. Yes.

MR. BAIETTI: I think the problem is what already alluded to, and when the Captain was speaking, that the thrust is where do you have the authority. I am all for inspection, but I really think he hit on the most key point, and that is the licensing system is already geared to begin the inspection system, and it would seem to me that it should be the regulatory, the group that issues the license to define how the inspection can take place.

Now they could say to a particular licensee, you will

12

be inspected by your broker. And if they make that a condition of that license, that makes the broker then responsible to do this. That may not be the pathway that they want to choose for every licensee. And I think the advantage of letting the license issuing system determine how inspections should go forward puts it clearly in the chain of command that says how they control this, who is authorized to do it, what pathway you go through if you don't agree with the inspection when you have a third party involved. It is very difficult to know where the enforcemen ends.

CHAIRMAN DISIBIO: I am strongly concerned by the fact that all of us have identified time and time again the generator as the place to solve the problem as it were, and packaging.

Now if that is the case, doesn't it seem rational that rigorous inspection on site in the opening of packages will eventually solve that problem, long before embargo?

In other words, we are going from one extreme to the other.

Barry?

DR. KOH: I was just going to respond with regard to the inspection. Once again, between brokers and shippers, generators and burial sites, there is no commercial considerations that make the inspection of one commercial entity of another impractical, except as where it is required by regulations and

13

the authority is clear. For example, the utilities quality assurance department do audit my company's qualities assurance program, and as they are required to do by the condition of their license.

And there is authority for that. On the other hand, I don't know of any authority that I have to audit them.

CHAIRMAN DISIBIO: Well, you got the inherent authority as Tom, as anybody else has, to take the stuff, you want to make sure it is packaged correctly, it seems to me.

DR. KOH: Well, that may be a commercial consideration that I would enter into with the people that I serve, but I don't think you could have that as a requirement for the industry.

CHAIRMAN DISIBIO: Okay.

MR. GALLAGHER: Consider the possibility that I enter a hospital on their premises and happen to be working with a very bad actor. I open the drum and threaten contamination through the area of packaging who is liability number 1. Number 2, consider that the hospital may be using one or maybe four differer brokers. One happens to pick up the scintillation, one happens, dry waste, one happens to pick up animal carcasses. Are you going to expose this customer to reinspection for three separate brokers?

I mean the whole situation, I would much prefer to see a similar situation you are using in the burial site. A broker goes out, he picks up his drums of material and each of

the brokers is authorized under certain conditions in his facility to open that drum, in his premises, and then he effectively says, hey, Charlie, you are not packaging right, we are not picking up anymore and we are bringing you back the ones we do pick up. Which is more logical.

CHAIRMAN DISIBIO: Remember the premise, which was: would it be okay to ask what your plan is with regard to opening and inspecting packages, not that you must do it.

Could I ask you for your plan? Would you send it me? And would it make any sense to do that?

In other words, I have got, take your scenario again. What happens to that bad actor's package that comes to Nevada?

You see, we have got to worry about it because it is being mispackaged some way. And you are saying you can't on the one hand use the logic that, hey, if this stuff is packaged correctly, it is terrific, there is no problem. And then be afraid to open it.

You know, you guys are in the same -- -- can go in and say I don't want to open it. It doesn't work. That is our concern as well.

MR. GALLAGHER: I appreciate the concern. You get into all sorts of legal liabilities at the customer's premises. Everything I have heard here indicates that we apparently are the only broker who has the degree of authorization to even open a customer's package.

15

So it is going to take some licensing conditions from you fellows to allow something to be implemented of this sort. Now the thing that you can do, the only way that you are going to get to the generator is to do the same thing you have done to the broker, make it expensive, make it inconvenient.

We as a broker are already making it very expensive. Now we can make it inconvenient for them and get them to start to packaging it. At the same time, we tell them, all right, these four drums we picked up are going to cost you this much if we packaged. You will send us a purchase order, and if you need some help packaging next time we will come out and help you.

Now I think that is the sort of approach, I think that is what you are really asking, is that feasible?

CHAIRMAN DISIBIO: No, I just want to know what the system is.

MR. BISHOP: Well, I understand the regulation. Each license generator, whether it is licensed by an agreement state or the NRC has to have a QC/QA program that is an integral part of their license being granted. But it seems to me that to ask them to send a copy of that ought to be no problem. But I wonder if we are not back to the Italian kid in the corner. I think the difference is whether they are doing what their plan says or just getting a copy of their plan. I don't see

it being of much value to you. This is what one of my problems is, and the reason I brought it up.

One of my problems is you take a state like California which generates tons and tons and tons of waste. They don't have at the state level, and they are an agreement state, and they just don't have the manpower to inspect and open packages. It is that simple, but I would like to know that.

Now if they are not doing it, who is?

If they can't do it physically, are all of the Thomas Grays doing it?

Yes, Tom.

MR. GRAY: Well, I would like to point out that in our case, and I think this is true for most of the brokers, we do not have the license authorizations to have this package picked up. Consequently, when we perform an inspection, quote, unquote, we are simply observing the reopening up of the drum by the generator, and he obviously is able to do that because he had to do it in the first place. We are just overseeing what he has done by suggesting strongly that he open the drum in our presence.

So I think this way we get around the problem of are we in violation or the generator is not doing anything out of line and we accomplish what we are trying to accomplish, and that is spot the bad actor before it gets out of the generator's area and breeds the problem for everybody. As opposed to taking it to our place and opening it up as quickly as we can and say you

17

have got -- you have to call the generator and say you have a lot of expense here, we are going to bring it back to you. You can avoid all of this by maybe catching it at the site.

CHAIRMAN DISIBIO: If we did that, if we as an industry did that regularly, you would not have half the embargoes we are talking about. We just wouldn't have them.

DR. BRANTLEY: May I use that? I would like to come back to something you said about California, Ralph, and it may come back to haunt you.

I think you said California did not have sufficient inspection personnel to --

CHAIRMAN DISIBIO: Or the manpower.

DR. BRANTLEY: I think that probably this could be said of most states. It could be said of most, of the Nuclear Regulatory Commission; it could be said of the DOT.

Now I ask you, let me turn it around a little bit, whatever is going on within the State of Nevada to increase your own inspectional staff here in the state? Is there any state involvement in acknowledging the problem, and saying, yes, within the state we are going to do this? Is there any such thing?

CHAIRMAN DISIBIO: The answer is yes. Affirmatively. We are, as a matter of fact, at this very moment recruiting for another individual to be onsite full time for example. We are preparing legislation to increase significantly, not only staff but other resources. So yes. And I think others have to do that

as well and recognize that this is no longer the garbage industry. This is something that is very serious, and it is something that we ought to be very heavily involved with and provide resources for.

DR. BRANTLEY: I am happy to hear about Nevada doing that, but that -- in concept that makes a lot more sense to me. Let's beef up the inspection staffs that now exist rather than create some new monster that in all probability to cause to come to have any change whatever is going to involve both legislation and certainly rule changes of a regulatory nature.

MR. HOHMANN: When you say you are beefing up your staff on site, do you mean that they have to be at Beatty, just as at Beatty?

SPEAKER: We mean at the other end.

CHAIRMAN DISIBIO: I understand.

John?

MR. VADEN: We only have four waste generators in the states, and only two of them are state licensees and we are talking about 20 barrels or 20 -- -- barrels a year.

CHAIRMAN DISIBIO: And John is complaining that he is overworked. Enough?

MR. HOHMANN: John, do you visit with them?

MR. VADEN: Yes, sir.

MR. HOHMANN: Good, you have got a good service there. Well, that is what we are talking about at that end.

CHAIRMAN DISIBIO: Yes, I agree.

DR. BRANTLEY: I think you have raised a very valid question that has got to be faced up to. Let me give you an example. It bothers me to hear people calling back on who has got the authority and who has got the right to do these things.

A few years ago in the transportation industry we were faced with the question of whether we were going to be able to ship our generators which are used by all hospitals and commercial aircraft. There was at the time and there still is and it has never been changed, a rule on the books that says that you may ship on a commercial aircraft a generator which has a TI, which is a measurement of their radiation level of three feet, you may ship a generator that goes up to 10 MR per hour at three feet.

The airline industry was saying we will not continue to do this. The federal government says we will not change the rule. And we were therefore coming to an impasse.

Bill Briner, a few people sat down -- Captain Briner is his formal title -- sat down with some people from the airline pilots association, and they got on the phone with me and between the group of us we established a new rule that said that no generator would go on any airplane if it did not have, if it went over three TI. That happened in 1975.

For five solid years this country has lived with that rule. There has never been a permit issued. There has never been

a law written or anything, but we still don't ship generators of over three TI on a commercial aircraft.

If these people want to deliver their waste to a dump, then doggone it, they ought to be able to live with some sort of an affirmative action by an inspection system imposed on them by I don't give a damn who.

But somebody has got to step in there and see to it tha they do it.

CHAIRMAN DISIBIO: Yes, sir.

MR. WESTERN: I don't agree that we need more state and federal inspectors. I think the problem is going to be self-correcting with the existing embargo system. Brokers that want to stay in business are going to reach some sort of an agreement with their customer to inspect his shipments in his plant or in the broker's plant, depending upon how the broker wants to handle it.

If not, a broker is not going to handle his waste. We have done this very successfully. We now ask our customer to store his adsorbed liquids upside down for a period of time so that we can inspect them. If we find anything wrong he opens all of the barrels.

The other thing we have done is re- -- our shipments about 20 miles outside of Beatty and inspect them again. Not on the road, we have a yard out there for that. But we have implemented our own QC system, and the customer has been very

cooperative.

CHAIRMAN DISIBIO: I would simply say that that to me is the answer.

Tom is a little ahead of the game, I think, too because he was the first embargee, as it were, and he got a head start on the system.

I think it will work eventually, but I think the only answer is that you have to open the packages and inspect.

I said that to the NRC a year ago, almost a year. And that still hasn't happened dramatically around the nation, but it has got to happen.

Let me just --

MR. GERBER: I got a little problem. If you have a problem with a case of a nuclear power plant doubting your credibility of the utility's QC department making these inspections because they deal with a lot more things that would impact on the health and safety of the public than waste. And I think they are perfectly capable of doing the inspections and you can rely on them because if they can't do the inspection of opening up the drum and not really, and nobody is impartial, they should not even be in the business.

CHAIRMAN DISIBIO: I would agree with you and I can tell you some horror stories. But they are extraneous to this discussion, but the fact of the matter is those folks, at least my determination is that those folks are so technically oriented

22

that, yes, you are right. They are really heavyweights in this business, and I mean they know they really have the expertise. But when it comes to the garbage that is being shipped out to Beatty, hey, that stuff is so low level, believe me it is never going to hurt. You could sleep next to it, you can do this next to it. I have heard all of those stories.

In the meantime we are getting all of the bad guy images -- the bad packages. But there are -- -- and their QA system and that place is down to zero problems and all of that business, but not with the waste.

That is my problem.

Now I can only tell you that from experience, that I know what we get in, from big places, I mean, really.

MR. GERBER: I think that is going to change.

CHAIRMAN DISIBIO: I know, but it is not going to be because I trust them.

There was another one that Captain Briner brought up that I wanted to just hit on real quickly, which is you talked about a point system being developed for embargoing, and much like licensed drivers, I am in favor of that. I would like to throw that burden onto someone and let us get some action on it.

Why don't a couple of brokers raise your hand and say, hey, Thomas Gray, and Al and so forth, we will get together and develop some kind of a plan that you guys can take a look at because I don't intend to sit down and do it.

DR. BRANTLEY: We are going to do it in AIF.

CHAIRMAN DISIBIO: A point system?

DR. BRANTLEY: As a followup on the QC/QA that we proposed to look at a point system.

CHAIRMAN DISIBIO: I am going to say that that is an an -- that it is going to be taken that you are responsible for it. How was that? That is what I would like to have come out of this.

DR. BRANTLEY: What we propose to do, Ralph, is to take something like that NRC list of four criteria and put a point count system based on that.

CHAIRMAN DISIBIO: Fine. Then in effect I will be saying that AIF is working on that. It will be presented to the states, as it were, for their possible adoption, or some system like that?

Yes.

MR. GALLAGHER: I would like to ask Al what possible makeup of this little pseudo organization here is. How will it --

CHAIRMAN DISIBIO: It is not a pseudo organization. Are you a pseudo shipper?

MR. GALLAGHER: No. This particular committee, Cal, who makes this committee up? What types of people are represented?

DR. BRANTLEY: Well, there is somebody from, in this particular committee there are power upon power companies,

radioisotope producers, and we cross-check most everything we do with Bill Briner to do the Society of Nuclear Medicine and the Society of Radiology.

MR. GALLAGHER: But you really don't have anybody on the waste -- -- on this?

DR. BRANTLEY: Yes, we do, we have got a -- and then there is -- we have a Mr. Gordon who works on it. It is a Connecticut operation.

MR. GALLAGHER: Are these power plant level or are these down at the --

DR. BRANTLEY: Hittmann Power Plant, and the other one was University Hospital.

MR. HOWARD: Someone else is on that committee and he is from Yankee Power.

MR. GALLAGHER: I question to some extent whether the group that you are talking about really has the same experience or same sort of situation that Gray and myself.

DR. BRANTLEY: They are saying the same things. They are raising the same problems.

MR. GALLAGHER: I don't doubt that. I just wanted to caution them with the point system in the wrong category.

DR. BRANTLEY: We are trying it very hard.

CHAIRMAN DISIBIO: Let me go just one step beyond that. As we said, the point system will be given to us. We then would get some input, I should think, from brokers and so forth.

And if we didn't we would just implement it. And you would not be able to say to me anyway in a sincere effort -- in a sincere effort we really would like to develop one that made sense and i is rational and reasonable and I think that is a good way to generate it. We go through them and then to us, and then we will ask you guys what you think of it.

So that is something settled.

Who is next?

MR. COOLEY: I am.

The second group had the two subjects: volume reduction and items for future or further consideration. As to the second one, items for further and future consideration, obviously there were two other groups discussing four other subjects that we were not able to interact with to find out what they come up with.

So we have a few things that we thought of on our own. But I think when you have each of their presentations they will bring out items that do need to be looked at in the future. And I think that is about as much as I can expect from them.

When I asked them, I got one or two small points but nothing significant.

As to volume reduction we were dealing with a somewhat different category, I think, than the other four problem areas, because the volume per se has not been addressed as a distinctive problem that needs to have systems developed. I think through the

course of our conversation, yes, the problems of large volumes of radioactive waste, low level radioactive waste seem to be inherently a problem, or the fact that we have any at all is a problem.

So our approach is somewhat different. We were not dealing with looking at the mechanics of hard procedures but more discussing techniques, goals rather than objectives for these approaches.

And when we, in putting them, succinctly stating the problem, there was again just the fact that we have the volume of low level radioactive waste.

The next thing was was to state the goals that we were after in volume reduction, and certainly it was to reduce the volume of these wastes currently going to the existing burial sites with the hope of or the goal of extending the useful life of the current burial sites, possibly and in fact effectively reducing the number of shipments and attendant problems including public concern with the shipments of radioactive waste, reducing the volumes, necessarily, or we would hope ultimately reduce the overall cost, not only to the waste generator but back then to the public at large.

And lastly, was volume reduction. Hopefully could also improve product integrity, product being the ultimate waste form that is coming out being transported and going into the burial sites.

To my remembrance there was never any consideration during these discussions of having volume reduction being a regulated objective. That is, to put into place a system that says you will reduce your volume by X percentage.

I think the logic for that even though it wasn't discussed will come out because we are dealing with a heterogeneous population with multiple problems and you need multiple technologies approaches to solving these problems.

What we did was take the waste reducing population and break it into the nuclear power plants, the institutional sector which covered hospitals, colleges, universities, and then lastly the industrial commercial sector, the group that seems to cross over between both of those, as well as having distinct areas.

A couple of companies mentioned that we were not allowed to talk about. They say to make sealed sources or something like that. We did not have any representation from those. We found them lying in the middle ground.

As to the nuclear power plants, and these are somewhat prioritized, and the key ones, improved or increased management control to minimize the actual waste volume being generated.

The approach of identifying the waste streams and then putting control procedures into effect, having some power plants reduce the waste volumes from 50,000 cubic feet to 17,000, as low as 18,000 cubic feet per year.

It is quite evident through the course of the discussions that a good management control mechanism could effectively reduce the volume coming out of the nuclear power plants.

The second thing we were trying to establish is who should be implementing these programs or objectives on each one of these alternatives. So in many cases we tried to identify who we thought it should be. The nuclear power plants seem to feel that these management control mechanisms could and should be put into place by the power plants themselves.

There are various agencies, professional groups and others that could assist in the communications between those plants that do have the controls in place and those that don't to improve it.

There was a general feeling that a considerable amount of the waste volume could be reduced simply by better management.

The second volume reduction technique that was considered was incineration of selected waste forms, and while everyone felt this held a great deal of promise the technology has not been developed to the point where any particular power plant would feel comfortable in installing what is commercially available.

There is definitely the feeling that current work being done by the Department of Energy and EG&G should continue and once incineration systems have been demonstrated to be effective

they would undoubtedly find their way into the power plants for incinerating certain waste forms.

The development work being done by DOE and EG&G should definitely be done in conjunction with the NRC and the EPA to make sure that there would not be any cross-interest or unnecessary holdups.

The third volume reducing technique that was considered was the idea of onsite storage and decay of selected waste forms.

After some discussion we came to the conclusion that this approach probably would not actually reduce the gross volumes of waste generated or ultimately shipped by the power plants, but it would allow them certain flexibility to fall back the wastes during adverse periods, as was pointed out, bad weather, trucking strikes, burial site shutdowns, anything that might come up.

But the one real benefit would be to reduce the curie content of the waste shipped out, and that while it might not make a difference in terms of, again, volumes in trenches, or the accomplishing of our ultimate goals of extending the life of the current burial sites, it might minimize some of the risk associated with transport and handling of those wastes.

The fourth consideration was improved compaction techniques. Apparently the techniques of compaction, the actual equipment and so on is commercially available, but not all power plants are using the most efficient system that they can.

A compaction ratio of 3 to 1 was identified with consensus as being the readily achievable and should be at least minimum compaction ratio that is accomplished by anyone who is doing it.

This certainly don't need any regulatory, I think, direction in doing this. It should be self-evident. Power plants should be able to undertake that on their own.

The fifth method was evaporation technology is available and evaporation of liquids. This technology is available and under further development, and utilization of it or the ability of the power plants to utilize it apparently is there and all that is needed is improved communication. And as better methods become available they will probably be undertaken by the power plants.

The sixth one, and now we are starting to go into the somewhat R&D categories, the idea of acid digestion of certain waste forms, ultimately to reduce their volumes.

This is under development, and as its utility or nonutility is proven, it will be considered and undertaken by the power plants.

And finally the last one is sort of a catchall and that is to encourage those federal agencies who are funding research into disposal methods, there is a general feeling that there are no new hidden technologies out there that need to be uncovered, just refinements, improvements and interplay between existing

technologies that are under development.

These technologies and work on them should continue as quickly and as hastily as possible.

That addresses, unless anyone has any other suggestions that we overlooked, what we consider to be the volume reducing technologies or techniques that could or should be put into place or are available.

CHAIRMAN DISIBIO: You said onsite storage and decay. Did you mean of the then disposal into --

MR. COOLEY: As it turns out, yes. It would turn out that if you have a good management control program in place and you are segregating wastes that don't need to be in the waste train or the waste stream, you still could store and hold for decay those wastes that ultimately go to burial sites. They would have to go to burial sites. You could not decay down. You would assume that you sorted out all of the extremely short lived and nonradioactive material and separated it down to the minimum. But it comes out in such a heterogeneous form, most of these, that you could decay off of the short lived material and still be left with a long lived component. It will have to end up in a burial site.

Are there any other additions?

(No response.)

The second component of the radioactive waste and radioactive waste producers was the institutional waste and the

32

insitutions themselves, the hospitals, colleges and universities.

Certainly we put number one, is improved management control by the licensees themselves or the programs to identify the waste streams and again reduce the gross amount of volume or waste product that comes out of the institution.

A couple of conservative and shoot-from-the-hip estimates from people representing institutions was we could probably drop our waste volume by at least 40 to 50 percent if we carefully segregated out nonradioactive wastes.

Now this certainly could be put into place and should be put into place in institutions. The question of how should be within NRC guidance, and quite possibly considering the diversity. Unlike power plants where you have a finite number and you have a staff and you have revenues, the institutional waste producer ranges from the 300-bed community hospital which generates a fraction of the drum per month, or five or six, does not have a firm radiation safety program and really can't afford one, it isn't justified.

You will have hundreds and hundreds of these waste producers all the way up to the very large institutions such as the NIH that will be shipping 20 to 25,000 cubic feet per year.

Well, one suggestion within NRC guidance, as I said, is primary method for implementing, possibly model programs for how you go about it.

I saw a presentation yesterday that they are proposing

how does a hospital set up a little decay pit, little plastic containers with plastic liners, little guiding suggestions like that to administrators or those who are not really into the field, are very useful things.

And I think once the obviousness of it was brought to their attention a lot of this waste volume, or unnecessary waste volume would be cut out.

The second one was the idea of storage and decay. As we heard yesterday, many hospitals have come around to that, and it is going to cut at least the medical component of waste probably way down.

More storage and decay in research facilities for the shorter half-lived material certainly will be affected.

Here again I think it is a case of the programs being instituted by the licensees themselves with guidance, and I mean direction, not shoving, from the regulatory agencies such as the NRC.

The third area is compaction. This is a very viable volume reduction technique for dry solids, but it needs to be made or employed to scale.

Again the small insitutions cannot afford to go out and buy big $2000 compactors. I drop my cost estimate. Other people told me that there were cheaper ones, when they are only shipping two or three drums a year. But aggregated, those two or three drums a year may comprise as much as 30 or 40 percent of

the institutional waste volume.

So wherever compaction, in terms of our general recommendations come later, there is another option of vast compaction, should be encouraged where it can be economically afforded.

Incineration is probably the most utilitarian and omnivorous waste disposal or volume-reducing technique that was discussed, but here again, as with the power plants, the technology needed to have this implemented on a broad scale is not available, and certainly the work being done by the Department of Energy and others should be encouraged. And as soon as the information from that work is out it should be made available so that the institutions themselves, with their local circumstances, economic and otherwise, can determine if incineration is viable for their situation.

A fifth consideration is increased usage of the mini-vials, the liquid scintillation fluids which comprise about 30 or 40 percent of the institutional waste volume, from what we can determine.

And the common, or still I think the most commonly used liquid scintillation vial is the big 30 cc one with anywhere from 10 to 15 cc's of liquid in it.

If all of the people, or as many as could, switched over to the mini-vial which only holds about 4 cc of liquid, we could drop very quickly the gross volume of liquid scintillation

vials and fluids going to the burial sites.

Here again I think it is a question of guidance and assistance. It is not something that could be regulated or demanded because some research activities, if you talk to the people, they cannot use the liquid scintillation vial.

Again it may be a matter of perception or information, but this information should be coming from a central point, distributed to the waste producers.

The sixth one, improved solidification media for certain types of liquids, organic solvents and other problems that don't easily, or cannot easily be solidified in the current, by current methods.

I think this is a question more of the commercial sector. We will probably be responding more to the power industry and others than something that can be done by regulatory agency.

In other words, it does not need further study but as these things become available, information should be made available to the licensee this material is available.

Seven, increased usage of conventional alternative disposal methods. Those methods which are in place, such as dispersal to air and water. This I think again is a question of communication and interpretation between the Nuclear Regulatory Commission licensees, licensees and their local communities.

That community can either be polit[illegible] just

36

individual citizens.

The choice of using conventional alternative disposal methods I think will be left up to the institution. The most that the regulatory agencies or others can do is continuously make them aware that it is available and what procedures they would have to go through to take advantage of these.

A consideration of a centralized or regionalized centers where any or all of the above procedures could be implemented for those waste generators of small volumes of waste or hospitals that could not implement waste volume reducing techniques that would require capital outlays that they could not afford.

As I said, if you accept the premise that roughly 50 percent of the waste volume comes from the small waste producers and you do not have professional health physics staffs on hand, and so I think it is unrealistic to expect them to install an incinerator and an expensive compaction system. Even space requirements may prevent from undergoing through decay.

Centralized centers, and if you did not define out whether there should be a commercial venture or done by the federal government, although I think there is a leaning towards the commercial, to collect the small quantities of waste, process them, decay, incinerate some, solidify some should be considered.

Nine, reconsideration of the current regulations so

that they more accurately set control mechanisms that are commensurate with the hazards, both radiological and chemical, associated with waste forms that come out of institutions.

Ten, consideration of utilizing Class I chemical waste disposal sites for selected forms, or disposing of selected forms of institutional wastes.

This I understand or have been told is currently under consideration, and actually implementing is a strong recommendation, I think should await the findings of those agencies that are considering chemical waste sites for low level, or low concentration radioactive wastes.

That is what we set out for the institutional waste in terms of volume reduction.

While we discussed the net impact of, if all of the above were set into place, there was some, I think optimistic but I will repeat them, estimates so that we could probably reduce the institutional waste fraction by about 95 percent, if you consolidated and concentrated and decayed the activity.

Again, as we pointed out from the study we did, we are talking about a very small curie quantity of activity, an awful lot of dilute, in fact probably nonradioactive wastes coming out of institutions today.

Are there any other considerations that we should put on our list for volume reduction for institution waste? That is some I might suggest.

(No response.)

The last one was the industrial-commercial category of waste producers. This heterogeneous group that in some areas may have the same problem as the nuclear power plant with the radionuclides in the waste form and the other, the radiopharmaceutical manufacturer that can have the same problems that institutions have.

And so we just merged the two and we came down with essentially the same thing.

Number one was a management control mechanism, for improved management control to segregate out the radioactive from the nonradioactive waste. And that would be the most effective thing initially. It could be accomplished to reduce the waste volume.

Storage and decay, again where it is appropriate, to be implemented. Incineration, when and if the technology becomes available.

For those select waste forms, compactions of dry solids to reduce waste volume. Evaporation of liquids. Solidification of those problems. And again, assuming that low level or low concentration chemical wastes come out, centralized, regionalized centers for processing these.

In summary, the question -- that is all we had for the industrial, again because we did not have a -- as need a breakdown or description of the waste forms that came out of

there. We could not address it much more directly than that.

In summary, again we were dealing with, I think, a goal which was try to reduce waste volume. The various technologies, approaches, management control mechanisms and so on that are available or should be becoming available to accomplish this.

The incentives are economic, certainly, broader incentives for the public at large or the country at large as to keep the existing sites for as long as possible, reduce, as we perceive it, the possibility of reducing risks on highway in transport. And if we can reduce some of the curiage going on the highways, reduce the possibility for exposure to the people.

And that summarizes. Unless someone has some other things that we should consider.

Our discussions and what we came up with is acceptable suggestions for reducing the waste volumes.

CHAIRMAN DISIBIO: Any specific actions in terms of what we or some or one or more of us can do to implement -- not implement necessarily but to encourage those kinds of things?

MR. COOLEY: I would suggest that the economics of the situation and the inconvenience of not, you know with the embargoes and other things, have set the incentives in place.

As I said, we want to avoid is like some of the other things. This is a good objective to work towards. The rewards

are going to be commensurate with your ability to accomplish that. I don't see any -- I don't individually, and we did not discuss this -- I don't see any need in management or desire to try to make it any more structured or stringent.

DR. BRANTLEY: I would like to propose one. I don't know about this either, but one of the things we are talking about, some of these are going to require state approvals in order to be acceptable, solidification procedures and so on. If you people can send out some sort of a mechanism, if we can get approvals from the states, it seems like to me that would be a big help.

We came to you and said we want to try for a solidification method.

MR. COOLEY: I did not mention that under our volume reduction technique, but certainly under our recommendations for further action that was number one, is to remove the regulatory bottleneck for getting certification or approval for new technologies and so on that are developed.

As was pointed out for solidification media, that would be accepted by the NRC or brothers. This could be an interminable length of time for those who are waste producers and want to reduce their volume.

That was number one.

CHAIRMAN DISIBIO: How about if we said, and states will give priority to approval process for new concepts in volume

reduction?

MR. COOLEY: I think you might run into a problem there. If that particular state gives an approval doesn't that approval extend only to the boundaries of that state?

MR. WAGNER: That is a start.

MR. COOLEY: That is a start, yes.

CHAIRMAN DISIBIO: The next step obviously could be that I write my counterparts in the 50 states indicating that this is an approach we are taking, you might want to give it some consideration and do the same thing in your own state. That is another action we can take which might result in something.

DR. BRINER: I think that is an important aspect. All of the time in communication or most of the time it has had a connotation of some penalty involved, communication between states and the federal government. I think it is equally important that a communications situation follow -- when one state has found some exceedingly useful and valuable, say look, we looked at it, we think it is okay; you may want to consider it.

So that kind of communication I think is needed, almost as much if not perhaps more than the penalty kinds of thing we were talking about.

But really the good word has to get around too.

MR. GALLAGHER: One of the problems that we continually run up against, we go to a lending agency, we start talking to

42

them about some of our ideas and do some of the exact things that you were talking about. If I go digging into it a little bit and they find out that tomorrow we don't put our act together just exactly right, we would be out of business.

So all of a sudden you may have come through, and so the embargo itself has become a very definite mechanism that prevents anyone having a great deal of financial interest in it because you may spend $2 million and you are out of business tomorrow and really no mechanism to get back in.

Secondly, with the advent of the Todd situation and their announced closing in the last week, we have been visited by the Texas Water Quality Board, Texas Solid Waste Board, Texas Air Quality Board, and the EPA who was right behind them.

So one of our other problems here, even though we have permits in for a lot of these things, no actions have been taken for the several years that our permits are in.

So all of a sudden now they are trying to cover their backside to make sure they don't get criticized for it. But the problem is if we go out and start talking to intelligent people about money to help you do these things and they start looking at the total, insurmountable problem, and the fact that you could be out of business tomorrow, makes getting many to do certain activities almost impossible.

So anything that you can do there to modify this, to give it a little bit of a longer term relationship that the

financial people are interested in, would certainly be helpful in getting it implemented quickly.

MR. BAILEY: You mentioned that possibly getting priority you -- or you want to -- you mentioned getting priority review or evaluation of applications for new volume reduction methods and so forth. I think everybody wants a priority. I know certainly our uranium miners wanted priority because they have got a lease that says if they don't produce uranium in three months they lose their lease.

The hospitals are always wanting priority. It is always a life or death situation.

So I think that in most states you can get a fairly rapid review of an incinerator or a compactor or other volume reduction technique. I don't know that we need to say that these things have to be the highest priority things you do.

MR. COOLEY: I don't think that we said priority either or high priority. We said timely.

Some of the examples that were brought out were, what, multiple year considerations of things. So it wasn't a matter of putting things on a priority as much as just having it at a reasonable and timely review.

MR. BAILEY: One of the things that has come up in connection with Todd, which Bob Gallagher alluded to, is that more and more agencies are suddenly deciding that they have jurisdiction over radioactive wastes, not the radioactive

component of it but the nonradioactive components. And they are going to be requiring permits, and some of those are quite a lengthy process with hearings et cetera.

So I don't really see the process heating up, if anything slowing down.

MR. COOLEY: That is comforting, yes.

MR. MAYS: One of the problems I have here -- I am not sure whether this is relevant to everybody or not -- companies are very reluctant to go out and spend millions of dollars on a piece of equipment which may in two years not be worth a damn, because they can't use it.

We have looked at volume reduction within the company, and we have done some things to do some reduction. We go out and buy some new pieces of equipment, which we are not even sure we can get licensed at this point.

It is pretty hard to convince that board of directors that they are interested in the investment.

MR. COOLEY: I think for a particular approach, and we never actually got in it, as I said, but the incentive or objective is something that each individual company or institution or facility would have to set for themselves. Whether it is cost effective, whether it is reliable and whether it is not, it may turn out that it is in terms of viability for that firm better to keep paying the premium of shipping that volume than trying to reduce the volume.

I don't think we -- we certainly did not discuss what happens if we don't reduce the volume. We just discussed the net benefits if we do reduce the volume of waste going out. If we don't we will fill up the sites quicker and cut down their useful life. Then we start to getting into conjecture of what ifs, what ifs, what ifs.

If the Carter plan works or if this happens or that happens. And we pull ourselves back to talking about within two days sitting, what are the things that we can do or what are the things that should be considered to reduce volume.

In terms of future, again the biggest thing was to try to speed up to a reasonable time period consideration by the regulating body or bodies of such proposals for volume-reducing techniques, solidifying agents or other technologies.

CHAIRMAN DISIBIO: I just think once again that an awareness of an affirmative action program, volume reduction on the part of the state officials is valuable in and of itself, an example of that being again, if you look at a certificate of need process, a hospital conglomerate A wishes to build a holding area where it can decay its waste and then dispose of it in the regular system. They have got to come to me.

Now if I am aware of this whole process, then I am going to get that out, certificate of need out as quickly as I can, as opposed to turning it down if I don't understand the problem to begin with.

So I think the awareness is critically important to high state officials with regard to innovations for reduction of waste by its nature. So the letters I think are somewhat valuable.

MR. COOLEY: The awareness is one that we had not considered. I was just wondering if it comes under -- I will put this one next -- improving public perception. And that is about as far as we can get with it, period.

I know there is another group that is looking into the communication and so on, which is probably the mechanism that we were thrashing over too.

But we will just leave it at that. Something that should definitely be worked on and needs to be addressed is working on improvement of public perception of all of our activities whether they be power plants or nuclear medicine or industrial.

Some small, probably definable ones, is quite possibly the need for developing a process to remove radioactivity from liquid scintillation fluids and thereby returning the solvents back to use as nonradioactive and stripping out the radioactive component.

Again, it is a very large volume and very problemmatic in terms of handling, shipping, and possibly long-term integrity of the site.

The second development of a low level waste criteria, and this sort of overlaps the others, for waste disposal methods:

that is, your restriction should be commensurate with the hazard.

Third under that category is work on more the chemical aspects of the waste to improve the product integrity. There was quite a bit of discussion about the length of time materials can be stored in containers and what sort of chemical interactions. There is work, I understand, going on, and it is probably more of a chemical question. But that is something that would solve a lot of problems to one of our participants.

And then, I am just going to repeat that one, it seems to recur in just about everything, and involves all of the alternative disposal methods, and that is working on improving public perception.

I think that is the one that comes next.

End

T.17-18
Burrell

DR. DISIBIO: Thomas Gray.

MR. GRAY: The subjects that Group III had to consider were standardization and subitems there were standardization of paper work, burial site acceptance criteria, containerization, labelling and storage. The second item to be considered was communications and under this were subitems, emergency notification plan, routine notification plan, enforcement communications dealing primarily with the embargo problem and last informational communications which we did not get to.

Under standardization of paper work we discussed primarily the radioactive shipment record as being the form that we felt deserved the primary attention for standardization. Some of the points to be considered there were first, the color code on the forms.

At the present time, the one used by NECO calls for or uses a white, two whites really, a pink and a yellow and this was found to be an acceptable type to use. The point is that it should be consistent throughout the industry if possible.

The size of the form, the present NECO form is towards the legal size. I don't know if it does have a standard size, but it is somewhat unusual and if this could be brought down to a standard size of 8½ x 11, we felt it would be an improvement.

Also as far as the information on the RSR is concerned, in some instances there appears to be a duplication of information. On the one instance, the weight of the container is called for in

one column and then you are asked to repeat the weight of all of the containers again at the top or the middle section of the form.

There did not seem to be any really good logic behind that. Maybe Walt Hipsher can tell us why that is being done. Also the items conflict in terms of calling for both a metric form as well as an English form. A minor point, but personally I don't see any reason why it has to be that way. Why can it not be metric throughout?

So the concensus was that we felt it would be a very good idea if the regulating bodies, in this case probably the three states as well as the burial sites get together and pool all of the good ideas that they have and come up with a form that we could live with.

We left the RSR form then and we went to the site specification or the burial acceptance criteria. We talked about this at some length and we had a representative from Chem-Nuclear furthere define the reasons why their criteria are as they are and we came to the general agreement that the sites are certainly at liberty to set their own criteria and we really don't have much reason to argue with what they feel is best for their particular situation.

So we more or less left that one alone in terms of any form of standardization. We then got into containerization.

Primarily we talked about drums. We talked about the possibility of going all the way to new 17 inch drums throughout

and we discussed the cost of that possibility. We then got back to using refurbished 17 inch drums. We generally decided that in most cases there did not seem to be any real problem with the refurbished 17 inch drums and decided to leave that pretty much where it was.

Everyone agreed that if it is possible to use new 17 inch drum, if they can stand it economically, meaning the generators, it certainly is a better way to go. But in most cases, the refurbished drums seemed to be satisfactory.

We also talked about the utilization of the fiberboard boxes and it was unanimously agreed that since those boxes have been ruled out at this point in Beatty and will be ruled out soon in Washington, that it might be a good thing to leave that just the way that it is. And the boxes apparently have presented some problems with the sites and we might be getting back into another problem if we thought in terms of bringing them back so we left that pretty much where it was.

Other types of containers were briefly discussed, but again, it was not felt that anything could be really standardized. Wooden boxes certainly are going to take various forms and as long as a 7A specification is met it would be rather difficult to come up with any standard form that would be fairly universally acceptable.

We then got into labelling and talked about the possibility of establishing a label that would have general usage,

primarily for the LSA containers that would indicate radiation level. This would be done in an effort to protect any individual who may not realize that a high level of radiation existed.

It was discussed and decided that in all probability we would, in a sense, be gilding the lily and we decided to leave the LSA specification just the way that it is. We felt that if we went with a new lable, it might set off a whole new form of thinking on the LSA classification and decided to leave it where it was.

I know that yesterday Walter Hipsher mentioned that if the generator or broker saw fit to mark on the drum a high radiation level existed, this could certainly be a potential help to the burial site. So that was left as an optional consideration.

The Chem-Nuclear people pointed out that a copy of the RSR goes to the burial trench with the waste material and since the RSR calls out the drums by number and calls out the surface radiation level, this probably would be enough to put an individual on guard that a high radiation level existed.

We talked about placarding and came up yesterday that some instances, the cardboard or the paper placards do not always arrive at the burial site among our group, we had no experience that way. The paper placards seem to hold up pretty well if they are taped on properly.

So at least as far as the experience with the group was concerned, there did not seem to be any problem with continuing

with that format. We should have the option of using the plastic placard or the type that are already installed on the trailer.

We talked about whose responsibility the placard really is and we discussed the fact that it is the responsibility of the generator or the broker to at least make the placards available to the trucker and in the event that they are not accepted or the carrier has his own placards, as soon as he signs his certification form, at that point, he is responsible in terms of having the placard on the trailer when it arrives at the site.

There was some short discussion about utilizing two labels on a specification drum, two of the diamond labels as opposed to one or three or whatever. About the only objection to the two lables had to do with the use of a drum lifter on a lift truck which in some cases can scrape part or all of the label off and would this constitute a violation of the site?

There is no real decision made or further discussion on whether or not that could have been or has happened in the past. Maybe we could hear from nuclear engineering on that.

But the general opinion was that two labels are fine and to leave it at two labels. We then went to storage.

Here again we talked about storing inside, storing outside whether or not the time of the storage should be limited, whether or not the utilizatio of tarps or something of this nature should be used and kicked it around quite a bit. We eventually

decided that there are so many unique and individual situations that it would be awfully hard to come up with any kind of a standard format for storage. It was brought out regardin outside storage that if a drum was properly packaged it could handle the outside storage. The time limit would probably be a function of the climate or the location.

So again, it would be very hard to pin anything down. We backed off on that one and did not come up with anything there.

On other point. We did not discuss this, but it came up later and it has to do with the absorbant material. It was brought out yesterday that the state of Washington has stated that they are going to tell us what the approved absorbants are. In fact they said that we would know by February 1 and I don't know of any information that has been put out on that.

I know I don't really know at this point what they approve. We are assuming that they approve the type of absorbants that nuclear engineering has recommended and we are going on that basis.

So we would like to see some standardization on that and broken down to the types of waste. A case and point has to do with the use of LSL or the corn-cob material vs. a diatomaceous earth in the packaging of scintillation vials.

With nuclear engineering they specify the diatomaceous earth. Many generators prior to the release of the packaging requirements from NECO in October of 1979 were packaging the vials

in Pellacell. It has always been a question with me as to why Pellacell would not be accepted.

It seems to me to be a good material to utilize for vials because in most cases it is more of a shock material than anything else. In most cases it will not be utilized for its absorbative value in the case of vials. But again, just something standard so that we would know what to work with.

Then we went to the next question which had to do with the communications and discussed the emergency notification plan and the routine notification plan. Well, we all felt that the term emergency was not a very good term to use and it has a lot of connotations that frequently do not exist.

By the same token we did not go along with the routine matter either. That is the routine term. So we came up with incident notification to cover both emergency and routine notification. This term would be utilized for such an incidence when as a scenario here, a truck driver has a problem taking a load into a site.

The truck driver would then notify the highway patrol and the shipper one right after the other. We felt that the highway patrol should be notified first, but within a few minutes notify the shipper. The obvious reasons are the highway patrol is going to be notified from a hazard or safety point of view and to take care of that part of it is as much as they are capable of doing, but the shipper should be notified so that he can take

whatever action he feels should be taken. Certainly in the event of an accident the shipper may want to get on the scene as quickly as possible to do whatever he can do.

We also felt that the shipper should be notified at once because as soon as the highway patrol knows about it, the media will know about it and if the shipper isn't notified he may get a telephone call from a reporter and be very embarrassed to hear about an accident with one of his trucks that he doesn't even know about.

So we felt it was really important to get the shipper the information as quickly as possible. The shipper then, in all probability will notify the state or the licensing regulator. There was one situation that was brought up. Let us say for example the truck turned over, but it could not be determined, or it was determined that none of the packages integrity had been breached.

Consequently, would it really be necessary to notify the licensing authority? That was one that we felt was up to the shipper to let him make that decision.

So from there we went to enforcement communications dealing primarily with the embargoed individual. We talked at some length as to whether or not just who should be notified. Obviously, the embargoed individual should be notified. Should anyone else be notified? Should the licensing authority be notified? Should any other individuals be notified that might

have some activity with the embargoed person.

If it is a generator, the broker certainly would be interested. If it is a broker, that is about as far as it should go. So we came up there that probably the best method to use there would be for the site or the state to notify the embargoed person and if a broker or any other interested parties wanted to find out who was being embargoed at any given time, it is their responsibility to contact the burial sites to find out.

This leaves a lot to be desired and Dr. DiSibio then came up with the plan that he mentioned earlier, that by June 1, there will be the handbook released which will indicate what constitutes an embargoed company, why they are embargoed and all of the details surrounding an embargoed situation.

So what was left was that the embargoed person is going to be notified, but as far as any other individuals being notified they will not be and if they want to find out they are going to have to find out for themselves.

The last point having to do with communications came up right at the end of our discussions and it had to do with a notification of hot line, a notification hot line network. This was also suggested by Dr. DiSibio and it would be a voluntary matter and all interested parties would participate and it would be a situation where if any point of interest that was felt to be of general interest around the industry someone at the state level would have an individual to contact by telephone.

That individual then would call someone else. This woul be all established and a network would be formed and then it would then be the individual's responsibility to contact his telephone contact and through this type of format, that particular bit of information could get around rather quickly.

It has some bugs in it and you probably all play the game where you sit in the living room and whisper in each other's ear a comment or a point and see what the last man has heard at the end of the chain. Frequently it is quite different from what it started out to be. I don't know if that would enter into this or not.

But it seems like a real good idea and certainly we all felt that it should be considered. That is about it.

MR. GERBER: There is currently a system now called Notepad that nuclear power plants subscribe to. You name it. If you want to know something you just sit down and put in your question and the people get this out all over where you want to go to.

You can communicate between two people with it or you can get everybody into line. I am not sure of all of the details of it, but it does exist and we do have it in our plant. Somethin like this might be worth looking into. Just let us know about that.

MR. HIPSHER: I have a question or I would like to respond to some of your indications that you needed an answer on

it. On the paper placarding, I am not saying we should change those, it is just if the truck is placarded with paper, it should have a couple of additional ones with the driver in case they fall off. We can avoid that problem at the site then.

On the RSR, we are required, all the information on there is required for use by the company. You are correct in saying that you have to put weight on there twice. We have an additive weight indicated for, let us say like radioactive material, LSA, and then each individual package has the weight we would have to end up totalling this category of radioactive material if we did not have that other additiona box on the RSR.

We are standardizing the RSRs in this fashion. We have a condition in the Washington state license which we have asked for that has a requirement that a Washington state RSR be used and our intention is to approach Nevada upon issuance of our next license and have the same thing used so it would be a Nevada-Washington state license.

Plus there is a lot of new information that the state requires to be given to them in order to keep track of amounts of certain material. So there is a move to standardize the form, but I understand there is a color coding difference between us and Barnwell, that could be worked out. The size problem can be worked out, but I don't think it is going to get any smaller, probably will get longer.

On the labelling we have not had anyone cut off for the

specific problem of label missing or incorrect marking. There has been in some instances warnings issued that next time maybe too late if you don't square away your act now. I hope we didn't confuse anyone, two labels are required on each package.

There is no, I will not professing one label or two labels, it was just that when I was speaking yesterday, LSA radioactive material on exclusive use requires only the one type of marking, LSA exclusive or LSA radioactive, but that has to be on two places on the drum.

In all cases I recommend for radioactive material to stencil it on.

MR. GRAY: Did you say that LSA should appear two times on the drum?

MR. HIPSHER: Yes. It indicates in 173.393 that it must be marked radioactive LSA if you read under the labelling requirements. It says all packages will have two labels, one on the, generally under size, under size of the marking it says one half inch.

Where in exclusive use does it say exemption from that? If you want to put it in there in a 1/16 inch, well that is our interpretation because it does not say in the LSA paragraph anything that is required one label or requires to so we go to the previous directions that it must be in English, must be durable, must be contrasting color, at least one half inch high and two labels must be present.

MR. WESTERN: We routinely just ship one on there so we may be in violation, but our interpretation has been the same as his.

MR. HIPSHER: There have been interpretations but there is no guidance. Where is there guidance that says one? There isn't.

MR. HARVEY: I think the confusion here is that two labels are required, but radioactive LSA stencil or marking is not a label.

MR. GRAY: That is right, that interpretation.

MR. HARVEY: It is one, two, or three are labels and they must be on opposite sides of each container.

MR. HIPSHER: Well, okay, we will have to work that out. I don't agree with opposite sides of container because it specifies on the top or the side and not the bottom.

So maybe we are playing a word game, but I call in a label because it labels what kind of material it is. A marking ould be weight, would be something else that would be required.

In any case, let me address the other things here. Absorbants. Correct that the Washington state has not issued a list of the absorbants that they will accept that were supposed to be issued by 1 February. Correspondence with the state has all been through telephone conversations.,

They have indicated that we should to business as normal until a list is issued. Should it differ from NECO's previous

list issued, they will have some sort of grandfather clause or time period when generators can get rid of presently packaged material with non approved absorbant.

Addressing Pellacell, it shows very very low affinity for absorbtion of Toluene and that is basically what we don't want to to be used. Because a shipment of radioactive liquid in containers is specified in the DOT regs that you must have twice the absorbant to absorb that material and that is where it comes from.

Pellacell is something like the absorbant capability that may be one tenth of other material. You have to put an awful lot in there with very small volume of scintillation vials so it sounds to me to be uneconomical to use Pellacell for vials in that case.

But I will straighten out and make sure in my mind that on the marking and labelling there isn't a problem. But true, LSA exclusive use is exempt from marking, labelling per 172.300 and .400, but what directions do you go by for putting on the radioactive LSA? There are no other directions to go by other than the other directions for size and color and I assume it is labelling where others assume it is marking and that isthe difference.

Tom, did I answer most of the questions that were brought up?

MR. GRAY: I think so.

MR. HIPSHER: I did not try to side slip any. Yes, Dr. DiSibio?

DR. DISIBIO: Walt, are we to assume then that you are going to deal with South Carolina with regard to the standardization of forms?

MR. HIPSHER: No, right now that is not our position that we talk with South Carolina on many items. We don't want to be in the situation that it is an antitrust thing. We are one company, but right now we have the program that we want to have a standard form between Nevada and Washington. I think it is a good eventuality that that occurs and I think it is an easy enough situation to talk to South Carolina and say, "What about one unique form?"

But they may have additional requirements that we don't have and they would have to be worked out.

DR. DISIBIO: You did say something on the size and you are going to work on some of the--

MR. HIPSHER: I understand. I am not necessarily on the paper work area of what colors and all of that, but they can be worked out. The customer gets a certain different color from each site, but we can change that. The size should be able to be worked out so it is standardized where it can be placed in a three ring binder or something so I don't see a problem with that.

DR. DISIBIO: What I am saying is that I want a time

frame. I want a who is responsible when.

MR. HIPSHER: I really can't give you that. I know we have the condition and we will be working on it, but there are more immediate things for sure than the RSR right now.

MR. CRASE: We are going to have some more of that in a couple of weeks and we will address your question right away.

DR. DISIBIO: Thank you.

Yes, Mr. Bishop.

MR. BISHOP: Two comments, first of all, we talk a lot about how we need to work together to solve problems. I think this argument about the antitrust is at best a smokescreen, but at worst I don't know what.

MR. GORDON: It is not. If you are not a lawyer, don't--

MR. CRASE: I have to intervene on that.

MR. BISHOP: And anyway--

MR. CRASE: I have to intercept on that one. Antitrust is a very serious matter. The case that is now before the courts between Hittman and Chem-Nuclear if you will read the brief is most serious. We are a private company and we depend solely upon the disposal of radioactive waste.

We are not about to draw our parent company, Teledyne into any position whatsoever that we could be construed as corroberating the set standards or any other we to control the

business. Our license is our livlihood. We must operate within that license and within that respect we operate as an independent company.

MR. BISHOP: May I suggest that there is room for the sovereign states of Nevada, Washington and South Carolina to get together to insure that the licensees are all treated in the same way equally and that standardization is reaching from that format, it can be through the companies.

DR. DISIBIO: I will take that responsibility.

MR. HIPSHER: I am sorry to have sized up that one, but you can see my point that we cannot converse with them on everything and I have to go to a lawyer on something like that and so I could not commit right here that yes we are going to do that because we haven't planned that.

But we are doing it at the state level and so I think that is a good idea I think to keep it at the state level. We are trying to make it a state form. We don't think it should be a Chem-Nuclear Engineering form. It should be a state form and that has been our approach. That is what we are trying to get Washington state and Nevada to form.

To go further with it it sounds very good, but there can't be a Chem-Nuclear and Nuclear Engineering form. That is what we are trying to get away from.

DR. DISIBIO: We will have that on our agenda when we get together with regard to the handbook for embargoing.

MR. BISHOP: My second comment is that it would seem to me that there would be some benifits certainly not in seeking formal arbitration, but asking the Nuclear Regulatory Commission if you will for a declaratory ruling as to how to interpret their regulations, DOT regulations. As to for instance, one example, what is the labelling requirement?

It strikes me as being very, in a very unhappy situation that one burial site apparently has a conflict with another and the shipper, the brokers, the carriers, are playing blind man trying to describe the element and trying to guess what the right interpretation is.

I find it difficult to justify that there are two different right interpretations.

DR. DISIBIO: For sure. Is there a DOT person here who can tell us? Is DOT here?

(No response.)

Mark that down, that DOT left.

MR. HIPSHER: The interpretations are changing. I talked to Mr. Gruella about the 200 millirem on the other side of the vehicle being in violation and eclusively used. That was not so six months ago and I don't think anyone is going to put it on paper, what official interpretation is on the basis it may change.

But I think on the labelling, yes, we should be able to get an interpretation whether it should be two or not on that

area. But I don't think we can hold out for getting a layman's interpretation of a lot of the regs.

They want to leave it there where they have enough flexibility to change it.

DR. DISIBIO: That is unfortunate. I mean, you don't have regulations left for a lot of flexibility, otherwise you don't have regulations it seems to me. But I understand what you are saying.

MR. BAILEY: I think there is already in place a mechanism to get uniform state regulations and acceptanc criteria and the whole thing.

The conference of state radiation control program directors presently writes with the concurrence of EPA, NRC, and FDA the suggested state regulations. If the states are truly interested in having a set of compatible regulations, then I think this is an excellent mechanism to use.

The statest themselves write the regs and as someone mentioned, on one of the task forces I was on, if I take it back to my office and there is disagreement about what they say then they are obviously not clear enough. So we have been able to get away from some of the legal gibberish that occurs in some Federal regulations where you have to go to the attorneys before you can publish them.

I think we have much more easily read regulations. This mechanism already exists and I think it would be counter

to go outside of this mechanism to develop additional model state regulations.

DR. DISIBIO: Thank you.

With that ladies and gentlemen, I want to thank you sincerely again all of those who have attended. I want to thank sincerely the group leaders in particular. I have taken copious notes with regard to who was responsible for what. It ends up that I am responsible for nine things and someone else is responsible for one, but we can handle it.

MR. CRASE: Well by representing Nuclear Engineering Company and as their chief peddler I usually talk a lot. I did not say much at this meeting, but we certainly appreciate your efforts in discussing our situation and waste disposal.

We may be the oldest. We don't necessarily profess to know everything or be the best. Feel free anyone, to contact us at any time regarding any situation which you have that you feel would make it more efficient for us to operate, safer for transportation, and above all economical and something that causes your own business to proceed the way you want it.

Our corporate staffs sure appreciate what you have done

DR. DISIBIO: Thank you.

Thank you all for coming.

(Whereupon, the conference was concluded.)

nd tape 19

NUCLEAR REGULATORY COMMISSION

This is to certify that the attached proceedings before the

---

in the matter of: Low Level Waste Meeting

Date of Proceeding: February 21, 1980

Docket Number:

Place of Proceeding: Incline Village, Nevada

were held as herein appears, and that this is the original transcript thereof for the file of the Commission.

Jim Higgins

Official Reporter (Typed)

Jim Higgins

Official Reporter (Signature)