Dr. LIEBERMAN. I will do it this way, Mr. Chairman. The salt formations in which we conducted field tests out in Kansas have been there for a long period of time, for geologic periods of time, and I think we have every reasonable reason to believe they will continue to be there for roughly equivalent periods of time. Therefore one can conceive, as I think we have and are demonstrating in an engineering way, of techniques for solidifying these highly radioactive materials, minimizing the volumes so that by the year 2000 we would have something less than 1 million cubic feet produced of these solidified wastes, taking them, then, and putting them into the salt formations for long-term or "permanent" storage. These salt formations, which by their geologic nature are not associated with sources of water supply because if they were the salt wouldn't be there, have other very useful properties. The material behaves something like a self-sealing gas tank. If one puts this radioactive material in solid form in that kind of environment he can be reasonably sure that for the lengths of time we have to be concerned with this material it is adequately managed. The development and demonstration of this technique represents a major undertaking of our research and development program.

We are now demonstrating in an engineering scale plant out at Hanford three processes for solidifying these wastes. We are just completing field tests in the salt mine in Kansas where we have used irradiated fuel elements to simulate these waste pots, to corroborate our laboratory work with regard to the behavior of salt under temperature and radiation conditions, and I think it is reasonable to state that this technology indeed is in hand and it is being demonstrated. The final engineering reports on this work will be available within a matter of the next year or two.

Mr. MOSHER. When you say 1 million cubic feet, over what period of time?

Dr. LIEBERMAN. As of the year 2000, with the installed capacity of nuclear power that would be included by that time, we would be producing in this solidified form something like 90,000 cubic feet per year, but by the year 2000 we would have accumulated, as a result of everything that has gone on, all the nuclear power which has been produced up to that point, with all the waste processing, something like 960,000 cubic feet.

That 960,000 cubic feet would be the amount we would have accumulated by the year 2000, based on the estimates of the growth of nuclear power.

Mr. MOSHER. Then there would be continual production?

Dr. LIEBERMAN. By the year 2000, this would be roughly 90,000 cubic feet per year.

Mr. MOSHER. That would not appreciably increase after that?

Dr. LIEBERMAN. No. It would increase as the nuclear power growth went up. Our crystal ball looking stops at the year 2000, but if the nuclear power installed were to double over the course of the following 10 years, then there would be a proportional increase in the volume of solids we would have to handle.

Let me indicate it in terms of how much salt mine space you would need for this operation. The estimates we have made would indicate that by the year 2000, and Mr. Belter can check me on this, something less than 3 acres of salt mine space per year would be required.