UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Title: BRIEFING ON STATUS OF WEST VALLEY PROJECT

Location: ROCKVILLE, MARYLAND

Date: MARCH 29, 1989

Pages: 64

NEAL R. GROSS AND CO., INC.

COURT REPORTERS AND TRANSCRIBERS
1323 Rhode Island Avenue, Northwest
Washington, D.C. 20005
(202) 234-4433

DISCLAIMER

This is an unofficial transcript of a meeting of the United States Nuclear Regulatory Commission held on MARCH 29, 1989 in the Commission's office at One White Flint North, Rockville, Maryland. The meeting was open to public attendance and observation. This transcript has not been reviewed, corrected or edited, and it may contain inaccuracies.

The transcript is intended solely for general informational purposes. As provided by 10 CFR 9.103, it is not part of the formal or informal record of decision of the matters discussed. Expressions of opinion in this transcript do not necessarily reflect final determination or beliefs. No pleading or other paper may be filed with the Commission in any proceeding as the result of, or addressed to, any statement or argument contained herein, except as the Commission may authorize.

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

- - - -

BRIEFING ON STATUS OF WEST VALLEY PROJECT

- - - -

PUBLIC MEETING

Nuclear Regulatory Commission
One White Flint North
Rockville, Maryland

Wednesday, March 29, 1989

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

COMMISSIONERS PRESENT:

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

STAFF SEATED AT THE COMMISSION TABLE:

SAMUEL J. CHILK, Secretary

WILLIAM C. PARLER, General Counsel

JOHN E. BAUBLITZ, Acting Director
Office of Remedial Action & Waste Technology

DR. JOSEPH COLEMAN, Director
Division of Waste Treatment Projects

ROY THOMAS, President
West Valley Nuclear Services
Westinghouse Electric Corporation

TED K. DeBOER, Director
Radioactive Waste Management Program
New York State Energy Research & Development Authority

HOWARD A. JACK, General Counsel, Secretary
New York State Energy Research & Development Authority

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

2:00 p.m.

CHAIRMAN ZECH: Good afternoon, ladies and gentlemen.

Today, the Commission will be briefed on the West Valley Demonstration Project by the Department of Energy and the State of New York.

The briefing will be conducted by John Baublitz, Acting Director, Office of Remedial Action and Waste Technology at the Department of Energy, and Ted DeBoer, Director of Radioactive Waste Management, New York State Energy Research and Development Authority.

West Valley Demonstration Project Act instructs the NRC to monitor the project to ensure that public health and safety are protected. The Agency fulfills its responsibility by reviewing safety analysis reports, conducting site visits, and providing consultation to the Department of Energy.

Although the Act does not require NRC licensing of either low-level and transuranic waste disposal or decontamination and decommissioning process, it is my understanding that all those activities are to be carried out in accordance with the applicable NRC licensing requirements.

All activities in the project require good coordination between the staffs of the Nuclear Regulatory Commission, the Department of Energy and the State of New York. The Commission is interested in hearing today as to how the cooperation and coordination between these organizations is progressing.

Copies of the slide, I understand, are available at the entrance to the meeting room.

Do any of my fellow Commissioners have any comments to make before we begin?

If not, gentlemen, we welcome you here today and we'll ask you to proceed.

Mr. Baublitz, are you going to be first?

MR. BAUBLITZ: Yes, sir. Thank you, Mr. Chairman. It is my pleasure to be here today to brief you on the West Valley Project. As you remember, I was here several months ago, last summer, and gave you a review of the programs in our Remedial Action and Waste Technology Office, which have close involvement with the Commission and the staff. As a follow-on to that, we understood that you were interested specifically in some more specific information about the West Valley Project, how it was going, and then specifically, as you mentioned, Mr. Chairman, the

interaction and relationships between us, NRC, and New York State.

Let me introduce to you those that are accompanying me here today. On my left, Doctor Joseph Coleman, who is our Director of the Division of Waste Treatment Projects. His division is responsible for our West Valley activities.

Doctor Willis Bixby is our Director of the West Valley Project in New York. He could not be with us today, but representing him, in the back, is Chuck Lunbird, who is the gentleman who's done the most work on developing the plans for the environmental impact statement which is the focus of our initial work on this close coordination with New York State for the final site closure.

Then on the left here, Doctor Roy Thomas, who is President of West Valley Nuclear Services, the prime contractor for the project at West Valley.

Mr. DeBoer, as you mentioned, will be giving the presentation following mine for New York State.

(Slide) Could I have the first slide, please?

This is a simple organization chart to simply remind you how we fit together organizationally, just to put the pieces in

perspective. I work for the Assistant Secretary of Nuclear Energy and under our overall jurisdiction, the Idaho Operations Office is directly responsible for the West Valley Project and have provided a project office and project team at the West Valley location to implement the day to day management of the project. As we mentioned, the West Valley Nuclear Services Company is the principal contractor that's carrying that out.

In a very close coordination role, of course, with us is the New York Energy Research and Development Authority, as shown by the dashed lines on the chart, and they also have a project office at the site which is staffed by their own personnel

(Slide) Next slide, please.

To introduce the project, I'm providing a bit of background, a current status on where we are right now. Then I'll go into the plans for what we call our Phase II, the final decontamination and decommissioning phase of the project which leads ultimately to site closure.

To review the history briefly, we have a chronology listed here going all the way back to 1961, when New York State acquired property for the establishment of the Western New York Nuclear Services

Center, to be a commercial reprocessing facility for nuclear fuel.

An agreement was reached in 1962 with the Atomic Energy Commission and New York State to construct such a plant and the construction was completed in 1966.

From that year until '72, Nuclear Fuel Services reprocessed spent nuclear fuel, a total of approximately 640 metric tons. Then, in 1972, the plant was shut down for modification and expansion.

From '73 through '75, while the plant was shut down, they continued to receive spent nuclear fuel in the assumption, the expectation that reprocessing would be resumed.

Finally then in 1976, NFS decided to withdraw from the reprocessing business and did so. Subsequently, to deal with the waste that was at the site, the remaining spent fuel and the necessary clean-up associated with the entire site, Congress in 1980 passed a specific piece of legislation that authorized the Department to carry out a high-level waste demonstration project in conjunction with New York State.

In 1981, the Department selected Westinghouse and its principal subsidiary, which Mr.

Thomas now heads, to be the operating contractor. In February of 1982, we assumed operational control of the project premises.

(Slide) Next slide, please.

This shows pictorially a simple sketch of the key parts of the West Valley site. The processing plant is that facility which was built and used for the reprocessing itself.

There are two tanks, named 8D-1 and 8D-2, which contain the high-level liquid waste that was resulting from the reprocessing operations, and there are two waste disposal areas. The one that's labeled New York State Low-Level Waste Disposal Area had no direct connection with the high-level waste processing facility. It was a general low-level waste site for commercial low-level waste. And then the so-called NDA, the Nuclear Regulatory Commission Disposal Area, that did in fact receive waste from the processing plant while it was operated. Mr. DeBoer, in his discussion, will talk about those parts of the facility.

(Slide) Next slide, please.

The goal of our project, of course, is to demonstrate solidification of the high-level liquid waste that's at the site and prepare it for permanent

disposal in a federal repository. The authority is the legislation that was enacted in 1980.

(Slide) Next slide.

To accomplish all the objectives of the project, we divided into two phases. The first phase which we are currently involved in now is to solidify the high-level waste in a form suitable for ultimate disposal and develop the containers that would be needed to, in fact, contain it for disposal. So, the solidification part is the focus of Phase I.

Phase II picks up the transport of that solidified waste to the repository, disposal of the low-level and transuranic waste that's produced by the solidification project and decontamination and decommission of all those facilities that were used in the project.

(Slide) Next slide.

Our current schedule for the project is to complete the solidification phase by 1998. I might mention at this point, in my earlier briefing I believe I probably gave you some similar information on this project in a shorter form. Since that time, as a result of the actions on the 1990 budget, the project completion date has stretched. We told you probably in June that the completion of Phase I was

1994. We have slipped by four years as a result of the actions on the 1990 budget.

The second phase, the D&D phase, goes on for a very long time and is estimated now to be completed in the year 2020.

Implementation of the project is, as I had mentioned before, assigned to our project office at West Valley and the cost of the project is shared in accordance with the terms of the legislation, 90 percent DOE, 10 percent state.

(Slide) Next slide, please.

I've summarized here the NRC role in accordance with the authorizing legislation. NRC is required by the legislation to review and consult with the Department on our plans for high-level waste removal; solidification and preparation for disposal; our plans for decontamination of the facilities used for the solidification; on the form and containers to be used for the high-level waste disposal; and also then, the safety analysis reports that are prepared for the individual parts of the facility as they are developed and readied for operation; and, of course then, in a more generalized way, all information related to potential hazards to public health and safety in a broad general operational sense.

(Slide) Next slide, please.

The NRC, of course, also has free access to the site to monitor our activities and they are specifically to prescribe requirements for decommissioning and decontamination in terms of what we would loosely call clean-up criteria.

(Slide) Next slide, please.

The Department and the NRC implemented a memorandum of understanding subsequent to the passage of the legislation to establish the procedures for the relationship between the agencies. The scope of the agreement encompasses the development, design, construction, operation, decontamination and decommissioning activities. In other words, the entire scope of the project.

The focus of the responsible parties with the Department are the Office of Nuclear Energy, as I mentioned focused in our West Valley Project Office; and with the NRC, the Office of Nuclear Material Safety and Safeguards in Region I up in King of Prussia.

(Slide) And then a very brief summary on the next slide of the contents of the MOU, very straightforward. It was agreed to and signed in September of 1981.

(Slide) Next slide, please.

What I'd like to do now is review briefly the status of the project in that part which we call Phase I, whose objective is the demonstration of the solidification and preparation of the high-level waste for disposal. We have outlined on this slide the portions of the total project scope that fall under Phase I, the solidification of the waste, the development of the containers, and then the decontamination of facilities that we would need to do the solidification work.

(Slide) The next slide is a simple pictorial to give you essentially a quick photo of what the basic Phase I project is all about. Taking the high-level waste in the 8D-2 tank, which is divided basically into two phases, there's a liquid supernatant phase and a sludge phase at the bottom of the tank. The supernatant, which is predominantly contaminated with cesium, is processed in one stream to produce ultimately drums of low-level radioactive waste. The sludge is processed through a different stream to produce the glass logs that will ultimately go to the repository.

(Slide) The next slide shows --

COMMISSIONER ROGERS: Excuse me. What's the

difference between 8D-2 and 8D-1?

MR. BAUBLITZ: 8D-2 has the --

COMMISSIONER ROGERS: Is there a difference?

MR. BAUBLITZ: 8D-2 has the large bulk volume of the waste. 8D-1 has a much smaller volume of waste. That will be, in fact, combined with the 8D-2 waste and all be handled together ultimately. This is an oversimplified rendering, just for convenience.

(Slide) The next slide is again, of course, still a schematic, a slightly more complicated view to show the steps in the two processes. We've defined the two processes to be used to solidify the waste as low-level waste and high-level waste defined by the end product of that stream. As I mentioned, the supernatant gets treated first. That is treated through a series of zeolite beds to remove the cesium. There's an evaporation step to concentrate it and then the liquid remaining, which is now a low activity, is solidified in cement and those cement drums are currently in storage, or being put in storage as they're produced, pending a final decision on disposal.

The vitrification cycle is the lower half of the picture where the sludge in the waste tanks is

combined with the zeolite bed material from the supernate processing and that combined then is made into the glass in the vitrification system which produces the roughly 300 glass logs which will ultimately be disposed of in the repository.

(Slide) The next slide just gives you a current status of where we are in the Phase I of the project. The supernatant processing system was started up with radioactive processing in May of last year. We've had very good operational success. Decontamination factors through the zeolite beds has ranged from 5,000 to 150,000 under different operating conditions, well above that range and the entire range is well above the design goal of 1,000.

The product acceptance rate, that is the acceptance rate for the cement drums at the other end of the screen, has been very high. The dose rates on the drums has been about a factor of ten below design expectations. We have achieved full NRC staff concurrence on the cement waste form and the interactions with the staff in reaching that agreement I think have been very good. We've had very good working relationships with the staff in reaching that objective.

As of March 10th, a total of 150,000 odd

gallons have been processed and we produced about 2900 cement drums. Referring back to the earlier slide where our total number of drums is some 15,000, you can see we're a third or so, a little less than a third of the way along.

COMMISSIONER CARR: Initial estimate looked like it might have been 13,000, and that's ten percent or so. What happened? It just turns out you're getting more drums than you thought you would?

MR. BAUBLITZ: I think our experience is showing more accurately what our long-term expectation is. We're still, I guess it's fair to say, fine tuning the process a bit in terms of bead rates, dilution factors in terms of the feed. That all affects the actual number of drums produced.

Our overall goal of the operation of the system is to try to get as much of the cesium out of the system as possible and make as few glass logs as we can. In other words, to get as much out of the front end of the cycle to reduce the number of logs as we can.

(Slide) The next slide --

COMMISSIONER CARR: Do you mean by that you're expecting -- if you get more drums, you'll get fewer logs?

MR. BAUBLITZ: In a rough way.

COMMISSIONER CARR: Okay.

MR. BAUBLITZ: Only roughly.

The next slide shows our current overall schedule. We are in the process now of processing supernatant and doing what is called the civil construction. That's the building and shielding construction in preparation for the vitrification system. When that is complete in 1991, we will be finishing or proceeding with the rest of the construction of the vitrification system, the sludge mobilization system, and processing additional washing of the sludge to try to get as much of the cesium out as we can. Leading then, in about late 1994, to cold operation of the new melter and hot operation of the melter in about late 1996, about a two year operational cycle for the melter to produce the logs.

COMMISSIONER ROGERS: What happens in the cold operations?

MR. BAUBLITZ: That's basically a full check-out of the melter in cold system. We have operated a melter at the site for a number of years. I guess we will complete something like five years of operation of that melter in the next year. That melter will, in fact, then be taken off-line and

refurbished as a back-up. A brand new melter will be procured and installed for the actual production. So, the cold ops. is principally to get the new melter operating and get all the operating parameters down very confidently before we start our operations.

(Slide) I've included on the next slide a summary of what is called the waste acceptance process because it does relate to the operation of the melter and the things that we're doing along with the repository program at DOE to assure ourselves that the logs that will be produced by the project will successfully be handled by the repository program, the licensing action that they will be going through with the NRC for the repository and then ultimately the successful disposal of the logs at the repository.

There's a sequence of steps that had been identified for the project in conjunction with a repository program. Some waste acceptance preliminary specifications, as they're called, have been developed. That provides the targets for the operation of the melter. We, as a waste form producer, develop, produce and characterize the waste to meet the requirements of those specifications. There's a series of documents that are prepared to provide the trail of that development. There's a

waste form compliance plan that's under development now. There's a waste qualification report that will summarize all the data from our current operations of the test melter. It will include the cold operations of the production melter and then finally when we get into production in a hot sense, we will maintain production records of what is actually being produced.

The repository program evaluate the waste form as part of their work in site characterization to establish suitability for licensing and, of course, interact with the Commission for the repository license. Then, of course, finally, the canisters and the production records are provided for final acceptance and disposal in the repository.

That concludes the summary on Phase I.

(Slide) The next slide initiates the discussion on Phase II. Again, we've outlined the parts and project scope that are included, the transport of the glass logs to the repository, the disposal of the waste that's been created in the project and the decontamination and decommissioning of the facilities that have been used in the project.

(Slide) The next slide shows our schedule for the Phase II project. You can see we have two options identified here to highlight the fact that

within the Department we're looking at ways that we might be able to speed up the final steps of this project by retaining the glass logs in storage for a shorter period of time.

The base case shows that following completion of the vitrification in 1998, we will have the logs under storage until about 2009, which is the earliest we expect the repository to be in a position to accept them. The dashed line shows an alternate case. If we can identify a location within the Department for storage of the logs while they're waiting for the repository, and the obvious point here is that DOE will have other vitrification facilities operating, producing logs for disposal, that will be in storage. And if it's feasible to combine the West Valley logs with those Defense waste logs, we can save a significant amount of time on the tail end of the project.

There's no real safety issue here. It's just clearly an economic issue that this project can certainly save a significant amount of funds and time if we could close up shop quite a few years earlier. That's an issue that's open within the Department now and quite possibly won't get resolved rapidly. But, of course, it's not a real near-term issue, but it is

an important one.

(Slide) The next slide describes the environmental impact statement for Phase II which we have just initiated. We published a record of intent in *The Federal Register* in December. We identified that the EIS will address the completion of the project which is the joint responsibility of DOE and New York State under the terms of the legislation. And, in addition, it will address the closure of the overall center which will be the state's responsibility following completion of the project.

The Department and New York State will cooperate fully on the preparation of the EIS. We are the lead agency for National Environmental Policy Act compliance and New York State is the lead agency for compliance with their equivalent legislation for environmental compliance in New York State. The process was kicked off with public scoping meetings in Springville, New York, near the project site, in February of this year.

(Slide) The next slide identifies those things in the notice of intent that will be included for decision-making by the project, the State and the DOE together in the project sense. The first category of things is building structures and system

components. This includes the former reprocessing plant itself and the systems that we have installed in it for the vitrification process, the high-level waste storage tanks and vaults, the supernatant treatment system which the project has installed in the vicinity of the plant where the storage tanks are, the high-level waste vitrification facility itself, and then an assortment of miscellaneous auxiliary structures and systems that are associated with the plant and the operating facilities.

(Slide) The next slide shows the second category of items to be evaluated. These are solid and liquid waste management or disposal units. This covers radioactive waste storage structures, stored solidified high-level waste, stored low-level waste and stored true waste.

That portion of the NRC licensed disposal area, the so-called NDA, that is used for project waste, I didn't mention it in the initial discussion when I showed that snapshot of the site that showed the NDA, but if you remember it's somewhat horseshoe-shaped. The portion of that facility that's in the horseshoe, some of it has been used by the project for storage of project waste. So, that waste that was stored there by the project will, of course, remain

the responsibility of the project.

Then there's a low-level liquid waste treatment system that was part of the original facility that the project is using for certain low-level waste treatment for operational things.

(Slide) The next slide then shows the proposed alternatives that will be considered, in this case the decontamination, decommissioning enclosure activities. This will include, for the primary building structures and systems, a whole series of options: decontamination for unrestricted use; decontamination and sealing for restricted access--that's sort of an entombment kind of option; decontamination, demolition and in situ disposal; decontamination, demolition and off-site disposal; and then the no action alternative which is, I'm sure you recognize, required by NEPA as opposed to be some option that we would really seriously consider.

(Slide) Then in the category of solid and liquid waste management of disposal units, the alternatives include stabilization and closure; exhumation, repackaging and disposal; or, again, the no action option.

(Slide) The next slide shows a category of alternatives that are associated specifically with

waste. The previous discussion of alternatives had within it alternatives for treating facilities and equipment that would produce waste. We've broken these options out, just for information, to better understand what's being planned to discuss, the options that we're going to consider specifically for disposal of waste.

This slide shows the considerations for options or alternatives for disposal of waste other than high-level. The ones that we're looking at are fairly straightforward, on-site, off-site and interim storage pending availability of some other disposal capacity, as well as the no action alternative.

(Slide) The next slide talks to the transportation of the stored high-level waste. This provides us for the consideration of what I mentioned was being considered early ship-out to an interim storage site of the high-level waste, vitrified waste, or on-site storage awaiting the availability of the repository, or again the no action alternative.

(Slide) Then, finally, the last two slides are devoted to a summary of the key areas of NRC involvement. For the integrated radwaste treatment system, that's the system currently operating, periodic product quality reviews and long-term cement

performance reviews are both things that the Commission staff are involved in and are very important.

In the area of low-level waste storage and disposal, a key item is the criteria for closure of the West Valley Project, the item that we tend to refer to colloquially sort of as D&D criteria. Very important. The evaluation of West Valley's approach for low-level waste and TRU disposition. That has to be a very key item.

(Slide) The final slide continues this list. The sludge mobilization system, preparation of a safety evaluation report prior to our hot operation of that system. For the vitrification system, consultation on the final waste form and also a safety evaluation report prior to hot operation of that system. When we get to the stage of waste transportation, the certification of appropriate casks, and then finally, in general, the ongoing monitoring of DOE on-site activities. We're continuing with that.

That concludes my prepared presentation. I'd be glad to take questions now or, if you prefer, let Mr. DeBoer proceed and take questions after.

CHAIRMAN ZECH: Well, let's see if we have

any questions first for you, Mr. Baublitz. We appreciate again your being with us here today.

Questions of my colleagues?

Commissioner Roberts?

COMMISSIONER ROBERTS: No.

CHAIRMAN ZECH: Commissioner Carr?

COMMISSIONER CARR: Sure, I've got some curiosity questions.

I gather you haven't produced any glass logs yet.

MR. BAUBLITZ: That's right.

COMMISSIONER CARR: Well, what are you doing with the overflow from the supernatant treatment that shows the drop down there? I mean you must be generating something that --

MR. BAUBLITZ: The zeolite that is being produced as we go along with the clean-up of the supernatant is simply being stored. That will be combined then with the sludge when we get ready for vitrification.

COMMISSIONER CARR: Is it in the tank that it's going to go to there to --

MR. BAUBLITZ: I guess it's being collected in the bottom of the tank where it's being produced. What we've done, there was a spare tank that was

essentially empty. We've installed zeolite beds in this tank. And so, the supernatant runs in through the beds in this tank and then out and over to the main building. At the conclusion of a cycle, when we need to change zeolite, we just drop the zeolite into the bottom of this tank and just stay there until --

COMMISSIONER CARR: So, there will come a point in time where if you can't vitrify, you're going to have to stop when you fill that tank up, I guess?

MR. BAUBLITZ: I don't think they're linked that way, no.

MR. THOMAS: They wouldn't fill the tank up.

MR. BAUBLITZ: Yes, we won't fill the tank. In other words, we don't have to get vitrification started by a certain time to catch up with the zeolite production.

COMMISSIONER CARR: Okay. And maybe -- the other question, you talk about campaigns, what's a campaign? I gather this thing is not a continuous process.

MR. BAUBLITZ: It's a batch operation, in a sense, yes. Our campaigns for the supernatant treatment system had been running about what, about four weeks, something like that?

MR. THOMAS: About four weeks. A campaign

basically is determined by the level of cesium loading on the zeolite columns. When we reach what we call a breakthrough level, the campaign stops.

COMMISSIONER CARR: Okay. And how long does it take between campaigns then?

MR. THOMAS: About two weeks.

COMMISSIONER CARR: The timetable for your EIS that you're getting ready to run now, what does that look like?

MR. BAUBLITZ: We're anticipating that it will take us about four years to get all of it completed.

COMMISSIONER CARR: From today?

MR. BAUBLITZ: From today. December, it's close to today.

COMMISSIONER CARR: That's all I have right now.

CHAIRMAN ZECH: Thank you.

Commissioner Rogers?

COMMISSIONER ROGERS: Well, I don't know whether this would be answered in a later presentation, but I was just curious as to what the timetable is for processing the supernatant because there seems to be some slippage in the schedule, but it was different from what you just mentioned. The

supernatant decontamination and solidification process extends into mid-1991 on your slide 17 here, while in an earlier report that was supposed to be finished in late 1989. Now, you mentioned some later dates for completion of the full solidification.

MR. BAUBLITZ: Yes, there were two different things that have happened.

COMMISSIONER ROGERS: There are two different aspects of this.

MR. BAUBLITZ: We essentially re-baselined the whole project. In other words, we started essentially with a fresh slate from the bottom up on the project about a year ago. We had experienced a couple of specific things with regard to the planning for the vitrification design and construction and there were a number of other specific things that put us well behind where our original target should have been. So, at that time, we re-baselined the entire project, came up with a new baseline and cost estimate that was approved last summer and was the basis for my discussion of last June, I guess. That was a delay from the earlier information that you are probably referring to that's had us completing supernatant processing in '89.

According to our new revised schedule last

year, we were able to get the process started on time this last spring and we're on track to meet the new target as it's laid out here.

Now, the thing I mentioned at the outset was that in preparing our 1990 budget, both for the year 1990 and the four subsequent years, because of the shortness of overall dollars, we've had to stretch everything out significantly. That has created a four year stretch to the tail end of the entire Phase I project.

COMMISSIONER ROGERS: I see. Okay. How many programs at DOE interact with the West Valley Project? How many things have to be coordinated here to --

MR. BAUBLITZ: Well, I guess --

COMMISSIONER ROGERS: -- that are involved?

MR. BAUBLITZ: -- I should mention two specifically. What we call the high-level waste program, the Office of Civilian and Radioactive Waste Management that's responsible for development of the repository, we have a very formal link with them through this high-level waste qualification process and their interaction for licensing considerations on the repository.

We also have a very vigorous but more

informal link with the Defense Programs people who are developing vitrification facilities for the Defense waste program. That's more of a technical interface. The interface with high-level waste people is technical and procedural and administrative as well.

COMMISSIONER ROGERS: Just those two then?

MR. BAUBLITZ: We have our Environment Safety and Health Oversight people who have a close role, for example, in the EIS process and those kind of things. They have an important role in general safety oversight of our operation. So they're clearly important too.

I think those are the main ones. Have I forgotten anybody important.

DOCTOR COLEMAN: Other than the normal administrative and environmental oversight.

MR. BAUBLITZ: We get a lot of advice from the General Counsel as a routine matter. I guess we should throw him in.

A VOICE: Probably very helpful. Very good.

CHAIRMAN ZECH: Good advice like we get from our General Counsel, I'm sure.

COMMISSIONER ROGERS: Does this all go through a single contact point at DOE?

MR. BAUBLITZ: Yes. Our office is the focus

for the project.

COMMISSIONER ROGERS: Yes. There aren't multiple approaches to the people there?

MR. BAUBLITZ: No. I think we have a good point of contact system established. I would say that resolution of all the issues is not necessarily easy and smooth, but I don't think we have problems associated with interfaces.

COMMISSIONER CARR: On the waste form suitability part of the problem, I gather from what you told us that the cement waste form has been deemed suitable by all hands?

MR. BAUBLITZ: Yes, sir.

COMMISSIONER CARR: But you're still working on the glassification waste form?

MR. BAUBLITZ: That's right and that's an interesting issue because on one hand the Department clearly wants to approach NRC and its licensing process for the repository with a good story to tell, having good data and good documentation, et cetera, et cetera, on the waste to be produced.

On the other hand, from a practical point of view, the glasses that we look through sometimes, we're going to be producing 300 logs compared to multi-tens of thousands of logs that the Defense

Programs people will produce and we'll share space in the repository with a lot of spent fuel which is a whole different ball of wax.

So, we feel from a technical point of view there's probably legitimately less concern about the quality of the West Valley glass logs than many of these other things. But all of that notwithstanding, we are, in fact, conforming to this process so that we will have a good documented record of what it is we're producing.

COMMISSIONER CARR: So that view of yours is not necessarily shared by your Office of Civilian Waste?

MR. BAUBLITZ: That's an accurate summary.

COMMISSIONER CARR: Right. So, there is some liaison that's got to go on there?

MR. BAUBLITZ: Yes, sir.

COMMISSIONER ROGERS: Are there any overseas sites that have similar approach to these problems to the ones that you're adopting?

MR. BAUBLITZ: Yes. There are facilities, I guess, in Germany that use a similar melter system. We've had people over there, I guess sort of once a year, on a regular basis, to share information. In addition, we've had a lot of exchange of information

with the French that are using a different technology from the liquid fed ceramic melter, but have a lot of experience with the system they're operating. So, there is a fairly vigorous exchange of information there.

COMMISSIONER ROGERS: I think you may have said something to it, but perhaps you could just repeat it if you have, how you see the DOE interactions with the NRC staff on matters relating to West Valley. Have we provided appropriate guidance in a timely fashion, for example?

MR. BAUBLITZ: Yes. I feel strongly that the interface there has been good, that the staff responses have been good and that it's been a positive working relationship. I think that's gone well.

CHAIRMAN ZECH: Thank you.

Commissioner Curtiss?

COMMISSIONER CURTISS: Just a couple of quick questions. On the waste form and the container design, what's the pacing item now on the container design? I guess I'm curious of your thoughts on whether we're going to end up with a single container that the civilian waste, the Defense vitrified waste and this waste will be placed in for the repository or whether you're looking at different container designs.

MR. BAUBLITZ: Let me clarify the question. There is a canister into which the liquid waste will be poured and then there will be some kind of a container which will be part of its ultimate package for disposal. The canister right now for the West Valley Project is very similar to the canister that will be used for the Defense waste facilities but slightly different. We are looking right now at whether or not some modifications to the canisters for West Valley could be done simply and cheaply that would make them really the same. The idea there is if that were possible, there might clearly be some cost savings overall by procuring some large number of these canisters, a much larger procurement of the same thing.

Now, separate from that, the repository program is looking at the question of containers that would be part of the disposal package. We're only generally aware of what they're doing there. I really couldn't give you much good information on where they stand on their development of containers.

COMMISSIONER CURTISS: Do you intend to take any credit for the canister that you're developing in the repository program?

MR. BAUBLITZ: I don't think the canister

shows up as --

COMMISSIONER CURTISS: Just the container.

DOCTOR COLEMAN: It's not one of the concerns we have under study. That's a repository responsibility. The canister, as we view it, is primarily for containment of the glass and for handling and transportation and storage purposes. Beyond that, I think you'd have to refer to the repository program, what they're looking toward the primary canister for.

COMMISSIONER CURTISS: The date that you gave for sending the material to the repository, 2009, is the pacing item for that the waste acceptance schedule or is there something else that pushes that out six years beyond when it opens?

MR. BAUBLITZ: Our understanding with the repository people is that the first that they would be ready to accept waste from West Valley would be six years or five years, whatever it is, after they initially open.

COMMISSIONER CURTISS: One other question. Could you briefly discuss what kind of QA program you have in place?

MR. BAUBLITZ: Maybe I'll defer that to Roy Thomas to describe the QA program.

MR. THOMAS: I'm not prepared to describe it in any significant detail. The QA program is under development now. It's being developed in accordance with the specification provided by the Office of Geological Repository under OCRWM. I can say it will be very extensive. It will be an integrated quality assurance program that is tiered from Department of Energy down through the contractor and integrated. It should be finished within, oh, the next six to nine months.

CHAIRMAN ZECH: Well, I'm pleased to hear that you believe you're getting a cooperative and positive results from your relationship with the NRC staff.

The slip in your schedule for four years because of the budget impacts from 1994 to 1998, do you see any safety concerns in that slippage at all?

MR. BAUBLITZ: No, sir. The impacts are associated with delays in getting the vitrification equipment procured, installed and operating. That requires some big bucks in fiscal '90 and '91. Those are the two peak years. By having the dollars in those two years reduced, it causes significant chunks of the project to move out. But there would be no safety concern at all, no, sir.

CHAIRMAN ZECH: All right. My fellow Commissioners have already asked questions about your relationships in DOE, the various offices you have involved with waste matters, your offices and the Office of Nuclear Energy. We interface, as you know, with the Office of Civilian Radioactive Waste Management as far as a repository is concerned. We're well aware of the Office of Defense Projects and their responsibilities for Savannah River and you mention other DOE offices that have responsibilities.

It seems to me that you do have a challenge as far as interacting with all those offices in DOE to make sure that you have an integrated program. Although that certainly -- in your area of responsibility, I would hope that you are interfacing closely with those other offices because they come over and make presentations to us too and we would like to feel like we're getting a consistent DOE position. I would just encourage you to interface with those offices. I know they may have different views, but it's important that you have a consistent view. I would encourage you to do that.

Are there any other questions before we proceed?

Commissioner Carr?

COMMISSIONER CARR: I might ask a couple more.

Do you see a mixed waste problem coming out of this before we're through?

MR. BAUBLITZ: Not at this time. We have entered into dialogue with those parts of the New York State agencies that have those kind of responsibilities, as well as EPA Region II with regard to the possibility of needing permits under RCRA, for example, on the site and so forth. Everything that's developed so far does not indicate that we would have a mixed waste problem.

COMMISSIONER CARR: Okay. Because I noticed in our letter we cautioned you to consider any mixed waste, but as far as you know there isn't any, right?

MR. BAUBLITZ: It hasn't reared its ugly head so far. We're certainly keeping in tune with that possibility because it is a special case.

COMMISSIONER CARR: Okay. And it looks like that we owe you something in determining whether the cement stabilized waste is TRU or low-level waste. Do we owe you that decision, and if so, when by?

MR. BAUBLITZ: I would have to admit I think that the ball is more in our court than yours at this time. We do need to get your determination but we need

to provide an analysis of the waste --

COMMISSIONER CARR: You're going to give us the basis for that determination, we hope?

MR. BAUBLITZ: That's right. That's right.

COMMISSIONER CARR: Do you have any idea when you're going to do that?

MR. BAUBLITZ: It's part of the process that will be involved in supporting analyses that will go into the EIS. So, it's certainly in the next few years. But at this point in time, we don't have a finer tune on that.

COMMISSIONER CARR: Well, another thing, I would say that in your EIS draft which we looked at, I certainly commend you and our guys both for the total site approach. I think there's no reason not to, once you turn loose this thing, have it fixed whichever way it goes. So I think you're going the right direction on that. I'm sorry it's going to take four years.

CHAIRMAN ZECH: I would agree with the total site approach too. I noted that and commend you for that.

MR. BAUBLITZ: Thank you.

CHAIRMAN ZECH: Any other comments before we proceed?

Mr. DeBoer, you may proceed, please.

MR. DeBOER: Thank you, Mr. Chairman.

It is a pleasure to be here today. I will discuss the state activities associated with the preparation of the Environmental Impact Statement for completion of the West Valley Demonstration Project and closure of the Western New York Nuclear Service Center.

With me today is Mr. Howard Jack, the Energy Authority's Secretary and General Counsel.

(Slide) Next slide, please.

This is a layout of the Western New York Nuclear Service Center and the site is commonly called the West Valley site. Almost all the facilities are clustered in an approximately 200 acre area near the center of the site. For the duration of the demonstration project, the Department of Energy has possession and control of almost all of the 200 acres with the exception of the state licensed disposal area. That is known as the project premises.

The remaining 3,000 acres of the site, including the state disposal area, is under the possession and control of the Energy Authority.

(Slide) Next viewgraph.

This is a similar slide to what Mr. Baublitz showed and I just want to point out that the two

disposal areas are southeast of the process plant. They are adjacent to each other, only a few feet separate them, as well as most of the facilities at the site. So, this is about the only way you could really address all the issues and address closure of the site, would be through joint cooperation. It would be very difficult to separate out what you are going to do with the closure or stabilization of individual facilities.

Even though the NRC licensed disposal area is within the project premises, the Energy Authority has some responsibility for the decontamination and decommissioning of that area.

COMMISSIONER CARR: How big is that New York State low-level waste disposal area itself?

MR. DeBOER: It's about 400 by 500 feet. Not much, just a few acres, I think.

(Slide) Next viewgraph.

In addition to being involved with the Department of Energy in the West Valley Demonstration Project activities outlined by Mr. Baublitz, the state activities that we will be pursuing include the decontamination and decommissioning of the balance of the center, which includes the state-licensed disposal area, the portion of the NRC-licensed disposal area

where Nuclear Fuel Services put plant waste prior to Department of Energy taking over the site on February 25th, 1982, the 3,000 acres outside of the project premises.

Another activity would be repossession of the project premises, taking it over from DOE, transfer from DOE to the Energy Authority and then long-term management of the center.

(Slide) Next slide.

State-licensed disposal area was operated by Nuclear Fuel Services from 1963 to 1975 as a commercial disposal facility. Total volume disposed was approximately 87,000 cubic yards or 2.4 million cubic feet of low-level waste. Since March 1983, it has been maintained and we are responsible for the state-licensed disposal area. It is licensed by our State Department of Environmental Conservation and our State Department of Labor.

(Slide) Next slide.

This picture shows the state-licensed disposal area. It consists of 14 trenches. Traditional shallow land burial techniques were used. The trenches are approximately 30 feet wide, 20 feet deep and 400 to 600 feet long. Trenches 6 and 7 really aren't trenches. Number 6 is a series of holes

that were made in the ground to place radioactive wastes that were higher than would be normally put in the rest of the trenches. These were done on the basis of special approvals by the regulatory agencies and that consists mostly of reactor components.

COMMISSIONER CURTISS: Are those squiggly lines creeks or rivers?

MR. DeBOER: No, that's one thing I was going to point. They're ravines. On the north side of the disposal area, at the end of 2, 3, 4 and 5, and about 20 to 30 yards only from the ends of those trenches, is about a 30 foot drop-off down to a stream on the bottom. On the east side of the disposal area, it drops off about 10 feet to a stream.

COMMISSIONER CURTISS: Is the north downgraded on this chart?

MR. DeBOER: North is --

COMMISSIONER CURTISS: Is it the way the water flows?

MR. DeBOER: Yes, that is the direction in which the hydrogeological characteristics of the soil dictate the water flow.

COMMISSIONER CURTISS: Do you monitor in that direction for ground water?

MR. DeBOER: Yes. There are streams on both

sides and we monitor in those streams as well as many other places on the site.

COMMISSIONER CURTISS: What are you finding?

MR. DeBOER: The site has been -- is well under control and no elevated levels of radionuclides. But as you can see, that presents one of their biggest problems and challenges in closing the site, the erosion and landsliding being two major considerations. The caps on the trenches are about eight feet thick and they're covered with a good stand of grass at the moment.

(Slide) Next slide.

This just gives you an idea of some of the materials that were buried in the disposal area and, of course, these all have to be considered in looking at the various alternatives and closure options. Source materials is 470,000 kilograms. That's mostly depleted uranium with some natural uranium. Included in that is about 1235 kilograms of U-235.

Plutonium is five kilograms and two kilograms of that are two snap reactors or power generators that were placed in the disposal area.

Enriched uranium, that was a ten percent enrichment roughly, the 487 kilograms.

By-product materials were 700,000 curies

originally and that's down under 200,000 curies now. And the primary radionuclides in this disposal area are tritium, cobalt 60, strontium 90, cesium, and carbon 14.

Then there are some radium and americium sources that make up the bulk of the 500 curies.

(Slide) Next slide.

The NRC-licensed disposal area, that was put into operation for disposal of plant-generated wastes that were too high-level to be put into the commercial disposal area. But while the state-licensed disposal area was operating, Nuclear Fuel Services did put all their low-level waste that met the criteria of that disposal area into that facility. The state disposal area was shut down in 1975. So, after 1975 and from 1975 through 1981, all of the plant generated waste went into the NRC disposal area. The total volume there was about 150,000 cubic feet or 5,600 cubic yards.

(Slide) Next slide.

This is a layout of the NRC licensed disposal area. As Mr. Baublitz mentioned, the NFS wastes were placed in a horseshoe around the outer edge of the facility and the demonstration project did dispose of some real low-level Class A wastes in the

center portion there prior to 1986. The state disposal area is immediately to the right on this chart and adjacent to it.

In the area, most of the radioactivity was the cladding hulls which came from the reprocessing of the spent fuel. The method used primarily to dispose of waste here was to dig holes that were about three feet by seven feet and 50 feet deep with a clamshell. Most of the wastes were put in there in 55 gallon drums. Also in the hulls and ends hulls area, 42 Hanford end fuel elements found their way into the disposal area and they are contained in three 55 gallon drums encased in concrete down at the bottom of one of those holes.

COMMISSIONER CURTISS: Do you have a feel for how deep these holes are?

MR. DeBOER: Fifty feet.

COMMISSIONER CURTISS: Fifty feet? That's the deepest depth at which waste is buried here?

MR. DeBOER: Yes.

COMMISSIONER CURTISS: Okay.

MR. DeBOER: And on the state disposal area, it was 20 feet. There also are a number of holes in this area, shallow holes that were dug to put specific pieces of equipment in and also the area -- there are

some reprocessing solvents in that disposal area that were absorbed on absorbent clay, kitty litter, and placed in -- about 500 gallons were placed in 1,000 gallon tanks and that was buried in these areas. There's some -- we think there are 26 tanks in the facility and placed in nine separate holes.

(Slide) Next slide.

COMMISSIONER CARR: The data they gave me said that instead of three 55 gallon drums, those were three 30 gallon drums. That's just for your information.

MR. DeBOER: Okay. That may be right.

COMMISSIONER CARR: I'm sure nobody's looked at them.

MR. DeBOER: The next slide gives some idea of what materials are in the NRC-licensed disposal area. Source materials, 1800 kilograms. That's mostly the U-238. That came from the cladding hulls that was left in.

The uranium fissionable, 23 kilograms. About 3.3 of that is the fuel and 20 kilograms would be in the hulls.

Then plutonium, five kilograms. .8 of that is in the fuel and 4 in the hulls.

By-product materials, the primary

radionuclides that are there now as far as by-product materials are cobalt 60, strontium 90 and cesium 137.

Reprocessing solvent, the best we can determine from the records is that about 13,000 gallons of the spent solvent, which was tributyl phosphate and kerosene, ended up in that disposal area.

COMMISSIONER CARR: Is that in a tank or is that just --

MR. DeBOER: They're in thousand gallon tanks. It's our understanding that 500 gallons of the solvent were mixed with the absorbent material in those tanks. There was some migration noted in 1983 and the Department of Energy took quick action and identified what the source of the kerosene was and two holes were exhumed. I think it was a total of eight tanks had been exhumed.

(Slide) Next slide, please.

Some of the alternatives that we will be considering for the two areas -- well, they're the same as were discussed by Mr. Baublitz for similar facilities a few minutes ago. So, I won't bother going through those.

(Slide) Next slide.

Another activity is repossession of the

Demonstration Project premises. The NRC license that Nuclear Fuel Services had with the NRC was suspended on February 25th, 1982 when Department of Energy took possession and control of those project premises. And, upon completion of the demonstration project, the project premises will be returned to the Energy Authority and NRC licensing action is required. Some sort of an NRC licensing action would be required and it is not certain at this point whether state licensing action would be required.

(Slide) Next slide.

COMMISSIONER ROGERS: Excuse me. What would be the issues that would have to be decided to resolve those questions?

MR. JACK: If I could, Commissioner. The primary question will be, depending on what is determined through the Environmental Impact Statement analysis and decision-making process, what kinds of materials will remain on site or are proposed to remain on site and then how does that affect whether the NRC will then have jurisdiction over those portions of the site or whether the state, as an agreement state, will have jurisdiction over continued regulation of it.

MR. DeBOER: Next slide.

CHAIRMAN ZECH: Proceed, please. Thank you.

MR. DeBOER: Among the major considerations in closing the entire 3,345 acre site are -- well, it was just mentioned the amount and type of radioactive material to be left at the site and the surveillance and monitoring programs and requirements that will be necessary in the future and also consideration of what areas can be released for unrestricted use, if any. All of these will have to be considered in the Environmental Impact Statement.

COMMISSIONER CARR: Is it a given that some amount and type of radioactive material will be left there?

MR. DeBOER: When you look at the potential impacts and costs of exhuming everything that is at the site, it leads you to think that that may be something that may happen. But, of course, this will not be determined until the Environmental Impact Statement is completed.

COMMISSIONER CARR: Okay.

CHAIRMAN ZECH: What would the levels be that might remain under those circumstances?

MR. DeBOER: I think it depends on the-- well, the NRC has to prescribe the decontamination and decommissioning criteria and also, I think they have

already prescribed the performance objectives.

CHAIRMAN ZECH: But you'd intend to meet those requirements, is what I'm saying.

MR. DeBOER: Yes.

COMMISSIONER CARR: But it's a cost trade-off is what you're telling me?

MR. DeBOER: It's a -- pardon me?

COMMISSIONER CARR: A cost trade-off as to whether it's complete --

MR. DeBOER: Well, cost and also if you did exhume it, where would you put it? Many of these materials would not be acceptable -- most of the materials would not be acceptable in the new state-licensed disposal area or any commercial disposal area. I don't know where you would --

COMMISSIONER CARR: No place to put them then?

MR. DeBOER: That's one of the big considerations. And the personnel exposures, of course, the worker exposures.

COMMISSIONER CARR: But this is what the EIS is designed to work out.

MR. DeBOER: Yes.

MR. JACK: Another question would be what would be the impact of trying to remove all the

radioactive materials from the site to some other location?

COMMISSIONER CARR: Okay.

MR. DeBOER: (Slide) Next slide, please.

We were asked to discuss some of our issues and concerns that we had. The key areas of NRC involvement that were identified by Mr. Baublitz are obviously those that we are very interested in. The licensing action upon completion of the demonstration project and the funding of the project, we are very displeased with the OMB action that just is occurring with the fiscal year '90 budget and which has resulted apparently in the extension of the project for four years. We hope that in 1991, the availability of dollars will be restored to reduce the impact on the project.

COMMISSIONER CURTISS: Is your ten percent share constrained by state funding limitations or are you pretty much able to get the necessary funds?

MR. DeBOER: Our funds are appropriated year annually, the same way that the federal funds are. So far, all our funds have been appropriated.

COMMISSIONER CURTISS: So, the funding constraint is at the federal level rather than the state level?

MR. DeBOER: Well, we are having our problems in the state too. So, I don't know.

MR. JACK: We are doing our best to get full appropriations from the state for our share and we have not been advised of any problem in getting that.

MR. DeBOER: And the availability of the high-level waste repository, unless the glass high-level waste canisters produced at West Valley are taken to some interim storage facility, then any slippage in the licensing or operation of the high-level waste repository will impact the Demonstration Project and our cost.

The final one is the high-level waste form acceptance specifications. Here we disagree with Department of Energy and in particular RW. DOE estimates that two-thirds of the spent fuel in the first repository -- or two-thirds of the waste in the first repository will be spent fuel and one-third will be the glass. The plans that I have seen call for over-packing the spent fuel.

In developing of the waste acceptance specifications, DOE RW appears to have completely ignored the presence of the spent fuel and have established criteria which are quite restrictive, in fact, which are somewhat difficult to meet and

certify. They provide also a waste form that is far superior than any waste form you'll have with spent fuel.

Millions of dollars have been spent and are being spent to meet these waste acceptance specifications. Since almost any glass that we make at West Valley or Savannah River or Hanford will have waste form properties that are far superior to spent fuel and will be going to the same repository, we in the Energy Authority in New York feel that it is really unreasonable and extremely wasteful to require these ultra conservative specifications.

CHAIRMAN ZECH: DOE wish to comment?

MR. BAUBLITZ: We recognize the Energy Authority's position on this and, as I indicated before, we also recognize that it is an issue and questions can be raised. But our position is that we recognize the need for DOE as a whole to be able to deal consistently with the Commission and others in terms of making judgments about the adequacy of the repository for the waste forms. So, we're doing our best to meet the needs of that process while keeping the costs as under control as we can.

CHAIRMAN ZECH: Does New York have any further comment?

MR. DeBOER: No, sir.

CHAIRMAN ZECH: All right.

MR. DeBOER: That concludes my formal comments.

CHAIRMAN ZECH: Thank you very much.

Comments from my fellow Commissioners?

Commissioner Roberts?

Commissioner Carr?

COMMISSIONER CARR: I'm trying to get this thing in perspective. You're running a demonstration project to show that this can be done and, incidentally, get rid of those two tanks of high-level waste, right?

MR. DeBOER: That's right.

COMMISSIONER CARR: That's one piece of the action and when that's done, you're required to clean it up.

MR. DeBOER: Yes.

COMMISSIONER CARR: That piece of the action, those two tanks plus the plan, I guess.

MR. BAUBLITZ: The general definition has been the things that we used to solidify waste in the first place, which is generally the plan and then the extra facilities that we created to do it.

COMMISSIONER CARR: And we will have a place

to put that, that part of the cleaned up?

MR. BAUBLITZ: Yes. We don't know what it is yet in the sense that we have to go through this analysis and look at alternatives and so forth. We believe technically everything we know right now is that technically an on-site disposal should be sufficient in the technical criteria, but that has to be demonstrated and meet the requirements of the environmental review process.

COMMISSIONER CARR: So, it may be the solution to that problem is when you get through you just leave it where it is, depending on what the EIS comes out with?

MR. BAUBLITZ: I'm talking about the waste that is created as part of the project.

COMMISSIONER CARR: That's what I'm talking about.

MR. BAUBLITZ: As opposed to the stuff that was there before.

COMMISSIONER CARR: You changed the form of it.

MR. BAUBLITZ: Right.

COMMISSIONER CARR: And hopefully you'll be able to ship it to a repository, that high-level waste portion of it, the glass. The concrete is low-level

waste.

MR. BAUBLITZ: Right.

COMMISSIONER CARR: And so it may be just as easy to leave it there as it is to ship it, depending on what the EIS comes out with.

MR. BAUBLITZ: That's correct.

COMMISSIONER CARR: I guess I'm really trying to figure out what kind of a problem we're trying to solve.

MR. BAUBLITZ: Certainly one aspect of the problem is dealing effectively with what I would call local community and elected representatives' concerns about what we're doing and how we're doing it. You might appreciate that from the perspective of those that live and represent those that live in the area, their perspective is that the right thing to do is simply get everything that's there now away, out.

COMMISSIONER CARR: Completely?

MR. BAUBLITZ: Completely.

COMMISSIONER CARR: Well, that's objective one.

MR. BAUBLITZ: Right. So, the NEPA process essentially provides a vehicle for those kind of concerns to be addressed and dealt with in a formal way, so that if we go through the careful analysis of

options and look at the impacts of the alternate options and then come to some formal conclusion in a public arena kind of way to decide, okay, here is exactly what we will do and why.

As I said earlier, from a technical point of view, from everything we know right now, there really would be no reason we would not be able to dispose of the low-level waste produced by the project on-site. But it has to meet the muster of that process.

COMMISSIONER CARR: Well, even if you take the low-level waste produced by the project and get rid of it somewhere else, plus your high-level waste that you've solidified and get rid of it, plus your concrete and get rid of it, there's still a major problem up there.

MR. BAUBLITZ: Yes.

COMMISSIONER CARR: That's not part of what we're addressing except we're trying to include it all in the same project now.

MR. BAUBLITZ: That's correct. The analysis that's going to go on will include that --

COMMISSIONER CARR: But the law is only forcing us to do the first part of this.

MR. BAUBLITZ: That's correct.

COMMISSIONER CARR: Thanks.

MR. JACK: Excuse me, Commissioner. The West Valley Demonstration Project Act only covers the first part of it.

COMMISSIONER CARR: That's right.

MR. JACK: However, the State of New York, we will have to satisfy the Commission with respect to those portions of the site which are licensed by the Commission but are not part of the project, including the previously disposed of waste in the NRC licensed disposal area. And then we will have to satisfy --

COMMISSIONER CARR: You've got two licensed areas up there and we still have to worry about it.

MR. JACK: Right. Then we have the state-licenced low-level radioactive disposal facility and we have to satisfy the regulatory concerns over closure of that portion of the site, on the state side. Again, outside, that's not part of the federal objective.

COMMISSIONER CARR: So, we've got a lot of hurdles to cross before we're ever going to take that fence down.

MR. JACK: That's correct.

COMMISSIONER CARR: Okay.

CHAIRMAN ZECH: Commissioner Rogers?

COMMISSIONER ROGERS: Yes. Maybe you could

just clarify something. It's my understanding that the solidified drums have about 30 to 40 nanocuries per gram of actonides in them. Yet the West Valley Demonstration Project Act of 1980 puts a restriction of ten nanocuries per gram on storage on the site. What's your approach to that?

MR. BAUBLITZ: Well, there's another part to what the act says about that. It says ten nanocuries per gram or some other limit as prescribed by the Commission. What's currently in process is we're undertaking an analysis of the waste that's being produced that's in this 30 to 40 range and will present to the Commission an analysis that we hope will support disposal at the site of that waste. But that has to be proven.

COMMISSIONER ROGERS: But that's not done yet?

MR. BAUBLITZ: Correct.

COMMISSIONER ROGERS: I see.

Mr. DeBoer, I guess. On your February 9th public scoping meeting, did anything come out of that that suggests some new approaches or new questions that had to be dealt with?

MR. DeBOER: These are being evaluated by the site operating contractor. I haven't seen any of

the results of that yet. I don't think any --

MR. BAUBLITZ: There were no surprises, but we haven't completed, I guess, the full resolution of all comments. But there was nothing really new in that, some startling new alternative or a new issue or anything like that.

COMMISSIONER ROGERS: Okay. Thank you.

COMMISSIONER CARR: Could I ask you what this whole site was set aside for in the first place, this how many hundred acres there were there?

MR. DeBOER: 3,345. It was set aside to be, as we understand it, a complete nuclear facility, starting out with fuel reprocessing. And I think there were thoughts of having other nuclear facilities built on the site, like fabrication facilities, although it never got that far. And, going back through the records, there is some indication that people thought it would be a real nuclear park.

COMMISSIONER CARR: We haven't violated anybody's original intent when they set this thing aside to be something nuclear, even though they didn't know what it was going to be, I guess. And it's still set aside for that purpose?

MR. DeBOER: Yes.

COMMISSIONER ROGERS: What's the level of

effort of the Westinghouse people on the site and your New York State office on-site and at headquarters? How many people do you have involved and how many people are --

MR. THOMAS: Currently approximately 500 people.

COMMISSIONER ROGERS: 500 people. And the New York State --

MR. DeBOER: We have on-site a two person office who work very closely with the Department of Energy's on-site office. Then, in Albany, I have a staff of four.

COMMISSIONER ROGERS: Well, do they work just on this?

MR. DeBOER: Two of the people in Albany work just on the Demonstration Project and others are part-time, as well as support from counsel and others that are part of the Energy Authority.

COMMISSIONER ROGERS: Okay. Thank you.

CHAIRMAN ZECH: Thank you very much.

Commissioner Curtiss?

Mr. DeBoer, are you satisfied with the guidance and support you've received from the NRC staff on this project?

MR. DeBOER: The support is primarily

directly between the NRC and Department of Energy.

CHAIRMAN ZECH: Yes.

MR. DeBOER: I've been fully aware of the interaction and the support has been very good.

CHAIRMAN ZECH: All right.

MR. DeBOER: And the NRC support is very valuable and continued interactions and support in the future I think would be very valuable also.

CHAIRMAN ZECH: All right. Fine. Thank you.

Well, let me just say, unless there are any questions of my fellow Commissioners, on behalf of the Commission I'd like to thank you, Mr. Baublitz, and you, Mr. DeBoer, and the other gentlemen with you here today for a very useful and informative briefing. The Commission is pleased to hear that the project activities seem to be progressing very satisfactorily.

The Commission earlier complimented the Department of Energy for the site-wide approach that they're taking. I think it would also be appropriate for the Commission to compliment the State of New York for their adopting a site-wide approach to this endeavor in addressing the waste disposal and the decommissioning issues and also taking an active role in the preparation of the Environmental Impact

Statement. It is encouraging to see a cooperative effort going on on a very important matter like this and to see that progress is being made, even though we recognize that there's still issues to be addressed.

I believe that we can be encouraged by the efforts being put forward by the Department of Energy and by the State of New York across the board. And again, I compliment you both for taking what would certainly appear to be a site-wide approach to the whole endeavor.

The West Valley Demonstration Project will continue to be of interest to the Commission and we'd urge both the Department of Energy and the State of New York to keep us informed and to bring forward any significant issues that you feel should be brought forward to the Commission regarding the West Valley Project.

But thank you very much for a very useful and informative presentation.

If there are no other comments from my colleagues, we stand adjourned. Thank you, gentlemen.

(Whereupon, at 3:25 p.m., the meeting was adjourned.)

CERTIFICATE OF TRANSCRIBER

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

TITLE OF MEETING: BRIEFING ON STATUS OF WEST VALLEY PROJECT

PLACE OF MEETING: ROCKVILLE, MARYLAND

DATE OF MEETING: MARCH 29, 1989

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

Judy Hadley

Reporter's name: PETER LYNCH

/ 3/29/89

SCHEDULING NOTES

TITLE: BRIEFING ON STATUS OF WEST VALLEY PROJECT

SCHEDULED: 2:00 P.M., WEDNESDAY, MARCH 29, 1989 (OPEN)

DURATION: APPROX 1-1/2 HRS

PARTICIPANTS:

DOE — 45 MINS

- JOHN E. BAUBLITZ, ACTING DIRECTOR
  OFFICE OF REMEDIAL ACTION AND WASTE TECHNOLOGY
- DR. JOSEPH A. COLEMAN, DIRECTOR
  DIVISION OF WASTE TREATMENT PROJECTS
- DR. WILLIS W. BIXBY, DIRECTOR
  WEST VALLEY PROJECT OFFICE
- ROY THOMAS, PRESIDENT
  WEST VALLEY NUCLEAR SERVICES
  WESTINGHOUSE ELECTRIC CORPORATION

NEW YORK STATE — 15 MINS

- TED K. DEBOER, DIRECTOR
  RADIOACTIVE WASTE MANAGEMENT PROGRAM
  NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY
- HOWARD A. JACK
  GENERAL COUNSEL/SECRETARY
  NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY

DEPARTMENT OF ENERGY

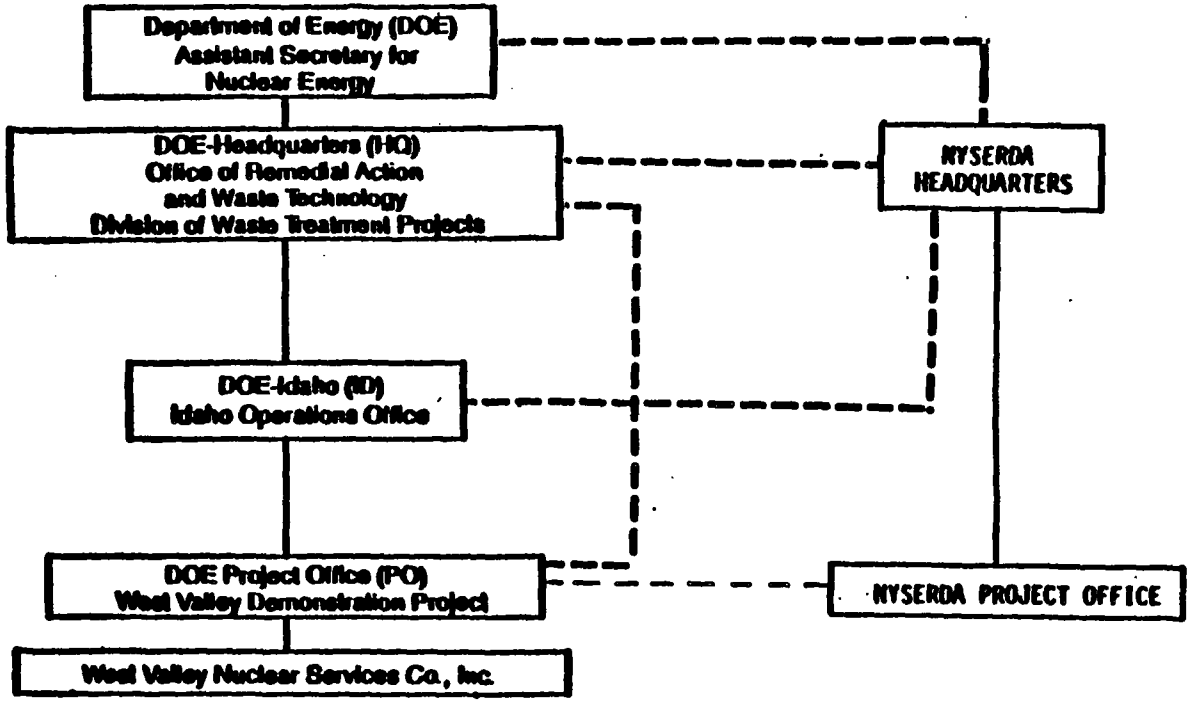
WEST VALLEY DEMONSTRATION PROJECT

BRIEFING FOR THE
NUCLEAR REGULATORY COMMISSION

MARCH 29, 1989

JOHN E. BAUBLITZ

WEST VALLEY DEMONSTRATION PROJECT
PROJECT ORGANIZATION



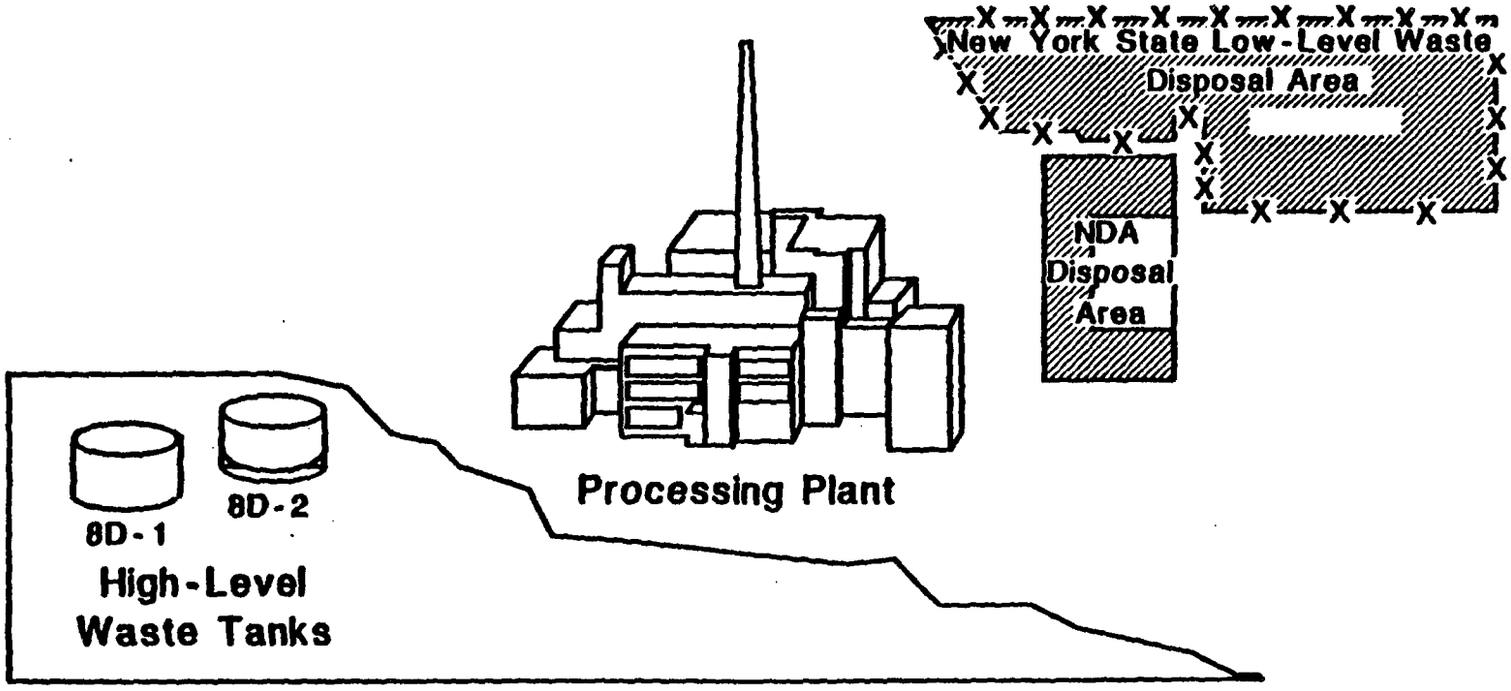
WEST VALLEY HISTORY

1961	NY STATE ACQUIRES 3345 ACRES NEAR WEST VALLEY, NY, FOR THE WESTERN NEW YORK NUCLEAR SERVICE CENTER
1962	NUCLEAR FUEL SERVICES (NFS) REACHED AGREEMENT WITH AEC AND NEW YORK STATE TO CONSTRUCT REPROCESSING PLANT
1966	PLANT CONSTRUCTION COMPLETED
1966-1972	NFS REPROCESSED 640 METRIC TONS OF SPENT NUCLEAR FUEL
1972	PLANT SHUT DOWN FOR MODIFICATIONS/EXPANSION
1973-1975	SPENT NUCLEAR FUEL RECEIVED IN PREPARATION FOR RESUMPTION OF REPROCESSING

WEST VALLEY HISTORY (CONTINUED)

1976	NFS DECIDED TO WITHDRAW FROM REPROCESSING BUSINESS
1980	CONGRESS AUTHORIZED DOE TO CARRY OUT HIGH-LEVEL NUCLEAR WASTE MANAGEMENT DEMONSTRATION
1981	WESTINGHOUSE SELECTED AS OPERATING CONTRACTOR OF WEST VALLEY DEMONSTRATION PROJECT
2/25/82	DOE ASSUMED OPERATIONAL CONTROL OF THE PROJECT PREMISES

WESTERN NEW YORK
NUCLEAR SERVICE CENTER
1981



WEST VALLEY DEMONSTRATION PROJECT

GOAL

DEMONSTRATE SOLIDIFICATION AND PREPARATION OF HIGH-LEVEL WASTE FOR PERMANENT DISPOSAL

AUTHORITY

PUBLIC LAW 96-368, WEST VALLEY DEMONSTRATION PROJECT ACT

WEST VALLEY DEMONSTRATION PROJECT

OBJECTIVES

- PHASE I
  - SOLIDIFY LIQUID HIGH-LEVEL WASTE IN A FORM SUITABLE FOR TRANSPORTATION AND DISPOSAL
  - DEVELOP CONTAINERS SUITABLE FOR PERMANENT DISPOSAL
- PHASE II
  - TRANSPORT SOLIDIFIED WASTE TO FEDERAL REPOSITORY FOR PERMANENT DISPOSAL
  - DISPOSE OF LOW-LEVEL AND TRANSURANIC WASTE PRODUCED
  - DECONTAMINATE AND DECOMMISSION TANKS, FACILITIES, MATERIAL, AND HARDWARE USED IN THE PROJECT

WEST VALLEY DEMONSTRATION PROJECT

SCHEDULE

- HIGH-LEVEL WASTE SOLIDIFICATION (PHASE I) TO BE COMPLETE BY END OF FY 1998
- DECONTAMINATION AND DECOMMISSIONING (PHASE II) TO BE COMPLETE APPROXIMATELY FY 2020

IMPLEMENTATION

- ASSIGNED TO WEST VALLEY PROJECT OFFICE AT WEST VALLEY, NEW YORK
- COST SHARING: 90% DOE/10% STATE

NRC ROLE PER PUBLIC LAW 96-368

- REVIEW AND CONSULTATION ON
  - DOE PLANS FOR HLW REMOVAL, SOLIDIFICATION, AND PREPARATION FOR DISPOSAL
  - DOE PLANS FOR THE DECONTAMINATION OF FACILITIES USED FOR HLW SOLIDIFICATION
  - HLW FORM AND CONTAINERS TO BE USED FOR HLW DISPOSAL
  - SAFETY ANALYSIS REPORTS AND OTHER INFORMATION RELATED TO POTENTIAL HAZARD TO PUBLIC HEALTH AND SAFETY

NRC ROLE PER PUBLIC LAW 96-368 (CONTINUED)

- HAVE ACCESS TO WEST VALLEY SITE TO MONITOR DOE ACTIVITIES
- PRESCRIBE REQUIREMENTS FOR DECONTAMINATION AND DECOMMISSIONING

DOE/NRC MEMORANDUM OF UNDERSTANDING

PURPOSE

ESTABLISH PROCEDURES FOR INFORMAL REVIEW AND CONSULTATION BY NRC

SCOPE

ENCOMPASSES DEVELOPMENT, DESIGN, CONSTRUCTION, OPERATION, DECONTAMINATION AND DECOMMISSIONING ACTIVITIES

RESPONSIBLE PARTIES

DOE - OFFICE OF NUCLEAR ENERGY
- WEST VALLEY PROJECT OFFICE

NRC - OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS
- REGION I, KING OF PRUSSIA

DOE/NRC MEMORANDUM OF UNDERSTANDING

CONTENTS

- PURPOSE AND SCOPE
- RESPONSIBILITIES OF PARTIES
- AGREEMENTS BETWEEN PARTIES
- EFFECTIVE DATE - SEPTEMBER 23, 1981

Phase I

OBJECTIVE

Demonstrate Solidification and Preparation of High-Level Waste for Permanent Disposal

AUTHORITY

Public Law 96-368, West Valley Demonstration Project Act

SCOPE

Solidify Liquid High-Level Waste

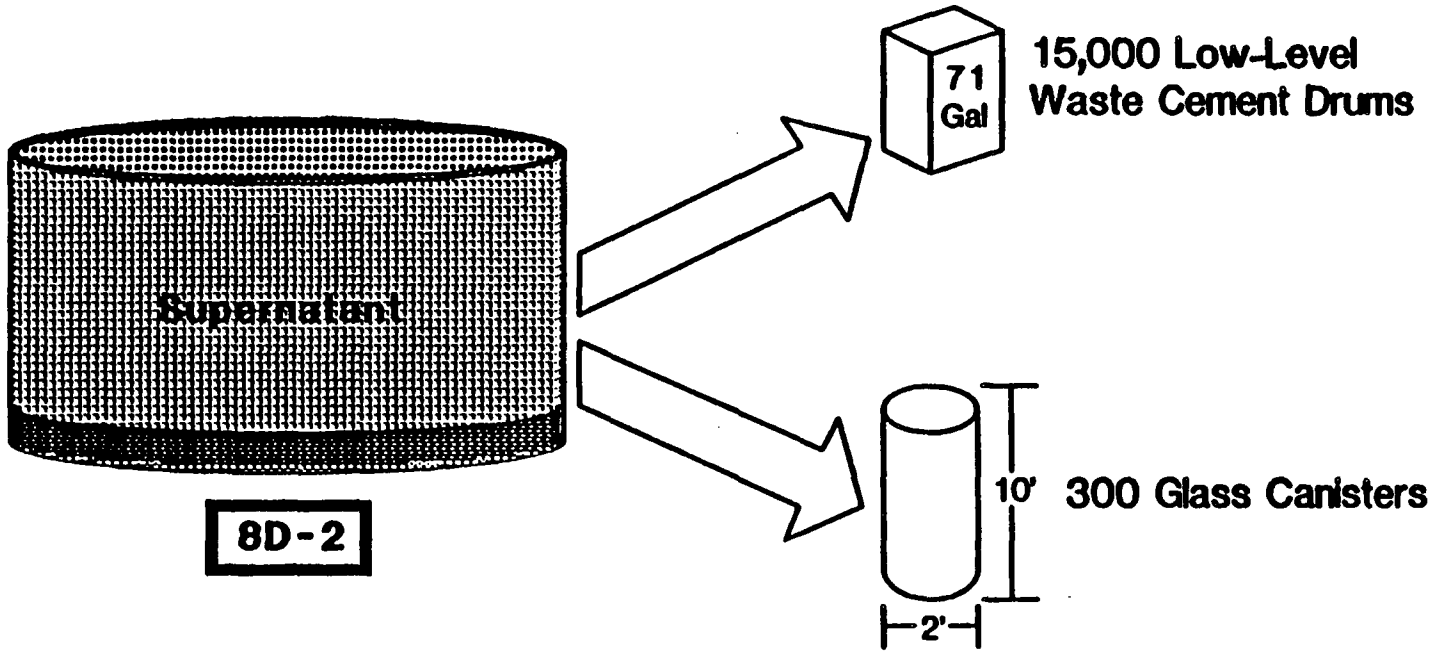
Develop Containers

Transport to Federal Repository

Dispose of Low-Level and Transuranic Waste

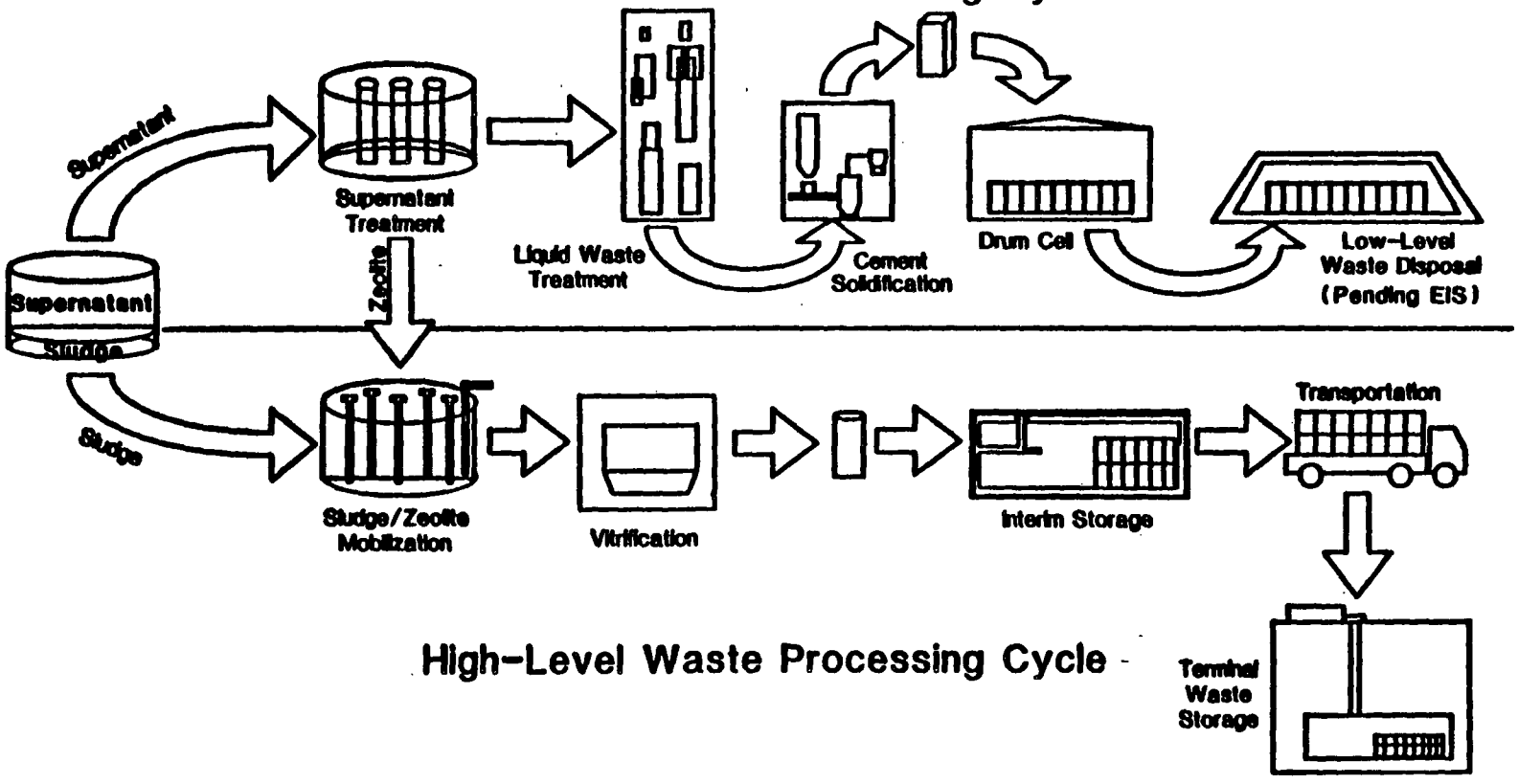
Decontaminate and Decommission Facilities Used (To Support Solidification)

SOLIDIFICATION OF HIGH-LEVEL WASTE



PROCESS OVERVIEW

Low-Level Waste Processing Cycle



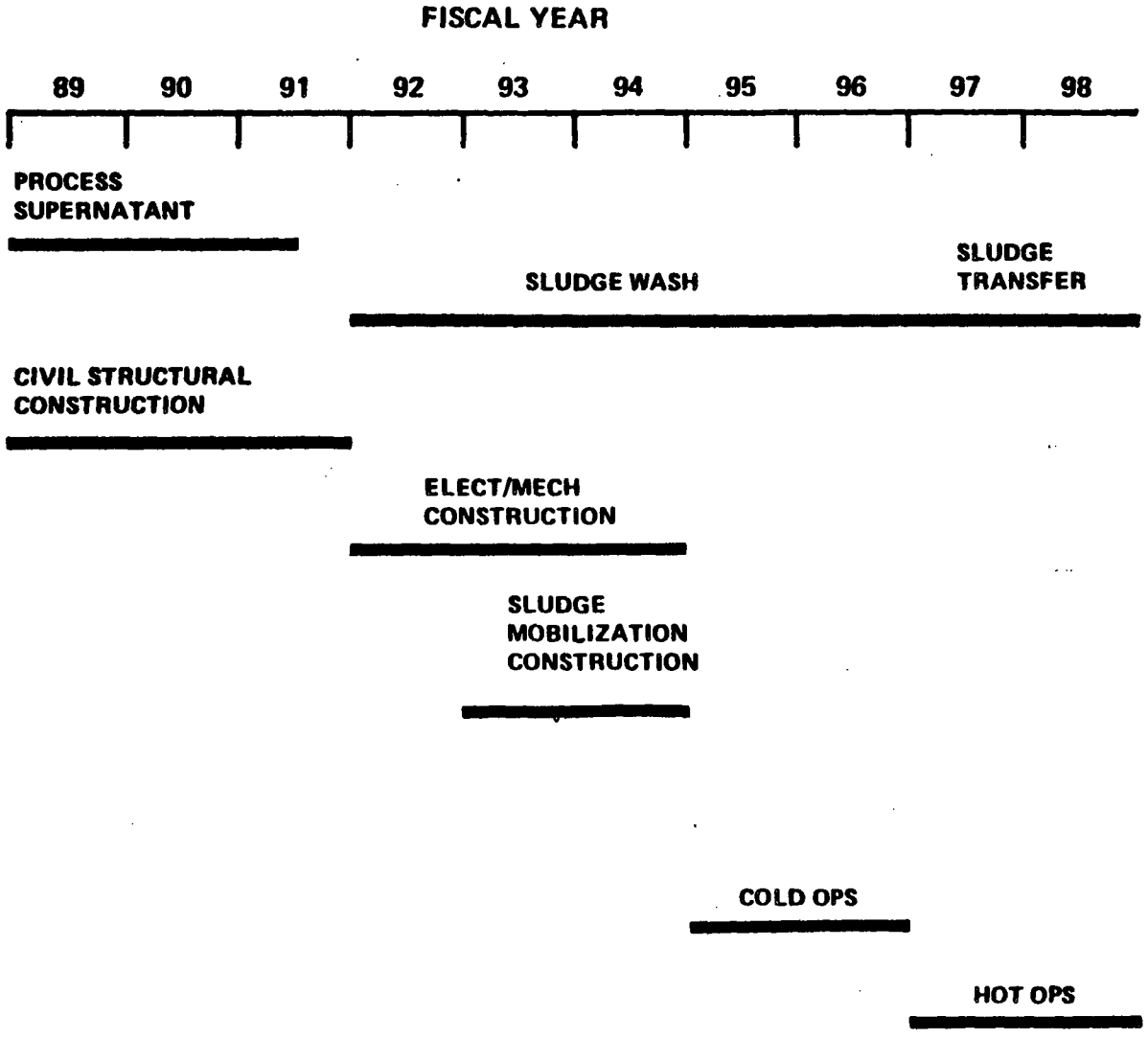
High-Level Waste Processing Cycle

WEST VALLEY DEMONSTRATION PROJECT

SUPERNATANT PROCESSING EXPERIENCE

- PROCESSING INITIATED MAY 23, 1988
- DF OF 5,000 UP TO 150,000 ACHIEVED
- PRODUCT ACCEPTANCE RATE 99.93%
- DRUM DOSE RATES UP TO 70 MREM/HR VS. 700 MREM/HR DESIGN
- NRC STAFF AGREEMENT ON WASTE FORM
- AS OF MARCH 10, 1989
  - 152,000 GALLONS PROCESSED
  - 2,914 CEMENT DRUMS PRODUCED

WEST VALLEY DEMONSTRATION PROJECT



WASTE ACCEPTANCE PROCESS

- o DOE REPOSITORY PROGRAM ESTABLISHES WASTE ACCEPTANCE PRELIMINARY SPECIFICATIONS (WAPS)
- o WASTE FORM PRODUCERS DEVELOP, PRODUCE, AND CHARACTERIZE THE HIGH-LEVEL WASTE FORMS TO MEET WAPS
  - WASTE FORM COMPLIANCE PLAN
  - WASTE QUALIFICATION REPORT
  - PRODUCTION RECORDS
- o REPOSITORY PROGRAM EVALUATES WASTE FORM AS PART OF SITE CHARACTERIZATION TO ESTABLISH SUITABILITY FOR LICENSING
  - REPOSITORY LICENSE
- o WASTE CANISTERS AND PRODUCTION RECORDS ARE PROVIDED TO REPOSITORY PROGRAM UPON ACCEPTANCE FOR DISPOSAL

PHASE II

OBJECTIVE

Demonstrate Solidification And Preparation Of High-Level Waste For Permanent Disposal

AUTHORITY

Public Law 96-368, West Valley Demonstration Project Act

SCOPE

Solidify Liquid High-Level Waste

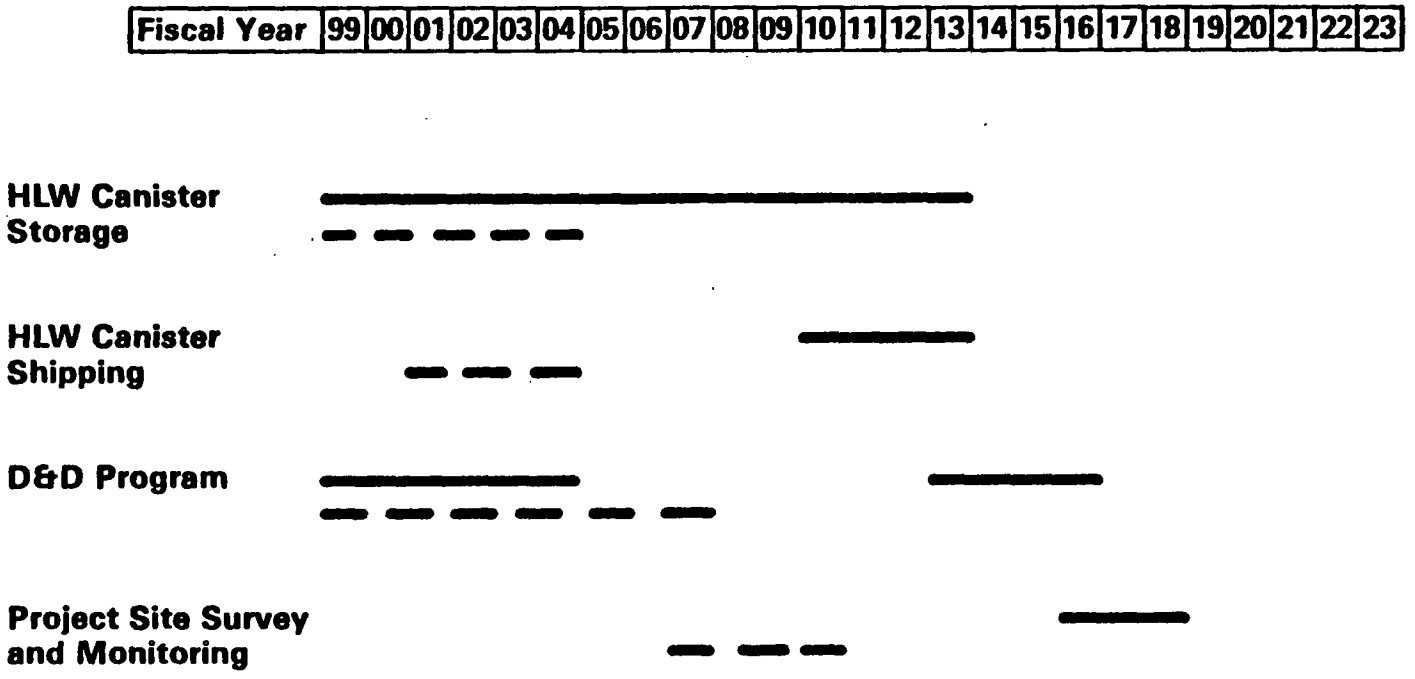
Develop Containers

Transport To Federal Repository

Dispose Of Low-Level And Transuranic Waste

Decontaminate and Decommission Facilities Used

WEST VALLEY DEMONSTRATION PROJECT



Phase II

PHASE II EIS

- FEDERAL REGISTER NOTICE OF INTENT ISSUED DECEMBER 30, 1988
- EIS WILL ADDRESS
  - PROJECT COMPLETION (FEDERAL AND STATE DECISION-MAKING)
  - CENTER CLOSURE (STATE DECISION-MAKING)
- DOE AND NYSERDA WILL COOPERATE IN EIS PREPARATION
- DOE IS LEAD FEDERAL AGENCY FOR NEPA COMPLIANCE
- NYSERDA IS LEAD STATE AGENCY FOR SEQRA COMPLIANCE
- PUBLIC SCOPING MEETINGS HELD FEBRUARY 9, 1989 IN SPRINGVILLE, NY

PHASE II EIS

PRIMARY ITEMS TO BE EVALUATED FOR FEDERAL AND STATE DECISION-MAKING

- BUILDINGS, STRUCTURES, AND SYSTEM COMPONENTS
  - FORMER REPROCESSING PLANT TOGETHER WITH THE NEWLY INSTALLED SYSTEMS
  - HLW STORAGE TANKS AND VAULTS
  - SUPERNATANT TREATMENT SYSTEM
  - HLW VITRIFICATION FACILITY
  - MISCELLANEOUS AUXILIARY STRUCTURES AND SYSTEMS

PHASE II EIS

PRIMARY ITEMS TO BE EVALUATED FOR FEDERAL AND STATE DECISION-MAKING (CONT)

- SOLID AND LIQUID WASTE MANAGEMENT OR DISPOSAL UNITS
  - RADIOACTIVE WASTE STORAGE STRUCTURES
  - STORED SOLIDIFIED HLW, LLW, AND TRU WASTE
  - PORTION OF NDA USED FOR PROJECT WASTE
  - ORIGINAL LOW-LEVEL LIQUID WASTE TREATMENT FACILITY

PHASE II EIS

PROPOSED ALTERNATIVES

- DECONTAMINATION, DECOMMISSIONING AND CLOSURE
  - PRIMARY BUILDINGS, STRUCTURES AND SYSTEMS
    - -- DECONTAMINATION FOR UNRESTRICTED USE
    - -- DECONTAMINATION AND SEALING FOR RESTRICTED ACCESS, SURVEILLANCE AND SITE MONITORING
    - -- DECONTAMINATION, DEMOLITION AND IN SITU DISPOSAL
    - -- DECONTAMINATION, DEMOLITION AND OFF-SITE DISPOSAL
    - -- NO ACTION, RESTRICTED ACCESS, SURVEILLANCE AND SITE MONITORING

PHASE II EIS

PROPOSED ALTERNATIVES

DECONTAMINATION, DECOMMISSIONING AND CLOSURE (CONT)

- SOLID AND LIQUID WASTE MANAGEMENT OR DISPOSAL UNITS
  - STABILIZATION AND CLOSURE
  - EXHUMATION, REPACKAGING AND DISPOSAL
  - NO ACTION, RESTRICTED ACCESS, SURVEILLANCE AND SITE MONITORING

PHASE II EIS

PROPOSED ALTERNATIVES

DISPOSAL OF RADIOACTIVE WASTE OTHER THAN HLW

- ON-SITE DISPOSAL
- OFF-SITE DISPOSAL
- INTERIM STORAGE PENDING AVAILABILITY OF DISPOSAL CAPACITY
- NO ACTION, RESTRICTED ACCESS, SURVEILLANCE AND SITE MONITORING

PHASE II EIS

PROPOSED ALTERNATIVES

TRANSPORTATION FOR DISPOSAL OF THE STORED HLW

- EARLY SHIPOUT TO AN INTERIM STORAGE SITE
- ON-SITE STORAGE AWAITING AVAILABILITY OF A LICENSED REPOSITORY
- NO ACTION, RESTRICTED ACCESS, SURVEILLANCE AND SITE MONITORING

KEY AREAS OF NRC INVOLVEMENT

- INTEGRATED RADWASTE TREATMENT SYSTEM
  - PERIODIC PRODUCT QUALITY REVIEWS
  - LONG-TERM CEMENT PERFORMANCE REVIEWS
- LOW-LEVEL WASTE STORAGE AND DISPOSAL
  - CRITERIA FOR CLOSURE OF WEST VALLEY PROJECT (I.E., D&D CRITERIA)
  - EVALUATION OF WEST VALLEY APPROACH FOR LLW AND TRU DISPOSITION

KEY AREAS OF NRC INVOLVEMENT (CONTINUED)

- o SLUDGE MOBILIZATION SYSTEM
  - PREPARATION OF SAFETY EVALUATION REPORT PRIOR TO HOT OPERATION
- o VITRIFICATION
  - CONSULTATION ON FINAL WASTE FORM
  - PREPARATION OF SAFETY EVALUATION REPORTS PRIOR TO HOT OPERATIONS
- o WASTE TRANSPORTATION
  - CASK CERTIFICATION
- o MONITOR DOE ON-SITE ACTIVITIES