SW14P

T R A N S C R I P T S

REGIONAL PUBLIC MEETING ON THE
RESOURCE CONSERVATION AND RECOVERY ACT of 1976
and
AN APPENDIX: CONFERENCE ON THE
MANAGEMENT OF NON-NUCLEAR HAZARDOUS WASTES
February 23, 1977, New York City

The Public Meeting was sponsored by EPA Region II,
and the proceedings (SW-14p) are reproduced entirely as transcribed
by the official reporter, with handwritten corrections
by the Office of Solid Waste.

The Conference was funded by EPA and sponsored by
The Scientists' Committee for Public Information, Inc.
and is appended for the benefit
of those who attended both meetings

U.S. ENVIRONMENTAL PROTECTION AGENCY
1977

An environmental protection publication (SW-14p) in the solid waste management series.

RESOURCE CONSERVATION & RECOVERY ACT OF 1976

PUBLIC MEETING

EPA REGION II
New York, New York

American City Squire Inn
New York, New York

February 23, 1977
4:00 to 7:00 P.M.

SPEAKERS (In order of appearance):

MICHAEL DE BONIS, Chief
Solid Waste Branch
EPA Region II

VAL GREY, Chief
Program Management & Support Services Branch
Office of Solid Waste
Environmental Protection Agency
Washington, D.C.

ALFRED LINDSEY, Chief
Implementation Branch
Hazardous Waste Management Division
Office of Solid Waste
EPA Headquarters

JOHN SKINNER, Director
Systems Management Division
OSW, EPA, Headquarters

ROBERT LOWE, Chief
Technical Assistance Branch
Resource Recovery Division
OSW, EPA, Headquarters

MR. OUTWATER: You know, it is interesting we always tend to underestimate the public's interest in solid waste, and this is another example of where we begin underestimating the space and the public interest in what we are going to talk about this afternoon.

Let me start by thanking those of you who were with us this morning for that inspiring contribution that so many of you made. It is extremely valuable.

We want to do the right thing. We want to reflect public opinion, and it is so important that we have your input.

I am the Deputy Regional Administrator for Region II of the United States Environmental Protection Agency. I am here to introduce our first speaker, Michael DeBonis.

He is Chief of our Solid Waste Branch at Federal Plaza, New York City.

MR. DE BONIS: Good afternoon, and thank you all for coming.

I think, as Eric indicated, that if anyone says there is no interest in garbage, we have disproved it, if nothing else, this

afternoon.

I would like to give you a brief overview of what we are trying to do this afternoon, and I will also act as moderator for the remainder of the program, and at least right now set up the ground rules which we will operate under.

The Resource Conservation & Recovery Act of 1976, that is Public Law 94-580, was signed by President Ford on October 21, 1976.

This significant new environmental legislation provides the opportunity for EPA, the states and local governments to develop a comprehensive solid waste management program, which will control hazardous waste, eliminate the open dump as a principle disposal practice,and increase the opportunity for resource conservation.

The Act provides for public participation in the planning and implementation, and in the enforcement of any regulations or guidelines or programs carried out under the Act.

As a first step, public inolvement for Region II, New Jersey, New York, Puerto Rico and

the Virgin Islands, EPA's primary purpose at this meeting is to give representatives of environmental groups, industry, and governmental groups, and individuals who are potentially affected by the new Act, to offer their preliminary views, attitudes and suggestions for EPA's guidance.

The Resource Conservation & Recovery Act recognizes the inter-relation of resources and public health issues associated with the land disposal of waste. It mandates regulatory actions for hazardous waste, as well as a series of other actions that also provides new opportunity for all levels of government, industry and the general public to protect the health and environment by upgrading sanitary landfills, to protect the ground waters, and by eliminating open dumps and expanding the concept of recovering resources.

The main recognition is that such goals will be achieved only if there are significant cooperative efforts among persons in government, industry and the public. To help such persons develop a meaningful understanding of solid

waste management, the Act has an unusual array of provisions that call for broader public information and public education programs.

It requires public participation in all the major activities mandated by the Act. EPA intends to take the public information and public participation requirements of this legislation very seriously indeed.

We will weigh all public comments received as they relate to the planning and implementation of the Act. We have prepared an agenda for this afternoon's meeting, and it is our intention to adhere to it as closely as possible, notwithstanding the fact that we are beginning 25 minutes late.

Let me remind you that we are here primarily to listen to what you have to say rather than lecture extensively on the provisions of the Resource Conservation & Recovery Act.

We have, none the less, prepared brief presentations on each major subtitle or section of the Act, and these will serve as a preview and introduction to our discussions in each of these areas. To the extent that time permits,

we will answer questions regarding each section of the Act as it is presented.

Often, it will be evident that a definitive course of action has not firmly been chosen by EPA at this point, and partly that is because of our commitment to seek your input before progressing too far in implementation of the Act. In any case, we are willing to give you our current thinking on the questions at hand, and if we cannot answer a question that you give us, then we will think of an answer to another question that we are more comfortable with.

Following the detailed discussion of the various sections, and that will be hopefully about 6:30, or 7:00 o'clock, we will allow time for public comments and statements from the floor, which we will limit to five minutes each.

Any written material which you would like to submit will be made a part of the official transcript record of this public meeting.

Any questions or other information which you desire will be furnished if it is not answered today, in due course, if you submit the questions

to us, we will respond in writing.

I might just mention one thing that you will see a lot of charts and slides projected here today. If you are interested in receiving a copy of these charts and slides, you can do so by writing to EPA in Washington, to the attention of Geraldine Wyer, she is with the Regional State and Local Affairs staff, and again the address is EPA, Office of Solid Waste, Washington, D.C. 20460.

Here in New York you may write to either myself or to the Public Affairs Division, if you have any additional questions or desire information.

I must apologize on our hand-out materials we have a list of issues for discussion which should prove helpful, and a very brief fact sheet on the legislation. I am afraid we do not have copies of the legislation itself. We had five or six hundred of them shipped here and they just have not arrived today.

I'm sure that most of you will probably want copies of it, but in the interest of conserving our supplies, I would ask that if you do

want a copy, see one of the EPA representatives here or leave your name at the front desk, and we will definitely mail you a copy, certainly it should be within the next two or three days, since we plan to have them here, and I am sure their arrival is imminent.

If you are looking for more information, I would encourage you to please write to EPA at the Regional Office, rather than calling. We are getting a very large volume of telephone calls since the passage of the Act, and having your request on paper allows us to analyze and answer your questions or provide you with information more thoroughly and efficiently.

The final thought which I will leave with you, I already said the Resource Conservation & Recovery Act several times, and you can see that it is a mouthful, if you say it out, so we have an acronym for it, we are calling it RCRA, it is only two syllables, and it takes much less time to say it, and it sounds officially cryptic to give it a universal bureaucratic appeal, but you should not mind too much since we brought you NEPA and OSHA and NIOSH and all the others, so

RCRA should not be too hard to live with.

The first presentation by our Washington Office of Solid Waste is on training, public information and public participation, and it is going to be presented by Mr. Val Grey, who is the Chief of the Program Management and Support Services Branch of the Office of Solid Waste in Washington.

MR. GREY: Well, my part of the presentation deals with public participation, but after looking at this audience, I am wondering what I am doing here.

You already know about public participation, you are here, and you are ready to participate, but let's see what the Act has about public participation.

The Resource Conservation &Recovery Act of 1976, or RCRA, contains an unusually complete array of provisions which could bring about a high degree of public understanding and participation. Taken together, these various provisions make it clear that the Congress understood that it is impossible for the public to participate meaningfully unless the Government first produces

valid scientific and technical data, and then processes and publishes this information in such a way that everyone may have access to it.

Only in this way can you, the public, have a reasonable chance of influencing the social, economic and political changes which the Law is designed to bring about.

In Section 8003, the administrator of EPA is required to develop, to collect, to evaluate and coordinate information on nine key elements, which are crucial to the Act's purposes.

The Administrator is not only to implement a program for the rapid dissemination of this information, he is also to develop and implement educational programs to promote citizen understanding. This makes it quite clear that the information called for is not to be developed for the exclusive use of those who for one reason or another may be considered experts in the field, but for everybody.

Moreover, the Administrator is asked to coordinate his actions and to cooperate to the maximum extent possible with State and Local authorities, and to establish and maintain a

central reference library for virtually all kinds of information involved in solid waste management, for the use of state and local governments, industry and the public.

Now, who is the public?

To insure that the public participation process does not become lopsided, we felt it was necessary to identify major categories of interest groups who would represent the public at large. Under RCRA we regard these to include consumer, environmental and neighborhood groups, trade, manufacturing and labor representatives, public health, scientific and professional societies and governmental and university associations.

This spectrum of categories of representative groups will be altered and supplemented as necessary if in the course of implementing the Act it appears purposeful to do so.

Now, what does the law say about public participation?

Section 7004 of the Act states that any person may petition the Administrator for the promulgation, amendment or repeal of any

regulation under this Act.

Section 7004(b) deals with public participation. It states that public participation in the development, revision and enforcement of any regulation, guideline, information or program under this Act, shall be provided for, encouraged, and assisted by the Administrator and the states, and further, that the Administrator, -- next slide -- in cooperation with the states shall develop and publish minimum guidelines for public participation in such processes.

Section 7002(a) states that any person may commence a civil action on his own behalf against any other person -- and "person" is defined to include the United States -- who is alleged to be in violation of the Act, or against the Administrator, if there is an alleged failure by him to perform any act or duty required in the Act.

What are some of the available public participation techniques?

The many techniques which can be used to involve the public in government actions fall into three major categories.

One, the use of appropriate public meetings, hearings, conferences, workshops and the like, much like this one, throughout the country, which EPA intends to plan and hold in countenance with the unfolding of the Act's provisions.

Two, the use of advisory committees and review groups, which may meet periodically, but which will also be called upon to review any comment upon major programs,regulations and plans, no matter when they occur, and no matter whether a specific meeting is convened or not.

Three, the development of educational programs so that the public has an opportunity to become aware of the significance of the technical data base, and the issues which emerge from it.

Effective public education programs depend on the use of all appropriate communications tools, techniques and media. These include publications, slides, films, exhibits and other graphics, media programs, including public service television and radio announcements, and releases to the daily and professional press,

and public education projects carried out by service and civic organizations with EPA technical and financial assistance.

What does the law say about manpower development?

Sections 7007(a) and 7007(b) authorize the Administrator of EPA to make grants or offer contracts with any eligible organization for training persons of occupations involving the managment, supervision, design, operation or maintenance of solid waste disposal, and resource recovery equipment and facilities, or to train instructors.

Eligible organizations is defined to mean a state or any state agency, a municipality or educational institution capable of effectively carrying out such a program.

Section 7007(c) provides that the Administrator shall make a complete investigation and study to determine the need for additional training of state and local personnel, to carry out plans assisted under this Act, and to determine the means of using existing training programs to train such personnel and to determine

the extent and nature of obstacles to employment and occupational advancement in the solid waste disposal and resource recovery field.

The administrator is required to report the results of such investigation and study to the President and to Congress.

MR. DE BONIS: Let's see if we have any questions on these provisions of the Act at this time.

Does anyone have a question?

AN UNIDENTIFIED VOICE: Under the training program, would this mean that, let us say, a municipality which was building a resource recovery plant might be eligible for a grant to train the personnel to operate it?

MR. DE BONIS: Let me interrupt for one second.

MR. GREY: Would you repeat the question again, please.

AN UNIDENTIFIED VOICE: Would a municipality which has constructed a plant for the purpose of operating a resource recovery program be eligible for a training grant to train the personnel which would be involved in running it?

MR. GREY: Yes, it could be part of that resource recovery project, that is correct.

AN UNIDENTIFIED VOICE: I applaud the portions of the bill that address resource recovery, but what I would like to know is, is there money to back up this program? I mean, how much money has actually been appropriated to the educational and participatory parts of the Act?

MR. GREY: Funny you should ask that question.

I really expected it to be the first question.

Did everyone hear the question?

Basically, the question is, will there be sufficient funds to implement the training and manpower portions of the Act -- public participation, excuse me.

Yes and no. We are having this conference today, and obviously we have some funds available for this sort of thing. The whole program is that we have -- what we have in mind is quite ambitious, and to answer your question directly, no, we do not have sufficient funds for all that

we would like to do.

The area that will probably suffer most is manpower training or manpower evaluations and training.

Public participation in connection with the various regulations and guidelines will include public hearings. We will have funds for that.

We are programming alongside each regulation, funds not just for the development of the regulation, but for the public hearing that goes with it. So it is hard to say at this point how much funds will be available for which programs, but I think that there will be some initial funds available, but not enough to do all that we would like to do.

AN UNIDENTIFIED VOICE: I wonder if you guys could get together with people in other departments, and agencies who have public participation programs, because in many cases the particular department cannot hire qualified personnel, in fact, they don't know how to write the job descriptions for that person, and I have been working very hard trying to get information

into our library, trying to tell the librarians how to classify it, and it seems to me someone up there should try to do that, get the HUD people and the 208 people and all of the public participation programs in some way catalogued, and easily available.

MR. GREY: I cannot comment on how much coordination goes on. I don't see too much coordination within the agency amongst the various media programs.

I doubt there is very much coordination between EPA and HUD or Transportation, but I will certainly make note of that and carry that message forward. It is on the record as a matter of fact, and thank you.

MR. DE BONIS: Next question.

AN UNIDENTIFIED VOICE: Since 208 has built into it an elaborate and rather sophisticated public participation process, which is on line, has any thought been given to the integration of this on-going apparatus inasmuch as this program is addressed in a very major sense to the water quality management planning effort that 208 is concerned with?

MR. DE BONIS: The question relates to our consideration of using existing Water Pollution Control Act Section 208 public participation mechanisms in implementing the public participation mechanism under this Act.

MR. GREY: Yes, there has been some thought, as a matter of fact, in fiscal '78, we have five million dollars identified in the 208 program, specifically, for solid waste management programs. However, the problem is, as you know, in administering 208, they go to state agencies not connected with solid waste necessarily, and we are trying to develop the mechanisms, the rules with in-house as to how we can continue to track in five million as it filters down to the state levels, so that it will be spent on those types of projects which 208 will authorize.

MR. DE BONIS: Next question.

AN UNIDENTIFIED VOICE: I have two questions.

Can you explain in a little more detail the role the Citizen's Advisory Council will play, and secondly, being involved with the

implementation of a number of Federal programs, there has been a lot of dissatisfaction with the state's role in getting public participation moving. Is there any possibility of having public participation --

MR. DE BONIS: The first question was asking for a little bit more detailed information on the role of the Citizens Advisory Council in the implementation of our legislation.

MR. GREY: The Citizen's Advisory Council as you call them and we call them the advisory committee, the Federal Government has a procedure or regulation concerning them.

I can tell you they are not too popular in the bureaucracy. However, we have proceeded to do two things.

We are planning an ad hoc group, I think, in the next two or three months, if I remember correctly, I think it is in May, roughly, when the first ad hoc group will meet.

Ms. Wyer, the lady's name you heard earlier, is the one that is coordinating this.

The membership on that, as I have heard something, is around 35 or 45 representatives,

who are already listed, and are being invited. However, that can only be held at one time. That is why it is called an ad hoc group, and we must go into a permanent advisory group.

I am initiating the necessary bureaucratic paperwork to get this approved by the Office of Management and Budget. It is still within our agency. It has not gone over to OMB for approval, but we are requesting a committee of about 15 persons. We are going to utilize this first meeting of the ad hoc group to get the initial reaction of the citizens in this area, and then to narrow down the membership to what advisory groups normally should have, which is around 15, which is the workable number we have been given.

Does that answer your question on the advisory --

AN UNIDENTIFIED VOICE: Not really. I am interested more in the role of the committee.

~~MR.~~ DR. SKINNER: One of the problems with an advisory committee is that it is a very select group of 15 people which some of them might represent some very special interests and might

deal directly with an advisory committee, and excluding the general public at large gives the advisory committee a tremendous amount of influence over the direction of the program. We are thinking of using the advisory committee basically to review our program directions occasionally, like once a year or once every six months, or use them for a special analysis of special topics, but the overall public participation to include everybody will be done through a broader mechanism, through the states and through the local governments.

MR. GREY: Does that answer the first question?

AN UNIDENTIFIED VOICE: The second one is, can public participation money go directly to citizens instead of being funneled through the state?

MR. GREY: They can, and they have been in the past.

AN UNIDENTIFIED VOICE: Thank you.

AN UNIDENTIFIED VOICE: Are you prepared to work with all levels of local government?

MR. DE BONIS: The question is, are we

prepared to work with all levels of local government.

AN UNIDENTIFIED VOICE: Does the law make any distinction.

MR. GREY: The question is are we prepared to work with all levels of local government, or does the law have any distinction.

MR. GREY: The answer is yes, we are prepared to work with all levels of local government and the law does not make any distinctions.

MR. DE BONIS: I might just clarify something a little bit here.

Let's keep our topics specifically to this particular section of the Act.

Now, that question could be construed in a different way, where there might be distinction in subtitle (d) where the state and local planning sections of the Act are located, so we are talking strictly about training, public information and public participation.

AN UNIDENTIFIED VOICE: I meant it in that sense.

MR. GREY: I answered it in that sense.

MR. DE BONIS: Any other questions?

AN UNIDENTIFIED VOICE: Does RCRA public participation tie directly into a specific project?

Let's just say in a community that does not have a solid waste program and is beginning to plan one, or resource, will Federal or state funds be held back or be continued upon the development of a public participation program as in 208 where we are generating an area whereby hazardous waste management treatment program, and in that we have a public participation program which is mandated under the law, and I am wondering if the public participation in this Act will be specifically tied to a particular project as a prerequisite, or requirement.

MR. DE BONIS: Are you speaking specifically of the 208 program as a project in itself?

AN UNIDENTIFIED VOICE: No, this particular Act itself defines a resource recovery facility and I want to know, will there be a mechanism developed prior to the development of a program, a resource recovery program.

MR. DE BONIS: The question as I

understand it is, will it be required to have a public participation program established before a specific is underway.

AN UNIDENTIFIED VOICE: That is correct.

MR. GREY: You stated that one of the requirements of RCRA is that we would write guidelines on public participation programs. Those guidelines have not yet been written or even started.

I would imagine that the answer in your question would lie in those guidelines when they are published, and you will have a chance to comment even on that.

My best guess would be that it will not be geared to a specific project, unless that project has a real requirement for special training in a special area for our special purpose, that our public participation guidelines will be a broader shot, working through the state governments to try and reach as many groups as possible, at various levels of state and local governments, to do whatever may be necessary within that state.

Now, in some states we may have to educate

legislators, and in other cases we may have to educate the housewife in the local communities to allow that landfill or the trucks to go through there, or whatever, so I cannot answer your question directly because I do believe it will be in the guidelines, but it will be broad in my opinion.

AN UNIDENTIFIED VOICE: Under the section for granting programs, will a municipality be able to conduct an engineering program to see whether it is feasible or not to have a resource recovery program, in other words, a survey of quantity and quality of garbage to see whether or not it is economically feasible for them to start a program?

MR. DE BONIS: Are you referring to the public participation provision? It is kind of our opinion that you are really --

AN UNIDENTIFIED VOICE: It says to train personnel or develop programs.

Now, before we develop a program, we have to know whether or not we have the -- enough --

MR. DE BONIS: I think I understand the question.

I think it is whether or not we will fund a feasibility study as a prerequisite to an actual training program.

MR. SKINNER: At the end of this session, we are going to talk about the grant provisions under the Act, and there are grant provisions for feasibility studies under one of the sections of the Act, not directly related to public participation, but you are talking about early construction studies, and site feasibility studies, and if so, yes, there are authorities for that purpose.

MR. DE BONIS: The next question.

UNIDENTIFIED VOICE: I don't quite understand how your provision on manpower training and public participation hang together.

Are you training people for public participation?

MR. GREY: No, my apologies. Really, we are talking about -- the question is, what is the connection between public participation and manpower training.

Are we training manpower for public participation?

The answer is no. These are two completely not completely, but nearly completely different areas that we are talking about.

Public participation is indeed created to train or to educate, which is maybe a better term, to educate the public and to educate the authorities or various elements of our society on solid waste management, to get public support, really.

The manpower training is more centered on the personnel that are involved in solid waste management from the state governmental or state regulatory levels down to the lower routing levels, if you will, of the local municipalities.

First, there will be a manpower study done throughout the country to determine what the manpower needs are, and what the training needs are, and then there would hopefully, when we get some funds, be some funds available to help train people in various areas of waste management, including resource recovery and model laws and that sort of thing.

Does that answer your question?

UNIDENTIFIED VOICE: Well, I realize you

did not write the legislation, but it seems to me to be one provision; is that right?

MR. GREY: No, they are different provisions.

MR. DE BONIS: The next question, all the way down in the back.

UNIDENTIFIED VOICE: I am interested in-- I have not seen the Act, so I will confine my questions to EPA.

To what extent does the agency intend to encourage private actions and have you actually thought about this, or would this be included in the guidelines?

MR. DE BONIS: What do you specifically mean by private actions, citizen suits? The question is, do we intend to encourage citizen suits,and I will definitely let the Washington office handle that question.

MR. GREY: If you remember, the citizens are not encouraged, but may sue any person or persons involved in what they may consider a violation of the Act, and any person can be the United States Government.

Now, certainly, I will not tell you we

will encourage you to sue the United States Government. If -- let me say this about the citizen suits, although I don't think that is my area, but I don't think anyone else is covering it, but I will be happy to discuss it because I do have a feel for this.

We will have some discussion later on on state programs, and how we hope to get the state involved, because we consider that is a very valuable and crucial element in getting the Act successfully implemented, but we have no stick in this legislation. We cannot force anybody to do anything except in the hazardous waste area, and we will cover that later.

So really, the only weapon we have is citizen suits. Now, we would hope that the use of the citizen suits would be beneficial to implementing the Act in the name of environmental protection, and health protection and better solid waste management.

We can go just so far with state and local governments, with guidelines and plans and programs and grants, but if the practices remain bad, or environmentally poor, there is no

way that the Federal Government can step in and force anybody to correct those actions, except through citizen suits and therefore, we would hope that citizen suits would serve that function.

Now, we hope we are not on the receiving end of your suits, that we have done our part, and that if you are going to sue anybody, sue the other guy.

MR. DE BONIS: We will take one or two more questions on this section of the Act, way down in the back there.

UNIDENTIFIED VOICE: On the same question, I know that the Nuclear Regulatory Commission now is considering funding intervenors in their proceeding.

Do you see any provision or any possibility to appropriate funds to citizen suits in some way?

MR. DE BONIS: There is only so much EPA can do under this legislation, I think. The question is whether or not we intend to fund citizen suits or fund intervenors under this Act.

MR. GREY: No.

MR. DE BONIS: There are some definitive answers that we can give you.

UNIDENTIFIED VOICE: I would like to know if the manpower is not going to be funded sufficiently, where all the training monies will come from? Will it come from industry? Will it come from other sources of government, such as state government? Where do you expect these monies to come from?

MR. DE BONIS: The question is, if the manpower provisions of the Act are not funded sufficiently, where will the trained manpower come from?

MR. GREY: Well, of course, our philosophy for many years has been that the whole business should be self-sufficient. Theoretically we should never have to have any federal funds to do local solid waste management jobs.

In fact, that has not worked out, and there are reasons for it, and there is a role for the Federal Government, so that is why we have RCRA, and why we have grants, and why we have a role for the Federal Government.

But the Federal Government cannot

obviously support all the training needs, nor all the other needs in waste management in this country.

We hoped that the system set up at the local level would include not only the physical deletion and removal of waste and disposal in an environmentally sound manner, but also in all the management costs involved, which would include local planning and local training and other aspects of the thing.

Now, different communities, I guess, raise their funds in different ways. I am not a financier, but you can do it through tax revenues or bond issues or whatever other mechanism you choose to use, which is available, so we will have -- you, the community will have to rely on many sources of funds to do the whole job throughout the country.

MR. DE BONIS: One more question.

UNIDENTIFIED VOICE: It seems to me you are working on changing social habits and the requirements would be to mandate certain legislation for local and state governments.

How are you recommending any enforcement

procedures for these.

MR. DE BONIS: Could you hold that question. That is really under the state program development and land disposal area, so we will get to that question if you relate it again a little later.

Are there any more questions? One more question, perhaps, on training or public participation.

UNIDENTIFIED VOICE: This is in response to the response you just gave. My name is Nancy Meyer, and I would like to know, have you people who have been involved in this, and this really directly relates to the last thing you said, talk to people in the small local communities who are going to have to deal with these issues? And if you have talked to them, would you say what you just said?

MR. DE BONIS: The question is whether or not we have talked to people in the small local communities, and Val, would you like to answer that? That is part of the reason we are here.

MR. GREY: Yes, that is part of my answer, that we are here --

A VOICE: You are not answering the question. Answer the question.

Have you been in communication with people who are trying to do anything about solid waste practices in the smaller communities such as -- and I say -- Rochester, Syracuse and Ithaca, for example, I want to know have you had any communications with them?

MR. GREY: Yes, we have.

Now, there are about 15,000 counties, I think, in the country. Obviously, we have not -- we are only about 100 strong of professionals. We obviously have not talked to all the counties.

But remember we have -- we have had for several years an on-going cooperation in communication with many associations who represent these governments that you are talking about, such as NACO, and the Conference of Mayors and so on.

Am I getting your question?

UNIDENTIFIED VOICE: What I hear you saying is that you talked to some people who are involved in solid waste, and I guess what I am asking you is, as I read over the bill, that --

I would like to speak to this later, but I don't want to take away what I am going to say later, but what I am saying is maybe you have talked to the engineers in the industry and maybe you have talked to some national associations, and I am asking you whether or not as you are imposing these guidelines, you have spoken to the public officials about what you will be implementing, and --

MR. GREY: Yes, we have talked to these officials you are talking about, but obviously we have not talked enough, and RCRA gives us greater authority, and greater encouragement, and hopefully greater funds to do this with.

I don't know how else to answer your question. There has been communication, but not everywhere, necessarily, nor obviously.

UNIDENTIFIED VOICE: Thank you.

MR. DE BONIS: I think we are going to move on to the next section in a few minutes, but if you will just give me a moment, I would like to do some advance planning.

Could I see a show of hands on anyone who plans to make a statement when we get to that

portion of the program, whether or not you have handed in a card, let me see a show of hands, please?

Okay, is there anyone who plans to make a statement who has not submitted one of these cards?

Fine, excellent.

The next portion of RCRA which we are going to discuss is subtitle (c), or the hazardous waste regulatory portion, and to give us the initial presentation, we have Mr. Alfred Lindsey, who is Chief of the Implementation Branch in the Hazardous Waste Division.

MR. LINDSEY: Thank you.

May I say at the outset that we appreciate the fine turnout that we have had here, and we are looking forward to, I guess, as all of the other people said, your comments and your participation as we go along here.

For those of you who were in the earlier session, the workshop on hazardous waste, I am sure you came away filled with at least some appreciation of the issues, and of the questions which we face in dealing with hazardous waste,

and if you are expecting me to give all the answers to all those issues and questions tonight, why that is not going to happen.

As a matter of fact, I am looking forward to hearing from you, hopefully, to gather your input into these -- at least your thinking on these issues and questions.

What I am going to do here tonight is follow through giving a brief outline of the requirements of subtitle (c), as we interpret it, and at the same time, to give some -- to identify some of the problems which we face in trying to come up with a regulatory procedure, regulations under this section.

As I said subtitle (c) mandates a regulatory program which is to control hazardous waste from their point of generation, which is usually an industrial source, to ultimate disposal at a permitted facility.

This is a very clear mandate.

There is a lot of latitude as how we carry that out in the Act, but the Act is clear in what we are supposed to do.

Can I have the first slide, please?

The first thing we have to do, and many feel that it is the most difficult thing, is to come up with criteria for identifying what is and what is not a hazardous waste.

Congress has mandated -- the first thing we have to do under Section 3001, is come up with criteria for what is and what is not a hazardous waste.

Now, Congress has mandated that we include in our consideration here toxicity, persistence in the environment, degradability, bio-cumulation in tissue, flammability and corrosiveness.

When we are done identifying the criteria, we have to come up with a list of typical examples of hazardous waste.

As with most of the regulatory provisions of Section 3001, we are granted 18 months in which to do this, and that is from October 21, 1976 which brings us to April 1, 1978.

We plan to give you an idea as to some of the issues we face, perhaps to spur your thinking on these things, and a typical question should be precisely how should hazardous waste be defined?

What toxic and non-toxic parameters should be used in defining a hazardous waste, and as I say, I mentioned a few that are written right into the Act.

Now, wastes are mixtures of many different materials. To what extent can criterion tests be applied to waste, and to what extent are suspected hazardous components in those wastes?

These are some of the questions which we are wrestling with as we begin to try and work on these issues.

Section 3002 requires us to promulgate regulations for the generators of hazardous wastes which will include record keeping and reporting provisions, including keeping track of quantities, constituents of wastes, disposition of wastes, to put together regulations on the labeling of containers, and perhaps on the characteristics of containers, and probably most importantly, to set up a manifest system, a manifest system to track wastes, that is to keep track of them from point of generation to point of disposal, so-called cradle to grave control.

A manifest system will include information,

pertinent information for the transporter and disposer.

As you may know, some states already have provisions, and have already set up manifest systems, and in those particular states they take the form of a trip ticket, which accompanies the transportation. Issues surrounding this particular area include how can record keeping and reporting burdens be minimized, and yet -- so that we still have adequate cognizance of hazardous waste management problems, and their solutions?

Should transport manifests be uniform nationwide is another question.

The next slide.

Under Section 3003, we have the mandate to come up with somewhat similar requirements for transporters of hazardous material, including record-keeping requirements, sources of waste, delivery points of waste, labeling requirements, compliance with a manifest system, and in the Act, Congress has mandated whatever we come up with here must be consistent with the Department of Transportation regulations.

Section 3004 of the Act is one of the most important ones, because it is -- it mandates that EPA develop standards for treatment, storage and disposal facilities, and it is by these standards that improper disposal will be made illegal, and as such, this is a very important section.

The Act requires that we, EPA, develop regulations for these standards covering record keeping and reporting, and the manifest system, how much material is received, and how it is disposed of, and it requires that we set up standards for monitoring and inspection, minimum standards for monitoring and inspection, which will allow us to determine if the site is, in fact, polluting, and there will be location design and construction standards, including perhaps requirements for where facilities can and cannot be placed, and what design options may be restricted, and in what cases.

It requires maintenance and operating standards, contingency plans, plans which will identify what is to be done if something is wrong, and then a broad category of ownership

standards which might include provisions for performance bonds, long-term car funds, training requirements, site closure plans and the like.

Then when it gets all done, there is a provision in there, actually it is at the start of this list, which says, in effect, that such other standards as may be necessary to protect the public health in the environment, so it is a very broad mandate.

Some of the problem issues which we have here include liability insurance. Should liability insurance be required? What are the main problems associated with integrating hazardous waste facility standards with the present air, water and OSHA standards?

Should performance standards for hazardous waste storage and treatement provide only a defense line?

Should hazardous waste facilities standards be uniform nationally, or should it allow for variations from region to region, state to state?

One of the major problems we have, and I

think -- we heard quite a bit about it this morning -- many citizens automatically oppose the siting of disposal sites intheir communities.

What can the Federal Government do to impact this?

What stringent standards have any influence on this issue?

Should the regulations published by EPA require certification of employees working in hazardous waste facilities?

We certify boiler operators, what about operators of hazardous waste facilities?

Should EPA require bonding for these facilities?

What routine monitoring should be required at a facility?

Who should do it?

These are some of the questions which we are facing, and on which we would like your opinion and input and your thoughts.

Section 3005 of the Act sets up a permit system for treatment, storage and disposal facilities and this is the mechanism under which we will determine whether or not a facility is

meeting the standards developed under Section 3004 that we just discussed.

If a facility is meeting and complying with those 3004 regulations, then they will be granted the permit.

Within six months after the identification of the Section 3004 standards, it will be illegal to dispose of a hazardous waste as identified without a permit.

Now, the requirements of a permit system are -- some of the requirements are briefly outlined in the Act itself, including when an application is made it will have to include information on the waste itself, including the manner of disposal, which is to be carried out, the times and amounts of waste which are to be received, the frequency of treatment, or the rate of disposal, and there will be information required on the site, there is also a provision for interim permits.

For those facilities which are in business as of the date the Act passed, the 21st of October, and who have notified the state or EPA under Section 3010, which we will go

into briefly in a minute, and who have applied for a permit, will be granted an interim permit to continue operations until the EPA paperwork clears.

Now, under 3006, the Congress has authorized the states to take over the permitting and enforcement parts of this Act, and they are very clear in their interests here that the states do that.

A state authorized program, to be authorized to do this, must be equivalent to the Federal program, consistent with other state programs, and must contain adequate enforcement provisions.

Now, Congress, however, did not identify what is meant by "equivalent," "consistent," and "adequate," so that is some of the definitions which we will be working with, and working on for the next period of months, and anybody who has any thoughts on those matters, we would be glad to have those also.

EPA on its part will be setting up guidelines or developing guidelines which will identify those particular points, and help the

states in setting up an acceptable program.

There is also authority for interim authorization for up to two years for those states who have had waste programs in effect 21 months after the Act is passed.

Section 3010 is the notification section of the Act.

What Congress has done here is require that within three months after EPA has promulgated standards of Section 3001, for what is and what is not a hazardous waste, then each generator, transporter, treater, or storer or disposer of hazardous waste must notify EPA or an appropriate state agency of their -- of the fact that they do, in fact, handle wastes, which they expect are covered under the Act.

One of the problems we have here is how do we reach these people.

How will they all know that they have to notify us, and how do we distribute the forms, et cetera, so this is an issue which we have to face.

Section 3011 provides assistance to the states to help them upgrade to take over the

permitting and enforcement parts of the Act, and it has authorized twenty-five million dollars to accomplish this for each of two years, fiscal years 1978 and 1979, I believe.

However, on the other hand, that money has not been appropriated yet, and how much of it will, in fact, be appropriated by Congress is quite a question.

In any event, we will be developing a formula, devising a formula which is to be based on the amount of hazardous waste, and on the extent of public exposure to those hazardous wastes inorder to determine how these funds will be split up.

Well, in seven or eight minutes, that is pretty much subtitle (c) requirements and as you can see, we have quite a lot of work ahead of us, and we have been on the road talking with people for the last month and a half, we are going to be continuing to do it for the next period of time in meetings like this, and in smaller meetings, and I am here to hear your thoughts on some of these issues.

I might point out that if you haven't

already picked it up, we did bring up with us a whole parcel full of papers here which list issues for discussion, and these contain some of the more important issues which we have to face, and on which we would like some of your input.

So with that, I will take some questions.

MR. DE BONIS: This is such a non-controversial portion of the Act, I am sure we won't have any questions.

Down there, in the back, please.

AN UNIDENTIFIED VOICE: I would like to chat about when is a waste a waste.

It is a common practice in my business to store certain things in 55 gallon drums in the backyard. Now, I have been told that you are going to look at these drums that we have sitting out in the yard, and we don't consider them to be products, they are intermediates, they are in our lots. I have been warned that this may be the most dangerous part of the Act. You are going to come in to our closed sites and look in our drums and I don't want your inspector to tell me that we have this waste on

our property. The question is, when is a waste a waste?

MR. DE BONIS: Let me make sure we understand you.

Are you saying when does this product -- when it is considered a waste by EPA, or are you talking about concentrations and definitions of what is a waste.

AN UNIDENTIFIED WASTE: If I have a yard full of 55-gallon drums, which most chemical plants have, are they products in work, in intermediate storage, or is your inspector going to come and knock on our door and say --

MR. DE BONIS: The question is not so much what specifics we are going to consider as hazardous as when a potentially hazardous waste will be considered a waste under the definition of the Act, and not an intermediate in some chemical process or raw material, or something else.

MR. LINDSEY: Do you want to give me your address and I will send you some forms for the notification part.

To be serious on this, the materials which

are in process, are intermediates as you point out, in that they are somewhere between the stage of being manufactured, and are not wastes.

I mean, I don't think that we could come up with a definintion that would make them wastes.

On the other hand, if a material is being stored, and it is a waste material, that is the intention is ultimately to dispose of it in some fashion, other than making a product of it, then my inclination is to say that that would be a waste, subject to the storage provisions under Section 3004, but that is a definition that we will have to come up with, and if you have any thoughts on how that should be stated, let us have them.

MR. DE BONIS: I might add that I used to work in the headquarters program in the Office of Solid Waste, and I am in the region, and it is much more fun to repeat the questions than to have to answer them.

Next question.

AN UNIDENTIFIED VOICE: I have a suggestion on how to handle the situation.

Anything that is in process or in work, normally states have regulations governing pollution incident prevention, and, therefore, that would -- that type of legislation or law would prevent mishandling of material that is being stored on site, whether it is a waste or an intermediate product is immaterial.

You have to have a pollution incident prevention system.

MR. LINDSEY: I think the point of your statement is that there are OSHA standards and other standards, state standards in many cases, that apply to the handling of hazardous products or hazardous materials, but we are dealing here now with waste materials, and not with products.

AN UNIDENTIFIED VOICE: He brought up a very good point that somebody could call a waste an intermediate product, and there is always a potential market for a waste.

We were talking this morning about waste trading, and all of that stuff, and you could always say well, someday somebody is going to buy this and that may be true, but --

MR. LINDSEY: I follow your point. I am

not quite sure we will handle that. For example, I can think of an issue whereby in the past certain hazardous chemicals which might come under the category of being hazardous, depending on what criteria we come up with, have sold for some nominal price, for example, for wetting down dusty roads, or something of that nature.

Now, the question becomes, is that a product or is that a waste?

Now, I think something will have to depend there on -- well, we will have to try to face that in the definition section.

MR. DE BONIS: If any of you in the back did not hear the gist of the question, you should understand it by now, but basically it is a question of whether or not you have something stored and we consider it a waste, but the industry perhaps considers it a consumer product before its time.

MR. LINDSEY: In the end, the courts will decide those kinds of questions, if there is a disagreement.

AN UNIDENTIFIED VOICE: You mentioned generating a list by April of 1978.

MR. DE BONIS: The question is how do we intend to generate a list of hazardous wastes within 18 months of the enactment of RCRA.

MR. LINDSEY: The -- what we have to come up with first is a set of criteria, and this set of criteria will be -- will include, as I said, consideration of things like toxicity, and things like that, and we have work going on to try and do that now. At some point, we will be setting levels within those criteria, and we will have to come up with standardized testing techniques so that everyone can -- so that we are not comparing apples and oranges, for example, and then we expect to test a variety of different types of materials, and frankly -- and according to those test methods, basically, that is how it will be done.

Does that answer your question?

AN UNIDENTIFIED VOICE: Thank you, sir, but it is only a year away.

MR. LINDSEY: Isn't that tough?

We are really up against it.

MR. DE BONIS: We are worried.

MR. LINDSEY: We are worried a lot about

that.

We are working on it, and we have time frames set up where we expect to be able to meet these time limits, but we hope to, we are working to it, it is too soon to be able to say we won't do it, let's put it that way.

UNIDENTIFIED VOICE: I assume you are going to be using a lot of other data, but toxicity studies can take quite long periods of time, and are you going to update that list frequently, or is this going to be -- what does the law say about that?

MR. DE BONIS: The question relates to what our list of hazardous waste is going to look like and how often will it be updated, based on the information we will receive.

MR. LINDSEY: I think we are getting off the track here. The Act requires that it is up to the generator to determine whether or not he has a hazardous waste by comparing it against the criteria.

Now, the list will be samples of material which we know and have found and have tested and so forth that meet the criteria, and so the list

is important in that sense.

There are also provisions in the act, I might point out, relative to updating that criteria that we update all regulatory provisions every three years.

It says that we are supposed to do that, and we will be complying with that part of it.

MR. DE BONIS: I will take this gentleman's question.

Before that, I would just like to mention one more thing. I don't want to accuse anyone here of confusing the Toxic Substances Control Act with our Act, but frankly it is not difficult to do at some point, and I would encourage you to attend the Toxic Substances briefing tomorrow, you know, if it is at all possible, because there are a lot of gray areas where, you know, you might possibly be confused.

Frankly, we think there is a fairly clear distinction of what the Toxic Substances Control Act is meant to do and what our Act is meant to do but I think it is too long for us to go into here.

AN UNIDENTIFIED VOICE: Would you address the question of pre-emption with refernce to state regulatory authority, particularly since you are getting into the enforcement end of it? What is the status, is this similar to 92-500, in water, or what is the posture that is going to be taken?

MR. DE BONIS: The question is from New Jersey DEP, and it relates to the pre-emption provisions of subtitle (c) of RCRA, of state hazardous waste programs versus Federal programs which take precedence, and how we might authorize state programs, I guess.

MR. LINDSEY: Okay, if a state -- you may recall that I said there were three basic provisions which we have to develop, what is "equivalent," what is "consistent" and what is "adquate enforcement."

Provided that we come to an agreement that the state program is, in fact, equivalent, consistent and has adequate enforcement, then the whole system will be turned over to the state.

Now, there is another issue which exists,

and which we have to come to grips with, and that is, once it has been turned over to the state, what oversight authority should EPA have? In other words, how closely should we oversee what the states do?

For example, should we review every permit? Is there a need to do that?

On the other hand, should we simply spot check, or what?

But once this program has been turned over to the State, basically the permitting and enforcement parts of the Act are the states prerogative to carry out at that point.

MR. DE BONIS: Next question over here, please.

AN UNIDENTIFIED VOICE: If a firm now has hazardous waste hauled out by a scavenger, whose responsibility is it if an incident happens during transportation, or during disposal, and how will this change the implementation of the program?

MR. DE BONIS: If a firm has a scavenger waste or a transporter of hazardous waste pick up the waste from his facility, whose responsibility

is it after that point during transport , and let's say at the disposal site?

What requirements remain binding on the generator versus the transporter, versus the disposer.

MR. LINDSEY: Okay, let me preface my answer by saying I am not a lawyer, but let me say how this will work.

As I said before, it is up to the generator whether that particular load of waste is, in fact, hazardous under the Act.

If he so determines, then that waste enters the management system, that is, it requires a manifest ticket, and it is up to the generator to identify then a permitted disposal site to which that can be taken. He then fills out, if the manifest system were to follow the system which is used in several other states, and I cannot say for sure that it will, but suppose it does, he will typically fill out his part of the manifest ticket, which identifies what is in the waste, and where it is supposed to be taken, and then the transporter takes over from there.

Relative to liability, if there is a crash or a spill or something happens, I am not sure that I am qualified to answer that question, quite frankly. However, in the past, the generator has had some residual responsibility, and I suspect that he probably would here, too, although maybe not to the same degree since he would have identified a permit to a disposal site, and unless there is something he should have told somebody, or something along those lines, I suspect his liability would be somewhat less.

But I am not a lawyer, so I am a little out of my realm there.

MR. DE BONIS: Let's take about two more questions on hazardous wastes.

AN UNIDENTIFIED VOICE: We know there is a Federal law, but we have to have some competence in using that law in order to get results.

MR. DE BONIS: The question is, is EPA going to write an environmental impact statement on --

AN UNIDENTIFIED VOICE: You have a unit that is a citizen's group --

MR. DE BONIS: Do we have a group within EPA that assists citizens in the preparation of environmental impact statements?

AN UNIDENTIFIED VOICE: Yes, in the use of an environmental impact statement.

AN UNIDENTIFIED VOICE: There is a law on environmental impact, bt if we don't know how to employ the law, it is ineffective, we would like some guidance in the use of that law.

MR. DE BONIS: The question relates to the use of NEPA.

MR. GREY: The National Environmental Policy Act did three things. It set the national policy for environmental quality in all government acts, and two, it set up the Council of Environmental Policy to manage the law, and to implement the policy, and three, it provided for the writing of impact statements on major federal acts, with significant impact on the environment.

Now, there is nothing in that law that says we help anybody write anything.

CEQ has written guidelines on how impact statements are to be written, which are guidelines to federal agencies. Only federal agencies write

impact statements.

The various federal agencies have additional guidelines which deal specifically with the programs that are managed by that agency.

Now, the entire environmental impact statement process has been used by the public to stop certain actions on a technical basis. When they opposed a particular action, they frequently used the non-compliance with NEPA, the National Environmental Policy Act, as a mechanism for stopping that federal action, but we don't muster resources to help citizens business. We write impact statements either with in-house resources, if we have them, if we have the expertise, or we contract the impact statement out to a contractor, through a contract mechanism.

I am not sure that the lady back there -- whether I have answered your question, but I hope I put the prospective as to the use of NEPA properly where it belongs.

We do not do, I think, what you are implying, Madam, if I understood your question correctly.

AN UNIDENTIFIED VOICE: Well, we would like to have some guidance in the use of NEPA in the interest of the public.

MR. GREY: The guidance in the use of NEPA is to federal agencies. The highest guidance from the Council of Environmental Quality, SEQ, and we have additional guidance and we, in the Solid Waste Office, have additional guidance on our programs. So the guidance is directed towards us, and not towards you.

MR. DE BONIS: We seem to have a plethora of questions on hazardous waste. I am going to take two more now, and we will be able to come back to this section, but if we spend anymore time on it after this, we will not get to the rest of the program.

AN UNIDENTIFIED VOICE: This is a quick one.

Will your regulations require an environmental impact statement?

MR. DE BONIS: Will our regulations require an environmental impact statement.

MR. LINDSEY: They will require that we -

well, we will be doing voluntarily an environmental assessment, and take a look at it and decide whether it is a major action under the requirements of NEPA, and then we will decide whether to do an environmental impact statement, or not.

MR. DE BONIS: Over here.

AN UNIDENTIFIED VOICE: Under Section 3002 the hazardous waste generator standard, you will be promulgating in the future regulations pertaining to the labeling of containers which will contain hazardous waste, for example, a 55-gallon drum.

Now, will this labeling, the requirement for labeling be compatible with the existing DOT requirements?

MR. DE BONIS: The question relates to our requirements under Section 3002 for generators and labelling requirements, which we will promulgate under that section, and how they will be consistent or conflict with Department of Transportation or other existing regulations, which I hope they won't.

MR. LINDSEY: The answer to that question

is yes, the Act requires they be consistent and, may I say, to give you a little background, developing regulations with NEPA, we formulate a lot of auxiliary groups, one of which is the work group.

The work group is made up of people from other parts of the agency, in order to insure coordination with other acts, and to be sure that various regulations are consistent, and in this particular case, under Section 3002, we have the Department of Transportation, and I think it is the Hazardous Material Control Division, or something of that nature, I cannot remember exactly the terminology used, which is sitting in on that, so -- in order to insure that this will be the case.

AN UNIDENTIFIED VOICE: You are coordinating then?

MR. LINDSEY: Yes, very closely.

MR. DE BONIS: I will not take anymore questions on hazardous waste right now.

We will continue with the program.

I hope we will have time for more hazardous waste questions towards the end.

The next section of the program regards the land disposal activities mandated by RCRA, and if you look on your program, you will see that we have John Skinner, who has been named the Director of the System Management Division, and we said it twice for emphasis, Systems Management Division, Systems Management Division, with the Office of Solid Waste, and I give you John Skinner.

MR. SKINNER: Thank you.

You just heard a presentation on the hazardous waste provisions of the Act, and these provisions are going to apply -- the presentation that preceeds mine was oriented towards the hazardous waste provisions of the Act, and these provisions apply to a hopefully narrow band of wastes, for which there will be federal regulatory and enforcement programs to manage.

I am going to talk to you about all of the other wastes, and the land disposal provisions apply to all of the other wastes, and when you see some of the definitions, you will realize what I mean when I say all of the other wastes.

But I would like to point out that this

is a very different approach to waste management for this section of the Act than for the hazardous waste section of the Act.

There is no Federal regulation.

There are some federal standards but there is no federal enforcement.

The entire enforcement is carried out through state and local programs.

There is a citizen suit provision, as we mentioned previously, and the primary EPA role is to write the guidelines, to provide information, and to provide funding, so it is not a federal regulatory program for non-hazardous wastes.

Can I have the first slide, please?

Now, the Act contains some important new definitions that are going to change the meaning of waste management, as it is known today.

Let me point out a couple of them to you. The first is a definition of disposal, and disposal in the Act means the discharge, the deposit, injection, dumping, spilling, leaking or placing of any solid waste or hazardous waste into or on any land or water so that such

solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters.

So it covers the placement of waste on the land in practically any way at all.

Jumping down to the bottom definition, solid waste means any garbage, refuse, sludge from a waste treatment plant, or water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under Section 402 of the Federal Water Pollution Control Act, as amended, or source, special nuclear or byproduct material as defined by the Atomic Energy Act of 1954, as amended.

What it means in essence is that waste

from industrial operations, commercial operations mining or agricultural operations, excluding nuclear materials and waste from sewage itself.

But you can see that there is a very broad definition of solid waste.

It is not just municipal trash and municipal garbage. It is practically any discarded materials.

Under this provision of the Act, the Administrator of EPA is required to come up with definitions of sanitary landfills and definitions of open dumps.

But you can see with the broad coverage of the Act that we are talking about a totally different type of disposal, than just a municipal solid waste sanitary landfill.

We could be talking about industrial pits and ponds and lagoons, and waste piles and in industrial operations, we could be talking about sludge, we could be talking about sludge application on an agricultural land, as being a disposal operation.

So the breadth of the law provides some problems, because the key problem, as we see it,

is to limit what is current initially so that it is manageable, so that we can manage it, so that state and local programs can adopt regulations, and efforts in order to meet these requirements of the Act, and yet still provide the broad environmental protection as called for by the law.

So it is a very, very broad coverage.

Now, as I mentioned previously, the Administrator of EPA is required to promulgate criteria for identifying which facilities shall be classified as open dumps and which facilities shall be classified as sanitary landfills.

Can I have the next slide, please?

These criteria for open dumps and sanitary landfills are required to be issued in one year from last October, so this coming October the criteria are required by law.

The law says that a facility may be classified as a sanitary land fill, and not as an open dump, only if there is no reasonable probability of adverse affects on health or environment from the disposal of wastes in that facility.

Now, this provides some question as to what is meant by unreasonable probability, and what constitutes adverse effects on health and environment.

Our current thinking right now is to concentrate on the open dump criteria, and to write criteria for the practices that are to be prohibited rather than concentrating on operating or design criteria for sanitary landfills.

On the Congressional history and from discussions that we have had with people who wrote this legislation, they made it very clear that they do not see this as being a Federal, national permit system for sanitary landfills.

We are to provide minimum protective criteria, but not day-to-day operating criteria, or design criteria for disposal sites.

Now, one of the other problems with these criteria, is that they are going to have to be applicable nationwide, so they are going to have to be very flexible, and there is going to have to be provisions in them for local adoption of the criteria, and local modification.

As I indicated, this regulation or this

standard is due in October of this year, and upon publication of this standard, open dumps are prohibited, except for sites under a compliance schedule, under an approved state plan.

The only enforcement of this prohibition is through the citizen suit provisions of the Act.

Can I have the next slide, please?

One year after we promulgate the criteria for sanitary landfills, which would be October of 1978, if we maintain our schedule, the Administrator is required to publish an inventory of all disposal facilities which are classified as open dumps, which do not meet the sanitary landfill criteria previously promulgated, and to give you an example of the mammouth task we are talking about, if we just included municipal solid waste operations, we would have to inventory some 20,000 sites, and if we included industrial impoundments, as well, this could add easily another 50,000 sites, so this is a very large task, and it is our hope that we will get state cooperation, and that most of this inventory could be carried out through existing

state programs, and records that they have.

I will talk more about the state planning provisions later, and the funding provisions later, but let me say for now that in order to receive an approval and become eligible for grants under the Act, a state plan which is required to establish a timetable for achieving the open dumping prohibition within the State, within a five-year period is required.

This is one of the requirements for receiving grants under the Act. If there is not an approved state plan, within the state, then the open dumping prohibition takes place upon publication of the criteria in October.

So there is an incentive for the state to get involved and to develop plans that would be approved, because that would provide a five-year leaway for instituting programs for closing open dumps.

Otherwise, those open dumps would be prohibited from the time of the publication of the criteria. Someone has called this inventory a hit list for citizen suits because it is going to indicate which sites are open dumps.

May I have the next slide, please.

The final provision of the Act that deals with land disposal is a provision which requires the administrator to publish guidelines and these are non-mandatory, and we envision these to be technical in nature, and to provide information on the technologies and on the cost of achieving various levels of performance from different solid waste management practices.

The Act indicates that these guidelines shall address the methods and degrees of the controls that provide for protection of public health, and the welfare, protection of the quality of the ground waters, protection of surface waters from leachates, and a whole series of other specific things that the guidelines should address.

But again, these are our technical guidelines, they are not mandatory and these would suggest ways in which the open dumping criteria and sanitary landfill criteria, could be met. But the actual compliance with that criteria is left to local government and state discretion.

Our intention right now for the first set of guidelines is to write guidelines on sludge disposal and utilization, and to update our sanitary landfill guidelines for municipal solid wastes.

We issued these guidelines several years ago, and they will be updated and improved.

Later guidelines could include industrial impoundment and mining wastes and provisions for control of those wastes will be available.

I will come back to the state planning provisions later, and talk about the grants that are available and talk a little bit more about the state plan that is required, and what that state plan should contain.

But first I would like to address questions to the land disposal provisions, and then we are going to have someone talk on the resource recovery and resource conservation provisions, and I will come back and talk about state provisions which cut across all portions of the Act.

MR. DE BONIS: Questions.

AN UNIDENTIFIED VOICE: What is the status of New Jersey, New York and Puerto Rico and the other members of the Region II EPA, as far as having a state plan right now?

MR. DE BONIS: The question is, what is the status of state plans in New Jersey, New York, Puerto Rico and the Virgin Islands?

MR. SKINNER: New Jersey has an approved state plan, it was approved several years ago. It is my understanding that that plan would require considerable revision to be approved under RCRA, and that it exists, it does not really meet the requirements of the new Act.

New York State has completed a plan, it has never been formally approved by EPA because of a requirement regarding the Governor's endorsement of it.

Suffice it to say that it has been updated several times, and is considerably more current in my opinion than the New Jersey plan, but again it has never been formally approved by EPA, even though it has been updated, it will undoubtedly still require additional work to be formally able to be ratified under the RCRA provisions.

Puerto Rico is in a similar situation to New Jersey. They have had a plan. It is several years old, which was formally approved at one time, but will require substantial revisions to be approved under RCRA.

The Virgin Islands has a plan which is completed, but has not been approved at this time. It also would have to be revised before EPA would be able to approve it.

So just to sum up, New Jersey and Puerto Rico have been formally approved, the other two have not, and all four would have to be updated before their approval under RCRA.

AN UNIDENTIFIED VOICE: That means by October 1st then of this year that any open dump will technically be illegal and who will enforce that?

MR. SKINNER: I believe that is true, but the only enforcement is through citizen suits.

MR. DE BONIS: The statement made was that as of October 21, this year, any open dump will be illegal, and subject to a citizen suit.

MR. SKINNER: If you read the Act carefully, it implies that the inventory has to be

complete, that is the implication from that section, the Act is not clear on this point, but if you read the section on the criteria, the Act indicates that upon publication of the criteria, open dumping is prohibited.

This is going to be a problem because the approved state plans probably will not be forthcoming for maybe two years or three years.

AN UNIDENTIFIED VOICE: And there is no provision for interim situations, as you have with the permit system for industry, and et cetera?

MR. SKINNER: I think the thing we will do is allow our regional offices and the states to enter into agreements for a planning process which will lead to the development of a state plan which will then lead to the closure of the open dumps.

I would assume that if that is a reasonable process, that that would provide some relief from citizen suits, but if there is damage from a particular site and it can be shown that that site does not meet the sanitary landfill criteria, I think a citizen could sue for

closure under the Act.

MR. DE BONIS: Let me mention one other point.

EPA has prepared a list of those areas where we feel there is some potential contradiction to the Act or the Act is unclear, and we hope that that might be acted on sometime in the near future to clarify any of those technical inaccuracies.

It was sort of an eleventh-hour bill, which was done at the close of the last Congress, which lends itself to potential problems like that.

AN UNIDENTIFIED VOICE: I want to get a repetition.

There is no legal remedy other than a citizen's suit. There are no penalties in this Act anywhere; is that the case?

MR. DE BONIS: I don't think they hear it in the back.

The question is whether or not there are any remedies for conventional waste disposal violations other than citizen suit .

MR. SKINNER: Except for the hazardous

waste provisions of the Act where there are federal enforcement procedures. For non-hazardous waste, for the waste that would not be classified as hazardous waste, there are two provisions, one is citizen suits and one is an imminent hazard provision where if there is a clear and imminent threat to the environment and a clear hazard, the administrator can intervene and call for that to be stopped, but that is to be used very, very sparingly and there is not going to be a broad enforcement mechanism.

MR. DE BONIS: The last row back there.

A VOICE: With respect to sanitary landfills and disposal dumps what is the view of EPA on the whole question of rubber tires? On the one hand they shorten the life of a sanitary landfill? Has anyone explored the possibility of going into that area as a side issue?

MR. DE BONIS: The qustion asks what are our feelings regarding special things such as rubber tires and the potential problem they cause sanitary landfills.

MR. SKINNER: There has been a lot of work done on dealing with rubber tires in various ways.

Incineration, pyrolysis, using them for various applications in roadbuilding, using them for reefs, there is information on tire shredders and the do's and don't's of tire shredders and the operation of them.

The problem with rubber tires is the cost of collection of them.

I think it merely is a cost problem. They can be shredded at landfills, they can be split at landfills, and they don't cause problems at the landfill if they are split or cut up. the question is the economics of doing that.

MR. DE BONIS: Up here.

AN UNIDENTIFIED VOICE: Are your guidelines going to include something on how to handle methane gas? I live in Brookhaven Town, and they had trouble with the migrating methane gas, and now the county has said they will not allow anymore sanitary landfills.

How do you solve that problem?

MR. SKINNER: Definintely. The guidelines will cover gas migration and methods of control for gas migration. They will cover leachate control and treatment.

AN UNIDENTIFIED VOICE: And the technology is there to handle it?

MR. SKINNER: Yes.

MR. DE BONIS: Next question.

AN UNIDENTIFIED VOICE: I would justlike to impress upon you the need for -- to do a very thorough job in defining what an open dump is, because in the State of New Jersey presently there are very stringent regulations as far as design parameters for any new landfills, and what is essentially happening in New Jersey is that you don't get any new landfills.

The local government cannot afford to put a liner in and monitoring wells and so forth. Even on a regional basis, a county does not have the incentive to build such a regional system because the guy down the street has a landfill that falls under the grandfather clause, and he can operate that facility at a much cheaper fee than you will be able to, so I think it is imperative for the Federal Government to be very specific as to what an open dump is.

The way you can rely on the state to do it is in New Jersey we don't know what is going

to happen to the state. It could be held up for quite some time, so it maybe a good idea for you to be more specific, and then if the cities do want to take action against a landfill, they have something to sink their teeth into.

MR. DE BONIS: Next question.

AN UNIDENTIFIED VOICE: I know there is some concern about the lack of powers on the part of EPA to force states and local governments to comply, or to follow the guidelines, actually, but isn't the main incentive that there is going to be the withholding of Federal funds or funds from this program if states do not upgrade their facilities and do not close down their open dumps and install more appropriate facilities? Isn't that the major incentive?

MR. SKINNER: That would be a major incentive if the Act was funded fully.

AN UNIDENTIFIED VOICE: Here we go again.

MR. DE BONIS: Yes, sir.

AN UNIDENTIFIED VOICE: Will your guidelines allow for the recovery of methane for landfills?

MR. DE BONIS: Will the guidelines allow

for the recovery of methane landfills.

MR. SKINNER: It is not a matter of allowing, the guidelines are advisory in nature, and explain the way various landfill practices should be taken, yes they will.'

MR. DE BONIS: Sir.

AN UNIDENTIFIED VOICE: Maybe I am mistaken, but did you say the grant funds were contingent upon the state having a approved plan? If that is the case, it is going to be very difficult --

MR. SKINNER: Are the grant funds contingent upon an approved state plan, and it would be difficult, therefore, to develop a state plan if the funds were contingent upon it?

There are funds available in the Act for the planning process itself, but once a state does have an approved plan, then the funding becomes automatic, and whatever funds are allocated under the Act are divided up by population basis between the states with an approved plan

I will discuss that more in detail when we talk about the funding provisions of the Act.

AN UNIDENTIFIED VOICE: Before I can ask

the quesion, I would like to get a clarification.

When you say you are going to upgrade an open dump, are you going to create -- upgrade this to a sanitary landfill, or scientific landfill, or what does that really mean?

MR. SKINNER: We will write criteria for open dumping in a way which describes the environmental dangers or hazards that should be prevented. The requirements would then be placed on the states to institute programs that -- so that no new facilities would violate those criteria, that existing facilities over a period of time, a maximum number of five years, would meet those criteria.

One of the questions, and I don't know if that is what you are getting at, is what about old facilities or facilities which exist right now, and we are not sure how we will handle that.

AN UNIDENTIFIED VOICE: That was part of it.

My concern is for dumps that accept waste from homeowners, garbage-type dumps, that have

television sets and refrigerators thrown on there and have PCB contingent material, obviously which is very hazardous, as EPA is well aware.

What plans does EPA have in order to try to capture this particular type of disposal?

MR. SKINNER: Those materials would not probably be covered by the hazardous waste provisions of the Act, because they occur in small quantities, so they would have to be handled under the open dump criteria of the Act.

I would envision our criteria would say things like there could be no leachate from disposal sites into drinking water supplies, and then the state would have to design the site or place the site in such a way so that it did not occur.

That would be the protection that would be provided for those types of materials.

AN UNIDENTIFIED VOICE: Would that be sufficient to close an existing dump?

MR. SKINNER: That is a problem. If you have a disposal operation with ten years' history and ten years' waste, the cost of removing that waste or lining the disposal site

or in someway preventing the leachate could be very, very high. We don't know how you are going to handle that under the Act.

It is a very difficult area.

AN UNIDENTIFIED VOICE: Well, with reference to existing operations to try and reduce the impact, one device is to cover the unit with an impermeable membrane, and, therefore, prevent water from going down in it, providing its out of the water table.

MR. DE BONIS: Yes, thank you.

Let's take one more question on land disposal.

AN UNIDENTIFIED VOICE: Under the Senate bill 624 amendment, each county is created as a district to come up with a solid waste plan, ten-year plan, and simultaneous to this we currently are having a great deal of citizen unrest because of the thought of the county importing outside-of-county waste.

Under DEP regulations a landfill owner or operator is compelled to take a specific waste, regardless of where it comes from.

Now, it almost seems to me that the

amendment somewhat antiquates this DEP regulation that would compel a local district landfill owner to take outside county waste.

Now, my question is under the Federal regulation or bill, are there any vibrations in there which would have the district manage its own fate, whereas they are not told that you must accept or import out of county solid waste.

MR. DE BONIS: Okay, this is a little bit complicated.

If we are referring to the New Jersey recently passed provision for -- which mandates solid waste management planning by the 22 solid waste districts, which are the counties in New Jersey, and the Hackensack Meadowlands Development Commission area, and one of DEP's regulations is that wastes at a facility cannot be discriminated against as far as what their origin is, and the question is whether or not the Federal legislation is going to address this in any particular fashion, or whether or not we are going to require individual facilities to accept or not discriminate against waste, and I don't know that our -- any of our regulations will

actually address that.

MR. SKINNER: There are no provisions in the Federal bill at all dealing with that issue.

AN UNIDENTIFIED VOICE: Well, going around and speaking with various municipal governing bodies in the resolutions that they are drafting and supporting, the county solid waste advisory committee, is that they also favor the concept that county solid waste should not be imported into Middlesex County, so this is where we do have a great deal of unrest.

AN UNIDENTIFIED VOICE: Just nuclear waste?

MR. DE BONIS: I am going to hold the questions off here for a minute on this topic.

We are going to make some very brief or very minor changes in the program here.

First of all, I am going to take about a five-minute break, but before I do, and I hope you don't go too far because we will really start in five minutes, it is necessary to get the prepared statements in as soon as possible, since the official record will be closed at 7:00 o'clock, so we want to get what you have to

say in before that time, so what I would like to do is come back and have our prepared statements at that time.

We will set up a podium in front here, and then go on with the rest of the program, but I know it is kind of cramped in here, so let's take a five-minute break, and you can go out in the hall and change your mind if that is what you desire.

(A short recess was taken.)

MR. NEWTON: Our first speaker is going to be Martin J. Siecke.

Would everyone please be seated.

Before Mr. Siecke begins, let me emphasize that we would like -- not that we would like to, that we are absolutely going to limit these to five minutes, so that in five minutes your time will be up and we will ask each speaker to sit down, so please budget your time as you need to.

MR. SIECKE: My name is Martin Siecke, and I am a licensed professional engineer, and I speak as a chairman of the Environmental Management Committee of the New Jersey Society of

Professional Engineers.

Our committee has been very concerned with the disposal of hazardous or toxic wastes within the State of New Jersey.

In fact, we made some specific proposals to the New Jersey Department of Environmental Protection when the problems of a particular Central Jersey landfill were being widely publicized. My prepared statement does not address the specific point of this Act, but I would pass on some of my concerns.

There are and must be realistic time considerations made to allow for problem evaluations, and engineering solutions to be formulate We must be very careful about making what might be unpopular, technically untenable solutions to these waste disposal problems.

For example, we can all recognize that ocean disposal of primary sludge or municipal garbage and waste is, in the long run, an unacceptable means of disposal.

We also recognize that to arbitrarily stop these procedures without engineering alternatives being ready to accept these wastes

is not acceptable.

Likewise, in the case of New Jersey, there was a landfill openly seeping hazardous or chemical waste not from New Jersey industries, but from many industries in surrounding states.

I will not address the fairness of New Jersey accepting waste from surrounding states when it is not capable of properly handling its own waste, but I do, however, question the arbitrary closing of this landfill site to these types of waste without due consideration being given to the engineer alternatives which must be made before these wastes can be disposed of in an environmentally sound manner.

I know, for example, that there were not many industries curtailed when this landfill closed.

I also know that there were tremendous quantities of waste going into this site.

I ask, therefore, where are these wastes going now? Perhaps some are being -- some are being stored. Some are going to acceptable alternative methods. But by the need to survive in business, the balance must be going to

completely uncontrolled and probably less environmentally acceptable disposal alternatives.

In closing, I propose that we must do a much better job of assessing these problems, through planning the expedient,but necessary interim steps to be taken, and following through with properly engineered environmentally sound final solutions.

Thank you.

MR. DE BONIS: Thank you very much, especially for keeping within the time limits.

Nancy Meyer.

MS. MEYER: I guess first of all after reading the bill several times perhaps I think at most it is a very well-written bill, and it took into consideration far more than I had expected it to, and my concerns are not with the quality of how it is written, but the process as it follows the first Act.

My name is Nancy Meyer, and I am a councilwoman for the City of Ithaca, New York.

For two years I served on the Steering Committee of the Tri-County Solid Waste Committee.

It is clear that solid waste has become a national concern, and that public law 94-580 of the 94th Congress is a comprehensive bill that aims in trying to deal with the problems of solid waste.

The dimensions of this problem start at the national level with our natural resources, but the solutions at the problem rest with the people at the local level.

How the taxpayers money is going to be spent to help solve this problem is the reason I came to New York today to speak at this hearing.

There are several primary questions I would like to ask EPA to answer while they are involved with the implementation of this bill.

First, when these guidelines are developed as suggested under Section 4002, will there be anyone who actually goes to the local government to find out what kind of help is needed rather than just telling the local communities what they are supposed to do via a committee from Washington?

Secondly, are you going to ask the

American people to help you separate the natural resources in the home or are you going to ask them to pay for it primarily through the cost of high technological systems that use a lot of systems to use RDF?

I am not against these systems, but I think we have to think in more depth.

Thirdly, how are you going to help the small communities and the private corridors participate when they are removed from the feasibility of the high technical system and the expert human resources that are necessary to move the communities out of the easy dumping practices?

Fourth, will this money end up going for engineering studies and -- by the way, I do like engineers -- and other programs without providing aid for the managerial systems necessary for the local political bodies?

Fifth, how are you going to educate the local DPW's and the political bodies to the urgency in the need and the reason for this action?

seriously at the local level.

Why do I ask these specific questions?

After studying solid waste for about five years, and spending two years on the Tri-County Solid Waste Steering Committee, there are a number of observations I have made that are relevant to the implementation of this bill, and to the situation as it involves the taxpayers' money, and all of you are part of that.

The first part of the Tri-County study was paid for by state funding to the tune of sixty thousand dollars. It only brought us to the point where it could be said that it was possible to use the waste of three to four counties of RDF at the local electric plant.

We are now in the position of trying to find forty-five thousand dollars for the second part of the study, for actual implementation of the RDF system.

The local counties don't want to contribute anymore than a total of twenty-five thousand dollars for the second step.

Analysts ought to be brought into the problem today, or all of this will be lost

unless we can finish the study with the necessary funding.

Will this bill help us at the local level?

Will the Federal Government try to find a way to help finish what the state started?

I think there was a hundred seventy-five million that the state originally allocated for these current concerns. If not about a hundred thousand dollars of the taxpayers money will have been wasted.

It appears to me through the American fashion if there is a way to make some money, there will be someone there to develop technology to make a buck.

The large systems being developed, fantastic devices to make the American public deal with this problem of solid waste, will be swept away, and used in an energy system.

A large price will be paid.

I think there are some flaws in this system that are not being talked about.

I am not against the system. I am for the system. I want these things to be talked about, and in all the hours I spend, I find people not

wanting to talk about the details.

First of all, they continue to carelessly throw away materials we perhaps should be sorting out at the source, your home and mine.

Certain types of paper are more valuable if they are not mixed into the garbage system.

I would like to see this bill provide, as it said it is going to do, money for the research and development of a separation as part of a way of life.

The energy that goes on -- into hand sorting and separating in the home is energy that we taxpayers don't have to pay for.

The energy that it would save at the resource recovery plant is also energy that we would be saving.

I would like money from this bill to develop and investigate the present systems at the local level, meaning DPW's and what they would have to do to make separation possible.

There are many communities in this nation that the high technology is not appropriate, and I am sure many of you come from those communities, and it is not possible, because the quantity

may not be large enough to warrant it.

But sorting it out could help get the materials back into the system.

If the markets are not there, create the markets.

Coordinate the markets.

Don't let the money go into large cities only. In order to implement this system, the local communities need to have more power to control what happens to the waste, and more help developing the alternatives as to how to handle it.

In Monroe County, it took state legislation to allow Russell Point to have the right over the garbage to guarantee they would have enough waste to make it feasible to build a plant there.

On the other hand, with the state legislation, the local communities have given up their right to recycle.

My investigation of the legal right to solid waste needs to be developed.

If the right to recycle paper, for instance, is given up to this kind of legislation,

what will happen to the recycled paper industry?

Don't we need to make sure that that type of industry continues to operate so that at some time in the future we will realize that we cannot afford to burn all our waste paper, we will have some protection from the too hasty building of too many plants?

You know, we have a habit of kind of over-building and over-doing it before we think.

You can look around to see examples of that.

Build the plants but build them carefully.

Use the bill to find out how far we can haul solid waste. Talk to the local politicians and the DPW's before the guidelines are cast and concrete.

We local elected officials are constantly being frustrated with the rules from Washington which frustrate us and do not allow us to implement quickly enough.

In summary, think small as well as big. Consult the local officials, consider the source separation, and don't be afraid to ask the American people to participate in a personal way,

it is time we do it.

President Carter is doing it.

I think EPA can do it with this bill.

Write guidelines that fit the local needs.

Remember the energy crisis that hit us. We were all asked to turn down our heat.

Write guidelines that fit the local needs.

Take care of the existing recycling system that needs to be protected, and help finish the patterns that have been started.

Thank you.

MS. ~~CHOLER~~ Koehler (Phonetic spelling): My name is Sherry ~~Choler~~ Koehler, I am Director of the Environmental Coalition.

Actually, my comments, or rather some of the questions that I have in my mind should be better raised after we have the discussion of the resource conversation aspects of this bill, and I am sort of sorry we had to invert the program a bit, but in order to get on to the public record, I would like to raise some of the problems I see maybe occurring with this bill.

One of them and I think the title, Resource Conservation and Recovery Act, is

something of a misnomer in that the resource conservation and recovery aspects of this bill are really given much less consideration, I think, than the hazardous waste and land disposal aspects of the bill.

I think you can see just by the way the audience thinned out after discussion of hazardous waste and land disposal, that not too many people are sticking around to talk about the resource conservation part of things.

I think that I must second a great deal of what the previous speaker raised in her comments.

I think more attention has to be paid, let's put it that way.

EPA is one of the largest -- is the largest regulatory agency in the Federal Government.

I think with this bill it is becoming almost entirely a regulatory agency, and those aspects of technical assistance, education, public participation, although they are written into the bill, I feel will not be adequately funded, nor will they be adequately attended to.

I hope I am not jumping the gun by saying this, and you may in the next part of the program, eliminate my fears but I mean, I cannot be too supportive of the -- I wish to be supportive of the hazardous waste and land disposal aspects of this bill without question.

But I do think that we must not leave resource recovery, resource conservation solely in the hands of the private sector, and of public interest organizations, such as the Environmental Coalition.

We cannot hold it on our own.

We need the support of US EPA as we have always had it.

Now, the resources of EPA seem to be funnelled almost entirely into the promotion of guidelines and regulations, and I really fear for the kind of good work that has been done in the past.

We can lobby for more money to be put into those aspects of the program, so that those aspects of the program could be adequately staffed and adequately funded, and that adequate support can be given to the private sector, and to public

interest groups, I wish you would help us determine how best to lobby for them.

Thank you.

MR. DE BONIS: I believe we have one more public statement, would you please identify yourself.

MS. LATO: I am Theresa Lato of theBronx Council for Environmental Quality.

We stand for an asthetic unpolluted environment with a natural and historic heritage.

I have a question to ask of EPA.

What is it doing to promote the recycling industry that would automatically reduce waste?

Has it considered taxing virgin unrenewable resources, and considered a rationale of a freight rate program for recycling products?

We in BCEQ want to preserve our planet to promote the general welfare for ourselves and our posterity, as the Constitution dictates to us.

We are here to uphold the Constitution.

Thank you.

MR. DE BONIS: Thank you, especially for being so brief, and to the point.

We are going to continue with our regularly scheduled program, which sounds like something you would hear on TV.

In any case I have --

AN UNIDENTIFIED VOICE: Was that all of the public statements? I signed a card. I gave it to someone who purported to be a representative of EPA.

MR. DE BONIS: How many more people do we have who would like to make a public statement?

Would those three people come forward at this time, please, and we will take those statements.

MR. CASS: My name is Clifford P. Cass,III and I am from the law firm of Butzel & Cass, here in New York City.

We represent the Environmental Action Coalition and a number of citizen groups concerning solid waste problems, and particularly landfills.

I do want to emphasize, however, that I am appearing here this afternoon not on behalf of these or any other clients, but on our own behalf.

I am going to limit my brief remarks to

two areas, first, resource recovery systems, and facilities, and second, Federal procurement of products made from or including recovered materials.

It is clear to those who are familiar with development in the field that a true resource recovery industry built around high technology, solid waste processing facilities, is beginning to develop.

Such facilities are presently under construction in over 20 municipalities around the country, and more are on the way.

It is good to see that large-scale resource recovery is starting to become economical, and we hope this trend continues. Yet, I have one word of caution to interject, and that is that such large-scale systems cannot be allowed to pre-empt small-scale low technology systems which can, in some cases do the same job, or in some cases a better job with a much smaller capital investment, and a good deal less direct governmental involvement.

Such low technology alternatives might include prohibition or penalties on one-way

containers, or packaging taxes, source separation of newspapers and other valuable forms of paper waste and the like.

It would be disasterous if state and local communities found it impossible to even consider such alternatives, and thus reduce the amount of solid waste created in the first place, because they were locked into long-term committments to furnish all of their solid waste to high technology facilities.

Given the vast amount of garbage now produced, there is little present likelihood that such pre-emption will occur, but it is the obligation of EPA, in carrying out its responsibilities under the 1976 Act, to see that state and regional solid waste management plans allow room now and in the future for small scale low-technology resource redemption techniques, as well as massive resource recovery facilities.

The resource recovery industry, in other words, must emphasize many different modalities of conserving resources, and also energy.

We must not put all our eggs in one

basket.

My remaining comments are directed towards Federal procurement policies.

As you know the Federal Government is probably the largest single purchaser of goods in the entire country. Moreover, its specifications and procurement practices are followed by many other entities, governmental and non-governmental, so that its influence extends far beyond its own purchases.

Unfortunately, that influence in the past has not been used effectively enough to encourage use of reclaimed and recycled materials and I hope that those portions of the 1976 Act dealing with Federal procurement, will help to change the situation.

Let me speak particularly of one situation the Government Printing Office.

If the GPO were to adopt specifications which require significant reclaimed fibre content in the paper products it contracts for it could literally reshape the face of the paper industry in this country, in less than ten years.

The GPO has refused to do this in the past, however, primarily on the grounds, rather curiously, I think that reclaimed fibre content cannot be identified in paper products.

So they would have no way of checking in the good faith of people supplying the products.

This problem can be solved, of course, by appropriate certifications and inspections.

But up until now, the GPO has not troubled itself to do so, and there is a danger that its cooperation in implementing the spirit and letter of the 1976 Act will be grudging, at best.

We urge that in implementing the 1976 Act, the EPA adopt regulations which will expose grudging compliance on the part of the GPO, or any other Federal agency to full public view.

Such regulation should require that public hearings be held throughout the country, possibly administered by EPA, on new specifications, and that all agencies spell out exactly why recovered materials are not included in product specifications if they are not included.

These regulations should define recovered

materials for the purpose of specifications, so as to emphasize the possible consumer waste content without excluding any other forms of waste, and they should require Federal agencies to take account and procurement of the fact that recycled production costs are often smaller than their virgin counterparts, and cannot be contracted for in such large quantities or such large time periods, and they should provide for the phase-in of products to allow the industry to develop in an orderly fashion, and they should allow for credit in calculating the cost of procurement and recycling items for energy saved in their production.

They should recognize that in some cases higher costs must be paid for recycled products at least initially, at least into the cost period.

Any such smaller cost increment should be permitted for at least a limited time, since they will, in most cases, be offset by reductions in state and local solid waste disposal cases, and they should make special taxes unnecessary or less necessary.

Thank you for this opportunity to present

our views. I look forward to working with EPA and other concerned public and private agencies in the successful implementation of the 1976 Act.

AN UNIDENTIFIED VOICE: I am from the Bedford Park Civic Association in the Bronx.

What has happened to the garbage in our borough is that it is put in the park, and that is why I am here, because I am very,very interested in other things being done with it.

We know that a good part of the reason for this solid waste problem is product disposal, and that is what I am about to direct my remarks to.

There are many -- I was just wondering, I am not familiar with the bill, unfortunately, and I was wondering if there was any provision in it for any sort of way that we could have -- use the tax system in order to encourage manufacturers to make more durable products, because if it lasted longer, we would not have to throw it away so quickly.

MR. SKINNER: There is a study provision in the Act, there is no direct provision in the

Act, but we are to investigate that, and Bob Lowe is going to be talking about that extensively in the next presentation.

AN UNIDENTIFIED VOICE: That is great because I think using the tax system, we could even have-- it would bepossible, perhaps, to have a tax -- we could take it off our taxes, the cost of repair of an appliance, we could encourage retention of having a Proctor iron, for example, where one part could be replaced.

This kind of thing would keep an awful lot of stuff out of our landfills.

We should also make the life cycle of the applicance available to the public. Fifty per cent of what we pay for our refrigerator is in the cost of operating it, and I think these are things most consumers are not aware of.

They are aware of the price of something when they initially buy it. They don't have any of the other values involved in it, available to them.

Also, there is no -- we really don't have we have a used car market but we don't have a used appliance or television market, and I think

this is something else that might be looked into.

Anything to keep it out of my park is what I am interested in, so I thank you for giving me your attention.

MR. DAVIDSON: My name is Mark Davidson, and I am president of the Putnam County Recycling Council from a small town in Putnam County, New York. I have been involved with recycling in various ways, both physically and mentally since 1971.

I did jot down a few notes while I was sitting here in this wonderful meeting and I would just like to share them with you.

I would like to mention a few terms that I would like to hear mentioned here,and one of them is the word labor intensive,

I believe that every minute community is going to have to deal with what may be in most cases unique to that community. This is going to involve resource recovery in a most labor intensive manner, employing people at varying degrees of ability and beliefs on a local level.

The top would be an environmentally oriented person of considerable skill right down to the employment at the bottom of distress personnel who would be very much enhanced and very much thrilled to break bottles, separate cans and put them in containers.

We have such a n operation in our town now. It is a pilot project.

Secondly, I believe that every industry and plant and office, every community, village and town, four corners and lengthy country road, is in a way a generator of recoverable resources.

Garbage, sewage, hazardous waste, somehow will all eventually have to be recovered if we are to continue as a successful society.

I think, and I believe, that there can be no arbitrary discharge to the environment, unless such discharge could be proved to be beneficial to the environment, and our society.

Thirdly, in point seven in a brief look that we have all been giving, I would like to direct your attention to the fact that it could include something to the following effect, or

perhaps you could add an eighth point to focus on the need to continue the development of solid waste as an energy source to conserve and reduce soil depletion, perhaps by attempting to reduce dependence on expensive inorganic chemical fertilizers by the return of organic compost from municipal compost, properly treated septic and sewage.

It would seem a technology capable of piping crude oil from Alaska could develop a similar piping system for sewage, while treating it in the pipe back to the source.

If a system of this nature was developed, we could then divert much needed organics back to the land and augment the conservation of our soil, instead of sending this up a chimney, or wasting it in our oceans.

I thank you.

MR. DE BONIS: Thank you very much, and I thank all of our speakers for their comments that they have offered to us.

I think it is really more important that we make sure we get all of those comments into the record.

We are able to stay after 7:00 and continue answering your questions and provide our briefings, but we did want to give everybody a chance to get a comment into the transcript.

May I make one quick announcement?

I said before that you would have to indicate your request to receive a copy of the legislation, but we really haven't found anyone yet who does not want a copy of the legislation, so we will mail it to everyone who filled out a registration card, so if you filled a card, you will get a copy of the legislation, as quickly as we can, presumably within the next week or two.

Our next speaker is Robert Lowe, as opposed to our City EPA administrator, which causes much confusion at times. Bob is the chief of the Technical Assistance Branch of the Resource Recovery Division, and he is going to address the technical assistance provisions of RCRA.

MR. LOWE: Thank you.

I am going to have a little difficulty talking. The title of the Act gives one great hope that Resource Conservation and resource

recovery is going to get great emphasis, but as some of the people have already mentioned, that depends a lot on the funding level and staffing level that EPA is given for its own use and to pass through to state and local governments.

But it is clear that resource conservation and recovery are important objectives in terms of the intent of Congress.

I would like to go over those portions of the Act where resource conservation and recovery are called for or programs are called for.

Could I have the slides, please.

Resource conservation and recovery provisions of the Act are included in these areas, and a couple of others. Guidelines in Section 1008, which John Skinner already referred to, resource recovery and conservation panels, the development of state and local programs under subtitle (d) which John will discuss when I am finished.

An item which is not on here, and which is Federal procurements guidelines in Section

6002.

Development and dissemination under Section 8003 and then studies and demonstrations, and evaluations of all sorts of things under subtitle (h), Sections 8002, 4, 5 and 6.

I would just like to mention one thing about the procurement guidelines before I go onto the others.

That is that that someone -- as one of the -- excuse me, one of the speakers just mentioned, these guidelines could have great impact, but only if they are imitated by state and local governments and industry.

We will be writing them with that prime effect, as it is called, in mind.

Our major contribution, I think in these guidelines is to help determine and distinguish between what is practical and what is not.

May I have the next slide, please?

I am just going to mention a few of the sections of the Act that I think are interesting.

Section 8002 calls for a special study in a variety of areas that you can see listed up here, but one thing I want to assure you is that

at least in our hearts, if not in our resource allocations, we are emphasizing small-scale systems, sometimes called low technology. In other words, decentralized source separation systems, and we are also concerned more so now than in the past with the needs of small communities, and we are taking some steps to re-orient our program in that direction, although I have a question for you at the end, that I think will bear on this.

One very important portion of the Act, Section 8002(j), for you bureaucrats who have a copy of the Act, the Congress authorized the establishment of a resource conservation committee which is chaired by the administrator of EPA, and the membership is composed of the secretaries of several other executive departments, such as the Department of Commerce, the ~~Department of~~ Council on Environmental Quality and some others.

What is interesting about this is that this indicates a high priority forthis area. Congress stopped short of legislating incentive and dis-incentive, I guess that was too

controversial at the time, but it showed a serious intent by creating this committee, and this was the first of a series of study groups dating back to the 1950's with the study of material utilization is called for, but for the first time it is called for within the administration.

Prior to this point, there have been commissions, with recommendations to be ignored more easily than this.

Hopefully, these will not be ignored at all.

Anyway, this committee has been established to study several areas which are specified in the law, and these are listed here.

Just to give you an example of what is meant by incentives or dis-incentives, price supports could be one, some of the tax incentives that the lady speaking before mentioned, the penny a pound tax, which I think is more useful as a concept than an actual measure, an example of existing public policy would be depletion allowances, and these will be examined.

I think the others are probably

self-explanatory.

Anyway, this represents a chance for effective incentive programs to be passed into law.

Fortunately, though it won't happen now, it will happen at the conclusion, when it will be initiated at the conclusion of these studies, at least three years from now.

Section 2003 requires EPA to establish resource recovery and conservation panels to provide technical assistance in all areas of solid waste, not just resource recovery and resource conservation, but in all areas for a variety of purposes which are listed here.

Basically, it is to support the implementation of all aspects of the law, and to give you some examples of what we might do, we would work to help states, design and implement regulatory programs.

We would help to develop alternatives to open dumping, such as source separation and central processing recycling facilities.

Most of the questions that I have received are oriented or addressed to how these technical

assistance panels are going to be formed and composed. The terms are required to include expertise in the following areas, technical, marketing, financial, institutional.

What is interesting is that the last three, marketing, financial and institutional represent a new emphasis over previous legislation.

The terms will be composed of, and all of this is tentative right now, but so far most of the comments I heard have been supportive of this, they will be composed of EPA staff people, consultants of all types under contract to EPA, who will be provided by EPA to work with the state and local governments and what we call peer matching, and that is we will provide the funding to enable state and local officials who have had experience in -- with certain problems or in certain areas, to travel to other cities who are facing those problems.

Sometimes the most effective assistance can come from people who have already been there.

These teams will be managed by EPA.

We will have a fixed unit of individuals

who operate as a group and travel as a group. We don't envision it that way.

We -- our interpretation is that there will be a pall of resources,a stable some people refer to it as, who will be called on by EPA and bring to bear whatever keys is appropriate in the circumstances.

The consultant will be selected through competitive bidding that will be held periodically, and this bidding will be announced in the Commerce Business Daily.

Now, the Act requires that 20 per cent of the amount of money authorized to EPA be devoted for technical assistance.

I repeat, this is not just a resource conservation and recovery, but also in the land disposal and hazardous waste management.

I would like to add a couple of issues, some of which are already on your list of issues that were handed out as you entered.

One important one is what will be the relative emphasis placed by EPA on the non-regulatory aspects of this Act?

Primarily the resource conservation and

resource recovery one, as opposed to the regulation, the realities are that EPA is traditionally a regulatory agency. It may be said to be oriented in that direction. It will also be said that the Act provides very specific mandates by specific dates which must be implemented, and with a limited amount of resources and staffing, it is going to be considered prudent that EPA would take care of the regulatory provisions first.

That causes some distress to those of us who want to work in conservation and recovery.

The question I would like to get action to is how should EPA priortize its resource recovery program, its technical assistance, its demonstrations, its information development?

We could do this on the basis of who has the most tonnage, in other words, that would take care of New York first, and Los Angeles second, and with our limited resources, we would probably never get to Putnam County, which would be unfortunate.

Or shall we do it on the basis of the

In which case we penalize the communities then that have a nice landfill, or do we give first priority to those communities who are most likely to succeed with something, in which case they may have the most garbage andthe most severe problem, but because of some political or some other kind of problem, we never help them.

I am saying these somewhat humorously, but these are difficult problems.

If you say let's attack the biggest portion of the problem first, then we eliminate all the small communities, because we don't have the resources to deal with everybody.

Another question is should technical assistance be given in depth to a few cities and states?

In other words, get a few cities and states, and give them all the help we can possibly give them, or should we give a limited amount of help to a great number of cities and states, that is the inch deep and a mile wide philosophy, or visa versa.

That again is a very important question, and will dictate how we go about our business.

With respect to these studies under the resource conservation committee, what should be the criteria for evaluating the various options and measures that can be considered?

Should it be total overall pollution? Should it be resource scarcity?

In other words, should we try to conserve those resources that are most scarce, even though they might involve -- even though others might pollute the world more, or should we be concerned with the balance of payments or the political problems or importing goods, or should we be concerned with the employment impact, and there are a few others that I could mention.

Also, what should be the role of state and local government in resource recovery and resource conservation?

Should every state have a resource recovery technical assistance program, and should our program, therefore, be oriented towards helping the states develop that program, and then when they develop a program, we close up and go home?

Or should we centralize it?

Is it more efficient to centralize it and say okay, states, you concentrate on land disposal, and when you can improve your land disposal practices, by implementing a resource recovery system, call us and we will come in?

Those are the kinds of questions we are faced with right now, and that is why I am here, to hopefully get some answers to these questions.

Thank you.

(Whereupon, at 7:00 p.m. this session was concluded.)

* * *

I hereby certify that the foregoing is a true and accurate transcript of the testimony taken at this hearing.

Vincent Sparaco

Vincent Sparaco - Hearing Reporter

NOTE:

The Official Reporter ended his recording of the public meeting at 7:00 p.m., prior to the questions from the audience on the Resource Conservation and Recovery provisions, and prior to the presentation and questions on the State Program Development provisions of RCRA.

---Office of Solid Waste, EPA

Middlesex County
Solid Waste
Management Program

February 24, 1977

Mr. Michael DeBonis
Chief
Solid Waste Program Branch
U.S. EPA Region II
26 Federal Plaza
New York, N.Y. 10007

Dear Mike:

I very much regret my absence from the RCRA hearing yesterday, and I want to make amends by writing some of the comments I would like to have made in person.

The most important point is that solid waste planning should seek an optimal mix, a balanced combination of management methods, rather than a single best solution. What I have in mind particularly is that source reduction and source separation should complement, and co-exist with, capital-intensive resource recovery and landfilling.

In making guidelines and sponsoring solid waste plans, the EPA should require states and other jurisdictions to guard against flow-control measures that would discourage source reduction and source separation activities from reducing the mixed refuse stream.

The issue of "competition" between source separation and resource recovery from mixed refuse needs to be faced at the beginning of the design process, not as an afterthought. With most capital-intensive resource recovery facilities yet to be built, we can still optimize among the strategies by planning for a high level of source separation diverting substantial quantities of newspaper, office paper, and inorganics from the mixed refuse that will be subject to energy recovery.

134 NEW STREET NEW BRUNSWICK, N.J 08901 (201) 246-5712

I'm delighted to see some of the scrap-using industries waking up to this issue and start lobbying efforts to protect their materials inputs from ill-conceived flow-control regulations. I feel the EPA should take positive steps to help states to draft flow-control language that encourages the highest, most energy - and materials-conserving uses of solid waste resources. It would be ironic and counterproductive to inhibit source separation in the name of resource recovery!

Thank you.

Sincerely,

Garrett

Garrett A. Smith
Recycling Coordinator

GAS:br

cc: Mr. Peter Berle
Commissioner David Bardin

Feb. 23, 1977

STATEMENT FOR THE RESOURCE CONSERVATION AND RECOVERY ACT BRIEFING

NANCY R. MEYER, COUNCILWOMAN: CITY OF ITHACA, NEW YORK

My name is Nancy Meyer and I am a councilwoman for the city of Ithaca, New York. For two years I have served on the steering committee of the Tri-County Solid Waste Committee.

It is clear that solid waste has become a national concern and that the Public law Law 94-580 of the 94th Congress is a comprehensive bill that aims at rying to deal with the problems of solid waste. The dimensions of this problem start at the national level with our natural resources, but the solution of the problem rests with the people on the local level. How the taxpayers money is going to be spent to help solve this problem is the reason I came to New York today to speak at this hearing. There are several primary question I would like EPA to answer while they are involved with the implimentation of this bill.

First: When these guidlines are developed as suggested under section 4002, will there be anyone who actually goes to the local situation to find out what kind of help is needed rather than just telling the local communities what they are supposed to do via a committee from Washington?

Secondly: Are you going to ask the American people to help separate the natural resources in the home or are you going to ask them to pay for it primarily through the cost of highly technological systems that use a lot of energy to produce RDF?

Thirdly: How are you going to help the small communities and the private carters participate when they are removed from the feasibility of the high technology systems and the expert human resources that are necessary to move these communities out of the easy dumping practises?

Fourth: Will all this money end up going for Engineering studies and other programs without providing aid for the managerial systems necessary for the local political bodies to actualize resource conservation?

Fifth: How are you going to educate the local DPW's and political bodies to the urgeancy of the need and reason for this action?

Why do I ask these specific questions? After studying solid waste for about five years and spending two years on the Tri-County Solid Waste Committee there are a number of observations I've made that are relevant to the implimentation of this bill and to the situation as it involves the taxpayers money.

The first part of the Tri-County Study was paid for by state funding to the tune of $60,000.00. It only brought us to the point where it could be said that it was possible to use the waste of three or four counties for RDF at the local Electric plant. We are now in the position of trying to find a total of $45,000.00 for the second part of the study for actual implimentation of a RDF system. The local counties don't want to contribute any more than a total of $25,000.00 for this second step. Endless hours have been put into the problem todate and all these will be lost unless we can finish the study with the necessary funding. Will this bill help us at the local level? Will the federal government try to find a way to help finish what the state started? If not about $100,000.00 of the taxpayers money will have been wasted.

It appears to me, true to American fashion, if there is a way to make some money there will be someone there to develop some technology to sell to make a buck. The large systems being developed are fantastic devices to make the American public think their solid waste is going to be swept away and cleverly used to produce energy. A large price will be paid. I think there are some flaws in these systems that are not being talked about in enough depth. First of all they encourage us to continue to carelessly throw away materials we perhaps should be sorting out at the source. Certain types of paper are more valuable if they are not mixed into the garbage stream. I would like to see this bill provide money for the reasearch and development of source separation of some materials on a national level. as a way of life. The energy that goes into hand separating in the home is energy that we as taxpayers don't have to pay for. The energy it would save at the resource recovery plants is also energy we would be saving. I would like money from this bill to develop and investigate the present systems the local DPW's now use and what they would have to use to make source separation possible. There are many communities in this nation that the high technology is not appropriate; not possible because the quanity may not be large

enough to warrant it. But sorting out natural resources into their appropriate categories could help get the materials back into the industrial stream without expensive technology. Find the markets, create the markets and organize the markets....don't let all this money only go to the industries that are developing the massive technologies for large cities.

In order to impliment this system, the local communities need to have both more power to control what happens to the waste and more help developing the alternatives as to how to handle it. In Monroe County, it took state legislation to allow the Russell Plant to have the rights over the garbage to guarantee that they would have enough waste to make it feasible to build a Raytheon Plant. On the other with that state legislation the local communities in Monroe County have given up their rights to recycle independently of the plant. More investigation of the legal rights to waste need to be developed. If the right to recycle paper for instance is given up with this kind of legislation, what will happen to the recycled paper industry. Don't we need to make sure that kind of industry continues to operate so that if some time in the future we realize we can't afford to burn all our waste paper, we will have some protection from the too hasty building of too many plants. You know we Americans have a habit of overdoing a good thing. Look for example at the gas stations that have gone out of business, the stores that have closed because of the over building of too many shoping centers and the over abundance of fast food restruarants. Build enough resource recovery plants, but think carefully if we can endlessly use our paper this way....and the plastics.

Use this bill to find out how far we can haul the solid waste before the fuel it takes to get it to the plant costs us more than the energy it is producing. Look to the decentralized solutions, the small local markets for using the fuel as well as the large ones.

Talk to the local politicians and DPW's before those guidelines are cast in concrete and federal money is tied to Washington's concept of what has to be done before the federal government will give funding for the implimentation of a solution at the local level. We local elected officials are constantly being frustrated because we badly need money to carry out important programs, but are delayed by having to fill

out meaningless papers, write up summeries that don't fit the local situation at the same time Washington is demanding that we meet this never-never land criteria or that. We all laugh or cry or shake our heads in dismay and loose faith. We , in Ithaca are ready for a highway in our community, the state and federal government are ready to pay for it. To make everyone happy it needs to be built outside of the designated corridor. And just because of the 4h hearing procedure we are afraid to face trying to move the highway to where we all agree it needs to be. Washington's red tape is costing us time energy and frustration. Don't let those guidelines end up in such never'never land that they defeat the purpose they need to be written for. The problem with solid waste is that every solution needs to be tailor made, therefore the local officals need to be actively involved.

In summary:

1. Think small.....as well as big.
2. Consult local officials.
3. Consider source separation and don't be afraid to ask the American people to participate in a personal way.
4. Write guidlines that fit the local needs.
5. Take care that the existing recycling systems are protected.
6. Help finish projects that have been started.

Nancy R Meyer
214 Cascadilla Pk
Ithaca, N.Y
14850

607-273-9128

THE MANAGEMENT OF NON-NUCLEAR HAZARDOUS WASTES

February 23, 1977

AMERICANA CITY SQUIRE INN
Broadway and 51st Street
New York, New York

Following is the transcript of the Conference on "The Management of Non-Nuclear Hazardous Wastes." This meeting, sponsored by the Scientists' Committee for Public Information, Inc., is part of EPA's continuing efforts to educate and involve the public on the Federal solid waste management programs. This meeting was supported by funds from the Office of Solid Waste, U.S. Environmental Protection Agency.

The transcript of the Scientists" Committee for Public Information, Inc., is appended to the transcript of EPA Region II's public meeting and is for the benefit of those who attended both meetings and others interested in those discussions.

S P E A K E R S: (In order of appearance)

JUDITH DWOSKIN,
Executive Director, SCPI

ERIC OUTWATER,
Deputy Administrator,
United States Environmental Protection
Agency Region II

MURRAY NEWTON,
Program Manager for State Implementation,
Hazardous Wastes Management Division,
United States Environmental Protection
Agency

KARIM AHMAD,
Staff Scientist, NRDC

AMIR METRY,
Project Manager, Roy Weston, Inc.

DAVID NALVEN,
Chair Person, Solid Waste Subcommittee,
New Jersey Business and Industry Association

ALFRED LINDSEY,
Technology Program Manager,
Office of Solid Waste, United States
Environmental Protection Agency

ED HALL,
Environmental Specialist, Union Carbide

DAVID MILLER,
Partner, Geraghty & Miller, Inc.

ED SHUSTER,
Manager, Marketing/Sales,
NEWCO Chemical Waste Systems, Inc.

ROBERT L. HARNESS,
Engineering Specialist,
Monsanto Industrial Chemicals Company

EDWIN COXE,
Associate Vice-President and Manager
Advanced Energy Division,
Reynolds, Smith & Hills, Inc.

S P E A K E R S: (In order of appearance)

JACK RIGGENBACH,
Process Engineer,
Environmental Science & Engineering, Inc.

SHELDON MEYERS,
Deputy Assistant Administrator for Solid Waste Program, United States Environmental Protection Agency

MICHAEL F. DeBONIS,
Chief, Solid Waste Management Branch, United States Environmental Protection Agency Region II

BILL WILKIE,
New York State Department of Environmental Conservation

PETER PREUSS,
Special Assistant to the Commissioner, New Jersey Department of Environmental Protection

ROBERT CORMAN,
Staff Attorney, Division of Public Interest Advocacy, Department of the Public Advocate, State of New Jersey

FRED HART,
Fred C. Hart Associates

RICHARD SERNYAK,
Eastern Regional Sales Manager, Rollins Environmental Services, Inc.

MS. DWOSKIN: May I have your attention, please?

I am sorry for the delay in starting the program, but there is still a mob outside, so I hope we will get everybody in quickly.

I am Judith Dwoskin, I would like to welcome you here today. I think we have a very exciting program. We are anxious to get underway.

Let me make a few housekeeping announcements first.

If you will notice on the program, it says lunch at the pool, and we mean that quite literally, outside to the right is a swimming pool, and they setup tables for lunch around there, so you will just follow the crowd out.

Another point is that there are brief bios in the back of your program for all the speakers, so we will not be making those announcements from the podium.

Furthermore, there is a smoking

section in the back half of the room, and the front half is for non-smoking.

Also, we are having this session transcribed, and it is requested that when questions are asked people state their names and affiliation clearly.

Thank you very much.

Our first speaker today is Eric Outwater, who is from EPA Region II.

MR. OUTWATER: Thank you, Judy.

You know, I look at the beginning of any new piece of legislation, and if you look out and see a room full of faces, and people aren't really snearing, and they don't look too hostile because we haven't done anything to make you mad yet, I am just hoping that you will love me in September like you love me in the spring, as the saying goes.

I would like to acknowledge the presence of a number of very distinguished people.

We are always very delighted to see Carlin Karnheim (phonetic spelling)

from D. E. C., and Commissioner Fenton from the City, and in particular, Sheldon Meyers, who is our Deputy Assistant Administrator for Solid Waste Programs from Washington, and I hope that most of you will stay for lunch to hear what Sheldon has to say.

I had a speech today, one of these ones that exhorts you all to do big things with this from the beginning, and I will not read this speech, but I will give you just a few thoughts for the moment here.

You know, we have been in business in EPA now for almost six years, and we think we have made some pretty good progress, and I think most of you will agree that we have. But we also recognized that we had been lacking certain key pieces of legislation, and we got them much to our surprise last year and the year before, such as the Safe Drinking Water Act, the Toxic Substances Control Act and the Resource Conservation and Recovery Act.

So we have all the arrows in our

quiver that we need.

Now, all we need to do is sit down and do what we always have done in EPA, and that is to sit down, and see if we can figure out together what is right and what is logical, and how we can approach this thing in a way that we can implement it without having an incredible economic impact and still achieve the goals of the law.

The public, obviously, perceives they don't like dumping, they like resource recovery, and in a democracy we do what the public wants.

I think all of you that live in this region, I think most of you do here, know we have a problem with waste disposal. I don't mean to say we have an incredible problem in the City.

We still put a hell of stuff into the ocean that we don't want. Names like Kenbuck raise a spectra of problems that many of us know we have to solve, and I see no reason why we cannot work

this thing out logically together.

One of the reasons I always felt that my job at EPA has been maybe not as difficult as some other government jobs is that if you need to figure out what to do, and you don't have any answer, you do what common sense dictates, and what we are doing today is we are starting a small and tentative step to have a consensus from you in here as to what is common sense in terms of implementing this piece of legislation.

Now, in a regional office none of us wants to see the growth of government any more than necessary.

You don't want to see -- I take no particular pride in Region II, in my region, that we have gone from 225 people to almost 600. Now, the only way we are going to stop that, and I might add that you notice that there is still a pressing need for people in EPA, President Carter singled out EPA for 600 more positions because in spite of his attempts to

reduce the budget, he perceived that it was essential that we have people to implement some of this new legislation, particularly toxic substances, and this particular program in the hazardous waste area, among others, also in the grants area.

But the fact remains the only way we are really going to make this thing stabilize the growth of government, to plateau, is for you people in industry, and those of you in the State that have already made the commitment to take over the permanent program, and those of you in local communities who know that if you don't get your input in now, it is like 208, it will be too late.

Now, I don't know how many of you are familiar with 208, but it is a program where we are trying to coordinate all our environmental controls that lead towards a plan for water quality maintenance, and improvement, and, of course, what we are striving to do is not to

dictate land use policies, but to stimulate local communities and the states to come up with a viable solution, but again the only way that these programs work is with your input.

Now, it is very easy to get cynical about some bureaucrat that stands up here and says tell me what you are thinking, and we are going to reflect it in the way we write things, and I don't know how I can prove that to you because I say it a lot.

In EPA we have a lot of different types of legislation. We beg for public comments and consideration because we find out very quickly that we cannot get anything done unless you people out there, and that means industry and labor and local government and elected officials and appointed officials, feel that it is worth doing.

And so we, I, come to you today and I beg you to speak what is on your mind, wrestle with the problems, and

they are incredible, I might add, when you just think of what we are faced with here, and try to define and regulate a hazardous waste, to upgrade land disposal, to phase out ocean dumps, and to bring into existence a whole new magnitude of activity in the area of resource recovery.

Now, I can keep belaboring this point, and I will be back with you again at 4:00 o'clock this afternoon because as you know, we have a regional session this afternoon, but let's proceed to the next part of the program.

We are so far behind here.

What do we have, a panel? Where is Judy?

Thank you very much.

(Applause.)

MS. DWOSKIN: The first panel this morning is going to speak to defining hazardous wastes, which I think should raise some very interesting points about the various criteria that possibly could be used to define hazardous waste, and

the moderator for the panel is Murray Newton, from the United States Environmental Protection Agency.

MR. NEWTON: Thank you.

This is an appropriate place to begin, I think, since it typifies what Eric described a moment ago about the problems being difficult, and about the answers having not yet been developed, and they are going to be determined, I hope, with your help.

Let me introduce the panel discussion by briefly telling you what the legislation entails for EPA.

I should distinguish between a generic definition and the criteria that go with the definition.

As to a generic definition, part of the work is done. The Congress has told us what hazardous wastes are in the generic sense in the Resource Conservation and Recovery Act, under Definition 5, which I won't read just now.

Copies of this Act are available,

and I think many of you, in fact most of you, have it already.

The generic definition is in the Act, and has been given to us already.

The Act further requires EPA to publish within eighteen months several specific items, one is criteria for identifying the characteristics and for listing hazardous wastes within the meaning of this definition.

A second requirement is that within eighteen months, in other words, at the same time, EPA must publish criteria for identifying -- excuse me, to identify the characteristics and listing of what the Act calls particular hazardous wastes.

There is a fourth subpart to the definition which presents no problem.

The law allows any state governor to petition EPA to identify or list a material as a hazardous waste.

Now, one might infer from this that it is possible for a governor to petition or for others to ask for the

inclusion of some waste which would not otherwise qualify on the basis of the criteria, and which was not included in the listing as we published it the first time around.

I am going to let the panelists take over now.

Our first panelist, David Nalven -- and the biographical material in the program, I hope, will suffice, except allow me to emphasize that Mr. Nalven is here in his capacity as the Chairman of the Solid Waste Subcommittee of the New Jersey Business and Industry Association.

Mr. Nalven will discuss some of the overview general problems of defining hazardous wastes.

Mr. Nalven.

MR. NALVEN: Thank you. Good morning.

The obvious opening question is just what is hazardous waste.

Is there any easy way to grab

hold of some waste material, figuratively, before it goes to its final, we hope, disposal point and say this is or is not a hazardous waste. It is nice and easy for those who write regulations to look at a ton of 50% sawdust mixed with 50% zinc cyanide, and say this is a hazardous waste, but how about a ton of sawdust with one gram of zinc cyanide dispersed throughout it, is it hazardous or isn't?

This has been a problem for both the regulators and the regulated, which applies to both when they confront each other in public hearings, or when they sit down together to reason out a workable definition, and that is for openers.

What about one family of substances that has been proposed as hazardous by EPA and at least one state organization.

Sodium phosphates, they're not usually considered in and of themselves particularly hazardous or toxic, but they are definitely environmentally hazardous

if they find their way into a water body.

A less complicated substance might be dioxin, it is toxic in all concentrations, and may even be hazardous when present in concentrations down to a few parts per billion.

Now, that is easy.

But how about heavy metals? If you use some local sand to filter fish and sticks out of your plant's water supply, and the sand analysts say one part per million of lead, as you receive it in from the sandbank, is it a hazardous substance because of the lead that was there before you used it when it is ready to be trucked away to a landfill?

Let's complicate it a little more.

Trace contaminants are probably a threat to the survival of many ecosystems, including our own. There seems to be a growing body of opinion of expertise that one of these is PCB. This is one material that degrades very slowly

in the environment, and is subject to concentration changes up the food chain.

There are probably very few loads of household rubbish hauled to your local landfill which do not contain a defunct air conditioner or a discarded fluorescent lamp fixture, or some other electrical appliance that features a PCB containing component.

This material is available to contaminate the environment for years to come, even though it has effectively been outlawed in new products.

It may not be too difficult to say how much is a lot, but how small is small? When is a trace only a trace? When does it become hazardous?

In my experience, no definition has been found to be completely acceptable to all parties negotiating a definition for hazardous wastes.

What has often been agreed upon is that some reference must be included to a level of concentration. Specific

limits are desirable or at the very least, guidelines as to maximum allowable concentrations.

The phrase "in no concentration" or its first cousin "in no quantity" just will not work.

Now, where does this leave us?

We need a definition for a hazardous waste which is based on the likelihood of a release of meaningful concentrations to the environment, whether through incinerated-off gas, or other discharge modes. It should allow for the fact that certain hazardous wastes can be put into a condition that makes them unavailable to the environment.

We also need to recognize, as the Association which I represent here has already recognized, that certain wastes by definition will require special considerations.

These are wastes which, because of their extra hazardous nature, at the very least, will require regional disposal

sites and for certain kinds of wastes these regional sites might encompass whole groups of states.

Do we need a definition?

You bet we do!

Whether the quantity is micro or macro, we must come up with a workable method for reducing the potential of solid waste disposal as a source of environmental contamination.

Thank you.

MR. NEWTON: Thank you, Mr. Nalven.

I would like to hold all questions until after all three panelists, if we may.

The next panelist is Karim Ahmed, and again there is biographical material in your handout, but I will say that Karim is with the National Resources Defense Council here in New York City.

MR. AHMED: What I would like to do this morning is to discuss the real problems that we face from a

regulatory point of view, and also perhaps a scientific or technical point of view, try to define hazardous wastes.

To illustrate the problem, I will go back a little bit in time and talk about one attempt at such a definition which was attempted by the Environmental Protection Agency in development of its regulation in Section 311 of the Water Pollution Control Act Amendments of 1972.

Now, if you have ever had a chance to look at the document that the EPA proposed, and which has not been promulgated yet as a regulation, you will notice that there are certain types of emphasis that would develop the definition of hazardous substances under the proposed regulation.

Whether it actually met the statutory obligation of EPA is a debatable issue, however, I would like to bring out and highlight some of the things that occurred in this particular

proposal.

One, the hazardous waste here, as you know, is defined only in terms of the discharge of the water wastes, and so in a sense, it is slightly different from the kinds of issues that we are dealing with here today in terms of the Resource Conservation and Recovery Act, and solid wastes.

But in its definition of toxicity it emphasized, overly, the issues of acute toxicity at the expense of chronic toxicity, but not only did it emphasize the acute toxicity factor, but emphasized it on a chronic organism.

The amount of material that they relied on in developing their list of substances that they would regulate mostly relied upon the LC 50 data that they were able to obtain from scientific literature in terms of chronic organism toxicity.

Very seldom did they rely upon human data in order to develop this

1 particular list of substances.

2 They also used few other criteria

3 that was not based upon toxicity.

4 These criteria were the quantity

5 of such substances that were being trans-

6 ported around the country, the production

7 amount of this particular substance that

8 was also considered as part of the criteria,

9 and finally the history of spills of

10 such substances as had been recorded in

11 the past.

12 Now, it was a combination of

13 all of these, never spelled out on a case

14 by case basis, and what the weighting

15 factor was in each instance led to this

16 particular substance being placed on the

17 list.

18 They specifically did not con-

19 sider questions of biodegradability, or

20 carcinogenecity or mutagenicity. They

21 mentioned this in passing, but they

22 felt that because of the nature of the

23 regulation at this time they were not

24 willing to regard this as a criterion

for selection of substances on this list.

Now, recently the State of New Jersey has proposed results concerning discharge of petroleum and other hazardous substances, too.

This particular document relies heavily on the EPA proposal in Section 311. It also defines hazardous substances.

They have a category called pesticides and another category called petroleum and petroleum products.

There you see another rehash of the same type of definition, and you do have oils as a separate category defined statutorily in Section 311.

Now, we come down to the Resource Conservation and Recovery Act, and you notice that the definition, as it is in the statute, defines hazardous wastes as solid wastes or combination of solid waste which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (a) cause, or significantly contribute to

an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (b) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

You can see even here the definition is a rather all-encompassing definition. However, you will notice that there is a great deal more emphasis on human health in the definition as we have here in the statute, and perhaps rightly so, because we are talking about not the waterways of the United States, but we are talking about landfills, essentially, or disposal sites, and very often the kind of issues, environmental issues that will rise here are quite different from pointed discharges into the waterways.

We have hazardous substances and toxic substances, and you have a whole slue of definitions of toxic

substances, and the problem is how do you draw the line from a regulatory point of view, and how do you go about selecting this from a purely scientific point of view?

To start, I would like to make a suggestion, that instead of trying to develop a master list of substances that would fit a certain criteria, or a very finely tuned set of criteria, we should start thinking in terms of grouping compounds, or using chemical analogies as a way of trying to deal with the question of hazardous substances.

We had an experience with this recently, when some environmental groups settled its suit on toxic substances where we developed a list of 85 substances which should be regulated by the Agency. In the development of this, we used a subgeneric or generic grouping of compounds, which we called nitrogen phenols, and we, in effect, argued that all the well known nitrogen phenols used, should

be included in this list.

So what I am trying to do this morning is to make some suggestions about how we can go about selecting groups of compounds rather than trying to select compound by compound, and see how they fit into our matrix of criteria that we try to setup as we go along.

Thank you.

MR. NALVEN: Thank you, Mr. Ahmed.

Our last panelist is Dr. Amir Metry, from the Roy Weston Corporation.

Dr. Metry.

DR. METRY: It is very obvious that we all got to be needing a very good definition of hazardous wastes and a workable definition.

What I would like to present in the next two or three minutes is a quick concept of hazardous waste definitions, and as you will see there is no single way of skinning this cat.

The classification or definition

of hazardous waste is based on its hazardousness.

You could group different wastes into toxic, flammable, radioactive, explosive, irritant, infectious, and material that could biconcentrate, and then you get into the genetic effects, carcinogens, mutogens and tetragens; these are all types of groupings, and it is appropriate to include these kinds of groupings into the definition because we want to know what kind of animal we are handling, and what is the nature of the beast.

If such definitions are going to come up from the EPA studies, and also there are previous studies that if you are in a hurry and don't want to wait for the new requirements, such as the decision model that was developed for EPA in a publication called Management of Hazardous Wastes, 1974, which gives a qualitative criteria for deciding when a waste material or waste stream will become hazardous based on LC 50,

based on flammability and flash points.

It is qualitative criteria, but it is not -- it is in a way subjective because who says thataone hundred degree flash point is the cutoff point, but it is still a qualitative measure for classifying the types of hazards, and it is a workable system.

Whatever system you would need in working with hazardous wastes is a physical character or physical classification system. It would be quite different if you have the same wastes in solvent form or in sludge or liquid or in gaseous form, and that becomes a management tool if you know the type of waste, and its physical character.

Then you would need to know what constituents or pure compounds exist in the waste, such as do you have arsenic, do you have lead, and then the pure compound concept enters into the whole picture, you would like to know if this is a sludge containing

cadmium, and if so, it would be different than a sludge containing PCB, it is a different animal, even if both are toxic, so toxic sludge is not enough.

That kind of adds another dimension to the waste definition or classification.

Then you would get into a third item, which is the type of characteristics of the waste, its constituents, and lab analysis, and so forth.

The other option of doing that, you have two options of classifying the waste, by its nature and constituents.

If one is to go into every waste stream and look for a half quarter million or hundred thousandth type of elements, that becomes impracticable. As we know in industry it becomes very hard to define what is the waste itself, because if you have to look for a specific thing, and if you want to determine if the waste is carcinogenic or not, that becomes a good portion of a million dollar study to determine carcinogenic effects of certain

wastes.

You cannot go and pay a $50.00 lab fee to determine if your waste will become a carcinogen or not.

Then it becomes important in the classification, as Ahmed said, the grouping of waste into generic categories, and a good example of that is the current study by EPA looking at -- for different types of industries which are responsible for a majority of the wastes, and looking at it process by process, going into a model that looks at the quantity of waste, the constituents of waste, if they contain any hazardous substances or not, the way they are handled, its multiple effect type analysis of the waste in deciding if the waste is potentially hazardous.

We have to use the word potentially until everything is established and based on that, you get a grouping of types of waste, because it is very hard for somebody to know that his waste is hazardous, but it is very easy to know if it is a

pickling liquors or if it is a chrome-plating sludge, and if he has the guidance from the regulatory agency that tells him that this type of waste is potentially hazardous because it potentially contains these types of substances, and if it is handled by such and such a method, it will cause environmental degradation.

In some way, you need not a single system or definition. There is no legal definition.

It is an engineering process, and a scientific process to put the wastes in a slot where it belongs.

For example, you might end up using all the systems I described by saying this is a toxic substance, that it is also a metal finishing sludge containing cadmium or chromium, and all of these together will add up to a definition of a specific waste.

MR. NEWTON: Thank you.

I think our three panelists have helped frame the issue very well, and perhaps have helped you to appreciate the

many issues we have already identified, if not what is some new ones, in developing the criteria to determine what constitutes a hazardous waste.

We have been asked to move expeditiously in wrapping up this panel.

If there are questions from the audience, we certainly have time for one or two questions for any of the panelists.

Are there any questions?

AN UNIDENTIFIED VOICE: It would seem to me that Mr. Nalven alluded to something which is extremely important. I think he said that perhaps the definition of a hazardous waste or a measurement of its degree of hazard should be based upon the kind of leachate that might result from its exposure to water or the kind of flue gas that might be generated by its incineration.

I think that is an important consideration, and I would suggest that we address ourselves in the direction of measuring the kind of affluents you will

experience, that would be generated by the deposition of material into the environment rather than concentrating exclusively on the chemical nature of the waste.

MR. NEWTON: Thank you.

Any other questions or comments, please.

AN UNIDENTIFIED VOICE: I guess my -- this is more in the nature of a comment and a question.

You people are looking at definitions of toxic wastes, toxic substances, or at least four of the parts of EPA are, and three other agencies in the Federal Government.

My plea would be that I would hope that there would be some correlation, some cooperation, so that we don't have six definitions of toxic substances that we, in industry are going to have to contend with.

You are looking at it from one point of view, and we have to look at

it from all these regulatory points of view, and my plea would be for some uniformity, at least within the Agency.

MR. NALVEN: You might add the solid -- the National Solid Waste Association, and probably the States of New York and New Jersey would be involved, that are developing, or have developed definitions.

MR. AHMED: I would like to respond to the question about leachates, if that is what he said.

I would have to sort of take issue with that point of view.

How would one go about determining leachate when the leachate may be different at any given time. The argument must be obviously that you have a monitoring system for leachate and only when the leachate becomes highly toxic do we start regulating at the entry point into where you are disposing chemical wastes.

I don't see the logic in this particular definition.

Could you perhaps expand on that

a little bit.

MR. NALVEN: I would be glad to expand on that.

I said the definition should include materials based on the likelihood of their release into the environment.

If a material is not going to be released into the environment, but it could be classified by one of the multifarious definitions as a toxic or hazardous substance, if it is not going to be released into the environment, it is almost irrelevant that it be classified as such.

I think one of the best examples I know of is, there are processes for taking a toxic material, not just hazardous material, and rendering it so it is unavailable to the environment.

MR. AHMED: My question was on leachates, really, the definition of hazardous waste by the leachate in a landfill, for example. Is that what you stated earlier?

MR. NALVEN: Part of what should be included in the definition, and I suspect that is what the person who made the comment meant, too, part of that should include the likelihood of its release into the environment.

If a material is not going to be available for release into the environment, why bother calling it a toxic substance or hazardous substance.

MR. NEWTON: Are there any other questions on comments?

AN UNIDENTIFIED VOICE: Are there national standards or any kind of position from the industry that the industry viewpoint has generated with reference to this question?

The major studies on hazardous wastes, apparently, are governmental in their orientation.

There has been an industry position developed as to what is hazardous, and what is not, or how could this be done if it is not already done?

MR. NEWTON: I find it difficult to respond to it because there isn't an industry voice for all we know.

For our part, in the EPA, we do work with a large number of trade associations which represent those industries affected by this legislation, and, of course, the more general trade lobbies, and associations in Washington, but the manufacturing chemists and the petroleum people and so forth, we deal with them regularly, and they are developing positions, and they do testify when we have meetings such as this.

AN UNIDENTIFIED VOICE: I suppose my question is for Mr. Nalven.

In New Jersey, for example, I did learn about how difficult the problem was, but I was wondering whether or not from your vantage point, your group is developing its own view of what it was that it was producing that was hazardous.

MR. NALVEN: First of all, I did not catch what your representation was.

AN UNIDENTIFIED VOICE: I am with a public interest group.

MR. NALVEN: It gives me great pleasure to answer and to respond to what you have said, because the New Jersey Business and Industry Association has been working with the New Jersey Department of Environmental Protection in trying to come up with a workable, useful definition for solid wastes, and for hazardous wastes.

We have been working with them now for over a year.

It is a very difficult problem to resolve. We do have our own biases, the State does have its own biases, and we are trying to work them out together.

There are certain areas that we recognize that it is difficult and almost impossible from the point of view of the regulators or from the regulated to come up with a definition which is going to be workable. However, you do need some of these things to be mentioned.

There is some feeling expressed that we have expressed, and that the State has expressed.

There has to be some degree of trust and we don't know how to put this into a regulation.

MR. NEWTON: Yes, sir, could you stand, please.

AN UNIDENTIFIED VOICE: My name is Frank Markowitz, and what do you mean by the word trust, precisely?

MR. NALVEN: If a definition were to say no cyanide, and I use that in my example, the question is, is a gram of cyanide in a ton of sawdust or sand toxic?

Now, if the state says no cyanide, then the industry has to trust the state not to prosecute them for a concentration which is below a limit which would be hazardous to the environment. However, on the other hand, if the definition were to say your material, your waste shall contain amounts of cyanide which shall not be hazardous to the environment, the

state will have to say well, we will trust industry to make sure that their cyanide concentration is going to be below that which is hazardous to the environment, because we do not want to name zinc cyanide, or copper cyanide, or sodium cyanide, et cetera, et cetera, et cetera, and does that answer the question.

MR. NEWTON: Any other questions or comments, please.

AN UNIDENTIFIED VOICE: I am with the Solid Waste Committee, and my question or comment concerns the fact that one of the things we have been doing in the petroleum industry, in conjunction with EPA, we have been sampling a number of refineries, every possible stream that could come out of a refinery is being sampled for possible hazardous material, and deciding which of those materials to look for is a big problem in itself.

Aside from the work with EPA, the thing that we have been doing is we have started a survey of everyone of the re-

fineries in our organization, and right now we are sampling over a hundred refineries, and as somebody pointed out, this is a very complex problem, and we have been at it for about a year and a half, and the way it is going, we will be at it for another five years, but we are working on it night and day.

MR. NEWTON: Thank you.

AN UNIDENTIFIED VOICE: Isn't it important to establish -- my name is Theresa Lato, from the Bronx Council for Environmental Quality.

Isn't it important to establish criteria for making judgments as to what is hazardous and what is not, and one of the criteria would be time, long range and short range?

I think that the matter of trust depends not only on goodwill, but judgment, and how far that judgment extends.

At one time, cigarettes were thought to be harmless, but after long experience, we find that they are not

so harmless.

MR. AHMED: Well, I will try to respond to this comment by mentioning the fact that we have in the past placed, as I mentioned earlier, far too much emphasis on acute toxicity, which means cyanide, if you get enough of it in your system, you die, literally.

Whereas things that are chronic are added in small amounts.

Even cyanide, in small amounts, can be chronic, sawdust or no sawdust.

It could accumulate and eventually cause certain kinds of problems, and there is a whole host of other issues like different substances placed in the landfill, if you will.

We have placed very little emphasis on chronic effects.

What I mean by chronic is something that happens over a long period of time, cigarette smoking being a very good example. It does not happen overnight, it happens after twenty or thirty years.

The same thing pertains to the definition, and quite true, the question is, can we tolerate small amounts of PCB diluted in whatever way, which might seep into the ground water.

Can we tolerate that?

I don't think so.

MR. NEWTON: May we have one final comment or question before we break, please.

AN UNIDENTIFIED VOICE: I find it difficult to understand how you can define a hazardous material by its likelihood of getting into the environment.

We don't expect nuclear fissionable material to get into the environment to be hazardous. We don't expect cyanide to be hazardous unless it gets into the environment.

Maybe I misunderstood?

MR. NALVEN: I gather you were sort of addressing that to me.

AN UNIDENTIFIED VOICE: Yes.

MR. NALVEN: Part of the problem

is that maybe I have read too many proposed regulations, and everyone of them talks about how a material is going to be disposed, and that is part of the regulation.

Whether it is going to be disposed by putting it on a landfill or sealing it up, or taking it out to the ocean and dumping it, this question imposes -- many of these regulations impose the same type of controls, the same type of "thou shall not".

If you are going to take a drum of material and encapsulate it in six feet of concrete, it is the same thing as if you were to take it and put it out in your back yard, and throw it on the ground.

This is the way the regulations are written.

This is why I mention that separate consideration. It will not be available in certain methods, and if it is not going to be available to the environment, within our present state

of knowledge, there is no reason why we should apply the same concerns to it.

I am not saying we should not be concerned because every regulation for disposal operations that I have seen includes keeping records of where the bodies are buried.

MR. NEWTON: Thank you.

I thank the three panelists, and the schedule now calls for a fifteen minute coffee break which begins out in the hall where you registered.

(A fifteen minute break was taken.)

MR. LINDSEY: Please take your seats everyone.

I am Fred Lindsey, and I am with the Hazardous Waste Division of EPA in Washington.

May I say at the outset here that I am really pleased to see such a large group of people turn out to discuss hazardous waste management.

I think it is indicative of the interest shown nationwide, at least

partially, concerning the new Act.

We have with us today three distinguished experts on hazardous waste management.

We heard a little earlier that somebody made the statement that whether or not a waste material poses a hazard depends largely on how it is handled and disposed. I think none of us can dispute that, and it is here -- we are here on this particular panel to discuss treatment and disposal.

I am the moderator of this panel.

I am supposed to set the stage and let the others then do the talking, but being a good federal bureaucrat, I brought along a couple of slides which I could not resist showing, first of all.

I am afraid those in the back of the room will have trouble seeing these, but hopefully it won't be too bad.

We in EPA have been espousing this general philosophy for handling

hazardous waste for quite some period of time.

I will not dwell on these things, but I thought it would be worthwhile to kind of set the stage.

The first thing we should try to do when faced with a hazardous waste disposal problem is reduce or eliminate the use of that waste within the generating plant. Failing that, we should try to recycle or reuse it. Failing that, we should try to destroy it, preferably with heat recovery, if possible, and as a last resort, we should reduce the volume, and isolate the material in some form of land disposal.

Now, there are a number of good and bad approaches to hazardous waste management, and we will talk about them in some more detail later, but just to run through some of the options which have been practiced, this has been the way in which we have typically managed the hazardous waste in the past, that is,

incorporating them into the open dump, which has obvious problems with leaching, percolation to the ground water, perhaps surface water pollution and occasionally air pollution problems.

The step up is the Sanitary Landfill, which is what EPA has espoused, and I think most environmentalists have espoused as being the proper way to handle municipal refuse. However, hazardous waste leaching can remain a problem, and pollute ground water with hazardous materials.

As you can see, it is kind of an unusual slide, in that there is a lot of supervisors up there on the hill.

I am not quite sure where that slide came from, actually.

Lagooning and evaporation are widely practiced in drier areas of the country, where the -- they are similar in nature to irrigation and soil piling, which are sometimes associated with those techniques.

In wetter areas these can create

problems, particularly if the lagoons are not lined, and we can also have problems with emissions from these techniques also.

And then there is the chemical waste landfill, which can take on a number of characteristics. The primary characteristics of which is physical isolation of the waste from the ground water, and a number of proper management techniques and safeguards for the environment.

But definitely, isolation from the ground water.

The next slide is incineration, which is practiced. This is one of the larger incinerators of industrial and hazardous waste in the country.

There are a number of others around.

The principle here is, of course, to detoxify through destroying the organic material.

Chemical treatment is an option, and it basically -- chemical treatment is designed to do one or more of these

three things, probably the most common chemical treatment techniques in use are oxidation, neutralization, distillation, and chemical fixation.

Okay, that is enough with the slides.

We will move along next.

We will have individual presentations by each of these three gentlemen, probably on the order of five to ten minutes discussing various aspects of hazardous waste management, and then we will be prepared to have a general discussion, and take questions from the floor.

So if you will hold your questions until the end, I would appreciate it.

First on my left is Mr. Ed Hall, who is an environmental specialist with Union Carbide in Institute, West Virginia.

MR. HALL: I am going to talk about waste management processes and control and disposal of chemical waste

in industrial landfills where we put together some of the items there on the board that Fred showed.

On the Kanar River (phonetic spelling) within 50 miles of Charleston, Union Carbide has two diversified chemical plants and a large engineering research and development complex.

The two plants employ almost 1,800 people each, and the technical center, 4,000.

The product mix from each of the plants is 200 plus chemicals, mostly organic in nature. Chemical wastes are processed through a staff waste management practices program.

In descending order of preference, the alternatives are, one, to reprocess, two, sell, three, burn in a coal-fired burner -- boiler, for fuel value, and four, bio-oxidize in the plant's waste water treatment unit, and five, landfill, and six, incineration.

In support of the system we built

a chemical landfill that has a unique flow-through design coupled with a leachate collection system which discharges the waste treatment unit.

The flow-through landfill evolved in 1969 from our experience, and from -- in studies disposing of practices of the early 1960's. It was licensed by the State Division of Water Resources in 1969 and unlike today, where we have permit after permit and questionaire after questionaire, at the time the State Division of Water Resources did not have a permit form for landfills, so they modified their water -- waste water treatment permit to give us a permit.

It was the first licensed chemical landfill in West Virginia, and probably in the country.

In 1970, it won two awards, the consulting engineers' council of annual honor award for engineering excellence, and then later, the construction equipment

earth care award.

Now, let's get into the control of the chemicals going into the landfill.

It was right after we built the landfill -- it was not uncommon for many of our engineers, to not so candidly or gently ask us, and not in these words, how do I get anything into your award winning dump?

It did not come out landfill, it came out dump.

We told them how you get chemicals in there.

We had setup some standards.

First we would review with the waste generator to insure the safety and health of the transporter, the landfill operating personnel, and since the leachate went to waste treatment units, we had to assure their health and safety, and the safety of the environment.

In addition, we did some -- we required that the generators do some re-processing to control toxicity, flamability,

reactivity, some physical states, and some environmental impacts, such as odor, fumes, bio-toxicity, Ph, and metal content.

Any special additional preprocessing required that the landfill was spelled out also, and entered on the face of the disposal ticket which we call an order for waste removal. Also listed on this ticket is the required personnel protection and precautions required with this particular waste.

Only when the landfill supervisor is satisfied, does he certify the order. Then it becomes a standard for the handling of that particular waste and the order travels then with the waste on the truck, and without that key control, there is no stamp of approval on the ticket, and then there is no acceptance by the driver.

Now, to the site.

We were fortunate that right across the road from the Institute Plant there was a ravine or a hollow, or if you

The ravine was full of clay, it was ready for a landfill without having to buy it, and bring it in there, so we started building the basin seals and necessary dykes, but prior to that, we did all of the required extensive sub-surface geological studies, and salt tests to make sure that we did not have any problems with the ground water.

On half of this fifteen acres, we started the first section, the first phase of construction, and we built a landfill with a minimum of two feet of clay as a sealer, except for one section of the lower dyke.

This we punctured, put a drain through the wall, and an elaborate drainage system throughout the landfill, and the water that comes into the fill then leaches whatever chemicals that are not reacted in the landfill, through the dyke, into a leachate basin, which discharges in two ways, the bottom layer will go to the waste treatment unit for

treatment, and the top layer is skimmed and the oil layer is then burned in the steam plant for fuel value.

An elaborate peripheral drain system to divert the rain falling on the 86 hilly acres was also put in.

Also, we have six groups of three sampling wells, some of them as deep as 130 feet. The first sampling well goes down to a foot below the base of the clay, the next one goes a foot into the broken lock, and the third one goes down a foot into the bedrock, for monitoring.

Also, there is a monitoring well above the landfill that monitors the water that flows through the fill.

The key to the operation then on the landfill is the blending operation. The soil -- rather, the chemicals, are blended one to one with soil, with the use of an end-loader, and this material -- which resembles soil, and then this is spread in a four to six inch layer over the surface of the landfill.

The broadcasting of the soil waste mix over this wide area allows gas to escape over the whole area of the fill.

We had concern for odors when we first started thinking about this approach. But by keeping the surface relatively loose, it seems that the anarobic digestion deep in the fill, where you do get many of your odors, are anarobically digested in the top six to eight inches of soil, and eliminates the normal odors from a landfill.

The early blending system also eliminated some problems we encountered when working with an impounded system. The cellular approach resulted in fires and problems with day to day mess, quagmires, pools, and we would get our equipment all hung up in this mess, and got swine flu occasionally, and had to change our method of operation.

By capping these pockets, we had the seals break at times, and we haven't had any problem since we went to the

blending operation.

Now, odor has been a problem in the leachate basin. Therefore, in the expansion that takes place in 1977, we will skim the oil continuously before it gets to the basins, and send it to the powerhouse for burning again.

The capital expenditures through 1977 using 1977 dollars as a value, is 1.6 million dollars.

The operating cost is expected for 1977 to be 1.2 million dollars, a half million of which is for transportation.

Upon completion in 1977, the life of the landfill will extend past 2004.

Thank you.

MR. LINDSEY: Thank you, Ed.

I guess we can see that handling volumes of waste materials in a rather complete way is not a cheap or easy undertaking.

The next speaker we have is

Mr. Dave Miller, who is a partner with Geraghty & Miller, a hydrogeology engineering firm on Long Island.

MR. MILLER: Thank you very much.

I guess I was asked here to talk about some of the problems, specifically as they are related to the land disposal of industrial waste, and the impact on ground water quality.

What I would like to do is to describe the interim results of an EPA funded investigation begun before the Resource Conservation and Recovery Act was passed, but is most timely considering the recent passage of this legislation.

The objectives of this ongoing study was to install monitoring wells and/or sample existing monitoring wells at sites across the country which are receiving or have received significant quantities of industrial waste on the land.

Today, we have inventoried over 500 such sites in 40 states, field inspected

more than 140 sites in the 15 states, and drilled and/or sampled about 50 sites in 10 states.

About 25% of these sites involved lagoons that were receiving industrial waste affluents, and 75% were landfills.

The criteria as to whether we call a particular site a contamination case or not was the migration of ground water that was contaminated with some type of either heavy metal, trace organics or special toxic substances, such as cyanide or arsenic.

In other words, the monitoring roles that we used or installed had to be beyond the limits of the area receiving the waste. The heavy metals and trace organics, et cetera, had to be found in greater concentrations than background so that one of our criteria was to have at least one background well that was tapping ground water supplies that was not affected by contamination.

Now, as far as the findings are

concerned, in over 90% of the sites studied, contamination was established. These sites were chosen to represent a cross section of both the practices of industrial waste disposal and a cross section of different geologic environments.

Another criteria was that ground water contamination had not been determined prior to our testing, in other words, we ruled out all damage cases and in the course of that eliminated several dozen cases where ground water contaminance by hazardous substances had already been established.

One of the other interesting findings was that although earth retention and attenuation in the earth or the ground water system had been effective in reducing the concentrations of contaminants that we found in the industrial waste, they were not -- do not eliminate the contaminants from reaching the ground water system and moving through it.

Some of the other findings that are worthy of note are that several hundred sites that we inventoried, and inspected, out of that number only about a third had any type of monitoring, and of these a very large number, potentially hazardous substances were not analyzed for.

What does it all mean?

In our opinion, based on the results so far, land disposal is not and cannot always be the answer to disposing of wastes now going to the air, rivers, and the ocean.

Even though earth retention and attenuation processes can reduce the concentration of hazardous substances at land disposal sites, they cannot be depended upon to wipe away such substances from migrating in the ground water system.

Attention will have to be paid to either greater treatment and recovery of industrial waste, transporting such waste to the limited geological areas which are alternative, or using water

supplies or treating ground water to a greater extent than it is now.

Thank you.

MR. LINDSEY: Thank you, Dave.

At the far end of the table is Ed Shuster, who is manager of marketing and sales with NEWCO Chemical Waste Systems, Inc., in Niagra Falls.

MR. SHUSTER: One of the joys of being at the end of a panel is that you don't have to say too much because a lot of it has been said.

One of the hazards is what do you do to justify being here after all of this.

I am pleased to be here at this point representing the professional waste service industry, and also as a member of the chemical waste committe of the Institute of Waste Technology of the National Solid Waste Management Association.

I don't expect anybody to have written that down.

I point out the Chemical Waste

Committee, and that we have -- we feel we have been a rather effective force in trying to develop a partnership between the waste service industry, which includes the transportation, processing and disposal people, on one hand, and the various state and federal governments on the other hand, and the waste producing industries, sort of as a three-way partnership, and in our estimation this is the only way that a rational and successful program for ultimate waste management is going to be achieved.

If I were to say that, you know, what is probably the biggest problem, the problem is in developing this kind of partnership relationship between the three sectors who normally have somewhat of a standoff relationship with each other.

Mentioned earlier was the word "trust".

I think it is really the -- that signifies a negative point.

I think the positive and affirmative point is that we have to develop a partnership, we have to get the kind of communication going that Murray talked about earlier, to get the proper input so that the program is reasonable.

When Ed was talking, he mentioned about six different ways in which different wastes are processed at the Union Carbide facility. The seventh way in which waste can be properly handled, which he did not mention, is through the use of a waste surface company, a maker by decision.

They have undertaken to do most of their work in house, and limited the amount of work that is done by someone that they would hire to do that work as a contractor.

Not every company, not every plant has the necessary volume of material requiring treatment, the necessary technology in house, the necessary funds, the necessary space at their site. In other

words, there are many reasons why many plants cannot do the elaborate job of taking care of their own wastes that "X" has.

This is where the role of the professional waste service company comes into play.

On the other hand, there are still in many segments of the United States restrictive barriers to the development of the waste processing industry, and this is through the non-professional outlets.

The ability to dispose of waste inexpensively, and I am talking about two or three cents a gallon as opposed to double figures, including transportation, and it is a "take it away and make it disappear attitude", that attitude is becoming less prevalent.

The major companies and a number of the smaller companies have adopted a good citizenship posture, and are not at this point encouraging

the development of our industry.

It is very probable there will be a lag in the industry, the lag in hardware capabilities in the period 1978 to 1985.

I have seen some EPA information to that effect, it will be a substantial fall in the ability to process these wastes as rapidly as they are identified, and quantified, and that the legislation requires more processing than has been the case in the past.

There are a number of technical problems, the waste materials themselves frequently defy definition from a practical standpoint.

There are a lot of cases where the material is really debris or sludge that is contaminated in some degree from time to time with a variety of materials which will fall in the hazardous or toxic classifications.

There is a need within our industry to provide what I choose to

call flexible processing, the ability to take building block hardware and modify it day by day, hour by hour, if necessary, modify the process, change the flow of weights, change the operating parameters to compensate for the varying composition of waste.

Out of a single industrial process that is making the same product with the same input material day by day, week by week, very seldom do two shipments of waste coming out of that process behave the same.

Everything is different.

Everything is custom.

So much for the discussion of problems.

We all have problems in our industries.

What I would like to mention though is some of the alternatives in the processing of wastes, and in the management of wastes.

First of all, it is desirable

to take waste out of the category of waste and put it back into a usable product form, whether as a material or whether in the form of energy.

There are programs within the waste service industry, and within large manufacturing industries to do just that today.

Many of the products we use in our regular life contain recycled materials that have been recycled internally in the plants for years, because it made dollars and cents to do it.

Now, that is shifting toward even further -- even further toward the area of recycling more and more, as the cost of disposal gets more and more.

Until the last five to ten years, the cost of disposal was almost zero, relative to operating costs. It sometimes is the larger single cost in the manufacturing of a product.

Where recovery is not practical or for those portions of wastes which

cannot be recovered, there are a whole spectrum of detoxification processes that convert the form of the material from a more hazardous to a less hazardous state.

We cannot create or destroy the material, we use incineration, distillation, which effectively gives a recovery, but also may be preparatory to two or three disposal systems along the way, you have re-refining of oils, and other chemicals which create some products, and some waste.

Always you had the techniques such as neutralization, oxidation, reduction, solidification, and then the ultimate disposal techniques from incineration, you have air discharges, which will contain some materials, you create sludges from scrubbers, and you have aqueous materials, so that after detoxification there is a repurified water stream to be entered into the environment, and then the secured type landfill that Fred and Ed have spoken

about, where the residuals are placed for ultimate containment in storage.

I would like to get on the questions, I appreciate the opportunity of being here.

MR. LINDSEY: Before we open it up to the floor, I had a couple of questions which occurred to me, and I think may have occurred to other people, so I would like to throw them out for a few minutes.

We have a substantial period of time here for questions, so I don't think anybody is going to be prevented from asking them.

Dave, if I could pose one question to you, you mentioned that within your study, which is still going on, there was approximately, I think you said, 10% of the sites where no leaching was found in the ground water, and could you say anything about what techniques or what hydrogeologic conditions might have been in existence at those ten

which might have been successful?

MR. MILLER: Okay. Some of the 10% we had purposely picked as this cross section of geologic environment.

Some of the 10% we purposely picked in geologic environments where we felt it would be difficult for leachates to ingrate.

For example, a number of areas in the Midwest had a very thick layer of clay that sat between the bottom of the landfill lagoon or the deposits and in those areas we found no contamination. Since we were limited in the number of wells that we could put in, we were not looking or trying to establish the size or the number of the contaminated ground water, or the severity, which I think we missed, there may have been contamination that we missed, and a few of the sites had engineered facilities as has been described here to trap or drain away the leachate, and some of these we found to contain contamination.

MR. LINDSEY: Thank you.

Ed Hall, if I can ask you a question here, you mentioned that the leachate from your disposal site was handled in a treatment unit.

If you mentioned what the treatment unit was I did not catch that, and could you expand on that a little bit?

MR. HALL: It is our five million gallon per day waste water treatment unit that was built to treat the diluted waste streams from the processes in the plant.

MR. LINDSEY: Is this a biological plant?

MR. HALL: Yes, activated sludge.

MR. LINDSEY: Ed Shuster, when a waste material comes into a complex contract treatment disposal facility of the type you have been with for some number of years, how do you go about deciding how you are going to handle it?

You have a number of options in most cases.

MR. SHUSTER: Well, in our industry,

we don't simply take someone's waste with a capital "W", and figure out what to do with it later.

The first step is to either interview the generator of the waste personally, or through the use of a survey form where we ask the originator to define, describe and certainly to disclose to us the total composition of the waste as best he knows it, and then determine if it is necessary to get subsequent testing done before we even see a sample of the material.

In other words, if we require him to provide more material, more information, excuse me, he will have to do it.

Once it is done, on a new waste product, we require a sample of that waste product to be submitted to our laboratory for some verification of compositional parameters, and also for laboratory scale processing treatments at the laboratory bench to determine the most beneficial and certainly we try to find the cost effective way of

treating that material.

Then once that is done, we enter into an agreement with the customer to treat and dispose or recycle, or whatever, the material meeting that composition.

We write a formal description into the agreement. Then each load that comes in must be checked to determine that the material in fact agrees with the composition of the sample, and that it is not going to adversely react in the system, it is not going to cause damage either through injury to people or damage to equipment -- this is kind of a laborious process to get new materials in.

You are able after a while for someone who is knowledgeable about the manufacturing processes that generate the waste, the inputs, and from on-site visits to those facilities and discussions, to build a confidence factor of the general knowledge of the kind of wastes.

I would say in our own cases,

two or three samples of waste that come in, if we have ample knowledge of the generator and a knowledge of the process, whether it is a plating operation, metal etching or printed circuit operation, or it is solvent cleaning, whatever kind of manufacturing process generates the waste, we have a comprehensive understanding of the material at the present time.

MR. LINDSEY: Could we take some questions from the floor.

AN UNIDENTIFIED VOICE: I have a question for Mr. Hall.

Would you please repeat the construction and operating costs of your waste facility, and if you could break it down please by solid wastes into the water treatment unit?

MR. LINDSEY: For those that cannot hear the question, I will try and repeat it.

That was Jim Rogers, and he asked if the construction and operating costs of Mr. Hall's facility could be expanded

upon.

MR. HALL: First, this does not include any water treatment costs.

This is strictly the open -- the construction and operation of the waste -- of the landfill.

Starting back in 1969, the construction costs were $350,000.00 which in 1977 dollars is $600,000.00.

The construction cost to complete the project is a million dollars, which makes it 1.6 million dollars.

Sir, you shook your head. Is there a question, or can you not hear?

MR. ROGERS: That is fine.

MR. HALL: Okay.

The operating cost plan for 1977 is 1.2 million dollars, a half million dollars of which is for trucking, transportation from the three locations, and this does take care of three locations, two plants, and one large technical center. We are only involved with those wastes that are compatible after pre-treatment

for landfilling.

Does that answer your question?

MR. ROGERS: Yes, thank you.

MR. LINDSEY: Yes, sir.

MR. FENTON: My name is Richard Fenton, I am with the City of New York, EPA.

The first group of speakers, among the first group, Mr. Nalven mentioned the difficulty in getting zero discharge into the environment, and I was pleased to hear that Mr. Miller, in his field investigations found that there were cases of zero discharge, that there was just no material leaving the fill according to your test well.

Could you indicate the kinds of materials that were in these landfills that got zero discharge, please?

MR. LINDSEY: Again, the question from Mr. Richard Fenton of New York EPA, is that previously the difficulty with achieving zero discharge was mentioned, and he asked Mr. Miller whether in those

cases where zero discharge was found, if he could elaborate on the types of wastes that were in those facilities.

MR. MILLER: Actually, let me do two things.

We found, as far as the ground water is concerned, zero discharge from the standpoint that we did not find contamination.

In many of these cases, where we did not find ground water contamination, it was simply because the waste water, if the lagoon was being held up and being removed from the surface, and in other cases it was being drained off the surface water or being drained off, collected and treated, the types of waste that we found in these landfills were the typical -- they could not be characterized as being unique from the others where we found contamination.

I hope that answers your question.

MR. FENTON: I am calling for a more specific response because of

the doubt expressed.this morning of achieving zero discharge. Were these industrial type fills?

MR. MILLER: Yes, they were all industrial, every site we studied, the major portion of waste was industrial, and it was zero discharge to ground water, but it was not zero discharge to some other environment.

MR. FENTON: You mentioned that this would be published?

MR. MILLER: Yes, sir.

AN UNIDENTIFIED VOICE: I would like to point out a phenomenon with respect to waste disposal, and that is the air bubble jet drop phenomenon which is able to materialize particles of particular matter, for instance, from sludge, into the air, and this can be brought ashore, whether it is from a lake or the ocean, onto the land.

Then it depends on the diameter of the material, whether it is water soluble or fat soluble, whether it is

respirable, but what the health damage can be of this waste, I don't think has been taken into account.

MR. LINDSEY: Does anybody want to say anything to that?

MR. SHUSTER: It was a comment.

AN UNIDENTIFIED VOICE: I have a question for Mr. Miller.

In his survey he is talking about landfills that have no contamination to the ground water, they had either a thick layer of clay or you used a term, engineers' facilities.

Are you talking about leachate collection systems like a series of pipes, or are you talking about man-made liners? Did any of these landfills have man-made liners?

MR. MILLER: They had a man-made liner plus a leachate collection system.

In the case of the landfill, they had a leachate collection system plus a liner.

The liners in some cases were

clay and in other cases were membrane-type liners.

AN UNIDENTIFIED VOICE: You mean high prone rubber? Did you run into any with tar liners?

MR. MILLER: They were municipal type. We studied ones with tar liners, but not as part of this study.

The only ones I ran across are landfills that receive predominantly municipal wastes.

AN UNIDENTIFIED VOICE: I know what clay is, or what it is supposed to do, but what kind of percolation weight, or -- what is the thickness of this clay that you think is feasible or does the job?

MR. HALL: We use a two foot layer that is impervious to water and chemicals. We have not had any internals, we have had no sign of organics or chemicals leaching out.

AN UNIDENTIFIED VOICE: Is it 100% impervious, or 90% impervious?

MR. HALL: I don't have those numbers. Nothing is completely impervious, as you well know.

AN UNIDENTIFIED VOICE: Well, do you have any criteria that a person could use, say on a permeability basis?

MR. HALL: I am sure our engineers have it. I don't have it with me.

MR. LINDSEY: Way in the back.

AN UNIDENTIFIED VOICE: My question is for Mr. Hall.

Could you describe briefly the process by which you blend wastes with the soil before distributing it in your landfill?

MR. LINDSEY: The question to Mr. Hall is, can you describe the blending operation that is used before depositing the waste into the fill?

MR. HALL: It is a simple mechanical operation. We use an end loader. We have a pile of dirt of equal size to the pile of waste. We stir them like you are stirring cereal or soup,

just by continuous mixing until we get it to the consistency -- to a consistent level, and then it is broadcast over the area with the same equipment.

MR. LINDSEY: Right here.

AN UNIDENTIFIED VOICE: I have a question for Mr. Hall.

In your operation where you spread it out in thin layers, is all surface run - off, therefore, collected and treated?

MR. LINDSEY: The question for Mr. Hall is, is all surface run-off collected and treated.

MR. HALL: Surface run-off on the landfill site, the 15 acres, or what will be the 15 acres in 1977, all run-off on that surface, goes down in and with a system of drainage, goes through the gravel, it goes to the leachate pond, and then the waste treatment.

For anything treated or any water that falls on that area goes to the leachate pond, yes, it is treated.

Now, the 86 acres surrounding

that, and this is a very hilly area, is not contaminated. We have a series of peripheral drains that carries that off, so they are strategically located, and that water is monitored regularly to make sure that we don't have a leak in the clay seal.

Does that answer your question?

AN UNIDENTIFIED VOICE: Yes.

AN UNIDENTIFIED VOICE: For Mr. Hall, two questions.

One is, in your present processing or your screening of the compound, do you restrict those that you use on the landfill to biodegradables? It seems like everything is done by biological processing.

The second thing is, did you find any difference in the type of soil structure used in the mixing process?

MR. LINDSEY: The question for Mr. Hall, in re-possessing and considering the disposal of wastes, do you restrict the waste to those that are biodegradable,

and the second question, did you find any difference in types of soils that you used for mixing with the wastes?

MR. HALL: In answer to your first question, we do not restrict it to materials that are degradable, we treat metals, and at one time we were treating or setting up to treat metallic sodium by a pre-treatment, which allowed it to be treated into soil directly.

You can micronize sodium in mineral oil, it comes out so finely you can take it directly to the soil without any problems of fire, as you ordinarily have with the water.

We later were able to have an exchange by agreement with a processor to make sodium methylate out of it, and return it to the area.

The other question -- is that enough on the first part of your question?

AN UNIDENTIFIED VOICE: Yes.

MR. HALL: The other question was soil type.

We generally have to buy soil. We have clay, but soil is scarce, and we would like to have the garden variety of soil to treat with.

We don't use clay for that purpose.

MR. LINDSEY: Yes, sir.

AN UNIDENTIFIED VOICE: Mr. Miller, could you confirm what I understood you to say, that land disposal does not appear to be the answer, except in very specialized areas with certain geologic conditions, and if that is your position, does that -- do we hear some difference of opinion on this in the panel?

MR. LINDSEY: The question is to Mr. Miller, are you saying as a result of your studies that land disposal does not seem to be the answer, except in very specific hydrogeologic conditions, and does this pose a disagreement among the various panel members?

MR. MILLER: Let me make sure that I make myself clear.

What I would say -- what I said was that land disposal is not always the solution and that there are a number of very large areas, most areas actually, where some engineered or very special precautions, such as resource recovery methods of treatment must be used if land disposal is to be the alternative for the disposal of wastes.

There are not that many geologic environments that are suitable for land disposal of waste, especially if you don't have an engineering system.

Even when you do, since there is sometimes a great difficulty in getting a guarantee that that engineer system will last a long enough period of time to protect the ground water system, even then it has to be taken into consideration too.

MR. LINDSEY: Is there any other comments by the other panel members on that issue?

MR. SHUSTER: Land disposal is

a necessary part of material handling, because no matter what you do, there is always something left over.

I think this is one of the whole thrusts of the new legislation, which is to focus attention on these residuals that historically and traditionally have been sort of swept under the rug, and in order to focus attention on them, and deal properly with them, there has to be a proper kind of facility available.

Now, this is probably going to involve a lot of engineering features rather than a sanitary landfill type of situation, and certainly we do substantially eliminate the amount of indiscriminate dumping and direct discharge to waterways, and things of this sort.

The shortage of the availability of ideal geologic sitesis real.

There are some states and some groups of states in our nation where

there is probably not a single ideal site.

There may be some that can be engineered so that they would be moderately tolerable, and there is an alarming concern about parochialism extending downward to state lines, and into county lines, even into township lines, regarding the transporting of waste across the lines.

It seems nobody wants to accept it.

The concept is that we are willing to accept automobiles made in Detroit anywhere in the United States, and other things that are manufactured at one point and distributed broadly, but you think where the proper location of these sites is, they should be permitted on a statewide and hopefully regional basis.

MR. LINDSEY: The lady in the back.

(Question posed.)

MR. LINDSEY: That question is

to Mr. Hall.

The question was, is there any chance of using dredge materials or sewerage sludge, dried sewerage sludge for mixing with the hazardous materials?

MR. HALL: We have worked a little bit and not just a little bit, but we have worked in this area, using our own waste water treatment unit biological sludge, which is the same as your domestic sludge, and the problem with sludge, as many of you in here know, is drying it to the extent that you can recover enough sludge to mix with the waste.

Also, you would have to have a metals analysis of this sludge to make sure you did not have copper and chromium and such things as this, and knock a waste unit treatment out because it is incomplete.

We knew it would be safe if we could dry it from the 1½% to the 30% that was required to mix with the soil,

yes, it is a real viable approach.

MR. LINDSEY: In the front here.

AN UNIDENTIFIED VOICE: Does EPA plan to identify sites where hazardous wastes can be disposed, or is that up to local authorities?

MR. LINDSEY: This -- of course, you are asking the question relative to the new Act.

AN UNIDENTIFIED VOICE: Right.

MR. LINDSEY: We are going to discuss that for those who may not be familiar with it later this afternoon, between 4:00 and 7:00, and I would rather hold most of the questions relative to the Act until that point.

Let me just say briefly that on that score, whether EPA is going to identify,as it were,good and bad sites, the new Act does call for a permitting system, which will either be carried out by the states or by the federal government, if the states choose not to, which will have that effect, I

think.

Any more questions for the panelists here?

The lady over there.

MS. LATO: With the rising costs of waste disposal, wouldn't it be good economy to increase the budget for research and development so that we can recover the materials that we bury or that will hopefully disappear?

MR. LINDSEY: Is that directed to me?

MS. LATO: To anyone.

MR. LINDSEY: The question is shouldn't we increase our research and development budget so that we could make recycling and recovery more practical, and identify more options for that.

Ed Shuster, do you want to take a whack at that?

MR. SHUSTER: Our budget has a lot of money in it for that.

This is one of the costs of doing business as a professional service

company.

You are constantly involved in research.

Your research is directed towards recycling and towards improved hardware and towards improvement of the life of your existing hardware. In other words, make your pumps last more months, and things of this sort.

There is a lot of practical and applied research. The federal government has funded a substantial amount of research and demonstration projects along these lines, and I am presuming that they are continuing to do so although that is a matter of federal and state budgets.

I have to come back to the problem that we end up with a lot of materials that would have to be considered lowgrade at best, low quality materials. You can get uranium out of the lock in your driveway, but it is not worthwhile. There is not enough

there.

You can come to this kind of a situation.

Plus, the fact that these wastes are constantly changing. Of all the wastes that I see today, probably no more than half of them were wastes that were generated five years ago.

The rest of them, they have been phased out as processes are starting to be improved to generate less waste, to generate a different kind of waste, and new processes have generated new wastes, of course.

I think at the process research level the generated material balance situation is that of more product and less waste at the primary source, and this falls in the area of source reduction, and this is Ed Hall's ballgame, and I will let him talk about that.

MR. HALL: Starting with Carbides pure oxygen system, trash to gas, is one way to approach this, and there has been

a lot of money going into that project, and it is using only the home trash right now, but later probably we will get into the chemical area.

Also, the large polluting units are at times replaced by a more efficient process, and this is probably a more economical way to go than to try to find some new uses for old materials.

These are two approaches that you can take.

Now, research in general in the area you are talking about is going on all the time, and I don't have the numbers to say whether there is enough spent, and by whose standards is there enough spent.

MR. LINDSEY: May I say that we in the federal government never have enough money.

I am afraid I am going to have to cut this off, folks.

I know there are a lot of other questions, but we do have several other

speakers before lunch, and I would like to thank the panelists here for doing a good job, and they will be around for a while, I am sure, if you could catch them in the hallway, and so forth, and you will be able to ask questions that you might have.

We will move right along.

We are not taking a break here. Thank you, panelists.

Our next speaker, if you would come forward, is Mr. Robert L. Harness.

MR. HARNESS: A number of the speakers this morning, and also several of the questions that have been asked have been directed towards the recovery and reuse of waste materials, and what I would like to talk to you about is the concept of the waste exchange as a tool in waste management, and specifically the experience of the St. Louis Waste Exchange.

To begin with, I would like to just give you some examples of what

we found after about a year and a halfs worth of effort in this area.

We found an acetylene manufacturing company located in the Midwest that was generating a lime waste stream, that they were dumping in a landfill located on their own property.

On the other hand, we found several waste treatment plants in the area that were neutralizing their waste stream and buying lime, bulk lime, and shipping it by truck about 200 miles at a very substantial cost to do this, to do something that could have been done with a lime stream.

We found a number of sources, and this really surprised us, of contaminated solvents that were being either incinerated or in some cases just being dumped.

On the other hand, we found at least two that I can think of, off the top of my head, paint companies that could have, and, in fact, did use some

of these solvents later on as thinners for low quality non-consumer oriented paint products.

The solution to this sort of problem is fairly obvious. If these people could get together we could eliminate a costly, or in many cases, a hazardous waste disposal problem, and at the same time save a little money for somebody.

But unfortunately, and in practical terms, this is a waste exchange, it is not a difficult concept.

But unfortunately, this does not occur in the United States to any great degree, I am afraid.

There are some reasons for this.

The prevalent tendency in the United States is to use virgin or raw materials, and I think there are several reasons for this, although any of the people in the room could point out some exceptions, but generally United States industry is spread out over a fairly

large geographical area, and this applies a little more to us located in the wilds of the Midwest, than perhaps up here, but nevertheless, I think it is true, and it makes marketing of waste materials fairly difficult.

Secondly, there really just has not been an incentive, and someone before mentioned the cost of waste disposal was practically zero until five years ago, and now it becomes one of the major costs and acts such as the Resource Conservation and Recovery Act to put pressure on people to take a responsible approach, and it will, in a lot of cases, be an expensive approach.

In terms of the scope of the problem, I think a number of comments have directed themselves towards this, but I will just quote one statistic, that in 1975, the U. S. EPA Office of Solid Waste Management said that the United States industry produced about 260,000,000 dry tons a year of industrial

waste, and they expected that figure to possibly double by 1983.

Well, the ultimate disposal of these materials has been discussed.

Landfills, incineration, and in a lot of cases, methods that really are not environmentally acceptable.

Well, in terms of theory, the waste exchange, as I mentioned, is a fairly simple concept. It is simply a mechanism to help individuals, firms, and in some cases communities, find a useful end for something that has been previously considered to be a waste product.

It operates on the premise that many waste materials contain some valuable components, and some of these components are presently in short supply and, therefore, extraction and reuse does make some sense, and in many cases this can be economically attractive.

I think the basic problem is defining a user.

It is easy enough to find or define a waste, but to find someone that can use the waste, either in its present form, which is, of course, the most attractive alternative, or in some form that it can be transformed into by some treatment or unit process operation, the waste exchange is an institutional arrangement to market or assist in the marketing of waste materials; in other words, just to simply try to find a user.

Well, there are two characteristics that are dominant in waste exchange operations. First is the type of service to be offered, and there are two types of operations, one that deals in information only, strictly a marketing service for information, and secondly that the other stream is one that deals in materials handling, that actually buys the wastes and sells them and so forth.

The second characteristic that can be discussed would be the approach

to or the strategy of doing business.

There is -- you can operate your waste exchange on the passive -- in a passive mode, meaning that you don't go out and seek customers, you simply create a marketing service, and receive wastes listings, so-to-speak, and they help broadcast the availability of these wastes listings.

You do not become involved in the actual business.

On the other end of the spectrum would be an active exchange where you actually aggressively try to identify matchups of waste generator-waste user, and then in some cases, even actively participate in the exchange to the extent of even buying and selling the material yourself, or even entering into a re-processing business.

Now, from this -- these characteristics, we can identify four types of waste exchange, and some of these are in existence already.

The first is a direct exchange, a company manufactures a product, develops a waste material, and I am directing my comments towards industrial wastes, but I think it holds true in other cases as well, and by some means finds an exchange -- finds a company that can possibly use the waste, and this is a very common arrangement that takes place within a number of big companies already, and I think you can find examples of this thing -- this sort of thing happening.

The second is using a specialty broker. This type of arrangement is carried on by waste brokers, who deal in some special area, such as reclaimed oils or solvents or metal sludges, and so forth. There is some economic involvment in that he may charge a fee for this service.

The third type is an active third party exchange where the exchange deals in materials handling, in actually buying and selling the wastes, and again

they deal in specialized areas, and there are some examples of these operations in the United States already, and they are very successful, but they are very specialized, generally.

And finally, there is a passive third party, where someone simply deals in information only, tries to help a company find a market, or user for a given waste material, and there is no economic involvement required, and the two companies then make the transaction, and the waste exchange simply tries to put companies in touch with each other.

Well, while the materials handling type of exchanges possibly offer the greatest promise for success, they are -- there is risk attached to them in that economic involvement is required, and they are usually private operations, whereas this type of an exchange offered potential for benefits to industry in general, while not posing

any significant capital involvement.

Capitalizing on this type of concept that one -- that a waste from one process can represent a raw material, so-to-speak, for another, several waste exchanges to be exact have been established in Europe.

The first one was established in The Netherlands by the Association of Dutch Chemical Industries in 1972, and it was followed by exchanges in Belgium, Germany, Austria and Switzerland and Great Britain.

These European exchanges have several operational and character similarities, and I want to just run through a few of those.

First of all, they were established in response to pressure, either regulatory or economic restraints due to raw material shortages.

Second, they were all of the passive, third party type involvement, dealing in information only, and not

involved in the exchange itself.

Thirdly, they all made an effort to maintain the confidentiality of the people involved. There was little or no government intervention, and it was simply a matter of putting compatible companies in contact with each other.

Fourthly, they were operated by private industrial associations for use by anyone, really. There are a few exceptions, the one in Great Britain was a government operation.

Fifth, they were for no other market other than wastes. They were not designed to try to take the paper business away from the Boy Scouts, or to try to deal in trash metals for which there were established markets at the time.

Sixth, they had access to some form of communication, trade journals, direct mailing lists, and so forth, that advertised their services.

Seventh, they used followup

communications to assess the value of the service, to determine if the waste exchange was, in fact, performing any valuable service, and if it was reaching the proper market place.

Eighth, they initially dealt only in trying to communicate wastes available, but later expanded to include communication of services available.

In a sense, it became an advertising agency.

Ninth, they experienced what we generally call the normal life cycle, sort of started off slow and grew at a rapid rate to a peak of business, and then began to die out, and through communications with the using parties, they found that they sort of, in a sense, killed their own existence. By putting compatible type companies in contact with each other, they eventually negated their own need.

Finally, they -- in terms of response, the offers for material

available greatly exceeded the offers for materials wanted, and this was somewhat understandable.

A waste management problem is at least in today's day and age potentially much more difficult than a raw materials problem. It is a little easier at times to find the raw material, not cheaper, but easier.

I would like to talk a little bit about the St. Louis Waste Exchange. In May of 1975, a conference very similar to this was held in St. Louis, and it was attended by government representatives, and industrial representatives, and a number of citizen interest representatives, and public trade association groups, and the conference dealt with specifically hazardous waste management, and discussed a number of the problems that have been discussed today, but at the conclusion of the conference there was some participation by the people involved in the European exchanges, we were fortunate

to have one of the speakers from the European exchange, and he discussed the concept, and a task force was organized to take part of this, and I am a member of that task force.

But you all know how task forces go, they meet a lot of times, and write a report, and say that is it.

We were fortunate to have some cooperation from a lot of people, and we were well represented by all the groups that I mentioned.

This task force then took the problem of trying to create a waste exchange operation in the St. Louis area, and we operated on the principle of there was no passive third party type waste exchange in operation in the United States, and, therefore, we would really be starting something that was somewhat unique, and we would try to organize along the principles that -- of the things that we learned from the European exchanges.

On this basis, the waste -- the St. Louis Waste Exchange task force identified several principles of operation that they wanted to follow.

First, they decided on a passive third party operation. We would deal only in information.

Secondly, it was determined that day-to-day management at the exchange would best be carried out by some industrial or private association, and we were very fortunate to have the St. Louis Regional Commerce and Growth Association, which is a Chamber of Commerce type organization, take the exchange into their charter, and operate it on a daily basis.

In terms of finances, the exchange started out and continued to operate on a zero budget. All of the task force time is voluntary, and the St. Louis Growth Activity, which now occupies one person full-time, and another staff person, on 50% time,

1
2 was all donated.
3 In fact, when I say donated,
4 it was paid for by the Industry and
5 Commerce Community Association, within
6 the area, who is the sponsor of this
7 Regional Congress of Growth Activity.
8 The only attempt to recover
9 any of the costs is a $5.00 fee for
10 making a listing and the attempt here
11 is simply to try to cover the cost
12 of a mailing list that has grown to
13 staggering proportions, and I will
14 talk about that in a minute.
15 In terms of communicating our
16 services, two things were attempted.
17 First, we tried to communicate
18 to the press and to the technical commun-
19 ity, and we were very fortunate to have
20 a number of advertisements and articles
21 concerning the waste exchange published
22 in technical journals and so forth.
23 Secondly, we decided upon a
24 direct mailing list for the waste ex-
25 change to communicate our operations,

1 and that mailing list has started out
2 -- well, obviously it started to be
3 zero, but has now grown to somewhere
4 near 2,000, and is still growing after
5 a year and a half, and we also communi-
6 cate through some technical journals
7 that carry our listings and so forth.
8 We try to require a minimum
9 amount of information for our listing.
10 We did not ask for a tremendous
11 amount of detail, we just simply wanted
12 enough detail to identify the waste to
13 the point where someone could determine
14 if they are interested or not. We felt
15 that maintaining confidentiality is
16 a must, and in that respect, all the
17 listings, and I will describe how the
18 listings are published, but the listings
19 are published under a coding, and only
20 the listing company alone makes the
21 decision as to whether it wants to
22 deal with anyone who might respond.
23 Now, this we felt was important,
24 and from a survey that we took, it was
25

verified to be important by the listing company, there is a concern about government intervention, and there was a concern about trade secrets.

However, we try not to address these problems within the exchange, we were simply trying to provide this marketing service.

In terms of legal -- the legal matters, obviously, the passive type operation lends itself to a lesser, if totally non-existent legal involvement by the waste exchange.

We simply are again trying to provide the marketing service.

Finally, we have undertaken our own survey after a year's worth of work operation, to determine how successful we are, and I would like to talk about that, but first just to go through a few slides just depicting how the waste exchange operates, because I have talked a lot about principles, but I want to show you in

1 somewhat simple terms how the thing
2 works.
3 First of all, we advertise the
4 availability of our services, and pro-
5 vide directions and forms, and so forth,
6 for directing someone to how they would
7 put themselves in contact with us, and
8 how to make a listing.
9 Now, we are -- our mailing list
10 and so forth has grown to a rather large
11 proportion, and we are happy to see that,
12 and if there is anyone who feels the
13 need that they might possibly benefit
14 from the service, I think there is going
15 to be a pad of paper that you can put
16 your name and address, or leave your
17 business card, and we will be glad to
18 put you on the mailing list, and there
19 is no charge or anything for you.
20 The listings are then coded
21 to maintain confidentiality, and we in-
22 clude in the coding a description of
23 the material, whatever quantity or
24 volume of information we have, and
25

then finally the location of the material or the general location.

Thirdly, the listings then are collected and published in the form of a booklet every three months, and then again the booklet contains information and directions as to -- if you are interested in any of the materials contained on the list, how to go about getting in touch with the waste exchange, who would then forward your inquiry to the listing party.

That, of course, is the next step, the Regional Commerce and Growth Association, or the waste exchange receives inquiries, and then forwards them to the listing company.

The negotiations then are left between the two companies, the Regional Commerce and Growth Association or the waste exchange do not get involved in the technical, financial or legal aspects of the negotiations.

We feel we have provided a

service at this point, and while we are hopeful of some success from that contact, we do not take part in that.

Finally, we send the survey form to all parties annually to assess whether or not we have done any good.

Now, in terms of survey, during our first full year -- we have been in operation approximately a year and a half, and during our first full year of operation, we received listings for 115 waste streams. Of those 115, we -- from our survey, we have learned that 13 actual transactions have been made. This does not sound like a tremendous number, although it does represent a fairly sizable volume of waste, but in terms of the success rate, it is slightly better than 10%, and that exceeds any of the European operations in the first year, at least.

We found that of the 115 items listed, we received some 80% of them in the way of inquiries, so it does

indicate that there is an interest in reusing the waste materials, and the communications part is a significant problem.

A total of nearly 300 inquiries were received concerning the listings. Now, of the 13 successes that we know about, and these were the 13 that were confirmed, we have several others that we think are good potentials, what they were -- only seven of them involved companies from the St. Louis area. In fact, there were, I think, two from New York and spread all the way across the country from New York to Colorado, so we did reach a number of people in our first efforts.

Of the listings that we received, only 34% were from the St. Louis region.

Well, just in the way of conclusion, let me just say that I think that the waste exchange concept does offer some relief to the industrial waste management problem. It is, of

course, not the only answer, but hopefully and realistically, I think it is part of the answer.

I might add that with a great deal of gratitude we have received tremendous support from the United States Environmental Protection Agency Office of Solid Waste Management, both the Washington Office and the Region VII EPA office in Kansas City, which have both been very active in the formation and in advising us of the formation and the operations of the exchange.

I think aside from the obvious advantages of reusing material, the waste exchange concept offers a selling point, and the Regional Commerce and Growth being a Chamber of Commerce type operation, has tried to use this as a selling point to relocation of, or the location of industries in the Missouri-Illinois communities.

I might add that since the time that we have started, there are now

ten such operations either going on in the United States or in the beginning stages, so that it is a concept that is growing.

Let me make two final points.

First of all, as you can see from what I have said, this is by no means a complicated operation. It is simply a management practice, in effect, that is what EPA terms it, and I think they have just recently published a bulletin entitled Best Management Practices For Residuals, the Waste Exchange. It is something like that, but it is a very simple concept, and it is just a communications problem.

Secondly, as I said before, it is not the answer to all the problems. It is an answer to a number of them though. It is simply a case of just not wasting something that can be reused.

I would like to thank the Scientist Committee for inviting me here today, I just want to commend you

on the response to this meeting. I think it is by all means an indication that the people in this area are very interested in solving these problems.

Thank you.

(Applause.)

MR. LINDSEY: Thank you.

We do have a couple of minutes for questions.

I think we can entertain one or two if anyone has a question.

AN UNIDENTIFIED VOICE: I am from the New York State Department of Environmental Conservation, and I would like to know was there any assessment of the economic benefits of this waste exchange? Was there any indication by the companies of what cost savings they realized by getting these materials rather than using virgin materials?

MR. LINDSEY: The question was, was there any identification of the economic benefit to be gained by using these wastes instead of virgin raw

materials?

MR. HARNESS: To answer your question, no, simply it was not.

Let me try to elaborate on it, because I think it is an important consideration.

We want to justify our own actions.

In terms of operating, we do not want to impose upon the company any legal issues or trade secret issues, or in anyway impose any restrictions upon the potential of someone participating in the exchange. We felt, you know, there is a lot of things that can be done, and a lot of people so far this morning have talked about various approaches to the solution of waste management problems.

We tried to identify one area that we could help in, and that is simply the marketing and communications end.

Obviously, we would -- I would love to be able to say yes, we have

saved thousands of dollars or millions of dollars, I can only say that I don't think any of the exchanges would have taken place had there not been some economic advantage.

If nothing else, it saved someone from the costly -- from the expense of having to dispose of a material.

But again, we identify one area that we were trying to participate in, and in terms of response, we are continuing to grow. We had these 115 listings in our first year, and we are averaging something like 20% above that rate as of the beginning of the second year, so we are continuing to grow, and we are just trying to aim at one area right now.

MR. LINDSEY: Is it your intention to be a nationwide exchange?

MR. HARNESS: We have had a great deal of contact with the United States Environmental Protection Agency on that subject, and I did not mention

it because it is really not definite, but we have had direct contact with the other ten or the other nine operations in the United States, and there is some likelihood that there will be some reciprocal agreements where our listings would be published in their program, and vice versa, and, in fact, there is a very good possibility that we will have another meeting in the St. Louis region in June, jointly sponsored by the United States Environmental Protection Agency and the Regional Commerce and Growth Association to try and promote that.

We are moving slowly.

We are not trying to create a Cadillac when a Volkswagen would do, but I think that is something we want to move into, yes.

MR. LINDSEY: Any additional questions?

(Question posed.)

MR. LINDSEY: The question is,

can you expand on the difference between a broker and an active third party?

MR. HARNESS: Well, I think there is a distinction, and it deals in terms of financial involvement.

We have found in evaluating this kind of operation, that there are several people who would deal strictly as brokers, and they deal, for example, in waste oils, and I guess this is an area that has kind of fallen off because there aren't very many waste oils, there is enough incentive to try and reuse them, but someone dealing in the area of waste oils simply does what we are doing and then charges a commission for any sale, whereas an active third party would be an operation that actually buys the waste stream, and they either, in its present form or in some converted form, sell it to another market.

Now, there is a very large operation of this type in California that I know of, so there is a difference, and

1 it is in the area of the extent of
2 financial involvement.
3 *MR. LINDSEY:* One more question.
4 AN UNIDENTIFIED VOICE: Which
5 is the nearest exchange to this region?
6 MR. HARNESS: There has been --
7 there is one in New York, it is a private
8 operation, and I have seen some of the
9 brochures, and it is operated by the
10 Kalspan Corporation (phonetic spelling).
11 There are beginnings of opera-
12 tions in Boston, and I think Philadelphia,
13 but I am not positive about that, but
14 I think those two are just in their
15 beginning stages.
16 The Kalspan operation is a private
17 operation, I don't know how they operate,
18 or what kind of a fee they charge. I
19 know they operate on a premise very
20 similar to ours.
21 MR. LINDSEY: Bob, thank you
22 very much.
23 We have one more speaker here,
24 so if we could just exchange speakers.
25

Our next speaker will be Jack Riggenbach, a process engineer from Environmental Science and Engineering, Inc.

MR. RIGGENBACH: Before I begin, at the outset, let me apologize that Edwin Coxe, the Associate Vice-President and Manager, Advanced Energy Divsion, from Reynolds, Smith & Hills, Inc., could not be here this morning

My firm, however, and our parent firm, who Dr. Coxe is employed by, are two firms that did a study for the United States Environmental Protection Agency on hazardous solid wastes, and it was looking -- we looked at various industrial hazardous wastes that were generated, and if I could have the first overhead, I will begin.

This is just kind of the flow diagram of the project. We started out by looking at a list of seventeen, and not twenty industries, and we went through a preliminary screening sequence

where we narrowed the list down to eight major industries, where we took these eight major industries and looked at a detailed look at the processes in them, and the types of wastes generated, and if I could have the next slide, this is a listing of the seven agricultural, those dropped out for one reason or another, but this shows here the types of wastes that we were looking at in these industries, where they are generated, and a range of heating values.

We don't have an average, but this gives a range, and a lot of these wastes come from distillation columns, or various separation processes that occur within the manufacturing processes.

You can see quite a wide range of values listed here.

Some are quite high. That kind of gives a brief run-down of the project, where we stood, and stand right now.

If I could talk a little bit more now on what one needs to do in

1
2 considering whether or not you should
3 pursue incineration with environmental
4 recovery, and the one thing, of course,
5 is to inventory all the plant wastes,
6 hazardous and non-hazardous, and anything
7 that you have that you might consider
8 disposing of through incineration.
9 If you need to categorize waste
10 by combustibility, degree of contamina-
11 tion, heavy metals, tars and sludges,
12 the physical state, whether it be liquid
13 or solid, we did not look at gaseous,
14 of course you would want to consider
15 that as well, and the volume of the
16 wastes, and whether or not they are
17 continuous -- produced continuously
18 or discontinuously.
19 Then you have to look at the
20 various aspects of composition, if you
21 have moisture, you might analyze one
22 thing at 3%, and the next thing you
23 might get would be 30, and EPA has been
24 finding this in some of their testing
25 programs.

You have to determine preprocessing requirements, if you have solids, you have to reduce solids if you want to go through liquid type injection incinerator, or maybe you might not want that, you might want another type.

You want to select your incinerator to watch the waste. You determine your in-plant heating and cooling needs, and by cooling we mean absorption and refrigeration, and you will pick the type of environmental recovery operation that would best suit your particular operation.

When you are going through categorizing your waste, you need to consider physical properties, such as density, viscosity of liquids, percent solids, your flashpoint, moisture and percent ash.

The chemical properties that one needs to look at are the ultimate composition, your acidity level, and selecting the right components, and composition, and what components you

will have in ash on incineration, and the heating value as received, and on an as-fired basis, as-fired being after preprocessing.

Certain problems are suspended solids, if you have a liquid stream, you have to reduce your solids to at least one-eighth of an inch. That is the largest a liquid incineration can handle.

The solid composition that is in the waste, you have to avoid problems that you will get with a eutectic formation, low melting levels on firing that could cause slagging on your boiler services, and so forth.

Heavy metal emissions, you have to consider, mercury being very volatile.

Corrosive agents to consider are sulfur, phosphorous or chlorine. The ash characteristics, fusion temperatures, leachability, and the heavy metals presence that you would have to consider.

Then an analysis has to be done to determine what is your flue gas composition, corrosive gases, and where you have to scrub the gases to clean them up, any unburned hydrogen chloride or hallogens, and incomplete combustion products that might be forming during the upset operation.

Here is a list, just a short list, of a lot of industrial wastes that have been used, and are being used right now, and some of these that are hazardous are rubber product wastes, tars and waste oils.

Some of these others I won't get into, whether we find them to be hazardous, but some of them could be.

The bottom shows samples of operations that are currently burning wastes, and these are being burned in package boilers, chemical heaters, you name it, and another example here is the Union Carbide facility that Mr. Hall spoke about earlier.

This is an incomplete list, but these are types of incinerations that one can look at for utilizing.

Your fixed bed, your local chamber, multiple hearths, rotary kiln, molten salt, and submersion combustion, are three others that are not listed.

The flow ebbs of industrial wastes that we considered is the next slide. It was from manufacturing ethylchlorohydrogen.

Liquids, we show there the storage facilities, the incinerator itself, a waste heat boiler and absorption columns, one for producing a twenty percent hydrochloric solution, and then a dilution column for removing the last traces.

The waste that was regenerated, of course, you have to scrub, and going back on the last speaker, talking about the waste exchange, you can -- this is a very viable operation for people of this nature, and certain operations do

recover the hydrogenchloride as diluted, or go into a further distillation to recover a 35% commercial grade.

The next one shows a mixture of solid and liquid, where we have waste liquids storage, you have a sledding operation with storage for the solids, and a solid waste generator, and it should be a rotary kiln in this case.

These types of wastes do not generate corrosive gases, so that you meet the state, federal and local codes.

This one here is a very big one, and is very, very good as far as reutilization.

The factor you have to consider, of course, in your air pollution emission, you have -- you have flue gases, and you have to consider your composition, what is contained in your particulars, and heavy metals.

The term particulars does not tell us anything very much any more.

You need the size, range, and

1 what the impact will be on the local
2 environment.
3 EPA is looking at incineration
4 of polychlorinated byphenols, and I know
5 we did some work for a utility company
6 down in Florida, where they were burning
7 their wastes in one of the utility
8 boilers, and we ran emission tests for
9 them, and we analyzed PCB's.
10 Now, the EPA is looking at
11 what might happen when you don't complete-
12 ly combust these PCB's, because some
13 of these things that you might just may
14 be worse than what you started out with.
15 So you have to consider these
16 various factors. You just cannot say
17 well, the codes say I have to measure
18 this, that, or the other.
19 You have to look at and think
20 about these other matters too.
21 The various flue gas cleaning
22 techniques that one has to consider
23 for particulars and gases are listed
24 here, and I won't go into them in any
25

great detail, but that is the site, specific operation, and you want the most economic equipment that you want to satisfy your needs.

The waste heat boiler operation, fire tube versus water tube, which depends on whether you want high or low pressure steam, where you have corrosive gases to cool down, the possibility of burning your existing plant boiler, as Union Carbide does, this, of course, is a much more cost effective solution, when you get into incinerating, you get into a very costly operation, especially for a smaller plant.

Whether or not you want to steam, hot water or air preheat, these are the types of things you have to consider.

Your gas temperatures, a lot of people on burning are afraid to look at environmental recovery because of the hydrochloride in the gas, and yet there are a number of samples where people are cooling gases with as much

as nine or ten percent hydrogenchloride in their gas.

The ash generator from incineration is a very important thing, and this has been addressed here, and what is going to happen with the ultimate disposal of this ash, whether it be a secured landfill or something with impervious variables.

This is an analysis of ash at a plant production facility.

This was a distillation column, and you can see there is a whole slew of various metals here, and some of them are bad and some are not so bad, and I won't comment on whether they are good or bad, but this one has a lot of titanium dioxide in it, but you can see the range of metals you can come across, and we found this in just about every operation we looked at, a petroleum refinery being a good one for having a lot of metals.

On the economic side, just

going back -- this just shows a curve here, and these are just rough figures, but the top curve here shows for waste heat recovery only, and this is from the manufacturing of waste, one type of waste we looked at, and if you go to the top curve there, you are talking about $50.00 to $200.00 a metric ton for your average of twenty-five to thirty thousand metric tons a year down to roughly two thousand metric tons a year, which is very small. If you can, you will notice the dramatic effect here of materials recovery, and in this case it is recovery of the hydrogenchloride, and you can sell the stuff in certain cases.

You can use the diluted acids for pickling liquors, and just about any facility that will generate a chlorinate hydrocarbon somewhere in their operation.

You can take and you can recycle this back in.

So the bottom curve there kind

of shows, and there you are talking roughly of a factor of ten or lower -- not a factor of ten, a factor of two, or lower, by utilizing materials and energy recovery.

Another problem we addressed in our study was that of regionalization, and this is just a rough flow chart for how one would go about looking at the possibilities for a regional facility to have to dispose not only of hazardous wastes, but anything you could burn, and produce a usable energy product that you could sell to a customer, and there are several examples of this type of operation extant in the United States today, but as you can see, there are a lot of problems you have to face when you do this.

To get an economic operation, you have to utilize your scale, you have to get a large operation or it just won't work.

You have to go around and

identify every source that you can in the area that is going to produce wastes that you might use.

You have to -- you have to identify the types of wastes, the composition, all the chemicals and physical characteristics one needs to know.

You have to look around for current projected planning capacities, and this is a waste facility capacity, and the supplier of the waste, because if you are going to have a saleable byproduct, say you will be selling steam, this is what they do in Arkansas, they burn MSW and they sell steam to a plant.

You have to guarantee that customer you will have steam when he wants it, and not when it is available.

You have to know.

You have to have reliable sources of wastes, and then you have to backup fuel costs in case something happens

with the waste.

Other problems you can -- that you have to face when you look into regional facilities, who is going to own the plants, the various options that are available, private ownership, county or city government, non-profit organizations, various options will give you very different economic pictures due to the tax structures, et cetera, and then the environmental and institutional factors, of course.

Assessing the availability of need for it and usage of the recovery energy, you have that customer there.

If you don't, there is no sense in recovering the energy.

This brings us not really an insurmountable problem, but it takes a lot of consideration. To locate your plant where somebody -- close to somebody who is going to need the steam, and in a central location where you won't have to transport the wastes

a very large distance.

A couple of the other -- the next slide shows some of the various processes we looked at, and it shows where you do with utilities, total electrical energy to produce the product, and based on the analysis of these industries, the recoverable energy, the amount of recoverable energy, you see quite a range there, and this kind of gives you an idea of why plants may or may not look into utilizing the energy that is available there.

You get down to a figure where you are -- like in a petroleum refinery where only half percent of your energy requirements would be available in the extremes we looked at, you are not talking about very much energy there compared to the total energy requirements.

Faced with the other factors that when fuel is cheap, and the need for process steam or whatever right

then, is no longer existing, this shows some of the ideas why some companies are reluctant to look into an energy recovery program.

Besides incineration, there are other options available, and this chart right here shows the properties of a product produced by pyrolysis. It is one of the ways we looked at in the plastics industry.

As you can see here, if you are familiar with the field at all, this is a very good oil right here. They have good recovery, 90% of it was recovered in these particular experiments, and they have a very, very high heating value, 11,000 kilometers per kilogram.

This is another option available for your consideration.

MR. LINDSEY: Thank you, Jack.

I appreciate it very much. We have a few minutes here for questions before we break for lunch.

AN UNIDENTIFIED VOICE: Can you

comment generally on some of the environmental characteristics of these plants in terms of their compatibility with surrounding land use? What are the site properties, what are the interactions with the surrounding area?

MR. RIGGENBACH: For which plant? We looked at eight major industries and we did not do a detailed analysis on anyone of them.

We were utilizing other contractor studies.

AN UNIDENTIFIED VOICE: If you were to site an incinerator, what kind of plants would you look for?

MR. RIGGENBACH: An industrial site. If I sited an incinerator that utilized energy recovery, I would look at it close to a steam --

MR. LINDSEY: Maybe I can clarify that a little bit.

I think the sites -- maybe I am wrong, and you can tell me if I am -- the sites that you investigated were

part of industrial operations, they were not private disposal firms, or were they?

MR. RIGGENBACH: No, we looked -- we were looking at, as that second slide showed, major industrial operations, where chemicals or plastics were produced.

We were not looking at regional facilities except for conceptual analysis there.

AN UNIDENTIFIED VOICE: A previous speaker spoke of hazardous waste exchange. It occurs to me that possibly you could burn some of this waste and get some energy value. You would need some kind of technical reference, and I am asking is there a technical reference if I was seeking to find out what a BTU value is, for example, so I know what kind of an energy resource I have, and maybe sell to somebody who is generating heat?

MR. LINDSEY: The question is, how do I know whether I have a reclaimable resource from the energy standpoint if I have waste stacks?

MR. RIGGENBACH: The best way to do this is to get several samples of your waste and to put them in an oxygen colometer to measure the heating value.

We were not actually collecting samples, but you could do a theoretical analysis based on the known elements.

Those are the two approaches.

The quickest approach is you have to have an analysis. You could figure what your BTU contents would be.

Does that answer your question?

MR. LINDSEY: Any more questions?

AN UNIDENTIFIED VOICE: You mentioned pyrolysis. That is the burning without air.

Did you look into the destructive distillation?

I forget the terminology used for it, but it is burning without air, and the product that came off may be a lot different than a combustion operation.

MR. LINDSEY: The question is, did you investigate destructive distillation

as an alternative in the use of the products?

MR. RIGGENBACH: We looked at destructive distillation or pyrolysis, which was heating in the absence of air, to produce various products, and I don't -- and I have other slides that I would be happy to show you that will show you the gaseous and liquid compositions of various plastics that were pyrolysized in a retort, and you do get a wide range.

You do get some that may be worse.

AN UNIDENTIFIED VOICE: What kind of products do you get?

MR. RIGGENBACH: You name it.

I would have to show you. You might break a plastic down through pyrolysis, and get twenty different gaseous and liquid products.

It depends on how you pyrolysize it, and what temperature, and the length of time. It depends on the chemical structure, you can get aeromatic components, or just about anything.

MR. LINDSEY: We did some test burns in a pyrolysis unit using real world wastes, as it were, and the results are not fully available yet, but as I recall, there was one waste in particular which is a rubber plant waste that looked like it had real possibilities in that regard.

Have the results been published?

MR. RIGGENBACH: Our draft copy went to EPA in December.

I am going to Washington, D. C. tomorrow to make our final oral presentation, and we have not received the red ink copy back yet.

So it is probably two months down the road, at least, before it is published.

AN UNIDENTIFIED VOICE: Will that be available?

MR. LINDSEY: Through the regular solid wastes information publication process.

AN UNIDENTIFIED VOICE: Thank you.

MR. LINDSEY: Any further questions?

Thank you very much, Jack.

(Applause.)

MR. LINDSEY: We will now convene for lunch, which is being held in the pool, so it says here, which is to the right.

(Whereupon, at 12:30 o'clock P. M. a luncheon recess was declared.)

A F T E R N O O N S E S S I O N

(Hearing resumed at 1:30 o'clock P. M.)

MS. DWOSKIN: Our first speaker this afternoon is Sheldon Meyers, Deputy Assistant Administrator for Solid Waste Program, from the Environmental Protection Agency.

MR. MEYERS: Thank you, Judy.

What I am going to do this afternoon is give you a relatively quick rundown of the provisions of the new Act, discuss some parts of it, and end by giving you a brief feel for how this Act relates to other acts that EPA administers.

You noticed this morning there was some concern particularly on the part of industry that they would have to deal with several different parts of EPA to get several different kinds of permits, and implying that we don't talk to each other, which is true in many cases.

Let me say at the outset, while this is a meeting that is dedicated to hazardous wastes, that the title of the

1
2 new Act is the Resource Conservation
3 and Recovery Act of 1976, and not the
4 hazardous waste management act of 1976.
5 That is important for you to
6 know.
7 Public Law 94-580 was signed
8 into law by the President on October
9 21, 1976. The Act has eight subtitles,
10 Subtitle "A" through "H".
11 They have under Subtitle "A"
12 general provisions, which is important
13 in that it has a series of definitions
14 that are critical to implementing the
15 act.
16 It has also a requirement in
17 there that we write guidelines, and I
18 mention this because it is a carryover
19 from the previous acts that allowed us
20 to write guidelines. Those guidelines
21 are generally advisory to the general
22 public at large, but they are mandatory
23 for federal facilities.
24 That means that all federal
25 facilities must comply with these

1
2 guidelines as if they were law.
3 Subtitle "B" sets up the Office
4 of Solid Waste statutorily. Now, many
5 of you may know that in the past the
6 solid waste program, while it is a multi-
7 billion dollar industry in the outside
8 world, was a relatively small program
9 in EPA. Congress very specifically
10 wanted to give the office visibility
11 and, therefore, set it up statutorily.
12 Subtitle "C" is the hazardous
13 waste management provision of the act.
14 The entire subtitle addresses hazardous
15 wastes.
16 Subtitle "D" is the state or
17 regional solid waste planning section
18 of the act, and that is important in
19 that it has a pseudo-regulatory program
20 which mandates the closing of open dumps
21 and this is to be administered by the
22 states.
23 Subtitle "E" provides a role
24 for the Secretary of Commerce. Now,
25 this is sort of an odd provision in

1
2 that I personally believe it was a hang-
3 over from one of the previous versions
4 of the law that did not make it into
5 law, which called for something called
6 the United States Resource Recovery
7 Corporation, and that particular entity
8 would have had a loan guarantee authority
9 of some two and a half billion dollars
10 to provide loans for resource recovery
11 plans, and in that particular version
12 of the law, the Secretary of Commerce
13 had an important role to develop new
14 markets for recovered materials, to
15 promote the technology, and to put to-
16 gether specifications for recovered
17 material.
18 Under the act that was passed,
19 he has those roles now.
20 Subtitle "F" is an interesting
21 one, it is called federal responsibilities.
22 Now, I mentioned that the guidelines
23 that we published under Subtitle "A"
24 were binding on federal agencies. Now,
25 this law has a unique provision in it

1 that is erratically different from the
2 other acts that we operate under, the
3 large ones such as Air and Water, have
4 to do with the obligation of federal
5 facilities.
6 Under the Air and Water Act,
7 federal facilities are mandated to
8 comply with the requirements of the
9 act like any other person and require-
10 ments is not further defined.
11 EPA, in conjunction with the
12 federal agencies developed a scheme
13 whereby requirements meant substantive
14 requirements, emission limitations,
15 regulations, and things of that nature,
16 but not to get federal facilities to
17 obtain state permits.
18 Now, this Solid Waste Act is
19 very explicit. It says federal agencies
20 must comply with all requirements, both
21 substantive and procedural, and in
22 parentheses, including getting permits,
23 so that for the first time, the states
24 will be able to deal with federal agencies,
25

1
2 at least in the solid waste arena, in
3 the same manner as they deal with every-
4 body else.
5 Now, I offer a note of caution
6 to those of you who represent state
7 governments.
8 Be even handed. In other words,
9 treat federal agencies equally. Don't
10 go after a very big and obvious fed for
11 unenvironmental reasons. If this particu-
12 lar section is not administered properly
13 by the states, you can bet your last
14 nickel that the law will be changed in
15 the future back to the way it was.
16 It is an interesting experiment,
17 and it can work, but there has to be
18 some caution on the part of the state
19 governments.
20 Subtitle "G" is miscellaneous
21 provisions, and that is important for
22 a number of reasons, it has a citizen's
23 suit provision that is quite important,
24 as I said.
25 It has the imminent hazard

1
2 provision, and both of these, in con-
3 junction, give us the authority that
4 we need.
5 Subtitle "H" is the research
6 development and demonstration authorities
7 that carry over from other acts.
8 I would like to read to you two
9 definitions that are in this act, and one
10 is the definition of solid waste, and
11 one is the definition of disposal.
12 Solid waste is defined as "any
13 garbage, refuse, sludge from a waste
14 treatment plant, water supply treatment
15 plant, or air pollution control facility
16 and other discarded material, including
17 solid, liquid, semi-solid, or contained
18 gaseous material resulting from industrial,
19 commercial, mining, and agricultural
20 operations, and from community activities,
21 but does not include solid or dissolved
22 material in domestic sewerage, or solid
23 or dissolved materials in irrigation
24 return flows or industrial discharges
25 which are point sources subject to

1 permits under Section 402 of the Federal
2 Water Pollution Control Act, as amended,
3 or source, special nuclear, or byproduct
4 material as defined by the Atomic Energy
5 Act of 1954, as amended."
6 The particular definition goes
7 to excluding certain things that are
8 covered by other acts, such as radiation
9 and the like.
10 I think you can see from the
11 definition that solid waste is a very
12 broadly defined term in the Act, and it
13 is important because in many cases where
14 the regulatory program is spelled out,
15 it talks about solid waste, hazardous
16 waste, et cetera.
17 So that when they talk about
18 solid waste, remember this broad defini-
19 tion.
20 Disposal is defined as "to dis-
21 charge, deposit, injection, dumping,
22 spilling, leaking, or placing of any
23 solid waste or hazardous waste into
24 or on any land or water so that such
25

solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters."

I think you can see that between the definition of solid waste and disposal, this act offers the possibility of rather wide coverage. There are, of course, a whole load of other definitions some of which are not so good.

Let me just quickly run down the key provisions of the act.

I mentioned that the act statutorily establishes the Office of Solid Waste, and it sets up Subtitle "C", which is a strict federal-state regulatory program for hazardous wastes.

You have heard the discussion this morning on problems with defining hazardous wastes.

But once you define it, the other provisions of the act follow.

The first section of that

1
2 subtitle -- Section 3 through Section 1
3 is the definitions, but beyond that,
4 you get into standards for generators,
5 manifest system transporters and a merit
6 system for treatment, storage and disposal.
7 All those things will apply to
8 whatever is defined as hazardous waste,
9 and we have 18 months to do that. It is
10 a federal program initially, unless states
11 come in and tell us they have one at
12 the outset, and there are provisions in
13 the act to pick up existing state programs.
14 That the program is defined to
15 be run and operated by the states.
16 We will put out an initial set
17 of standards, regulations and guidelines,
18 and we will operate the program at the
19 outset, if necessary, but it is really
20 designed for the states to pick it up.
21 Now, if the states choose not
22 to, then obviously EPA will.
23 If the states, or any particular
24 state has the program, and chooses not
25 to move against a particular violator,

the EPA Administrator does have the authority to step in and move against a particular violator.

We cannot make the state do anything they don't want to do. The act also requires us to put out guidelines, and I mentioned that earlier, that was Section 1,008, according to the general provisions, and again these guidelines are guided by federal agencies.

An important part of the act is for us to put out criteria guidelines that define open dumps and sanitary landfills, and that is important in that once we have defined what an open dump is, or a sanitary landfill, then the law also mandates that we take an inventory of all open dumps.

Once we have that inventory, then the states have five years to close down or upgrade the status of sanitary landfills and open dumps.

Now, this is a state run program.

The inventory will be done under

the auspices of the federal government, but our initial thinking now is to have the states the actual inventory, but it will be a federal inventory. Now, this is important, the inventory itself is important, in that the state planning effort that is not mandatory involves a scheme whereby if a state is working with us in this planning effort, and clearly they should have provisions for either upgrading or closing down open dumps in that plan, they would then have up to five years to take care of that particular problem.

If for one reason or another they choose not to work with us, then under the citizen suit provision, they will be operating an illegal open dump, and any citizen can walk in and sue to shut it down, and my guess is a judge will probably not give as much time as that five years that is in the law. So a state may be faced with a rather precipitous closing down of an open

1 dump, although judges rarely would not
2 leave an option to the state.
3 If there is nothing else you
4 may do with it, it may be okay, but it
5 is clearly not in line with what the law
6 wants, and the law wants no new open
7 dumps to be started, and secondly, to
8 close down or upgrade existing open
9 dumps.
10 The act provides or authorizes
11 -- provides is the wrong word -- author-
12 izes financial assistance to state and
13 local governments in the form of various
14 grants to implement the various parts
15 of this act. There is an interesting
16 provision under Subtitle "D" for fin-
17 ancial aid to rural communities.
18 It is authorized at the level of
19 some twenty-five million dollars for each
20 fiscal year of 1978 and 1979, and this
21 is the only provision of the act that
22 allows you to build something.
23 All the other parts of the grant
24 program are designed to plan and implement,
25

in the sense of hiring people. Under this provision of the act, you can actually build a sanitary landfill, you can buy bulldozers, you can do everything in it in the way of construction of facilities, except purchase land, and that particular prohibition is in one of those definitions that I did not read you, and you will have to read the definition.

Again, these are all authorizations, we have had no appropriations yet.

I mentioned the guidelines that are binding on the feds, and I mentioned that the federal agencies for the first time must comply with all substantive and procedural requirements.

The act also recognizes an administrative memorandum of understanding between EPA and the Environmental Research and Development Administration. Both of us have in our organic legisla-

1 tion authority to work on projects
2 to convert waste to energy.
3 The Congress very wisely
4 suggested in hearings before the laws
5 were passed that we work together, and
6 work out some mutually agreeable terms
7 and conditions which we did, and the
8 Resource Conservation and Recovery Act
9 statutorily recognizes that agreement.
10 The act also provides for the
11 normal research and development authori-
12 ties that I mentioned before. It pro-
13 vides demonstration authorities. It
14 also provides something called Resource
15 Conservation and Recovery Panels, which
16 are technical assistance teams, and these
17 panels, I think, also were a carryover
18 from when that -- when the United States
19 Recovery Corporation -- Resource Recovery
20 Corporation was being bandied about.
21 These panels would have advised
22 the corporation. The corporation did not
23 make it into law, but the panel did, and
24 despite what they are called, the language
25

of the law allows them to provide the complete range of solid waste management assistance, not just for resource recovery.

The act also provides for training grant authority, and it requires the agency to setup a broad-based information development system, and it requires a large number of special studies, and it established a rather high level resource conservation committee, and by high level I mean it is chaired by the EPA Administrator, and also composed of the Secretaries of Commerce, Treasury, Interior, and representatives from the office of Management and Budget.

This rather high level group is charged with looking at a number of areas in the field of conservation. There was very little that Congress could do at the time that law was passed that would mandate conservation measures, but I think they very wisely got some high level people to focus

1
2 attention on it, and these reports, of
3 course, will be made available to the
4 Congress.
5 That is in a rather large nut-
6 shell what the law is all about.
7 Let me very quickly tell you
8 where we stand in implementing the act.
9 One of the things that the act
10 does, and it is woven throughout the
11 act, and it is culled out specifically
12 in a number of sections, it mandates
13 a rather meaningful role for public
14 participation.
15 Now, I am sure that many of
16 you have had all kinds of heartaches
17 in dealing with federal agencies in
18 trying to get things in the perspective
19 that made sense to you. We would like
20 to put out the kinds of standards,
21 regulations and guidelines that makes
22 sense to the people that, (a) have to
23 administer them, and the people who
24 are covered by them, assuming we live
25 within the confines of the law.

1 We have no preconceived notions
2 in Washington now as to how these things
3 are to come out.
4 We have whole loads of options,
5 and our staff are trying very diligently
6 to bring into the regulation writing
7 process the views of affected parties.
8 Now, we have held a couple of
9 meetings, not around the country, we
10 had one in Dallas, and one in Washington,
11 where we merely laid out what the law
12 was all about, and let it be known that
13 we were interested in hearing from any-
14 body to let us know what their thoughts
15 were, and that was just to raise peoples'
16 consciousness.
17 We have going on right now, and
18 one of the firsts is this evening, the
19 same kind of meetings that will be held
20 around the country, they are being managed
21 by our regional offices, and I want to
22 encourage all of you who stick around
23 for that this evening, it will go into
24 a great deal more depth in terms of
25

1
2 what the act is about.
3 Moreover, make sure you get the
4 names of the people who are here so that
5 if you have something to say, and you
6 want to participate more fully, find out
7 who the people are, and write to them,
8 that will -- that information will be-
9 come available this afternoon.
10 Now, I have charged our people
11 with, when you get comments from people
12 from the outside, you know, they deserve
13 either an explanation as to why you cannot
14 do what they want, or a very nice note
15 saying that is a great idea, we are
16 going to do it.
17 Now, whether or not that works
18 in practice remains to be seen. We have
19 tried to setup the system within the
20 agency to sort of accomplish this.
21 We will have on the working
22 groups that develop these regulations
23 representatives of state governments
24 to help us write them, so the people
25 who have to administer the program will

1 be there helping us write the regulations.
2 We could not get outside citizens
3 involved, but we were able to get the
4 states. We have also setup a scheme
5 whereby some fifteen to twenty outside
6 organizations will be fed early versions
7 of draft regulations so that they get
8 material at a stage when nobody's pro-
9 fessional pride is on the line in terms
10 of the product, so that if something
11 makes sense to change at an early stage
12 in the game, it is very likely it will
13 change.
14 Now, I have done this for a
15 very selfish reason. At the time we
16 propose a regulation, I don't want to
17 get a big static from the outside world
18 saying we are out in left field.
19 Hopefully, if we have worked
20 effectively with all the parties,
21 explaining why we did what we did, there
22 should not be a last minute attempt
23 saying that these regulations are not
24 what they ought to be, and then you go
25

1
2 back to first base, and try all over
3 again.
4 Those of you who want to partici-
5 pate, we tried to setup a framework, and
6 moreover, a mental state of mind that
7 will permit you to do that.
8 I encourage you all, or all of
9 you that want to, to make sure that you
10 find out who it is that is writing
11 particular regulations, and make sure
12 they know how you think.
13 Now, one other thing that the
14 agency has done is that we have setup
15 an intra-agency strategy developing
16 group, which has representatives of
17 various parts of the agency so that
18 when the strategy for implementing the
19 act is written, it will not represent
20 just the parochial views of the solid
21 waste office, it will represent the
22 views of the entire agency, which may
23 be parochial as well, but at least
24 it will address those kinds of issues
25 that industry is concerned about, namely,

1
2 that we do not re-invent the wheel three
3 times over because we have a new law whose
4 coverage may crisscross with other parts
5 of the agency's program.
6 We expect to have a draft strategy
7 towards the end of April, and this, too,
8 will be presented to the public for re-
9 view and comment.
10 There have been a number of
11 meetings with various interested groups
12 thus far on the strategy, but mostly to
13 look at various issues that surfaced
14 before the strategies could be written.
15 We have received a number of opinions
16 from the Office of General Counsel on
17 various parts of the act that leaves
18 some discretion as to what you can do.
19 We have established a task
20 force to develop -- it is not really a
21 task force, an intra-agency group to
22 develop new regulations for grants
23 that may be unique to this act. We
24 will probably tack that onto the existing
25 agency regulations for applying for

grants, but if there is anything unique about this act, we want to get it out right in the beginning.

I have met, in fact, it was yesterday, I have met with the new administrator, and the deputy administrator to explain this new program to them, and I am really delighted to tell you that the new administrator knows a good deal about solid wastes, he came from the Connecticut Department of Environmental Protection, and was active in solid waste programs while he was there, and elicited extreme interest in the solid waste program, at least in the hour and a half that I spoke with him.

So from my perspective, it looks very bright in terms of a new law and new administrator that at least knows there is a solid waste program, which as I mentioned earlier, frequently disappears under the weight of the air and water programs.

That pretty much covers where

we stand.

We have done all the necessary things within the agency to allow us to proceed with writing these regulations, and standards, and I bring that up because in the past there was some concern in the government in general about over-regulation.

Many agencies would tack onto the last sentence of a law, and build a monumental program on that, and frequently ended up over-regulating, if that is an appropriate term.

At EPA, we try to come to grips with our problem by setting up an internal mechanism that required the administrator to approve in advance all regulation writing before you go too far along, and we have already done that, so that we have all the necessary approvals to proceed, we setup all the intra-agency work groups, that includes state officials to help us write these regulations, and we are well underway.

1
2 Now, let me just quickly touch
3 upon the various parts of other agency
4 programs that impact on this new act,
5 or vice versa.
6 EPA, as you know, has major
7 programs involving air and water.
8 Water being the waste water
9 treatment plant program under the
10 Federal Water Pollution Control Act
11 Amendments of 1972.
12 The pesticide program, the
13 toxic substances program, and the safe
14 drinking water program, and noise and
15 radiation also are very important
16 pieces of legislation.
17 Now, as best I can see now,
18 there is not too much of an impact on
19 noise and radiation.
20 In air, there could be an impact.
21 They have a section in air that is
22 entitled Hazardous Pollutants, and these
23 are hazardous air pollutants, and they
24 presume that if something goes up a
25 stack, and you prevent it from going up

that stack, you have a neat little bill that you have to dispose some way or another.

In the past, generally, that waste was disposed of on land.

I guess I should have started this conversation out by saying something to the effect that this particular act closes that last unrelated loop for the disposal of the most noxious materials.

Now, the difference between hazardous wastes and toxic substances are that toxic substances are generally chemical things you can see, and hazardous waste is a conglomerate mixture of all kinds of things, some of which may be toxic, and some of which may not be.

Someone mentioned this morning sand and arsenic. So that the Air Act does have an impact, perhaps not as much as the others that I will mention.

Under the Federal Water Pollution Control Act Amendments of 1972, many of you are familiar with Section 208 of

that act, which is a water basin planning concept.

Now, the previous administrator was quite interested in this particular section. He viewed it as a device for doing environmental planning, and it can be.

We felt that there was some credibility to that, and had been working with our 208 people in Washington, and have mounted a series of nationwide seminars to get 208 people talking to solid waste people for the first time in many cases, I might add.

Now, this new act that we have, R. C. R. A., under the section that talks about setting and planning boundaries, does specifically mention 208 as a device that ought to be looked at.

It does not mandate that solid waste monies flow through 208 agencies, but it merely says that in setting up the planning boundaries for solid waste, you ought to look at 208.

Now, where the 208 agency is a general purpose governmental body that covers many areas, it would be a logical place to have this program reside for planning purposes, as well.

Where the 208 agency is strictly a water planning kind of operation, then it would not be a very likely candidate for the solid waste planning function.

The decision will be left up to the Governor of the state to do the designation. We have worked with our people in Washington in 208, and if it is possible to have an environmental planning tool that includes solid waste, that is fine.

On the other hand, the feedback we get from the constituency we have in the solid waste field is they do not think it makes sense to have water planners do solid waste planning, and it does not, if it is put that way.

If we are talking about a

1
2 general purpose government agency that
3 does all planning, then very clearly
4 they could hire solid waste planners
5 or subcontract to an existing solid
6 waste organization.
7 So the 208 issue is there, and
8 we will be working with it continuously.
9 We will not force anybody to use 208.
10 On the other hand, if it makes
11 sense to use 208, it can be used.
12 The pesticides program is one
13 that we have worked with in the past,
14 and by that, I mean the main effort in
15 EPA in pesticides is registration of
16 pesticides, with an occasional cancella-
17 tion. Now, when you have a pesticide
18 or pesticide container that you have to
19 do something with, in other words,
20 dispose of it, we have an arrangement
21 with our pesticide office where the
22 solid waste office will do the disposal
23 part for pesticides.
24 So anything that has to do with
25 the disposal of pesticides or pesticide

1 containers, and ends up in the form
2 of regulations, will and have been
3 prepared by the solid waste office
4 We have an existing longstanding
5 arrangement with them.
6 Now, based upon that particular
7 arrangement, we worked out a similar
8 arrangement with the office of toxic
9 substances. Their act is designed for
10 mainly premarket testing, and control
11 of new chemicals on the market.
12 There is language in their act
13 that concerns disposal. Now, we have
14 worked out an agreement with them where
15 we will write disposal regulations for
16 them as they need them.
17 The first one that will be
18 coming out is one on PCB disposal.
19 We -- about six months ago or
20 seven months ago, before the law was
21 passed, either the toxic substances
22 act or our own act, we put out guidelines
23 on disposal of PCB's.
24 Now, that was advisory.
25

1 If you are going to dispose of
2 PCB's, here is the best way to do it.
3 We are taking that particular guideline
4 and converting into a regulation. So
5 in the arena of toxic substance disposal,
6 we again have worked out an arrangement
7 where we will worry about the disposal
8 aspects for them.
9 The safe drinking water act,
10 the last one I want to mention, has a
11 concern about the protection of drinking
12 waters. One of the concerns they have
13 is what we call pits, ponds and lagoons,
14 which may or may not leach into the
15 ground water, and there is a possibility
16 of overlap there, and we are currently
17 working with that office to make sure
18 that, however, that particular problem
19 is regulated, it will only be done once
20 within the agency, and not by two differ-
21 ent parts of the office.
22 So despite the concern that
23 many people have that EPA does not talk
24 to each other, I would say that I spend
25

half my time talking to other people in the agency to make sure that we do not, indeed, come out with the kind of programs that are perceived by the public, and industry, as re-regulating, or over-regulating, or regulating more than once the same thing.

It is sometimes a little tricky because you have legislated mandates that give you no options, and the way I have described this to others on different occasions, is that many times when EPA tried to be reasonable, someone sued us, and generally they won the suit, and we could not be reasonable.

The thing that comes to my mind is affluent guidelines. We wanted to be reasonable, and exclude feed lots of under 500 cattle, or some number, 50 cattle, I forget what it was, and it made sense to us not to put the burden on the small guy.

We got dragged into court, and whoever did drag us in, won the case.

1
2 He said we have no authority to have
3 a diminiimous setup.
4 I urge you to be patient with
5 us. There are a lot of reasonable
6 people in EPA. We recognize that the
7 kind of things we do impact the public
8 directly, and frequently very quickly,
9 and we are very conscious of that, and
10 there is nobody that I know in EPA
11 that, you know, at the outset, wants
12 to do unreasonable things.
13 We are frequently put into a
14 box, and end up down the road doing
15 something that may be perceived as not
16 too reasonable, but if you get a chance
17 to talk to the people who are involved,
18 and you find out that there were ten
19 million reasons why it came out that
20 way, frequently beyond the control of
21 the guy that was running it.
22 With that, I would be glad
23 and delighted to answer any questions
24 that you might have, within the time
25 period that is left.

1
2 AN UNIDENTIFIED VOICE: You said
3 that the states would get grant money
4 to actually purchase equipment like
5 bulldozers. For what purpose is that?
6 MR. MEYERS: That is under
7 the rural assistance program, under
8 Subtitle "D", and presumes that many
9 smaller communities, and when I say
10 rural communities, the law specifies
11 what a rural community is, the popula-
12 tion and density, and things like that,
13 and the concept is that if you have
14 an open dump, and everybody is throwing
15 their stuff in it, and by virtue of
16 this other part of the act you close
17 it down, there has to be something that
18 takes its place, I believe the law
19 contemplated that these rural commun-
20 ities would not have the financial
21 resources to build a well engineered
22 sanitary landfill, and this grant money
23 could be used for that.
24 AN UNIDENTIFIED VOICE: The
25 grant would be made directly to a

1
2 municipality rather than directly to
3 the state, or would it be administered
4 by the state?
5 MR. MEYERS: I think it would
6 go directly to the rural community,
7 but I don't remember the exact language.
8 AN UNIDENTIFIED VOICE: Could
9 you tell me when the guidelines for
10 federal installation will be out? Do
11 you have an anticipated date?
12 MR. MEYERS: I am not sure I
13 know what you mean.
14 AN UNIDENTIFIED VOICE: You
15 were referring to guidelines for what
16 federal installations will have to
17 follow.
18 MR. MEYERS: There are five
19 of them out right now. I believe under
20 the new act we are contemplating two
21 additional ones.
22 One is on land disposal, and
23 the other is on sludge disposal.
24 Now, these will be advisory to
25 everybody except for federal agencies

which must meet the requirements of the guidelines. The existing guidelines are on separation of paper, resource recovery plants, beverage container deposits and so forth.

AN UNIDENTIFIED VOICE: When do you expect the guideline for land disposal to be out?

MR. MEYERS: I believe in about eighteen months or fourteen months from today.

AN UNIDENTIFIED VOICE: How does the act tie into other federal programs outside of EPA affecting water quality, specifically the coastal zone management program, which defers to 208 on the water quality aspects? Is there a provision in this law or in your administrative regulations that would identify the respective roles of those programs?

MR. MEYERS: As far as I know, no.

We have had very little dealings with other agencies except the ones that

are mentioned in the law, and the number of them are, for example in the hazardous waste programs, under the regulations for transporters, we are obliged to work with the Department of Transportation, but that one has not come to my attention.

AN UNIDENTIFIED VOICE: Are there any federal subsidies for companies that may want to site at their own waste disposal facilities, in particular circumstances?

MR. MEYERS: The only part of this act, and I did not mention it earlier, that would be considered a subsidy for industry, is that there is a grant program for tire shredders, it is authorized at the level of $750,000.00 for each fiscal year '78 and '79, but you cannot get any more than 50% of the purchase price.

Other than that, most of the money flows to state and local governments. There are authorizations for demonstration plans, and there are those

in the industry that would be eligible for that.

AN UNIDENTIFIED VOICE: The criteria for obtaining grants, will this require being substantiated or backed up by a specific plan?

MR. MEYERS: I don't know what you mean.

AN UNIDENTIFIED VOICE: Well, let's say, for instance, whether it be developing a landfill or whatever, would the engineering plans be required for entering into the source separation program, for example, would a specific plan have to be developed?

MR. MEYERS: Well, the proposal that would go along with the grant application should very clearly, as best you can, the time, indicate what you are going to do. In other words, I would call it a plan.

It does not -- you don't have to have engineering drawings of a landfill, if that is what you want to build,

1
2 but describing the problems of the
3 sites you have, the geology, we want
4 assurance that the money will not be
5 wasted, and whatever that takes is all
6 we need.
7 It should not be a frivilous
8 thought kind of thing, it should be
9 backed up with as much information as
10 you have.
11 AN UNIDENTIFIED VOICE: When
12 you get to the point where you start
13 inventorying open dumps and eventually
14 hazardous waste from industry, will
15 there be a federally designed form
16 for doing it that the states will hand
17 out to industry, or will it be done
18 state by state, and will everything
19 be different?
20 MR. MEYERS: First the inventory
21 only effects open dumps. It does not
22 effect hazardous waste sites.
23 That is something completely
24 separate. Hazardous waste sites will
25 be directly regulated, either by the

1
2 feds or by the states.
3 The open dump provision for
4 an inventory is mandated to the feds.
5 We feel it makes sense to get the
6 states to do it for us, and hopefully
7 they will agree to that, but if they
8 don't, then essentially our regional
9 office will do it for them.
10 AN UNIDENTIFIED VOICE: What
11 is the criteria then for open dumps
12 if from state to state it varies,
13 depending upon their specific regulations?
14 MR. MEYERS: The criteria will
15 be put out by us. We will put out
16 the criteria nationally.
17 Now, clearly, criteria is
18 interpreted differently by everybody
19 under the sun. We won a number of
20 programs now, we find that no matter
21 how explicit and clear our guidelines
22 and criteria are to our regional offices,
23 you know, we always get ten different
24 interpretations of it.
25 But I think one can have a

relatively high degree of assurance that most of it will be covered under the open dump provision.

AN UNIDENTIFIED VOICE: Do you know what the prospects are for actual appropriations? I mean, they have the suggested appropriations for the various provisions of the act, but how much do you think you are actually going to get?

MR. MEYERS: Well, the Ford budget had some twenty-four million plus twelve --

AN UNIDENTIFIED VOICE: Thirty-five million, I had read for this year, and sixty-one million for 1978.

MR. MEYERS: This year is fiscal year '77, and we got sixteen million, that's all.

For fiscal year '78, the Ford budget had twenty-four, plus seven, plus five, and I mention it that way because the budget that came through our office was the twenty-four, with seven million as a consolidated grant

program that covers all grants that we hand out, and another five million dollars to be managed by the 208 program, although we would dictate how the money would be spent, which would come through from their pot.

Now, that is a relatively small amount compared to the authorization. The authorization for fiscal year '78 is in the order of $175,000,000.00.

Now, you don't have to be a great magician to see that there is a wide disparity between that which we have or think we have, and that which was authorized.

We estimate that if the states were agreeable to doing an inventory for us, that we'd eat up most of that seven million bucks in consolidated grant money. That means that the various planning that has to be done, and there are solid waste plans in most states, what we are talking about is upgrading them so that they cover not only solid

waste, but resource recovery, and hazardous waste as well.

Input from local government will be diminished greatly unless they get funding, so we don't have a feel now for how much over and above what I have already told you we will get.

I understand that President Carter has said something to the effect that there will be increased resources for EPA, but I just don't know what they are.

AN UNIDENTIFIED VOICE: Does this act or will this act eventually get involved with ocean disposal or aspects of ocean disposal, or does this just pertain to land disposal only?

MR. MEYERS: This act does not directly effect ocean disposal. There is another law, the Marine Resources and Sanctuary Act, that explicitly addresses ocean disposal, and as far as I know, we do not need any additional authority in that arena.

1 So even if there were authority
2 in that act, we would defer to them.
3 AN UNIDENTIFIED VOICE: Well,
4 I was just going to say, if under the
5 Marine and Sanctuaries Act, you prohibit
6 waste disposal to sea, then you have to
7 address yourself to a method of disposal
8 on land.
9 MR. MEYERS: That is right.
10 AN UNIDENTIFIED VOICE: Then
11 it would ultimately --
12 MR. MEYERS: If it came back
13 to the land, it would very definitely
14 be covered -- if the stuff you were
15 disposing of were hazardous, it would
16 come under the hazardous waste provision,
17 if it were not hazardous, then we would
18 expect the state plan to account for
19 that material, and what you are going
20 to do with it, either recover it, so
21 it can be reused, or that it be disposed
22 of in a well engineered, sanitary land-
23 fill, or some other environmentally
24 sound manner, which language is in the
25

1 law without explaining what it means.
2 Presumably, you could build an
3 expensive incinerator and get rid of
4 some of it.
5 AN UNIDENTIFIED VOICE: How does
6 the act define sanitary landfill?
7 MR. MEYERS: I have forgotten,
8 but it does define it.
9 It is rather broad.
10 One more question.
11 AN UNIDENTIFIED VOICE: Do you
12 have any provisions in the act for the
13 safe closure of the open dumps, or do
14 you envision a walkaway policy after
15 five years?
16 MR. MEYERS: The act does not
17 define what closing means. Now, it
18 does say that they either close or
19 upgrade. Conceivably, the closing
20 could be just walkaway from the thing.
21 If it had been an environmental dis-
22 aster, my guess would be that public
23 pressure would build up to do something
24 about it.
25

1
2 This act has all kinds of nuances
3 that we have not even mentioned, such as
4 who has long-term responsibility for
5 taking care of these sites.
6 You know, if you build a nice
7 landfill and twenty years later, who
8 is responsible for making sure that
9 something does not happen to it.
10 Those are other issues that
11 we have been trying to address, but
12 it is possible that closing could
13 mean that you just walk away from it,
14 although if we find that that is a
15 prevalent alternative, that people
16 are opting for, we may put out a
17 legally enforceable regulation that
18 requires perhaps a cover, or something
19 like that.
20 I will be around --
21 AN UNIDENTIFIED VOICE: Inter-
22 state transport of solid wastes, is
23 that governed?
24 MR. MEYERS: There is no explicit
25 prohibition against it, but my guess

1
2 is that problem will be resolved as
3 soon as the Supreme Court hears the
4 Philadelphia-Camden-New Jersey case,
5 which addresses that explicitly.
6 My guess is they will come
7 out and say it should be -- they will
8 knock down the New Jersey law, is my
9 guess.
10 (Applause.)
11 MS. DWOSKIN: Shelly will be
12 here if anyone has any questions they
13 want to ask him outside. But we really
14 have to get on with the program because
15 we have two very interesting panels
16 this afternoon.
17 I would now like to introduce
18 Mike DeBonis, who is Chief of Solid
19 Waste in our Region II EPA Office,
20 and with him is -- Dr. Peter Preuss
21 from New Jersey, and Bill Wilkie from
22 New York State, who is replacing Ted
23 Hullar, who is unable to be here today.
24 MR. DeBONIS: Thank you very
25 much, Judith.

Before I get started, I would just like to express my personal appreciation, I think Judith would also, for having Sheldon Meyers here. We really appreciate Sheldon coming up here for this meeting. He is probably one of the busiest guys in the federal government at this point with the new legislation having been passed, and having to implement it, and I would just like to mention in passing that he is not just another Washington Bureaucrat, because he believes in immersing himself with his work.

When he first came into the job, he came into New York City and collected garbage all day long, and went out to the Fresh Kills landfill, and really saw it from the grassroots level up, and I have a lot of respect for him for that reason.

Let me just tell you a little bit about the activities of the solid waste management branch in the regional

office, as they relate to waste management.

The foremost activity among these is our technical assistance program in the hazardous waste area. We are not in a position to certify any particular treatment or disposal method at this time.

We won't be, I presume, until the hazardous waste regulations under R. C. R. A. are finally promulgated. But we will, upon request, attempt to provide information on alternative options available for a given waste stream. Our recommendations are based on published materials on file at our office, specific agency guidance as Sheldon recently mentioned on PCB's or vinyl chloride propelled aerosols, and also based on consultations with the Office of Solid Waste, hazardous waste division staff in Washington, who are designated to provide us with backup support on special or unusual

problems in the hazardous waste area.

In many cases, we are able to refer technical assistance requests to the appropriate state solid waste management program. State resources used to respond to such requests generally emanate at least in part from EPA's state program planning grants provided by the regional EPA office.

I will go into that just a little bit more in a few moments.

The individual in our office who manages the technical assistance program is Eileen Iwanu (phonetic spelling), and I would just like Eileen to stand up for a minute so you can see where she is back there.

You might want to speak to her after if you have any particular disposal problem.

There are two other individuals I would like to have stand up for a moment, one is Ron Buchannan (phonetic spelling), from the New Jersey Solid

1 Waste Program, who is Chief of the
2 Hazardous Waste Section down there,
3 or hazardous waste problems in New
4 Jersey, and also Paul Counterman (phonetic
5 spelling), from New York State, who is
6 here. I don't believe we have anyone
7 from Puerto Rico represented at this
8 meeting.
9 In any case, either of those
10 two individuals is appropriate, depending
11 on what state you are dealing with, or
12 our office, you may feel free to get
13 in touch with it concerning any specific
14 problems.
15 The regional solid waste
16 branch also participates regularly in
17 a hazardous materials committee, which
18 is a federal inter-agency group here
19 in the metropolitan area of various
20 authorities concerned with hazardous
21 waste management, such as DOT, the
22 Coast Guard, and New York City Fire
23 Department, and other agencies.
24 Our office is charged with
25

monitoring and assisting in the planning and implementation activities concerned with the hazardous waste provisions of the Resource Conservation and Recovery Act, and we are acting as lead EPA region on two critical areas of Subtitle (c) of this act, the standard for storage treatment and disposal facilities, and permitting programs, and that such will be acting as kind of a conduit for the comments and regulations and guideline development from all ten regions in the country, and ultimately from all of the state programs directly to Washington, and sitting on these work groups, which will ultimately come up with the regulations.

The other key functions as far as our hazardous waste activities are concerned relates to the state grant program, and that allows for a cooperative federal and state approach to hazardous waste management.

We have provided almost $300,000.00

to the New Jersey State Department of Conservation and the Commonwealth of Puerto Rico's policy board.

These grants are provided for the purposes of performing hazardous waste inventories, supplementing existing staff to provide for technical assistance capabilities, and again I mentioned previously other activities directly in support of planning for a state hazardous waste regulatory program.

I certainly don't want to cover the topics of the next two speakers, however, so I think I will just end here in a minute or two.

I am going to remain the moderator of the rest of this session, and assist in the asking of questions as time permits after we have our presentations.

I might just mention again if anyone is interested in more information from our program, or wishes to avail themselves of our technical assistance

provisions, please contact me or Eileen at your convenience. If it is at all possible, I would ask that you write us a letter, and put your request in writing if you can.

We are getting an awful large volume of telephone calls since the new solid waste legislation was passed, and it really helps us if we have your request in writing because we can kind of do extra leg work, and analysis in the office, and serve you a little bit more efficiently if we have it in writing.

I think we will move on to the state program presentations now and save some time for questions a little bit later.

Dr. Theodore Hullar was not able to be with us today due to another more pressing commitment, but I am very pleased to introduce William Wilkie, who is the Deputy Director of Solid Waste Management Division with

the New York State Department of Environmental Conservation.

Bill is certainly one of the stalwarts of the New York State Solid Waste Program, and I cannot think of anyone who has more knowledge of solid waste management in New York State from the overall state level than Bill, so with that, I will just let you take it over, Bill.

MR. WILKIE: What I was about to say was to thank you for that introduction, Mike.

I wish very much my mother-in-law was here at that time, it would help.

In New York State, we had an active solid waste management program -- we have had an active solid waste management program in New York State since 1963. Our activities in hazardous waste management are of more recent origin, but we have been involved in the hazardous waste management area since 1972.

It is an extremely important area of concern to us because approximately twelve to thirteen percent of the hazardous generated in the United States is generated here in New York State.

Our initial entry into the hazardous waste area was in 1971, via some legislation that became effective January 1, 1972. This is legislation that requires annual registration by all septic tank cleaners, and by all industrial waste collectors that operate within the state, collectors of sludge, chemicals, waste oils, solvents, et cetera.

The processing and disposal facilities must be approved by the Department of Environmental Conservation, and annual reports have to be filed with the Department at the time of re-registration, indicating the quantity and the nature of the wastes that were transported and disposed of.

Currently, we have 855 firms

that are registered, 61 of these are collectors of industrial waste, and 79 are collectors of waste oils.

The results of the program became somewhat dramatic to us after a year and a half into the program.

In mid 1973, we noticed there was a great reduction in the number of reported incidents of gypsy waste dumping of collected septic tank wastes.

So this was the area that was most obvious, most apparently obvious as being effective initially.

Enforcement of this study was being enhanced substantially by the Department of Environmental Conservation.

This is a uniformed force of approximately 225 men that have State Police powers.

Violators of the statute are guilty of a misdemeanor, and registration can be revoked. The program has been pretty successful.

That has been our first element.

The second element relates to the approval of processing and disposal facilities. Essentially, disposal in the state must be by means of secured land burial. This was discussed this morning with impermeable barriers beneath, on top, and gas venting systems provided, a leachate collection system, and with special considerations given to drainage and geological and hydrogeological conditions.

We have proposed new regulations that are new before the State Environmental Board for their approval, and these would extend a little farther into effecting improved control of hazardous waste management practices.

First it will provide for a permit to operate. Right now, our rules and regulations are based on an approval of installations and proper operation. The new rules and regulations would specifically require permits first for construction, then for operation.

Secondly, it would require that records be maintained, containing descriptions of the quantities of hazardous wastes within these sites together with a location description. These are to be filed with the Department upon completion of the site or upon completion of portions of the site.

Thirdly, that completed sections be clearly marked with permanent markers that have appropriate warnings.

Now, we feel this is an important need. Mike illustrated just by one example in the western part of the state an area that is now a park, which originally was a disposal area for a chemical company.

The property changed hands twice. There appears not to be a sufficient recognition of the materials that have been disposed of on the site, or what was necessary to improve the site so it could be used for its present purpose.

There has been a real problem

with the inability of the area to support landscaping and vegetation. Problems with leachate, problems with odors and there must be problems with vapors of some sort, because I recall reading a newspaper article where during a summer evening's concert, nylon stockings were attacked by those sitting there listening to the music at the concert. You could bend down and pick up lumps of sulphur.

Now, with proper records maintained and proper notification of what is at the site, problems like this could be avoided.

The third major activity in the hazardous waste area has been a survey of industrial hazardous waste generators. This was initiated in February of 1976.

We have been assisted greatly, and I would feel remiss if I did not mentioned this. We have been assisted greatly through a grant from EPA, and without that, we would not be in business, certainly not to the degree we are.

The purpose of this survey is

to determine the nature, the quantity and the geographical distribution of industrial hazardous wastes as well as to identify the current hazardous waste management practices.

We estimate that there is approximately 2,500 industries generating hazardous wastes in this state. We will be inventorying approximately 1,100 of these.

To date, 470 have been completed. Our inventory will be completed this fall and a final report will be issued by the end of the year.

We have had very good cooperation from industry.

This was assisted, I would guess in large part, by our working together with the associated industries of New York State, initially, so they could inform their membership of the reason for our survey, and the benefits that could be gained through cooperating with us.

Our batting average at this point has been 97%. We get the best data from the largest firms. They appear to have a greater knowledge of the need for sound hazard waste management practices, their records are better, more people that specialize in the larger industries have a better idea of what wastes we are dealing with, the quantities, and what is necessary to handle them properly.

This survey will provide a needed data base upon which we can develop and then implement a meaningful hazardous waste management program in this state.

We have another area, that of providing technical assistance, and I have been continually surprised at the amount of time that is necessary to provide assistance to individuals, to industry, to municipalities, and to consulting engineers in this area of technology, which relates in large part to how to dispose of waste properly, how facilities should be improved, and

to assist in the review and design for new and modified facilities.

Our future direction, our main goal is to achieve sound hazardous waste management practices to the greatest degree possible in this state.

We anticipate that our program will be acceptable to EPA under R. C. R. A. as an interim program. We have worked closely with EPA through the development of our program, and will continue to do so.

We are also in the process of developing legislation that should insure better management practices, and places us in a better position to where a state program will fit in with and be complimentary to the program under R. C. R. A.

This will basically place requirements on storage and reporting by generators, establish requirements for collection transportation, processing, disposal, and establish a waste manifest system, and also provide for long term

maintenance.

I think we are running behind, I could talk for another twenty or thirty minutes, but I think this is a good time to stop.

MR. DeBONIS: Thank you very much, Bill.

Seated immediately to my left is Peter Preuss, who is a special assistant to Commissioner David Barden in the New Jersey Department of Environmental Protection, and I have also had the pleasure of working with Peter over the last couple of years since I have been in the New York Regional Office.

He has always taken a personal interest in the solid waste management activities of the department, and the solid waste management activities of the state, and I would like to introduce him at this point.

MR. PREUSS: Thank you.

It is very nice to be up here speaking about solid waste because --

1
2 especially hazardous waste, because of
3 such tremendous scope about what you
4 want to talk about.
5 You can talk about the horror
6 stories that you know of, or you can
7 go to the other end and talk about the
8 good things that are being done, and
9 where we are going.
10 I am sort of a little puzzled,
11 I must admit, by what has gone on today
12 so far, and I am not sure if this is a
13 perception that is shared by others in
14 this room, or this is simply my per-
15 ception, but the feeling that I get,
16 and that I have gotten listening to
17 what is going on is that we are doing
18 pretty well in hazardous wastes, and
19 it is not that much of a problem.
20 We have a lot of technologies,
21 we have a lot of good laws.
22 We have a lot of things going
23 in our favor, and really we are on top
24 of the situation.
25 Now, if you have gotten that

1 impression, as I have, I would beg to
2 differ with that. I think we are in
3 terrible shape.
4 I don't -- I really don't under-
5 stand this easy feeling that I have heard
6 all day, and don't need to bring out
7 all the horror stories that I have in
8 my bag to make that point.
9 It is true, there are technologies,
10 but the chances are that each of the
11 technologies that we have heard about
12 exist in one place in the United States.
13 It is true that there are regulations,
14 and guidelines, but I am not sure to
15 what extent they are actually being
16 followed in many parts of this country.
17 I think we are still at a point
18 where solid wastes is the stepchild,
19 the ignored stepchild of the environmen-
20 tal movement.
21 All you have to do is take a
22 look at the budgets of EPA. You heard
23 Shelly speaking up here before.
24 All you have to do is take a
25

1
2 look at the budget in New Jersey for
3 that matter for the past several years,
4 they are orders of magnitudes different,
5 and I think the reasons are very apparent
6 to those who work in the field. Solid
7 waste problems are generally not visible
8 to the community.
9 Most people do not see dumps,
10 most people do not see hazardous waste
11 leaching out of a landfill, or whatever,
12 so that there has really never been a
13 very strong constituency that has been
14 built up for this.
15 I think more important than
16 that, for those of you who read the
17 book, "Cleaning Up America", he makes
18 the point which I think is very good,
19 I think it is not just an environmental
20 working, but in government in general,
21 government in this country, at all levels,
22 runs on the basis of crisis, we don't
23 do something unless there is a crisis.
24 And I don't think that there has
25 been enough of a perception in this

country, that there is a crisis about having to do something about hazardous waste.

So that I think that we are at a situation now where we are finally aware that a problem does exist. We have not done a whole lot about it.

We have a very, very big problem on our hands, and the question really is now, we are at square one, and what are we planning to do about it.

Now, when we talk about what is happening in New Jersey, you know, it is sort of a funny thing with me.

There are a lot of things going on in New Jersey, and many of them are not particularly good, I would think. I think the most important point that many of the people that have spoken about today, I think that Shelly touched on it, that my colleague from New York touched on, that many people have touched on today, is that we really don't know what is happening, and I think the first

1
2 thing that we in New Jersey or the first
3 thing all of us have to do is start
4 finding out what is happening.
5 At this point in time, I don't
6 think we know who generates hazardous
7 waste, I don't think we know who transports
8 them, I don't think we know where they
9 are going, I don't think we know the
10 environmental effects of these wastes.
11 I mean, how can we build a serious
12 management program if we do not know
13 these things.
14 You heard a description about
15 the survey that New York is carrying
16 out. In a little while, I will describe
17 the survey that we are doing in New Jersey,
18 but this clearly has to be the number one
19 problem, and the number one effort that
20 we have to put into this.
21 I find it hard, for example, to
22 imagine running an air program or a water
23 program which I am somewhat involved in,
24 without the permits, and the information
25 that we have from industry and the

information from emission sources.

I don't see how we can run that, and that is really the stage that we are at with regard to hazardous waste.

We just don't know what is happening. Yet, we are attempting to regulate.

I think if you look at what has happened in New Jersey historically in this area, I think you can understand why we have had some of the problems we have had.

We promulgated a set of rules. I guess it must be two and a half years ago that they were -- that they went into effect, in July of 1974, which contained provisions as to what needed to be done with hazardous waste.

Certain of these provisions with regard to hazardous wastes were to go into effect in March of 1970, and these provisions were stayed at the last minute because we really did not know what would happen if these were

to go into effect.

At the same time, or very shortly thereafter, we proposed new regulations which everybody dumped on.

It was unbelievable.

I mean, I had just come to the Department, I had never seen anything like it.

I mean, everybody picked on them, we really did not do too much with those regulations either.

Then in September of 1975, we proposed another set of regulations, this time with a list of substances that we considered to be either toxic or hazardous, or what have you.

We held a public hearing on those, and these also for a very large number of reasons were not adopted. Now, again, I don't want to give you the impression that nothing at all has happened with regard to regulations of these kinds of wastes, because clearly somethings have happened, but

they have happened in spite of the fact that we knew very little about what was going on.

Now, I think the best example of this is that seven years ago when the New Jersey Solid Waste Act went into effect there were a very large number, and by very large number I mean maybe in the order of magnitude of about a hundred landfills that were accepting chemical and industrial wastes without differentiation, whether it was hazardous or not, and that this year the last such public landfill was closed in New Jersey.

There have been laws that have been passed fairly recently in New Jersey, such as the amendments to the Solid Waste Act, known as S624, which is a very broad comprehensive planning bill which enables us to do planning not just for municipal, commercial waste, but in this area as well, and, of course, we are as well in the throws of surveying and looking at what, in fact, our problems

are with hazardous wastes, so that we currently have out and for those of you who are interested, I brought a couple of extra copies with me, but we have a survey out to -- which went out to -- it was the same number, 2,500 firms, to try and find out all those things that I mentioned at the beginning that we don't know, such as when they are producing, and who is transporting it and where is it going, and what is happening to it afterwards.

We will try and assess exactly what the problem is in New Jersey.

At the moment, the only thing we know is that it is big, but we haven't yet been able to define what big means.

We know also that it is bad, but we have not been able to define what bad is exactly, so that is really the first thing that we have to do.

Along the way, we will be trying to develop criteria for facilities. We will be trying to develop criteria for

emergency plans, and hopefully we will come out with the rules and regulations necessary to implement a reasonable hazardous waste management plan.

But I think the most important thing that is really happening and it is very difficult for me to put this into words really, but I think there is a new direction, a new tact in the way we are beginning to handle environmental problems in this country, and I think that is extremely important, and I think that we have to be aware of that.

I think the new Toxic Substances Control Act is a manifestation of that. We are not-- we are sort of stopping the way we used to look at things, and say let's take care of what is going into the air, and let's take care of what is going into the water.

What we are sort of doing now is I really don't care where it is going, but let's see if I have an environmental problem or if I have a potential

environmental problem, so that along those lines there are new state programs to compliment the federal program that is developing under the Toxic Substances Control Act.

New Jersey has a program under -- the -- to deal with environmental carcinogens, for example, and I think, and I really hope, more than anything else, that these new programs that come out under the hazardous waste management act will sort of fit into that, that we will be looking at overall environmental problems, we will be looking at overall environmental effects, and we will be looking at them in this new light.

I really feel that this is an extremely positive thing that has occurred in the last year or so.

Now, there is one other thing that I would like to mention before I end, and that is something that I don't think has been mentioned in too much detail over the course of today, but

1 which is something that I think we all
2 have to pay a great deal of attention
3 to.
4 That is, what would we do about
5 all the hazardous chemicals, and all the
6 hazardous wastes that have been dumped
7 over the past fifty years?
8 I think we will be able, by
9 application of ingenuity and creative
10 thinking, or whatever one does under
11 the circumstances, to figure out a
12 system to deal with the wastes that
13 are going to be produced tomorrow and
14 next year. But I don't see an awful
15 lot of attention being paid to the waste
16 that we generated ten years ago and
17 twenty years ago, and last week that
18 are now sitting in some landfill, or
19 that have now been dumped someplace,
20 and that are slowly working their way
21 into the environment.
22 I think that this is probably
23 the Achilles heel of what we are trying
24 to do, and those of you who have something
25

to do in this area, I would very strongly urge that this be given much more consideration than it has.

Thank you.

AN UNIDENTIFIED VOICE: My question is, everyone here is interested in seeing how we are going to manage hazardous wastes, and I have a fear, like with public law 92-500, the clean water amendments, where we had 208, that we are going to ask people what kind of hazardous they have, and tell them how to handle it, but who is going to tell them how many parts per million they have of carcinogens or mutagens or toxins when few laboratories are going to be geared up to have equipment, and the personnel and the quality assurance to test this myriad of chemicals that we are making next week, that we don't even have on the shelf yet.

Can each of these persons respond how they see their agency dealing with making sure there is a competent laboratory capable to tell us how many parts per

1 million, or whatever we have, before
2 we dispose of it?
3 MR. DeBONIS: The question re-
4 lated basically, I guess, to competent
5 laboratory support to determine carcino-
6 genic elements in potential waste, per-
7 haps I will ask Peter to respond to
8 that first in terms of the New Jersey
9 program.
10 MR. PREUSS: Okay, this is indeed
11 a very serious problem, and I don't think
12 there is a very simple answer.
13 I would not accept your first
14 premise, however, that we not proceed
15 to plan and not proceed to implement
16 until we manage to analyze all of the
17 constituents that may be out there. I
18 would suggest that we know, in fact,
19 enough about the problem that we can
20 begin to go ahead.
21 In terms of how do we get to
22 a point where we have enough laboratories
23 that can monitor for enough things, I
24 am not really sure how to go through
25

that.

Part of that answer, it is clear to me, lies at least in the fact that a very large portion of the budget that I have at my disposal dealing with environmental toxic substances and environmental carcinogens will, in fact, go for monitoring and for analysis of these substances.

So that there will be, I guess, for want of a better word, business generated for those who can do these kind of analyses, and so far I have not found it to be too much of a problem, in terms of finding somebody to do an analysis that I had in mind.

With regard to the really esoteric substances, I think that is something that we are going to be developing through the next year or two.

MR. WILKIE: I would pretty much echo what Peter says, particularly as far as waiting until we analyze what we learn.

1
2 Right now we know a fair amount
3 about a fair number of materials, and I
4 don't think we can afford to postpone
5 the time that we effectively address
6 improper management or disposal practices.
7 Right now, as far as laboratory
8 services, we, in the Department of
9 Environmental Conservation, do not have
10 our own general laboratories. The
11 Division of Land and Forest, and the
12 Division of Fish and Wildlife, have
13 laboratory facilities, but they are
14 geared pretty much toward maintaining
15 those divisional programs.
16 We continue to work with the
17 State Health Department Laboratory, and
18 certainly because of fiscal stringencies
19 this whole thing has to be re-evaluated
20 now in our state.
21 What they will be doing is trying
22 to work very closely with EPA so that
23 we make as few mistakes as we can, and
24 that we wind up with a program that we
25 can manage rather than having a program

1
2 that will begin to manage us.
3 MR. DeBONIS: I would say that
4 EPA's point of view in terms of working
5 on this Section 3001 regulation is for
6 the definition or criteria of hazardous
7 wastes, I think this was mentioned this
8 morning, that we are going to have to
9 consider what tests will be performed,
10 or what criteria we are going to use,
11 and the tests are going to have to be
12 either relatively straightforward, or
13 if they are a little more complicated,
14 relatively available to generators of
15 waste before we willynilly characterize
16 everything as hazardous waste.
17 Let's take one more question.
18 AN UNIDENTIFIED VOICE: Do you
19 advise that we postpone before we go
20 ahead?
21 The key question is nobody is
22 going to regulate any toxic substances,
23 unless they know it is a toxic substance,
24 so that means that there is a tremendous
25 burden on the analytical community to

1
2 be able to do high quality work and
3 repeated as to what I am saying, it
4 seems to me, there needs to be parallel
5 at the same moment that we need a quality
6 assurance program, that we know we have
7 laboratories that do good work and can
8 find the carcinogen or toxic we are
9 looking for.
10 How can they tell us we are
11 going to have it, if we don't have the --
12 MR. DeBONIS: There is such a
13 quality assurance program, and I am sure
14 they will have to become much more sophis-
15 ticated as the toxic substances control
16 act progresses in various areas, but I
17 really would rather not go too deeply
18 into the toxic substances area, that is
19 more of an area of briefing tomorrow
20 morning.
21 AN UNIDENTIFIED VOICE: The
22 questionaire that was sent out to 2,500
23 firms, that lists, you know, the categories
24 -- that questionaire categorizes what
25 defines a hazardous waste, so I wanted

to know, does that information reflect what the federal and state regulations are going to provide? Is that their criteria, in other words?

Where do they get the criteria from?

MR. PREUSS: Well, the question was for those of you who did not hear it, how we setup our criteria in our questionaire for defining what is a hazardous waste?

Certainly, I cannot answer you with regard to what the federal regulations are going to reflect, since I have not the vaguest idea at this point.

MR. DeBONIS: I don't believe we do either.

MR. PREUSS: Not only that, I am not really sure what the state regulations are going to say since those are in the process of development, and will be to a large extent based on the information that we receive.

The definition that we used

1
2 was one that we sort of put together
3 on our own, based on other definitions
4 that were commonly acceptable, I think
5 is the only way to describe it.
6 MR. DeBONIS: I think we are
7 going to have to cutoff questions at
8 this point.
9 I apologize we did not get to
10 more of you, but we have a full program
11 scheduled through 7:00 P. M., and if
12 we allow ourselves new additional
13 questions, we will wind up all taking
14 rooms here and sleeping over, I think.
15 The next panel is going to
16 be moderated by Murray Newton.
17 MR. NEWTON: This is the last
18 panel of this part of the meeting,
19 appropriately enough, and those of you
20 who have been here through the whole
21 meeting now know how to define hazardous
22 waste, you are aware of the technology
23 that exists for managing these, not to
24 mention the waste exchange concept and
25 recovering energy from them, and now

we can proceed from some of the hard issues into the institutional, legal and economic areas.

Our first panelist is Mr. Fred Hart, and some of you may be wondering if this is the same Fred Hart who is a former Commissioner of Resources in the City, and it is.

Fred is now a consultant here in New York City, and will discuss some of the general issues in the permit and siting area of hazardous waste management.

Mr. Hart.

MR. HART: I promise not to say anything about totals, but I do promise as Peter Preuss did, to bring you bad news.

I too think that the hazardous waste problem is really not very much under control, and I think the siting issue is the best example of all of the problems that are imbedded in the whole question of hazardous waste.

In 1975, the figures indicate that there are roughly 110 sites throughout the United States which deal with hazardous waste. That is the number of sites that are apparently operated by the Hazardous Waste Service industry, and also there is an indication that of those -- in those 110 sites there remains something like 53% of capacity, so there is an indication that there may be plenty of capacity to deal with this hazardous waste problem, that there may already be a great number of sites which are well managed as they are, for the solution of the hazardous waste problem.

But I don't think that deals with very close to the real reality of the situation. As both Dr. Preuss and Mr. Wilkie indicated, they had sent out in their respective states something like 2,500 questionaires or questionaires to 2,500 different people who generate hazardous waste.

If you translate that across

1 the country, you will see that there are
2 25 or 50 of a hundred thousand different
3 generators that we may know about just
4 using their kinds of numbers, and it is
5 very clear to many people that nearly
6 90% of those firms dispose of their
7 hazardous waste either illegally or
8 in facilities near or at the site of
9 generation.
10 The sense is that after the
11 passage of the implementation of the
12 Resource Conservation and Recovery Act,
13 that these people who currently dispose
14 of their hazardous waste at or near their
15 own source of generation, or place of
16 generation, that we are going to begin
17 to discover that the number of sites
18 which must be developed, the number of
19 sites which will be the items of regulation,
20 will be extremely numerous, and that we
21 are probably looking at a problem which
22 even if it were limited to the greatest
23 extent possible would focus on something
24 like 25,000 different sites.
25

1
2 So we don't really have this
3 problem under control at all, and we are
4 going to be confronted over the next years
5 with a considerable number of siting issues,
6 and siting issues historically have been
7 very difficult ones to deal with.
8 I would like, in the few minutes
9 that we are going to take today to address
10 some of the historic aspects of siting
11 in general, and I think that we are going
12 to find that many of these siting efforts
13 that have gone on in other areas, such
14 as environmental facility siting, for
15 example, are going to be applicable in
16 the long term in the area of hazardous
17 waste siting, and finally I would like
18 to end up talking a little bit about
19 the relevant provisions of the Resource
20 Conservation and Recovery Act that might
21 deal with siting, and how they might be
22 implemented over the next coupe of years.
23 I think historically if we were
24 to take a look at hazardous materials,
25 we would all agree that hazardous materials

are sited on the basis or philosophy of isolation.

The first example is what -- in the old days, where they sited the industrial materials such as explosives, people centuries ago chose to put their explosives on a hillside quite a distance away from the village. They wanted to be able to -- they put it on a hillside so they could see it, they wanted to put it quite a ways away so that when it went off, as it often did, that the problems -- they were able to see the problem but not find the impact.

Maybe we are looking at that kind of a situation at this point as it relates to hazardous waste.

Another example is the whole issue of where people put outhouses, and anybody who grew up on a farm would know that one of the earliest things that occurs in the earliest childhood is that you don't put an outhouse near a well, and you don't bring it into --

or near to your home, and apparently, I did not know this was a fact, but apparently there was a great deal of consternation when plumbing went indoors.

The next example which is most relevant to people here, who have had previous experience in solid wastes, is the handling of municipal landfill material.

Dumps, from the waste of human settlements, has generally been placed in landfills as far away from the community as the band of the community would allow.

Occasionally, going across the property lines where that is possible, an even extending as far as into the oceans as we are aware of.

This whole philosophy has been one of get it away from me, isolate it away from me, and everything will be just fine.

There are a couple of things that are happening in hazardous waste that will not allow that to be the basic policy that can be followed as far as the siting of facilities is concerned.

The first is the question of volume of material. For years, in the solid waste business, people have talked about the expanding volume of solid waste material. Well, the same thing is happening in hazardous waste, but it is becoming more apparent that more materials, more different kinds of materials are hazardous.

It is becoming apparent that just in the normal growth of the economy and so on, that we are producing more and more of these materials, and we also have a number of government policies which are creating more hazardous materials as was pointed out a couple of times today, the hazardous waste activity in this particular act is what we are concerned with today.

We generate, if we have a power plant, we have a recovery system, and we can generate sulphur compounds that have two directions, they can go in two directions, the liquid material that will end up in the water, and as it is treated in the water, we create a sludge, and

that ends up back on the land.

Simply, the solid materials would go directly to the land, and that has never been regulated before, and eighteen months from October 26, 1976, that will be regulated or quite possibly will be.

So we are talking about enormous volumes of material that we cannot deal with any longer.

Similarly, we are also lacking in the sources and the places of isolation.

We no longer have the kinds of places, the number of places where we can store this material in an isolated fashion.

What exists in the act which will deal with these problems in the future, and elsewhere, is the citizen involving himself, and how can he participate in the process of dealing with these things in the future.

There really are two areas, the first is the whole site planning -- the whole site planning aspect of things.

Unfortunately, the hazardous waste

1 sections of the act, Title (c), the
2 three thousand numbers, do not really
3 include a planning kind of activity.
4 However, in the state and regional solid
5 waste plans there is this planning activity,
6 and we have had some discussion of that
7 today, and clearly while it is not really
8 spelled out in the state guidelines, it
9 might be when the regulations are developed,
10 that hazardous waste plants could be
11 developed under those state guidelines.
12 I think we have learned a lot
13 as I mentioned earlier in this environmental
14 facility siting area.
15 For example, in the State of
16 California, in a law which was introduced
17 and sponsored by the current Chairman of
18 the Council of Environmental Quality in
19 Washington, Charles Warren, it developed
20 a large program where the utility had to
21 come in and submit alternative sites.
22 It had to submit three alternative
23 sites to the one that -- to the one that
24 it was submitting as its prime site, and
25

each one of those alternative sites had to be developed to the same extent as the one that they were proposing, in other words, a full environmental analysis, a full economic analysis, and one which dealt with all of those issues.

One other law I just mentioned is what the State of Maryland has done in the power siting.

I know they have extended this over to the hazardous waste area as well, and that is the legislation which indicates that the state itself selects and purchases land for use by utilities over -- into the future as future sites for power plants.

These particular ideas might be of value in the state plans that will be developed as far as hazardous waste is concerned.

The other area, and one which is an element in the act, relates to the permit system.

Each facility which exists for

the treatment, storage and disposal of hazardous wastes must have a permit. These guidelines for the permits will be developed at ten months after the effective date of the act, and the facilities must meet standards which also will be dealt with at ten months -- which will be prepared at ten months after the act.

Contained within the permits are a whole flock of reporting items, design standards, with indications that the design standards have been met, and a number of other engineering related kinds of activities.

It is important that as these regulations are developed, that the citizen who has input make that input known.

Many of you in the environmental community have had great experience on other issues of a siting nature.

You have had experience in the siting of power plants, fills, and similar

1 types of activities, and this kind of
2 input is very crucial.
3 One of the important steps that
4 has to take place in the permits is the
5 integration of the hazardous waste permit,
6 the disposal permit.
7 The other kind of activity that
8 ends up generating hazardous waste, such
9 as the various pollutants, I guess there
10 are three that are covered under the clean
11 air act, and the 65 pollutants or families
12 of pollutants that are covered under the
13 federal water pollution control act, it
14 is important that we come up with some
15 kind of a system that possibly creates
16 a one stop shop arrangement where a company
17 which is confronted with both the water,
18 air and hazardous waste program kind of
19 problems, develop a single permit.
20 There is a great deal of progress
21 being made toward developing these guide-
22 lines, both for the permits and for the
23 standards.
24 I think that the people in EPA
25

are really looking for your input as these are developed, and I know that one of their goals is to have as much public input as possible.

Thank you.

MR. NEWTON: Thank you, Fred.

Our next panelist is Mr. Bob Corman, and Mr. Corman will describe some of the recent regulatory issues regulating industrial landfills in New Jersey.

MR. CORMAN: It is a pleasure to be here.

This opportunity to focus on some of the dynamics that have taken place in New Jersey with regard to regulations of hazardous waste landfills really lifts up for us just one real focus, because in New Jersey, as Dr. Preuss pointed out, the last landfill that took such hazardous waste was closed to -- the last landfill that took such hazardous waste was closed in this past year, or is still in the

1 process of being closed.

2 I was heartened also by Peter

3 Preuss' very frank comments with regard

4 to the difficulties that we are facing

5 and perhaps some of the false optimism

6 that exists.

7 I talked about the two ends of

8 the spectrum, about the fact that we

9 can all talk about horror shows, and

10 we can all talk about the great plans

11 that might be able to be provided for us

12 to deal with these problems.

13 I think that maybe focusing on

14 what he termed a horror show, what might

15 be very instructive, and this is something

16 that I am going to be doing to some extent

17 without casting specific aspersions or

18 making generalizations on industry, or

19 on the state agency, which has a very

20 difficult job, but I would like to make

21 a few preliminary comments before I

22 do that.

23 I wanted to point out that the

24 landfill that I am talking about is one

25

1
2 located in Middlesex County, infamously
3 known as Kenbuck, and this landfill was
4 the only one that was receiving these
5 types of wastes since 1974 in a large
6 quantity.
7 It received well over 1.2 million
8 gallons per week for quite a bit of time.
9 Now, the regulation that was stayed, as
10 Dr. Preuss referenced, was one which would
11 have required leachate collection systems
12 and dykes.
13 It is unclear why this is actually
14 done, yet, it was done, and it specifically
15 affected a landfill which was already
16 under the DEP scrutiny for potentially
17 being in violation of existing landfill
18 -- existing regulations.
19 Between 1974 and now, therefore,
20 we have a situation where one landfill is
21 receiving well over something like 70%
22 of the waste of the largest industry in
23 the state, which is chemical refineries
24 and chemical related industries.
25 No matter how much we develop

specific approaches to studies for future or new regulations, or creative approaches for -- by environmentalists dealing with these problems, is all just of very limited value to this, if, in fact, there are not waste processing facilities to deal with the present waste flow.

When Dr. Preuss mentioned the sorry fact that we don't have any idea where these wastes are going, it is very serious. There is a likelihood that the environment today is -- in New Jersey and possibly elsewhere, is suffering a dreadful attack.

Now, whether it is in the ocean or on the land or in pine barns, or in marsh areas, or down in sewers, we don't really know where it is going, and I suggest the possibility that the reason we do not know is that because there aren't alternative waste processing facilities in the state besides perhaps one major one in the south, which incidentally was receiving a very small

percentage of the waste flow which had gone to Kenbuck.

So let us then look at how this present crisis, and all the contradiction related to it evolved.

There is a story of Kenbuck, one which reveals what might be termed a human organizational folly, and simultaneously, represents just another anecdote in the book of what you might call planetary impairment, but for our purposes, it is very instructive, and can assist us in developing an approach to self-criticism which is based on today's problems.

Kenbuck was a landfill that was already in operation for many years. It is located along the Variton River, and it is adjacent to many streams, as well as above a major outcropping of what is known as the Farrington Sands.

Kenbuck, fortunately, or might have seemed to be fortunate for the industry, was grandfathered in when

the new statute in, I believe, in 1970 or 1971, was put into operation. Now, there is an irony to grandfathers, because there really cannot be such a concept really in operation when you consider that regulations are eventually going to be promulgated, and these regulations are still going to be applied to the operation of any outfit which is operating as a landfill, and might come into violation, so there is no such thing really as a grandfather, it is maybe appropriate where you are dealing with a building that was now in a zone that was not going to be zoned that way any more, but for pollution problems, it is not really a viable concept, and I think that is one thing that has caused a lot of problems and tension, and I am very much aware of the shortness of the time, so I will try to go through this with some speed.

The public advocate became involved in this case primarily from the outcry of local groups, and state

1
2 environmental organizations.
3 We found that the attempt to close
4 Kenbuck was going to be a very serious
5 problem given the fact that there aren't
6 alternative sites.
7 Consequently, when the time came
8 and a closure order was issued, notwith-
9 standing the fact that it was the only
10 landfill that was being used in the state,
11 there seemed to be no planning on the
12 part of the Department of Environmental
13 Protection, perhaps for reasons of
14 staffing, and what have you, to develop
15 what alternatives might exist for these
16 wastes to go into.
17 So we were interested in the
18 process of closing this facility, and
19 at the same time interested in what was
20 going to happen.
21 As Dr. Preuss pointed out, there
22 was still a lack of information. How
23 do you shut down this type of facility
24 without having a transition planned out,
25 without having an idea of what is going

to take place to the environment if there is no registered sites for processing these chemicals that normally went to Kenbuck?

That is a dilemma that existed at the time of the closure proceedings, and in a joint hearing before the Public Utility Commission and the Department of Environmental Protection, it is still the case today.

The department was faced with a dilemma, and the industry was faced with a dilemma, and so was the public, and most importantly, the environment was faced with a dilemma that still continues today.

The hearing officer's report in this matter reflects the same realization that we must find out where the stuff is going.

We must decide whether or not there is going to be a system developed so that we can keep count. Now, the regulations did exist for a reporting

system once a year by the Department -- to the Department by generators and by holders.

This reporting system would perhaps work very well if it were fully enforced, and if the Department of Environmental Protection had the opportunity and staff and money to enforce it. However, even if they did have that, and this might be instructive to others where these landfills are closed, it would seem that a transition reporting, upper mechanism could have been developed to assist in the transition from closing of the landfill to whatever alternative seemed to exist.

The reporting system might have lent itself to gaining the information that would have been very valuable in the new future study. However, it did not exist, and the problem persists.

So the Kenbuck situation is something which is a thorn in New Jersey's side, and will continue as such until

1
2 the manifest system perhaps is in operation,
3 where you can really account for all the
4 wastes that are generated, or the best
5 laid plans are put together, and we can
6 get on with the technologies that are
7 really very necessary now.
8 The one thing that I did want to
9 address also, which was also addressed
10 by Dr. Preuss, and it was a very important
11 point, and notwithstanding the chemical
12 waste generation within the state, there
13 is also the problem of closing these
14 landfills that are not chemical waste
15 landfills.
16 For all intensive purposes,
17 leachate from solid landfills, are hazardous
18 wastes, and what you do with ground water
19 once it is down there from even the
20 traditional solid waste facility is still
21 not seriously being or totally being
22 addressed by the scientific community,
23 because it would seem to me the opportunity
24 to deal with that problem is presently
25 necessary, potentially something that

1
2 could be accomplished.
3 I think that might be enough for
4 right now.
5 MR. NEWTON: Thank you, Bob.
6 Our last panelist is Mr. Richard
7 Sernyak from Rollins Environmental Services,
8 Inc. He will address what I know to be
9 of considerable interest to most industries,
10 and that is the problem of liability for
11 these wastes when they are consigned to
12 a waste management firm or to anyone else.
13 MR. SERNYAK: I was thinking for
14 the last couple of days how I could say
15 something profound about the economic
16 and liability aspects of waste disposal
17 in the span of five minutes.
18 I was not capable of coming up
19 with anything so profound, but ironically
20 as I was getting off the train this
21 morning, believe it, it is true, I met
22 a fellow I haven't seen since 1965, and
23 he said hi, Dick, how are you doing, and
24 I said hi, and I did not remember his
25 name, and he said Bob.

He had the typical Wall Street look with the three piece pinstripe suit, and the Wall Street Journal tucked underneath his arm, and he said what are you doing profession-wise, and I said I am in the trash business, and it was very helpful to me to see the initial response in his eyes to that comment.

So that is my theme, that initially being in this business about three and a half years reflected the posture of people in industry, as well as regulatory agencies.

In short, they viewed waste disposal as a petty cash proposition, and not a capital expended item, and conducted themselves in purchasing waste disposal services from that point of view.

We have been in this business six years, sinking in $22,000,000.00 to create an industry, almost having gone bankrupt two years ago, and supposedly we are technical experts.

What the hell are we doing wrong?

So we took a different approach.

We tried to put a marketing program together to address waste disposal from a different perspective, and that is look what can happen to you if you don't handle this waste right.

Look at the liabilities now.

What is it worth to you?

We used to sell to the man on the third shift or the guy at 4:00 o'clock who was in charge of refuse in a plant, and he would make hazardous waste disposal decisions.

Today, I have to talk to the attorneys in our department before I talk to the attorneys in the major corporations. I am at a totally different level today, and that is a reflection upon the sensitivity of the issue.

Industry is aware and in my experience, and I have talked to a lot of people in industry because I am a peddler, I am in business to make a buck, and I have to sell something that we want and they need, and they want it

1
2 and they need it.
3 The problem is from their per-
4 spective in many situations, that they
5 are perplexed about the arbitrariness
6 of regulatory agencies, the inconsistencies,
7 and in short, you are asking me to commit
8 big dollars, and I don't know what is
9 going to happen.
10 I too was pleased to hear Dr.
11 Preuss talk about the fact that we really
12 don't know the magnitude of the problem.
13 In my humble opinion, that is
14 a very intelligent statement because how
15 can you solve a problem if you have not
16 defined it, and I don't think anyone
17 has defined it.
18 As an interim solution, we do
19 have a good disposal service. We analyze
20 wastes, we run it through our lab, we
21 sample every load, we insist that the
22 customer visits our plant, bring his
23 engineers in, have your attorneys read
24 our contracts, it is all up front.
25 Fortunately, there have been

enough people who have bought, so that years ago when waste disposal was not such an issue as it is today, that we have managed to survive. Today, fortunately, we are happy and healthy, and prosperous, and our stock is going up.

We are making a lot of money, and we are buying a lot of land, but believe me, I am turning away so much business it is no longer a question of what is the price, it is what is the cost, and from a marketing point of view, that is important because I think we are all talking about dollars and cents here.

They are willing to pay for cost, but unfortunately we are supposed to be the Cadillac of the industry, the biggest in the business, the most financially stable, and we have extremely limited and finite resources.

We have real estate, but we are fighting about locating new land sites, and getting in new permits, and fighting

limitations from every agency you can think of.

We are perplexed.

We don't know what it is all about.

So in my humble opinion, to conclude, the bottomline is we all have a need, we all want it, we better get together and communicate effectively, and get some strong leadership to sell this thing, because if it is not sold effectively, we all lose, it all comes out of our pockets.

Thank you.

(Applause.)

MR. NEWTON: We have a few minutes for questions. Perhaps I can save one question by telling you Mr. Sernyak assures me that it is a really true story about the train.

Are there any questions for any of the panelists, please?

AN UNIDENTIFIED VOICE: I want to know, don't you have a problem with finding suitable chemical landfill areas now?

MR. SERNYAK: We are not in the landfill business. We are in the waste treatment business.

The only landfill material is sludges resulting from a treatment process. We are not in the landfill business.

However, we want to be in the landfill business in the very near future because we do identify a very real need in that area.

MR. NEWTON: Other questions, please.

AN UNIDENTIFIED VOICE: I would like to ask anyone on the panel their reaction to the comment that if disposal proves to be a serious problem, what would you recommend doing with that substance?

MR. NEWTON: It sounds like an excellent question for Mr. Sernyak, please.

MR. SERNYAK: If I understand the question, would you repeat it, I don't think I got the full impact of that before I try and answer it.

1
2 AN UNIDENTIFIED VOICE: If the
3 disposal alternatives all have serious
4 environmental consequences, what would
5 be your thoughts on how to handle that
6 substance? Not to handle it at all?
7 MR. SERNYAK: Drop back ten
8 and punt.
9 Seriously, I think you have to
10 qualify that question with a definition
11 of serious environmental impact.
12 We, to date, have treated over
13 3,300 different wastes at our plant,
14 and these are all the nastiest. We run
15 the gamut.
16 The only thing we are virtually
17 excluding is radioactive material and
18 explosives, and in essence, we handle
19 all others.
20 In most cases, there is a solution,
21 a treatment method to a disposal problem,
22 but I don't mean to imply that we are
23 the panacea to the waste disposal problem,
24 no.
25 AN UNIDENTIFIED VOICE: During the

whole day we have been talking about all kinds of disposal methods and so forth. I have not heard a definition of what are the health hazards involved.

You are talking about disposal regulations, but what are the health hazards?

MR. NEWTON: Well, the question is -- perhaps I can rephrase it, and say what are the hazardous wastes, it sounds like? What wastes are hazardous to health?

We would expect to come up with some viable answer to that at the end of our eighteen month period, and are in the process of trying to develop that now with your help.

We most assuredly do not have the answer to that right now.

MS. LATO: Suppose a municipality is guilty of failure to properly dispose of its waste, is your company in a position to take on the problem of municipal waste?

MR. SERNYAK: My company? Here again, I have to qualify my answer to

1
2 that question.
3 In defining just what this waste
4 is, the projected volumes, the form that
5 it is in, and all the other logistics
6 associated with a definition of hazardous
7 wastes, and assessing whether or not we
8 have the treatment capabilities, in no
9 way am I implying that we have the answer
10 to all the problems, but we do have an
11 answer to a lot of the problems.
12 AN UNIDENTIFIED VOICE: I wanted
13 to ask Mr. Sernyak a question.
14 I would hope that your company
15 continues to do as well as it is doing,
16 and continues to overcome some of the
17 struggles it is facing, however, have
18 any efforts on the part of the state
19 or any efforts on the part of industry
20 to offer other services such as yours
21 in the State of New Jersey since there
22 is a -- as you mentioned, the need for
23 you to turn away business, been
24 accomplished?
25 MR. SERNYAK: From an investor's

1
2 point of view, if I looked at all the
3 few companies in this business in relation-
4 ship to the new legislation and the time-
5 table for enforcement, I would have to
6 say that our stock is the hottest stock
7 you could ever buy.
8 The question is, why doesn't
9 new venture capital come into this business?
10 (a) because it has only been in
11 the last year that only one major company
12 has shown a reasonable return on invest-
13 ment.
14 They will not put their bucks
15 here if they cannot get a good return.
16 The second reason is that every-
17 body wants waste disposal services, no-
18 body wants waste disposal services in
19 their backyard, and by the time you file
20 an environmental impact statement and have
21 public hearings, you are talking about
22 two, three or four years, umpteen amounts
23 of money, with no guarantee of a return
24 on your investment, and who needs that?
25 Businessmen don't think that way.

I don't know where it is going to go.

AN UNIDENTIFIED VOICE: How much has your business increased since Kenbuck closed?

MR. SERNYAK: We have received -- we received an additional five gallons a month new business, that we can identify with Kenbuck, that is a lot because I know, and I see all the figures. I really would like to recommend that regulatory agencies should alter their work schedule, because all the action occurs from about 12:00 o'clock at night to 6:00 o'clock in the morning.

MR. NEWTON: Mr. Sernyak is speaking for himself on that note.

MR. SHUSTER: There is a good way to find out where things go, and you know who the generators are, and sit at their gate and follow the trucks that leave full, and this is the only way to do it.

The law puts the responsibility

1 for the ultimate disposal of these
2 things on the right people, and that is
3 the originators of the waste, and I feel
4 that is a very good provision, and so
5 does the committee.
6 MR. NEWTON: Other questions or
7 comments?
8 AN UNIDENTIFIED VOICE: Could
9 you give us a little more of the institu-
10 tional implications of a manifest system?
11 Clearly, in order to get at this, we are
12 going to have to monitor how much, and
13 this implies a records management system.
14 This panel is working on institutional
15 and financial implications.
16 Could we please bear down on
17 the specifics of that kind of question,
18 because clearly it is one of the big
19 horizons in public administration. We
20 have not done anything like this before.
21 MR. NEWTON: It will be a major
22 burden on all involved, I am sure.
23 I would like to defer that for
24 the 4:00 to 7:00 period, because that is
25