THURSDAY, SEPTEMBER 18, 1975

U.S. SENATE,
SELECT COMMITTEE TO STUDY GOVERNMENTAL OPERATIONS
WITH RESPECT TO INTELLIGENCE ACTIVITIES,
Washington, D.C.

The committee met pursuant to notice at 10:05 a.m. in room 318, Russell Senate Office Building, Senator Frank Church (chairman) presiding.

Present: Senators Church, Tower, Mondale, Huddleston, Hart of Colorado, Baker, Mathias and Schweiker.

Also present: William G. Miller, staff director; Frederick A. O. Schwarz, Jr., chief counsel; and Curtis R. Smothers, counsel to the minority.

The CHAIRMAN. The hearing will please come to order.

This is the third and final day that the committee will devote to the puzzlement of the poisons, and our first witness this morning is Dr. Edward Schantz. Dr. Schantz, would you please come to the witness table. And Dr. Schantz, if you would just remain standing for a moment for the oath, please.

Do you swear that all of the testimony you will give in this proceeding will be the truth, the whole truth, and nothing but the truth, so help you God?

Dr. SCHANTZ. I do.

The CHAIRMAN. Thank you, Dr. Schantz. Please be seated.

Do you have any opening remarks you would care to make at this time?

STATEMENT OF DR. EDWARD SCHANTZ, PROFESSOR, UNIVERSITY OF WISCONSIN

Dr. SCHANTZ. None, other than to say that I am now a professor at the University of Wisconsin, and I am in the Department of Food Microbiology and Toxicology.

I have spent about 30 years of my professional life studying the microbiological toxins, mainly those that are problems in food poisoning, such as shellfish poisoning, the poison itself, clostridium botulinum toxins, the staphylococcal enterotoxins and the like.

The CHAIRMAN. You are one of the foremost experts on this subject, are you not?

Dr. SCHANTZ. Well, that's what people tell me. I don't know.

The CHAIRMAN. Well, I want to congratulate you on the brevity of your opening statement. Let us go directly to questions. First, I will turn to our chief counsel, Mr. Schwarz.

Mr. SCHWARZ. Doctor, prior to going to the University of Wisconsin, were you at Fort Detrick?

Dr. SCHANTZ. Yes; I was.

Mr. SCHWARZ. And for how long a period of time were you there?

Dr. SCHANTZ. Twenty-eight years.

Mr. SCHWARZ. And during that time, you did research, as you say, on a number of matters, including shellfish toxin. Is that right?

Dr. SCHANTZ. That is correct.

Mr. SCHWARZ. While you were there, Doctor, were you aware that the CIA had a relationship with Fort Detrick?

Dr. SCHANTZ. Well, I did not know that directly. Now, there would be good reason to guess that, but I did not know it at the time.

Mr. SCHWARZ. So you were working on the shellfish toxin, but you did not know that the CIA also had an interest in shellfish toxin?

Dr. SCHANTZ. That is correct.

Mr. SCHWARZ. All right. Would you turn to exhibit 8,[1] which is National Security Decision Memorandum No. 44.

Dr. SCHANTZ. Yes.

Mr. SCHWARZ. The document dated February 20, 1970.

Dr. SCHANTZ. I have it.

Mr. SCHWARZ. You heard Mr. Helms say yesterday that such a document was so secret that it could not be shown to lower level employees in the CIA, including the very persons who were involved in biological warfare matters. Were you shown this document at the Defense Department?

Dr. SCHANTZ. I can't say that I saw this actual document. I saw, spelled out for us, essentially this very same statement.

Mr. SCHWARZ. Did you hear Dr. Gordon's testimony the other afternoon?

Dr. SCHANTZ. Yes; I did.

Mr. SCHWARZ. Do you read this order as covering shellfish toxin?

Dr. SCHANTZ. Yes; I do.

Mr. SCHWARZ. There is no doubt about that, is there?

Dr. SCHANTZ. That's correct; there's no question whatsoever.

Mr. SCHWARZ. What proportion of the amount of shellfish toxin ever produced in the history of the world is 11 grams?

Dr. SCHANTZ. My estimate would be about one-third.

Mr. SCHWARZ. How lethal is shellfish toxin?

Dr. SCHANTZ. It is considered an extremely lethal substance.

Mr. SCHWARZ. If it is administered intramuscularly, such as with a dart, how much does it take to kill a person?

Dr. SCHANTZ. The answer to that question can only come from animal experimentation, extrapolated to humans. I would estimate that probably two-tenths of a milligram would be sufficient.

Mr. SCHWARZ. Three-tenths of a milligram?

Dr. SCHANTZ. Two- or three-tenths.

Mr. SCHWARZ. Two- or three-tenths of a milligram?

Dr. SCHANTZ. That is correct.

---

[1] See p. 210.

Mr. SCHWARZ. Could you translate that into the number of people killed per gram?

Dr. SCHANTZ. Well, if it was two-tenths of a milligram, it would be sufficient for 5,000 people.

Mr. SCHWARZ. Per gram. And if you had 11 grams, that would be 55,000 people?

Dr. SCHANTZ. Yes; that is correct.

Mr. SCHWARZ. In addition to the ability to kill people, are there more benign uses for shellfish toxin, such as in hospitals?

Dr. SCHANTZ. Well, in Public Health there is; yes.

Mr. SCHWARZ. And what are those uses?

Dr. SCHANTZ. There are—well Public Health has several applications for this. One is the standardization of the bioassay to control shipments of shellfish poison or shellfish in commerce that may contain poison, and that was an important point, and still is, with the Food and Drug Administration.

Mr. SCHWARZ. And are there other benign uses?

Dr. SCHANTZ. Yes. We anticipate that there are many applications in medicine where the knowledge of the structure of shellfish poison could be applied. One is development of an antidote for shellfish poison, which we do not have at the present time. And the medical profession would need this, or needs this for cases that might occur along the coast, where they most generally have shellfish poisoning problems.

Mr. SCHWARZ. All right. Now, whatever benign uses there are, obviously they cannot be realized if it is sitting in a CIA vault?

Dr. SCHANTZ. Well, that is true; yes.

Mr. SCHWARZ. I have no further questions, Mr. Chairman.

The CHAIRMAN. Mr. Smothers, do you have questions?

Mr. SMOTHERS. Yes, Mr. Chairman. Dr. Schantz, during the period of your employment at Fort Detrick, did you work primarily in the Public Health aspects of this toxin?

Dr. SCHANTZ. A lot of my work was with the Public Health Service; yes.

Mr. SMOTHERS. Were you not, in fact, retained for the purpose of assuring the purity of the shellfish toxin for Public Health purposes?

Dr. SCHANTZ. Yes. That was one application.

Mr. SMOTHERS. Did you, during the period of your tenure, receive from a separate branch, other than the one you worked for, requests for this toxin? Did you receive such requests specifically from the Special Operations Division?

Dr. SCHANTZ. If I understand your question properly, I furnished to SO Division, that was Special Operations Division, toxin as I had purified it, and as they asked for it.

Mr. SMOTHERS. Approximately how much of this toxin did you furnish to the Special Operations Division?

Dr. SCHANTZ. I cannot answer that accurately, but I would assume that over the years from—as it was prepared, I furnished them probably 10 or 15 grams.

Mr. SMOTHERS. To the best of your knowledge, did the Special Operations Division receive shellfish toxin from other sources, other than that which you furnished them directly?

Dr. SCHANTZ. There was some prepared, of course, too, by the Public Health Service, which was supplied to the SO Division.

Mr. SMOTHERS. When you say prepared by the Public Health Service, are you referring to the Public Health Service facilities at Taft and at Narragansett?

Dr. SCHANTZ. That's correct.

Mr. SMOTHERS. Did these facilities provide toxin directly to the Special Operations Division?

Dr. SCHANTZ. Yes; they did.

The CHAIRMAN. Mr. Smothers, just for clarification, Special Operations Division was located at Fort Detrick. It was the Army Bacteriological Warfare Division.

Dr. SCHANTZ. Yes; it was one of the divisions at Fort Detrick.

The CHAIRMAN. Thank you.

Mr. SMOTHERS. Dr. Schantz, during your tenure at Fort Detrick, did you also supply shellfish toxin to persons outside the Government?

Dr. SCHANTZ. Yes; I did. And after the project was cleared by the Army for this purpose, I sent toxin to many laboratories throughout the country, and to other countries, except to those behind the Iron Curtain, which I was not allowed to send to. And the poison was for physiological studies, and it was soon learned what the mechanism of action was from these studies, and also it was a very valuable tool for the study of nerve transmission in medical work.

Mr. SMOTHERS. How were these poisons physically transferred from Fort Detrick to the recipients?

Dr. SCHANTZ. At SO Division it was mainly directly. They came and got it from me, or I took it to them.

Mr. SMOTHERS. How was it transferred to the scientists and other organizations that received it?

Dr. SCHANTZ. When it was sent off from Fort Detrick to laboratories, we conferred with the Post Office Department how to safely do this. They suggested we put it in a glass vial, pack it in cotton, put it in a metal container which was sealed. The metal container went into a cardboard mailing carton, and it was sent in that form.

The CHAIRMAN. Did it survive the Post Office treatment? [General laughter.]

Dr. SCHANTZ. Yes; it did. I have no reports of broken vials.

Mr. SMOTHERS. Dr. Schantz, was there further Government control of this substance after it was transferred to the recipients outside of Fort Detrick?

Dr. SCHANTZ. Well, Public Health had their interest, and they also had some control of this. There was an arrangement made between the Chemical Corps Chief, and the Surgeon General of the Public Health Service, for a cooperative study, and of course, there was some control there, too.

Mr. SMOTHERS. As a final inquiry, going back again to the time mentioned by the chief counsel earlier, after the Presidential order had come down on destruction of these materials, did there come a time when you requested of Special Operations Division that they return to you any shellfish toxin which they had on hand?

Dr. SCHANTZ. Yes. That is correct. When SO Division was closing out, I went to Chief of SO Division and asked if I could have, for Public Health work, the poison that they did not use in their research.

Mr. SMOTHERS. And how much did they indicate to you they had on hand at that time?

Dr. SCHANTZ. Well, they did not tell me, but a short time later, they gave me 100 milligrams, and I assumed that this was it.

Mr. SMOTHERS. Based on the supplies that you had turned over to SO Division, would it have been, or was it at the time, your expectation that they would have had more than 100 milligrams on hand?

Dr. SCHANTZ. Well, I had no way to know, because, although I had a top secret clearance, I did not know all of the things that they were using the poison for.

Mr. SMOTHERS. But you did transfer to them, over a period of time, more than 15 grams, or approximately 15 grams, of the substance?

Dr. SCHANTZ. It could have been that much.

Mr. SMOTHERS. Thank you, Mr. Chairman. I have no further questions.

The CHAIRMAN. Thank you, Mr. Smothers.

Dr. Schantz, how is this shellfish toxin manufactured or created?

Dr. SCHANTZ. Well, it is created by marine dinoflagellate. And shellfish become poisonous only when the marine—this poisonous marine dinoflagellate happens to grow out in the water. Shellfish consume, all the time, the dinoflagellates and other microorganisms in the water for food. Now, when a poisonous dinoflagellate happens to grow out which is very often or usually a rare circumstance, the mussels, clams, and other plankton-consuming shellfish bind that poison in the body and they become very poisonous, and when the dinoflagellate has run its course in the ocean and other dinoflagellates come in, usually not poisonous, the shellfish excrete this poison within a matter of a few weeks. So then they are safe to eat again, and this is often a sporadic occurrence. You cannot predict it, and so that is the reason so many people get poisoned, and so on.

The CHAIRMAN. In order to develop the toxin, does that take a great many infected shellfish? Is it a long and difficult process to develop this highly potent toxin?

Dr. SCHANTZ. The purification procedure, that is, getting the poison out of the shellfish and purifying it, was a difficult procedure to work out, and it took us several years study in order to do this. And much of the poison, as we were purifying it, went back into research to improve the method of purification. But it was not an easy matter to do this. It is easy now, of course. It is not so difficult.

And I worked out with my co-workers and various well-known chemists throughout the country—we developed this procedure, and it is published in the Journal of the American Chemical Society.

The CHAIRMAN. I suppose what I am driving at is that our discussion of this particular toxin and the way that it has been developed ought not to be misunderstood by the public as meaning that people should be wary of eating shellfish.

Dr. SCHANTZ. That is an important point. I think that everyone should understand that shellfish going on the commercial market is going carefully screened by the Food and Drug Administration and this poison, now, the purified poison, has established an accurate assay and has helped the Food and Drug Administration greatly in controlling the commercial fisheries, so that none of this, no poisonous shellfish get on the market. And I would like to make that very clear.

The CHAIRMAN. Thank you.

Once you had developed the toxin itself, how long does it remain potent?

Dr. SCHANTZ. I have—well, the material that we have purified, and I had Public Health back in 1954 or 1955, I have assayed within the past year, and it is every bit as potent as it was the day I prepared it. And I would imagine that it will last 100 years, and so on.

The CHAIRMAN. It has lost no potency at all in 20 years?

Dr. SCHANTZ. That is correct.

The CHAIRMAN. So there is no question in your mind that this cache that has been discovered, about which we are conducting this particular hearing, consisting of about 11 grams, which you say represents about one-third of all the toxin ever manufactured, still is as potent as it was when it was developed?

Dr. SCHANTZ. I would expect it to be every bit as potent today as it was the day it was made.

The CHAIRMAN. Just one final question, Dr. Schantz. I think, since you have been present at the earlier hearings that you know that this committee has been asked to lift a ban that applies generally to all the agencies we are investigating against the destruction of any material that they may have in their possession. In order that a proper disposal can be made of the 11 grams of this shellfish toxin that have been discovered, I would like some guidance from you.

We have entered into a treaty in which we have undertaken to destroy substances of this kind, except in such amounts as may be usefully used in laboratories for benign and decent purposes. Would it be your recommendation that part of this particular cache of shellfish toxin be distributed to medical schools and laboratories that are engaged in this work, within the limits of the treaty, or is there any special need to consider that use? I have in mind possible medical uses that might help us in solving some of the problems of disease and any other good and decent purpose.

Dr. SCHANTZ. At the present time, we have in the biochemistry department at Madison, a NIH grant to study shellfish poison. Within the past year, we have determined the chemical structure of it, and this is now published in the Journal of the American Chemical Society. We are now in the process of altering the molecule to determine whether we can produce substances of medical interest.

One such example might be the possibility of developing local anesthetics from this molecule, and we are much in need of toxin for this purpose. There are many physiologists throughout the country and one, of course, we are working with is Dr. Ritchie, at Yale University. And I know laboratories like his and others would appreciate very much getting material.

I have usually kept the supply of toxin and have supplied it to many laboratories throughout the world, as I have mentioned before. I would continue to do that, if I had the supply. And I must assure everyone that we are putting it to good medical use, and are not doing anything else with it, other than medical applications.

The CHAIRMAN. Thank you, Dr. Schantz. Senator Tower?

Senator TOWER. Dr. Schantz, did you serve as the custodian of the Physical Sciences Division stockpile of toxin?

Dr. SCHANTZ. Yes; I did.

Senator TOWER. Were you also custodian for the amounts that were transfered to SOD?

Dr. SCHANTZ. No; I was not.

Senator TOWER. To the best of your knowledge, did anyone keep an accounting of the toxin that was kept on hand by SOD?

Dr. SCHANTZ. I do not know, but after it was transferred to SOD, I had nothing more to do with it.

Senator TOWER. What was the formal procedure for the acquisition of shellfish toxin?

Dr. SCHANTZ. By whom?

Senator TOWER. By anyone.

Dr. SCHANTZ. By anyone?

Senator TOWER. Yes.

Dr. SCHANTZ. Well, it was in the Army. We passed it just back and forth, and I do not know as there was any formal——

Senator TOWER. No written requests or anything like that? No formal procedures at all?

Dr. SCHANTZ. No. If they needed it, we gave it to them. But any material that was sent outside of the Army was done by permission of headquarters at Fort Detrick. And whenever I had a request for poison—let us say from a physiological laboratory that wanted to investigate the mechanism of action—I first would make sure that this man was a competent investigator, and that the university wanted the poison used in their laboratory.

If that were ascertained, then I filled out a little form designed by Fort Detrick stating who it was to go to, how much they wanted, and whether or not I recommended that they get it. This went to headquarters; it would come back to me, usually approved. And then I would send out some material packaged as mentioned before.

Senator TOWER. Did you keep records of the amount of toxin that you gave to the Special Operations Division?

Dr. SCHANTZ. No; I did not really.

Senator TOWER. What accounting records were kept by you, or by your office?

Dr. SCHANTZ. Well, I must say this about turning it over to SO Division, that when I first prepared toxin—and I think it was in 1954—we had about 20 grams then, and this was passed on up to headquarters to be distributed. And I assume that SO Division got a portion of this.

Senator TOWER. Did the Army levy a charge to any scientist or organization that received this toxin?

Dr. SCHANTZ. I do not quite understand, Senator Tower.

Senator TOWER. Did they place any conditions? Did they try to mandate what the parameters of its use were?

Dr. SHANTZ. Well, do you mean that they defined who could get it, or what their qualifications——

Senator TOWER. And what they could use it for.

Dr. SCHANTZ. Oh, yes. That was my responsibility; to recommend to headquarters that these are competent people to handle this.

Senator TOWER. But after it left your hands, you actually had no control?

Dr. SCHANTZ. That is correct, except I used to check at times. And often these universities that had investigated it would send me letter

reports on what they had found out, and often reprints of papers they had published on the use of the shellfish poison.

Senator TOWER. Were there any reports required from the scientists or the organizations or institutions to whom this toxin was given? I notice quite a number of foreign establishments—University of Glasgow, University of Leeds, Norwegian Defense Research Establishment—that looks a little ominous—Italy, Japan, and so forth.

Dr. SCHANTZ. There was no particular report required.

Senator TOWER. In other words, they did not have to report to you periodically what they were doing with this stuff?

Dr. SCHANTZ. That is correct.

Senator TOWER. In response to Mr. Smothers' question earlier, you indicated a direct relationship between Public Health and SOD. Now, could you explain the nature and extent of any agreement or working procedure between Public Health and SOD?

Dr. SCHANTZ. Well, SOD, as I understand it, made the contract agreement with Public Health Service, and the first one was at the Taft Center in Cincinnati, to prepare toxin.

Now I had nothing to do with setting up the contract; I do not know how much money it was and so on. But I was sent to Cincinnati on occasion to help them get the purification procedure underway, and I also checked samples of the poison that supposedly were purified. And I checked it to make sure it was up to standards, so to speak.

Senator TOWER. Thank you, Dr. Schantz.

Mr. Chairman, I ask unanimous consent that a list be placed in the record of recipients of the toxin.

The CHAIRMAN. Without objection, that will be done. [Exhibit 11.[1]]

The CHAIRMAN. Senator Mondale?

Senator MONDALE. Thank you, Mr. Chairman. I think you testified earlier, Dr. Schantz, that you had seen orders come down to destroy toxin in language that was identical to the language appearing in the National Security Decision Memorandum.

Dr. SCHANTZ. That is correct.

Senator MONDALE. Was there any doubt in your mind that that Presidential order of destruction of toxins included shellfish toxin?

Dr. SCHANTZ. No question whatsoever.

Senator MONDALE. Do you believe there could be any reasonable doubt in the mind of a chemist or a technician working in this field, other than the one you had, concerning the applicability of the Presidential order to these shellfish toxins?

Dr. SCHANTZ. Well, this shellfish toxin is a chemical of high potency, that is highly lethal, of biological origin, and I do not know how else you could classify it. It is a biological product.

Senator MONDALE. And thus, in your opinion, at that time, when you saw the Presidential order, there was utterly no doubt in your mind but that this included shellfish toxins.

Dr. SCHANTZ. Absolutely. Yes.

Senator MONDALE. First of all, I would ask the staff to provide Dr. Schantz with two documents: One dated February 17, 1970, entitled "Special Operations Division's Toxin Inventory," and another, dated February 18, 1970, entitled "Paralytic Shellfish Poison Working Fund Investigation."

As I understand it, Dr. Schantz, at the time these inventories were prepared, you were still with the Government working on these shellfish toxins at Fort Detrick.

Dr. SCHANTZ. That is correct.

Senator MONDALE. Can you help us understand these two inventories? The first dated February 17, entitled "Special Operations Division Toxin Inventory" reports to higher authority that only small quantities of shellfish toxin remain in their inventories. Is that correct?

Dr. SCHANTZ. Well, when I asked them for the toxin, at the time the Division was being dissolved, they presented me with 100 milligrams——

Senator MONDALE. I'm not trying to get to that, Dr. Schantz. I am trying to establish that we have inventories prepared only a day apart which differ dramatically in the amount of shellfish toxin in their inventories.

Dr. SCHANTZ. Yes, I see that.

Senator MONDALE. The one on the 17th of February reports very modest quantities remaining, quantities I would think appropriate for research purposes: 0.2 grams of paralytic shellfish toxin; redried toxin, .01 grams; shellfish toxin, clam, .01 grams. Then, on the following day, on February 18, there is an inventory, and on top of it it says "U.S. Public Health Service, Taft Center, Ohio," and it lists, on the two pages, a total of 5.9—or 10.9 to 7 grams, which is an enormous quantity of shellfish toxin. Can you help us to understand the difference between these two inventories?

Dr. SCHANTZ. I really can't. I don't know anything about them.

Senator MONDALE. You see, what worries me is this: The Defense Department was ordered to destroy a massive quantity of shellfish toxin which could be used for offensive purposes under the Presidential order. They had substantial quantities of this toxin at Fort Detrick. But when the inventory came forth, it showed that practically all of that toxin had disappeared somewhere.

Dr. SCHANTZ. It looks that way, yes.

Senator MONDALE. So I am very suspicious that whoever did it, instead of following a Presidential order, sneaked the stuff out the back door, and then prepared an inventory for higher authorities which suggested that it had all been destroyed. But I gather that you are not in a position to help us understand these inventories.

Dr. SCHANTZ. I cannot explain this at all.

Senator MONDALE. Thank you, Dr. Schantz. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Mondale. Senator Baker.

Senator BAKER. Thank you, Mr. Chairman.

Doctor, I really do not know that I can cover any ground that you have not already covered except to ask you if you could tell me what sort of recordkeeping you did do. Was there a manufacturing record as you formulated a batch of shellfish toxin? Did you make a record of how much the yield was?

Dr. SCHANTZ. Oh yes. That is in our notebooks. It could be located, I suppose.

Senator BAKER. Have you tried to locate it?

Dr. SCHANTZ. Well, I haven't, no.

Senator BAKER. Do you know whether anyone has tried to or not?

Dr. SCHANTZ. No, I really don't.

Senator BAKER. Would that notebook say how much had been manufactured in toto by the Department of Defense or the Public Health Service or by anyone else in Government?

Dr. SCHANTZ. I imagine that a complete examination of all of the notes over the years—one could get a good estimate of what actually was produced.

Now, I know that in 1954, or along in there somewhere, I cannot pin a specific date to it, but we had about 20 grams.

Senator BAKER. In 1954?

Dr. SCHANTZ. About 1954 or 1955, along in there. And this was, as I mentioned before, passed onto Headquarters for distribution. And I retained some for research and some for the Public Health Service.

Senator BAKER. You estimated that about 10 to 15 grams were at Fort Detrick at one time or another.

Dr. SCHANTZ. That is correct.

Senator BAKER. How much material did you handle in the course of your professional lifetime? Could you give us some estimate of that?

Dr. SCHANTZ. Well, I prepared directly approximately 20 grams. I was involved in helping, or assisting, Public Health in the preparation of, I figure, maybe another 10 or 15 grams.

Senator BAKER. Do you know of any records that were ever destroyed in this connection, Doctor?

Dr. SCHANTZ. Well, none of mine were ever destroyed that I know of. Now, when Detrick was closed, I guess these notes and everything went to Kansas City, we were told—I know nothing about them after that.

Senator BAKER. So you have no personal knowledge of it, but you have no reason to think that any records were destroyed?

Dr. SCHANTZ. I do not know why they should have been destroyed.

Senator BAKER. Do you know what else was in the cache of material that was found at the CIA facility in Washington besides the shellfish toxin? I remember there was cobra venom and a few other things there, too.

Dr. SCHANTZ. Well, I had other toxins on hand which were destroyed.

Senator BAKER. Do you know the material I am referring to? The material that was found—what do they call it?

Dr. SCHANTZ. You mean the cobra venom? I never worked with that, and I don't know.

Senator BAKER. What else did you work with?

Dr. SCHANTZ. Clostridium botulinum toxins, staphylococcal enterotoxins mainly, and of course shellfish poison.

Senator BAKER. If there are records extant from the Fort Detrick operation, can you give us any clue as to who has them or where we might locate them?

Dr. SCHANTZ. Well, we were told that after a certain length of time all reports that we wrote at Detrick went to a depository, I think in Kansas City. I am not sure about that, but it seems to me that was it.

Senator BAKER. Really, all I'm reaching for is this, Doctor. I want to know whether or not you have any reason to think that any records of this program were ever destroyed.

Dr. SCHANTZ. I know of none.

Senator BAKER. Thank you, sir. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Baker.

It hardly needs to be stressed that this is a very serious subject, but Senator Tower asked that I include a list in the record of all of those who have received this toxin, presumably for laboratory and medical purposes. And I have just been looking through the list, and I find on the second page a listing of someone who is said to have been associated with the department of pharmacology at Georgetown University Medical School, and his name is Lieutenant James Bond. [General laughter.]

Dr. SCHANTZ. Well, I see this——

Senator MONDALE. Do you notice his zip code number is 20007? [General laughter.]

Dr. SCHANTZ. I'm sorry I missed that.

Senator MONDALE. There is also a Dr. Covert who gets it.

The CHAIRMAN. Do you know any of these gentlemen? Do you know James Bond?

Dr. SCHANTZ. I'm sorry, I do not know any of them. I knew Dr. Covert.

The CHAIRMAN. Senator Huddleston?

Senator HUDDLESTON. Thank you, Mr. Chairman. Since we have raised a specter of 007, do you have any knowledge or information about who P600 is?

Dr. SCHANTZ. P600? Well, if that was at Fort Detrick, I would be inclined to say it is a building number.

Senator HUDDLESTON. Are buildings able to give instructions?

Dr. SCHANTZ. For authorization to do something with it.

Senator HUDDLESTON. From a certain building?

Dr. SCHANTZ. That would be my guess. Now, I did not see anything with that on it, but we often used that around Detrick. P would be for a permanent building, and T was for temporary buildings.

Senator HUDDLESTON. I recall those myself back in my Army days. Well, does the building P600 identify anything for you? Did that house——

Dr. SCHANTZ. I don't remember.

Senator HUDDLESTON. You do not remember?

Dr. SCHANTZ. No.

Senator HUDDLESTON. Dr. Schantz, was the shellfish toxin stored in liquid form or powdered form?

Dr. SCHANTZ. You can store it any way. It should be—normally, it is stored in an acidic solution, and it would be in a solution such as that. I have no reason to believe that it would not be always stable.

Senator HUDDLESTON. I would like to determine the amount that would be required to render a lethal dosage to an individual. Would, for instance, dipping a pen or the point of a dart into this liquid, and then injecting it into an individual, be enough to kill him?

Dr. SCHANTZ. It might be. There are specially-designed things that hold enough to—that I'm sure would kill a human being.

Senator HUDDLESTON. In your research, did you involve yourself with these kinds of delivery systems?

Dr. SCHANTZ. No; not at all. But on occasions, SO Division had showed me some of them.

Senator HUDDLESTON. We were talking about how a manufacturing process took place. Can you tell us how many shellfish would be required to produce, say, 1 gram of toxin?

Dr. SCHANTZ. I think we said—and I am only making an estimate now—probably, well, 100 pounds.

Senator HUDDLESTON. 100 pounds? How many actual fish would that be, do you think?

Dr. SCHANTZ. Well, you caught me off guard on that. It would be several thousand shellfish.

Senator HUDDLESTON. Shellfish are not very large, are they, generally?

Dr. SCHANTZ. They would weigh, probably—a butter clam, the meat would weigh 100 grams or so, something like that, which would be a quarter of a pound.

Senator HUDDLESTON. What arrangements did you have for securing these large numbers of shellfish?

Dr. SCHANTZ. In securing them?

Senator HUDDLESTON. Yes.

Dr. SCHANTZ. Well, at one time, of course, we worked with people at the University of California Medical Center in San Francisco, and they would watch the toxicity of clams or mussels along the coast. And when the toxicity rose to a good level, about a dozen of us, mostly from the University of California Medical Center, would all go out and, at low tide, collect mussels. And this was our starting material for isolation.

Senator HUDDLESTON. Were there any other institutions you worked with that would supply you with the——

Dr. SCHANTZ. Well, now, one problem was the scarcity of it along the California coast, and we had heard rumors from the Canadians that this material, or the butter clams in Alaska, were very toxic at times. We went up there and worked with the Alaska Experimental Commission. They were very cooperative in helping us collect clams. We used their boat, we used their help, and we collected many hundreds of pounds of these clams' siphons for this purpose.

Senator HUDDLESTON. What kind of security did you work under at Fort Detrick?

Dr. SCHANTZ. Well, I had a top secret clearance. The project was classified "secret" in the early stages, and I do not remember the date that it was declassified. But I think it was along in 1956 or 1957.

Senator HUDDLESTON. It was declassified at that time?

Dr. SCHANTZ. Yes, it was declassified to "restricted," which meant that it was not published in the newspapers.

Senator HUDDLESTON. Were you required to report to any individual on the state of your experimentation in this field?

Dr. SCHANTZ. A report every quarter of the year.

Senator HUDDLESTON. And to whom did that report go?

Dr. SCHANTZ. Now, over the years—I think in the beginning they went to a Dr. Hill, who was chief of, I think they called it the Basic Sciences Division then. These were passed on up, of course, to Dr. Wopert, who was Director at Fort Detrick, and to the commanding officer.

Senator HUDDLESTON. I believe you have stated to the committee that when the Special Operations Division was closing down, you obtained from its laboratory a small quantity of shellfish toxin.

Dr. SCHANTZ. That is correct.

Senator HUDDLESTON. From whom did you obtain this, and under whose authority?

Dr. SCHANTZ. Well, I obtained it from—I do not know who actually handed it to me, but I talked to the Director at that time, and his name was Andy Cowan.

Senator HUDDLESTON. Did you obtain this for a specific purpose?

Dr. SCHANTZ. Yes.

Senator HUDDLESTON. Did you indicate to him what that purpose was?

Dr. SCHANTZ. Yes. I told him it was for Public Health.

Senator HUDDLESTON. And you did then turn that over to the FDA, is that correct?

Dr. SCHANTZ. That is correct, and it was used in making up these standards for the shellfish poison assay.

Senator HUDDLESTON. Do you know whether anybody else in the world is producing shellfish toxin at this time?

Dr. SCHANTZ. Not that I know of.

Senator HUDDLESTON. Dr. Schantz, while you were at Fort Detrick, were you aware of programs and experimentation in drugs or poisons that would produce tuberculosis or brucellosis?

Dr. SCHANTZ. Poisons that would produce these?

Senator HUDDLESTON. Well, bacteria or whatever that would produce tuberculosis.

Dr. SCHANTZ. Well, I know about it. I do not know specifically.

Senator HUDDLESTON. Did you participate in any of those experiments?

Dr. SCHANTZ. Really not, but I knew a great deal about them. There was a big program on brucellosis.

Senator HUDDLESTON. Do you know what the objective was, what they were seeking to accomplish?

Dr. SCHANTZ. Well, at Fort Detrick, we were interested in how you handle an enemy's attack with one of these agents, supposing—well, the brucellosis organism—there was experimentation going on in aerosolizing these micro-organisms, and we studied symptoms of disease produced in this manner, and mainly to learn how to combat these if it was used against us.

Senator HUDDLESTON. It was your understanding that the objective was to develop defenses against the use of this material?

Dr. SCHANTZ. Yes. But to develop a defense, you first of all had to—what the agent would do——

Senator HUDDLESTON. How it might be used?

Dr. SCHANTZ. And I think that was in line with policy of this country—defensive.

Senator HUDDLESTON. I believe my time is up. Thank you, Mr. Chairman.

The CHAIRMAN. And I might say, it is still in line with the policy of the country, because nothing we have undertaken to do in the treaty deprives us of continuing to develop defensive means to protect against these poisons.

Dr. SCHANTZ. Yes.

The CHAIRMAN. Senator Mathias?

Senator MATHIAS. Mr. Chairman, I perhaps, from a parochial point of view, have had to take notice of the fact that, as Dr. Schantz has

described the sources of toxic shellfish, he has referred exclusively to the west coast of the United States, and not to one mussel, one clam, or one oyster from the Chesapeake Bay. [General laughter.]

Dr. SCHANTZ. I must say that——[General laughter.]

Senator MATHIAS. You are ahead now, Dr. Schantz. Do not——

Dr. SCHANTZ. But in the last 3 or 4 years, along the coast of New England, there has been considerable trouble in the shellfish industry with the poison dinoflagellates growing and causing toxic shellfish. And we have had quite a problem, and the Food and Drug Administration is quite involved, and the local food and drug agencies in the States up along there are very concerned.

Now, in the Chesapeake Bay, we have never discovered any poison dinoflagellates that I know of, so you should feel safe.

Senator MATHIAS. Well, we thank you very much for that endorsement, and I am sure that all of the watermen of the Chesapeake Bay will be very glad to get that assurance.

Dr. SCHANTZ. I must add, too, that the Food and Drug Administration is checking those, too.

Senator MATHIAS. Dr. Schantz, we all had a chuckle at the expense of Mr. Bond at the Georgetown School of Pharmacy, but I would like to make sure that the record is clear with respect to what went on in the exchanges of scientific knowledge at Fort Detrick. Now, in the 28 years that you were at Detrick, did you observe that Detrick was a very secure Army installation? Was there a high awareness of security precautions?

Dr. SCHANTZ. I felt so, yes.

Senator MATHIAS. There was both an inner and outer fence?

Dr. SCHANTZ. Yes.

Senator MATHIAS. And very elaborate arrangements when anyone visited Fort Detrick? Is that not so?

Dr. SCHANTZ. I thought there was, yes.

Senator MATHIAS. And yet, at the same time, there was a constant exchange with medical schools and research institutions, was there not?

Dr. SCHANTZ. Well, with shellfish poison.

Senator MATHIAS. Well, I am talking generally at Fort Detrick.

Dr. SCHANTZ. Oh, yes, there was. That is true. There were many programs that extended to universities around the country.

Senator MATHIAS. Harvard Medical School?

Dr. SCHANTZ. That is correct.

Senator MATHIAS. Baylor in Houston, Tex., other medical institutions that are world-famous all sent representatives to Detrick. Is that right?

Dr. SCHANTZ. That is correct, yes.

Senator MATHIAS. And was there a program at Detrick which encouraged the materials for research purposes, bacteriological samples for example, and other scientific materials?

Dr. SCHANTZ. Well. I don't know as there was a special group for this.

Senator MATHIAS. I do not mean a special group, but did it happen? What I am asking you is——

Dr. SCHANTZ. Yes: it did. I always felt that the Army was very cooperative with medical institutions around the country, and if we

had something of value to medicine, that this was commuted to them, within the limits of security.

Senator MATHIAS. And this was not limited to scientific institutions in the United States? In fact, there was an exchange with many institutions in various parts of the world?

Dr. SCHANTZ. Well, the only ones—well, yes, of course. Britain, which has an establishment like ours, and Canadians, for instance, too; there is close coordination between Canadians, the British laboratories, and our own laboratory.

Senator MATHIAS. And did this exchange of people and materials result in any scholarly publications which were not classified and which were therefore available to the scientific community throughout the world?

Dr. SCHANTZ. I would say yes. One example would be that the Englishman by the name of Dr. Evans was the first to discover the mechanism of action of shellfish poison. He was at the agricultural research council at Cambridge.

Senator MATHIAS. So that what is illustrated in connection with the exchange of these toxins is not an isolated or an unusual or a unique example of what was happening at Fort Detrick?

Dr. SCHANTZ. That is right; yes.

Senator MATHIAS. Thank you very much.

The CHAIRMAN. Thank you.

Senator Hart?

Senator HART of Colorado. Dr. Schantz, one question. Were you at Fort Detrick when the Special Operations Division was closed down?

Dr. SCHANTZ. Yes; I was.

Senator HART of Colorado. Were there discussions among you and your colleagues in regard to the distribution of the toxins?

Dr. SCHANTZ. Well, I had to give a report on what I had on hand and I suppose that that was for—well, it was for decisions up in headquarters.

Senator HART of Colorado. Were you involved in discussions with the people around you, or that you worked with, about how to avoid complete destruction of these toxins?

Dr. SCHANTZ. Well, I had no such authority at all.

Senator HART of Colorado. It is not a question of your having authority. The question is whether there was discussion among you and your colleagues as to how to avoid destroying these toxins

Dr. SCHANTZ. No.

Senator HART of Colorado. It is not a question of your having thought in discussions with staff members that you were involved in complicated procedures.

Dr. SCHANTZ. Yes.

Senator HART of Colorado. Did those procedures have to do with the destruction of these toxins or with the avoidance of the destruction of these toxins? What were those complicated procedures?

Dr. SCHANTZ. Well, I do not exactly know what you mean. The procedures for destruction were clear enough to me. There is no question about that. Later they were clarified and did not apply to materials for research or for public health and so forth and that was what I meant by complicated.

Senator HART of Colorado. Well, did toxins that might have had destructive, wartime, or offensive capabilities suddenly become benign, medically oriented materials that everyone could reorient for different research purposes?

Dr. SCHANTZ. Yes; that is true.

Senator HART of Colorado. All of a sudden everybody began to think of other noncombative or nonoffensive purposes that these highly toxic materials could be used for. Is that not the case?

Dr. SCHANTZ. I think that is a natural thing to do. But shellfish poison was set aside for the Public Health Service and the Food and Drug Administration many years before this order was issued.

Senator HART of Colorado. But materials at Fort Detrick were not for medical research purposes. This was a Defense Department installation experimenting with these materials presumably for some activities that the Department of Defense undertakes. The Department of Defense is not the Public Health Service. It has a different mandate I think all would agree.

Dr. SCHANTZ. Well, now the material I had in Public—at Fort Dertick was held for the Public Health Service and I was custodian of this material. They asked that I keep it there, but it was done so under the auspices of the Public Health Service.

Senator HART of Colorado. But I think you have testified, just to clarify the record, that there were discussions of materials, let us say held by other people with whom you were working.

Dr. SCHANTZ. Yes.

Senator HART of Colorado. Materials which might be made available for nonmilitary purposes and thus avoid the destruction order.

Dr. SCHANTZ. Yes, I think that is indicated in these documents that you handed to me.

Senator HART of Colorado. That is all, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Hart. Senator Schweiker.

Senator SCHWEIKER. Thank you, Mr. Chairman.

Dr. Schantz, which department were you working with at Fort Detrick? Were you in SOD?

Dr. SCHANTZ. I was in what was called Physical Sciences Division.

Senator SCHWEIKER. And were you with them most of the 28 years or all of the 28 years?

Dr. SCHANTZ. Through the years the name of the Division changed. I think it started out as the Basic Sciences Division and there were some other changes in names, but it ended Physical Sciences Division when Fort Detrick closed down.

Senator SCHWEIKER. As I understand it, originally the work that you did on this area of shellfish poison was primarily with the Physical Sciences Division and then at some point in time the Special Operations Division, or SOD, really became the primary interest and Physical Sciences Division either lost interest or did not pursue it much further. Is that correct and when did that occur?

Dr. SCHANTZ. Generally, sir, that is correct; yes.

Senator SCHWEIKER. What was the initial purpose of the work when you first started it there in Physical Sciences as far as shellfish toxin was concerned?

Dr. SCHANTZ. It was started off in early discussion right after the war. The chemical corps was looking for new toxic substances and

I suggested to them, "Well, why not look at some of the biological poisons that are produced?" And I suggested this problem with the shellfish that we might—maybe we could isolate this, get its structure, and, from that knowledge, devise new chemical agents.

Senator SCHWEIKER. You indicated, I believe, that you were aware of an inventory of 20 grams in 1954 and your work was affiliated with that quantity indirectly or directly?

Dr. SCHANTZ. Yes. Except that I had to turn most of this over to the headquarters at Fort Detrick.

Senator SCHWEIKER. Meaning SOD?

Dr. SCHANTZ. No, meaning headquarters, Fort Detrick.

Senator SCHWEIKER. Now, of the 20 grams, about how much of that came from the U.S. Public Health Service centers, either at Narragansett——

Dr. SCHANTZ. None of it. That was another preparation.

Senator SCHWEIKER. None came from either the Taft Center or Rhode Island?

Dr. SCHANTZ. Well, the material from Taft Center and from Rhode Island was not included in this 20 grams. It was 10 or 15 grams prepared by them which was passed, as I understand it, directly to SOD.

Senator SCHWEIKER. Well, did the 20 grams, was that made in-house by the Fort Detrick people then?

Dr. SCHANTZ. That is correct.

Senator SCHWEIKER. So 20 grams was made in-house at Fort Detrick, about 10 grams came from the U.S. Public Health Service labs?

Dr. SCHANTZ. I would say that is approximately correct, but I do not have the exact figures for that.

Senator SCHWEIKER. Were there any other U.S. Public Health Service offices involved that you worked with or communicated with besides those two?

Dr. SCHANTZ. Well, there was a Public Health liaison officer at Fort Detrick.

Senator SCHWEIKER. Any other physical location other than Cincinnati and Narragansett that you tested the material with?

Dr. SCHANTZ. No; not that I know of.

Senator SCHWEIKER. And the relationship was a contractual relationship between the Army and the Public Health Service and I believe we cited a $194,000 contract between the Army and the Taft Center. Is that right?

Dr. SCHANTZ. That is what I heard, yes.

Senator SCHWEIKER. Do you have any idea how many grams that $194,000 would be accountable for or not?

Dr. SHANTZ. I have no idea.

Senator SCHWEIKER. Now, when the FDA came into it, were they in any way involved in the part that Fort Detrick was interested in or the CIA was interested in or were they involved in what phase of it?

Dr. SCHANTZ. They were only interested in making sure that commercial shellfish contain no poison.

Senator SCHWEIKER. Strictly on that basis?

Dr. SCHANTZ. That is right, that is as far as I know.

Senator SCHWEIKER. You have no knowledge of other contracts beyond the Taft Center contract or are you saying that is the only one you know, but there might be others?

Dr. SCHANTZ. That is the only one I know of that produced poison. Now we had contracts with Northwestern University, for instance, and the University of California.

Senator SCHWEIKER. For what purpose?

Dr. SCHANTZ. To help in developing the purification procedure.

Senator SCHWEIKER. So were they then producing the poison toxin?

Dr. SCHANTZ. They were not.

Senator SCHWEIKER. The testing and chemical procedures?

Dr. SCHANTZ. Well, they were developing procedures for purification with us.

Senator SCHWEIKER. Purification is a bit of a misnomer, it sort of means how deadly it is, does it not? I mean, we take a contamination, we try to make it pure, but we are really talking about how effective or deadly it is. Is that correct?

Dr. SCHANTZ. Essentially, yes, because the more pure you would have it, the higher the specific potency would be.

Senator SCHWEIKER. By a rough count of the list that we saw, there are 184 dispersals of some kind of toxin or poison, and about 63 were related to shellfish. Does this list show the operations where you were dispensing these toxins for medical, medicinal, or research purposes?

Dr. SCHANTZ. Is that from the Department of the Army or from Fort Detrick?

Senator SCHWEIKER. Right. And a typical dispersal would amount to how many milligrams?

Dr. SCHANTZ. Yes, it would be—it could be one milligram or sometimes it was 25, 30, depending upon——

Senator SCHWEIKER. Well, would you give us a rough estimate of how much toxin was involved in these 63 dispersals?

Dr. SCHANTZ. Well, if I took an average of 10 milligrams for each one, I would have 600 milligrams, and that is a little over a half a gram.

Senator SCHWEIKER. OK, a little over half a gram total.

Dr. SCHANTZ. Yes.

Senator SCHWEIKER. So, in essence, we have a picture where there are 30 grams U.S. production of which one-half of 1 gram is used for medical, medicinal, health or environmental research. Is that an accurate proportion?

Dr. SCHANTZ. Yes; that was sent out to laboratories not connected with Fort Detrick or the Public Health Service.

Senator SCHWEIKER. We are not sure about James Bond though, are we?

Dr. SCHANTZ. No.

Senator SCHWEIKER. Incidentally, if you are relieved, he did not get the shellfish toxin, he got the botulism pills, according to the list anyway.

The other P600 designation, could you tell us who the highest ranking officer headquartered in P600 was? In other words, you said that was a building at Fort Detrick. Who would be the highest officer that was located in building P600 of Fort Detrick?

Dr. SCHANTZ. Well, I said that I thought it was a building number.

Senator SCHWEIKER. Were you aware of what safe those toxins were stored in, or what building, or what vault, those two cans?

Mr. SCHANTZ. I do not know anything about those two cans.

Senator SCHWEIKER. When you want to get your supply that you dispensed, where did you get it from?

Dr. SCHANTZ. That I dispensed from my laboratory, where I kept it.

Senator SCHWEIKER. You kept it in the vault, your own vault?

Dr. SCHANTZ. Well, I kept it in my laboratory which was locked.

Senator SCHWEIKER. What was the largest quantity that you would keep there?

Dr. SCHANTZ. Well, I had several grams. I do not remember exact amounts.

Senator SCHWEIKER. So you are saying you do not know where the other vault or storage place was located that might have contained these 11 grams? Would that be correct?

Dr. SCHANTZ. No; I really do not, none whatsoever.

Senator SCHWEIKER. Using the Public Health Service for this purpose troubles me as a Senator because it looks to me as if we have the tail wagging the dog. At some point we were doing legitimate research to protect our people from the red tide and from the contamination of shellfish poison. But then at some point we decided that it was a biological weapon or toxic weapon and went all out in this regard. And I really do have great doubts that we should be using the U.S. Public Health Service whose function, by my concept as ranking member of the Health Committee, is to prevent people from getting poisons and toxins and to prevent the spread of disease instead of manufacturing it.

It is a little bit like saying you are going to stop the plague, but in stopping the plague they research enough of the plague bacteria and pass it out to people who can use it to kill other people for the plague. Does this not trouble you a little bit, this usage, getting away now from the pure research and the other aspects which nobody is questioning and, as you have documented it here, probably is a legitimate usage?

Dr. SCHANTZ. Well, I do not know why the contracts were established with the Public Health Service but I can understand why the Cincinnati laboratory would be interested in this material and also the Narragansett laboratory. The laboratory at the Taft Center is involved in the food poisons, and shellfish poison is one of these. The Narragansett laboratory is a national shellfish laboratory and I can see their interest in this. And I think that they just felt that here is a chance to gain some experience in shellfish, poisonous shellfish and I suppose that the money of the contract looked good to them.

Senator SCHWEIKER. Well, again I can understand if all of the 30 grams were being used for that purpose but with a half a gram being used for that and 29.5 being used as an obvious weapon of war, it just seems to me we sort of have the tail wagging the dog.

Dr. SCHANTZ. Well, now several grams have gone into Public Health.

Senator SCHWEIKER. Well, in addition to the three now, because they obviously kept some there, did they not keep some of their own labs for that research at Narragansett?

Dr. SCHANTZ. I imagine they did, yes, but I have furnished and I have on hand—well let us see—when we were developing the standard assay for shellfish poison I furnished Public Health a considerable amount of poison.

Senator SCHWEIKER. How much?

Dr. SCHANTZ. Well, it probably took a gram or two just to develop this standardized assay and then after that I have to keep up a supply on hand to put up in these little vials that are sent out to laboratories that assay shellfish poison, and so I still have an obligation with the Food and Drug Administration to have a supply on hand for them. I am still custodian of the toxin for them and whenever they need these for distribution in the assay. I prepare the vials for them and I standardize them and make sure they are what they are supposed to be.

Senator SCHWEIKER. That's all I have, Mr. Chairman, thank you.

The CHAIRMAN. Dr. Schantz, since you are the foremost expert in the country on this shellfish toxin and have given us the benefit of your testimony and have responded to the questions that have been asked by the committee, I think that we are prepared now, on the basis of your testimony, to reach a committee decision with respect to the request that has been made of us to lift the application of the general ban against the destruction of documents, substances or materials with respect to the particular poisons that we have been inquiring about.

And so I have prepared a letter to Mr. Colby and I would like to read it to the members of the committee and then ask the committee's approval. The letter has been prepared for my signature as Chairman and for the signature of John Tower as Vice Chairman of the committee and it reads as follows. I ask the attention of the members. It is dated September 16 addressed to Mr. William E. Colby and reads as follows:

Dear Mr. Colby. Last January, when the Select Committee was created, Senator Mansfield and Senator Scott asked that the Central Intelligence Agency not destroy any material that would relate to the Committee's investigation.

The biological toxins that are the subject of the Committee's first public hearings are subject to the ban on destruction. The purpose of this letter is to inform you that at the completion of the Committee's investigation into the improper retention by the CIA of these deadly toxins, the Committee votes to approve the destruction of the toxic materials in your possession.

However, before the CIA proceeds to destroy these toxins, we would direct your attention to the attached testimony. If adequate safety and security cautions could be taken, the Committee believes that it might be appropriate for the CIA to consider donating these toxins, consistent with our treaty obligations to properly supervised research facilities which can use these poisons for benign uses, such as curing such debilitating diseases as multiple sclerosis.

It is fitting that out of an admitted wrongdoing some benefit might be had. It is hoped that in this particular instance the Committee and the Executive Branch can rectify past abuses and reach a mutual solution for the disposal of these lethal poisons that will be directed toward bettering the lives of our citizens.

Senator TOWER. Mr. Chairman, I move the authorization of the letter.

The CHAIRMAN. It has been moved that the letter be authorized by the committee. Is there any discussion?

Senator BAKER. Mr. Chairman, I have a question I would like to ask.

The CHAIRMAN. Senator Baker.

Senator BAKER. This is the first time I have seen the letter and it appears to be satisfactory to me. I think I will have no objection to it; but as a matter of clarification, I take it that the tone of the letter is that we no longer as a committee have any objection to the destruction of the material but we invite your attention to its usefulness for other purposes. We make no effort to direct the Agency to do that.

The CHAIRMAN. That is correct.

Senator BAKER. After all that is an executive branch decision to be made with the President and by the CIA. But this is our suggestion.

The CHAIRMAN. That is correct, Senator. That is exactly what the letter says; it is the responsibility of the executive branch to make the decision. But we suggest that the CIA and the executive branch examine these possible benign medical and decent uses to which this poison could be put in limited quantities. The balance, I assume, should and would be destroyed.

Senator BAKER. Thank you, Mr. Chairman.

The CHAIRMAN. Any further discussion?

Senator Hart?

Senator HART of Colorado. Mr. Chairman, like Senator Baker this is the first indication I have heard of this letter. I for my part would like to withhold a vote on this at the present time, just my own vote.

The CHAIRMAN. Very well. The committee will not proceed to a vote at this moment in view of the objection of Senator Hart. But I would like to pass the letter down for the examination of each member. And later this morning we might reconsider the taking of a vote. And we will have further consultation.

The reason that the letter was prepared and presented was in order to bring an end to the impasse that has existed for some months. And I would hope that the committee could reach a vote this morning. The letter will be made available to all members and we will proceed with the remaining witnesses.

I want to thank you, Dr. Schantz, very much.

Dr. SCHANTZ. You are very welcome.

The CHAIRMAN. For your testimony this morning. And I will call a 5 minute recess during which I would like to ask Mr. Charles Senseney if he would come forward and take his position at the witness table.

The committee is recessed for 5 minutes.

[A brief recess was taken.]

The CHAIRMAN. The committee will please come back to order.

Mr. Senseney, would you please take the oath?

Do you solemnly swear that all the testimony you will give in this proceeding will be the truth, the whole truth, and nothing but the truth, so help you God?

Mr. SENSENEY. I do.

The CHAIRMAN. Thank you.

Mr. Senseney, do you have an opening statement you would like to make at this time?

TESTIMONY OF CHARLES A. SENSENEY, DEPARTMENT OF DEFENSE EMPLOYEE, FORMERLY IN THE SPECIAL OPERATIONS DIVISION AT FORT DETRICK

Mr. SENSENEY. Not really. Let us proceed.

The CHAIRMAN. All right. Then I will ask Mr. Schwarz to commence the questioning.

Mr. SCHWARZ. In February 1970, were you employed at Fort Detrick?

Mr. SENSENEY. Yes, sir.