History

of the

U.S. Food and Drug Administration

Interviewee: Caleb Kincaid

Interviewer: Donald R. Hamilton

Date: January 26, 1996

Place: Kent Island, MD

INTRODUCTION

This is a transcript of a taped oral history interview, one of a series conducted by the Food and Drug Administration's History Office. The interviews are with persons, whose recollections may serve to augment the written record. It is hoped that these narratives of things past will serve as one source along with written and pictorial source materials, for present and future researchers. The tapes and transcripts are a part of the collection of the National Library of Medicine.

DEPARTMENT OF HEALTH AND HUMAN SERVICE

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Caleb Kincaid

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DEPARTMENT OF HEALTH AND HUMAN SERVICES Public Health Service

Food and Drug Administration
Silver Spring, MD 20993

CASSETTE NUMBERS

GENERAL TOPIC OF INTERVIEW: History of the Food and Drug Administration

DATE: January 26, 1996 PLACE| Kent Island, MD LENGTH:

INTERVIEWEE:	INTERVIEWER(S):
NAME: Caleb Kincaid	NAME: Donald R. Hamilton
ADDRESS:	ADDRESS: Food and Drug Administration

FDA SERVICE DATES: FROM: 1960 TO: 1979

TITLE: Radiation Safety Officer

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INTERVIEW WITH MR. CALEB KINCAID

JANUARY 26, 1996

This is another in a series of interviews in the FDA's Oral History Program.

Today the interview is with Mr. Caleb Kincaid, former Radiation Safety Officer in the Food and Drug Administration.

Interview being held at the interviewee's residence. The date is January 26, 1996. In addition to Mr. Caleb Kincaid, is Mrs. Kincaid and Don Hamilton, the interviewer. The transcript of this interview will be placed in the National Library of Medicine and will become part of the FDA's Oral History Program.

Hamilton: Caleb, to start the interviews we would like to begin with a brief biography. Would you start with some of your early years? Where you were born, raised, and educated, and include work experiences you may recall prior of coming to FDA.

Kincaid: I was born in Morganton, North Carolina 73 years ago and I went to school in Morganton. While I was in high school, World War II started that's when I went into the Navy. During that time, I was around 24 years old and I just decided to make it a career. I was in the Medical Department of the Navy for 18 years and I retired from the Navy. When I did retire I became the Radiation Safety Officer at Chapman Avenue in Rockville.

Previous to that, I was at 24th and C Street, Washington, D.C., where the Bureau was at that time. Then when they moved to Rockville, I was transferred out with most of the rest of the bureau personnel.

We started out in the Bureau of Rad Health (what it was called at the time) with practically no equipment. We had to acquire x-ray machines, radioactive sources, starting from scratch. I spent (the rest of) my career with the Bureau (Chapman Avenue location). I would go down to 4th and C Streets occasionally, but most of my work was at Chapman Avenue.

Hamilton: You were probably one of the original people in the Chapman building?

Kincaid: Yes.

Hamilton: Were you there when it was only a two story building?

Kincaid: Yes, I stayed there and we kept getting more personnel and finally they put another two story on top of the original building. I never did really know how many people were in the bureau, but I were guess somewhere by the time I retired about 600 to 1000 people.

Hamilton: To contrast that, there were probably less than 100 when you started with the Bureau?

Kincaid: Yes, oh yes.

Hamilton: The first reference that I found in looking through some of the historical documents of the bureau was that the x-ray exposure study of 1964, you were listed as a Technical Director for that project.

Kincaid: Yes, but before that I did a lot of "putting out fire" type jobs, because what was the Bureau at that time, was just one office and we got called in on a lot of stuff, such as making a survey in a hospital. I also was assigned to the NS Savannah - the nuclear powered ship. I was the health physicist on the NS Savannah for about 1 year.

Hamilton: Did you do this on a detail, were you back in the Navy at that point?

Kincaid: No, I was a civilian. I had Navy experience, but they needed a health physicist on the NS Savannah which was just built, the first nuclear powered ship. I was working as a health physicist on the Savannah for about 6-8 months.

Hamilton: Now did that involved actual some of the travels that the Savannah made?

Kincaid: Yes, I picked Savannah up in New Jersey where it was built, and I stayed on it until they eventually hired a health physicist. After I stayed for about 8-10 months I left it and came back to Washington. It was a show piece of what had been done on a nuclear powered ship. It had a itinerary after it was built to go down the East Coast, stopping at all the big seaports and having big banquets when the ship came in and they would run tables up and down the decks and all of the citizens and big wheels came aboard

the Savannah, because it was a beautiful ship. They could not carry much cargo and they couldn't carry many people. It was more just a ship. I forget the exact number of staterooms on it but they probably had around 50-60 staterooms.

Hamilton: Was there much in the way of protests when you pulled into a harbor?

Kincaid: There were always a few protestors in the area. There was even one guy who had a sign on his shoulders saying not to go abroad the ship, it's a nuclear powered ship, etc. You always had that. But it was accepted fairly well, I would think.

Hamilton: Do you recall whether there was much in the way of increased background radiation or anything around the vessel?

Kincaid: No. You not only had a lot of shielding, but the ship sat in the water which is almost as good a shield as lead. We did surveys all around the reactor and we never found hardly anything.

Hamilton: You came back to Rockville with the Rad Health Operation. Is that when XES study started?

Kincaid: After the Savannah was up and running, I came back to work at Chapman just doing the health physicist work for the Bureau. If they needed someone to go out to airplane crashes that were carrying nuclear weapons, that was my job too.

Hamilton: Do you recall any particular crashes?

Kincaid: There was one up in Western Maryland, a 4 engine bomber. It was carrying two weapons. It crashed around Hagerstown. I went to crashes, bumming rides, anyway that I could get there. The Air Force plane crashed in rugged terrain up there on the mountain; it was scattered all over the mountainside and fortunately the two weapons on it were still intact. They didn't even split and spill any plutonium or anything. When we finally got there they had a lot of Army security people. We did the survey to determine whether there were any leaks which there wasn't, but we still had to post the area. As the word got out that a Air Force plane had crashed carrying nuclear weapon, there was a little concern all over Western Maryland. Again, we were fortunate that there was no problem, but that was the type of jobs that I ended up with.

Hamilton: I think that early in that time frame, there was still probably a lot more going on with weaponry than what we might suspect, even today. What some of the things that I've read, the idea that the Public Health Service was always in a battle with the Atomic Energy Commission, relative to who had jurisdiction.

Kincaid: That's true. We were an orphan group in that we really didn't have too many people who had any training in nuclear energy. We got involved in a lot of different activities that concern radiation that nobody else had any control over. We would go out and respond to it.

Hamilton: Is this a good time to go back to XES?

Kincaid: Sure. I guess I still have the response for weapon radiation safety as far as we were concerned. Then XES started and that was a time consuming period that I put in at the Bureau where

we started from the beginning again and had to design these film packs that we had to measure the radiation area that the film covered. The headquarters of it was the old Chapman Avenue building where we had all the material to put these film pack together and mail them out. They had to be designed to cover a specific area; I forget the exact measurements. Most chest x-rays are taken at a 72 inch distances and when you take an x-ray machine and open the shutters and take a film at 6 feet, the field is a big circle and you are only using a 14 x 17 film and we had to take film strips that was covered with papers so that light wouldn't darken the film. We put four arms on each 14 x 17 cassette and these had a 1 inch strip of x-ray film enclosed in a envelope so it would be light proof and they came out of each corner of the 14 x 17 film. They were attached by rivet. When the radiologist got it in the hospital, he could take it out of the shipping package and he had this film and a cardboard cassette with these four arms folded in, so when they got there, they just opened the four arms and had 14 x 17 plus another 14 or 15 inches on these arms. So you had one heck of an area.

Hamilton: So you had like better than a 3 foot square area to shoot at.

Kincaid: Well, most chest are taken at distances of 72 inches. So we wanted to catch any stray radiation where it (the beam) wasn't coned down the way it should have been.

Hamilton: That was one of the things they were trying to show, the need for collimation.

Kincaid: Right, and it really showed it, too. The design of it may not have been the best, but at the time, it was the only thing we had and it worked pretty well.

Hamilton: Was the XES also a data collection as far as how many films that were taken or was it solely as looking at a particular installation and how much radiation they were using for an individual film?

Kincaid: Yes, when they got the film that they were going to use (that we sent to them), they just had the technician to go in and set-up just as if he was taken a chest x-ray. He put down all the technical factors, what to use, KVP and distance and all the other things. Then they will make this exposure and fold everything back up and put back in a return mailer back to Rockville where it would be developed at the XES laboratory.

Hamilton: Did they actually have a dark room where they developed it?

Kincaid: Yes. It was all done by mail. And doing it by mail, you usually have some problems, things getting lost, etc. We had a good crew and they did a lot of work.

Hamilton: My research basically showed that they started with a trial study first in Montgomery County and then up in Berks County, Pennsylvania before they decided to try doing it on national scale. For example, when it was done in Montgomery County did the bureau staff actually go into the facilities or were they using the mail route at that time?

Kincaid: No, we usually carried them in our car and drove to the hospital or whatever. The ones that were out-of-town we did mail them.

Hamilton: For example, were you trying in Montgomery County and Berks County to get a sample of the doctor's offices or were you trying to take them all?

Kincaid: No, we were just taking a sample, not them all. We had some problems, but we worked the bugs out and got it on some kind of schedule, we turned out a lot of films, they were mostly shipping problems. Some people would come across them and not know what to do, even though the instructions and our address was on the package. The attrition rate wasn't that bad.

Hamilton: Once the films came in and were developed, then you were responsible for basically looking at the amount of exposure on the film in order to translate the radiation delivered to the film.

Kincaid: Yes, when we first started we used a small film, like a dental film. That was taped to the overall cassette that all the films came in. We had the 14 x 17 film, its two strips and a TLD (thermoluminscent dosimeter) type film. All of that was sent back and developed. Of course on the arms, we weren't trying to determine what the radiation (exposure) was on the extremities.

Hamilton: But mainly that there was radiation (exposure) and that they hadn't collimated correctly.

Kincaid: Right, it would show that outline of (the exposure). The biggest problem we encountered is that the technicians probably

didn't take enough time to position them right or the arm would shift somewhere. It was just a piece of film on a cardboard backing, only about an inch wide and 36 inches wide. Sometimes when they exposed the film the arm would be sticking out and then something would give way and it would fall over. It took a lot of deciphering to determine what occurred, or what we thought occurred. For a program that was just getting off the ground, it took a lot of work to work out some of these encounters that you have which you never even think of that happens out there. You know when you are mailing things around the country it can get lost and hidden and show up 2 months later when somebody finds it. There was a lot of work that went into this program.

Hamilton: What kind of feedback do you recall that the facilities got on their film once they have sent it back and had been developed? Did the bureau try to get back to the individual physicians to point out there lack of collimation, for example?

Kincaid: I was not in on the mailing part, so I do not know have the follow-up on it. I do know that it required a lot of people to follow-up on it. As far as I know, everybody that worked on it got the information they were looking for and sometime it took a lot of detective work to find out what happened to it. If there was an exposure that was excessively large, like we couldn't measure the radiation darkening of the film because it exceeded the limits, then we would follow-up by sending them another one and telling them to see if they couldn't cone down on it a little better than that because we couldn't even find out where the results of the darkening of the film were.

Hamilton: That was XES in 1964 and the following one was in 1970. Was there anything that was done between those dates?

Kincaid: No, I think that was it.

Hamilton: Was there anything in particularly different about the one in 1970 from the technical side, your side, of it?

Kincaid: I don't know, that was a period of 4-5 years. I think that we still used the same type of film. I don't remember any changes.

Hamilton: Then repeating it was to see what differences had occurred in radiological practice in the meantime.

Kincaid: To see if they learned anything from what the first one had showed us. I think we used the same type of film. It was all Kodak. I've never heard anyone say that the film changed or anything.

Hamilton: At that time, Kodak practically had a monopoly on film production, didn't they?

Kincaid: Yeah, I think that there were only two manufacturers, DuPont and Kodak, at the time. Most of the film that I was connected with, was all Kodak.

Hamilton: Another area that I would like to get some input on is some of the radium experiences that you've had.

Kincaid: The bureau would get calls from State Health Departments and some individual hospitals that had ended up with radium sources that some physician had left there, and been transferred, and they did not know what to do with them and would somehow find someone that knew that the bureau had a person or persons that would come out, the field people.

Hamilton: Radium was fairly widely used and not very well controlled for a long period of time. Basically, any physician and I guess other people too probably could get a radium source without too much difficulty and then when they found that radium was causing some health problems then it sort of fell into disfavor and people would trying to get rid of it, but many facilities didn't realize they even have some until some survey turned up a source.

Kincaid: Yes, that's the way a lot of the sources were found and a lot of the sources, believe it or not, were in pharmacies. You know that there are quite a few radioactive compounds, or there used to be, and a pharmacist would come across it and contact someone at the bureau and want to dispose of it because he had no use for it and it was a dangerous material. We had a collection of different pharmaceuticals that has been sitting on shelves in pharmacies, I guess for years. So I guess someone made the decision to get rid of these things so if someone comes and inspects and says what is this radium sitting here for or whatever. There were a lot of medication that contained radioactive materials. I don't know what their purpose was, but I guess therapeutic.

Hamilton: So, they weren't necessary just needles and inserts and things like these. This actually included a collection of radium salts as well.

Kincaid: Yes, They were sitting on shelf and we did get rid of a lot of radioactive material.

Hamilton: Was it stored in Chapman?

Kincaid: Yes, it was stored in a safe that was about 8 inches of steel with a huge door on it, down in the basement of the Chapman. I would get the sources in and put them in this steel shield under lock and key.

Hamilton: Did you dispose of these somewhere?

Kincaid: We disposed of them to the military. First of all, we would get some of our field people to go to a certain place and they would see what they would need to ship them back to us and we would store it. Then we got a radiation disposal company to take them and sent them out for burial or however they handled it.

Hamilton: So the government got a contract for a commercial firm to take care of the disposal. I thought that there was something about a facility in Montgomery, AL?

Kincaid: Yes, we had a laboratory in Montgomery.

Hamilton: The term that I found in during some work was the term "surpak." Was that the packaging that they used for sending out the film, or was that unrelated to XES?

Kincaid: I believe that was unrelated, I don't know if someone called them a "surpak." It's possible.

Hamilton: Once they had finished during the two pilot studies we mentioned before and then decided they were going to go on a national scale, did they actually go to a statistical sample?

Kincaid: No, it was just a sample.

Hamilton: Anything else you recall about XES that you would like to mention?

Kincaid: No, this is my own opinion, that from starting with somebody just having an idea that we ought to check all the x-ray machines in the country or whatever it was they thought of at the time. We did, I thought, and I'm not patting my self on the back because there were a lot of people working on this beside me, but from starting from scratch and accomplishing what we did that had never been done before I thought it turned out really well and the people that devised the study and made all the field arrangements, I thought we did fairly well. It ended up to be a much larger study than they thought they were going to have. It just grew. After we learned a little about it to start with, we got much better. I don't know what the final totals were, how many packs we sent out and how many we got back, but it was quite a few films.

Hamilton: Let's return to the radium disposal.

Kincaid: Well, I think the radium came up sort of as an afterthought because when word got around we were doing this survey some of the people in the pharmacies would contact the local health

departments and say "Hey doc, what are we going to do with this radiation we got sitting here?" The word got back to the people out in the field that some pharmacies had radium needles laying around and some had been left from different procedures that they had done in hospitals. So some of the rad health representatives, they would call them out in the field and rad health would offer their services of taking these little sources and packaging them so that they could be shipped through the post office or through shipping channels and they would end up back here in Rockville. We weren't really authorized to do it, but we did it mostly as a favor. Our rad health people knew about it and we accepted a lot of them (the sources). There was probably no record ever kept except for how many there was.

Hamilton: What about licensing? Wasn't radium licensable?

Kincaid: No, not through the Atomic Energy Commission. (It was a) naturally occurring substance.

Hamilton: It didn't have any regulatory authority on it. There was no real reason why AEC would have jurisdiction?

Kincaid: No. I do not know if there is a government agency now that regulates any radium sources or not.

Hamilton: As far as I know now, it's still a State problem. The NRC (Nuclear Regulatory Commission) has looked at what is called NARM (Naturally Occurring and Accelerator Produced Radioactive Materials), but I don't think that there is any change to that jurisdiction today.

Kincaid: Well, over the years we did accumulate a inventory of sources of inventory that people didn't want. They would send them to us and we would dispose of them, unless we had a use for them.

Hamilton: Was there any feedback again to those folks that turned up these sources as far as what they had been with them or anything?

Kincaid: If one turned up in a State, they would usually try to get a hold of a rad health representative. The State person would give him advice on how to package them or he would package them and send them to us.

Hamilton: The bureau was involved primarily because we had established a rapport with the local State people. And this grew out of this program?

Kincaid: Yes. Our rad health representatives knew what we were doing back in Rockville by word of mouth more than anything else. And the word got around that if you had a problem with a radioactive source, contact Rockville.

Hamilton: Another episode in the bureau's history was when again they were called in to help decontaminate a private residence in Lansdowne, PA. That occurred during part of your watch there, what was your role in that?

Kincaid: I do not remember off the top of my head. I don't know if I went up there and did a survey or not. I think I did but I don't remember.

Hamilton: The other area that you spent a fair amount of your time then was the area of Radiation Safety and as you said before, you were the Radiation Safety Officer for the agency at the time of your retirement. Our conversation prior had indicated that you also had spent some time doing radiation safety surveys and radiation safety advisory activities, I guess, for several other agencies.

Kincaid: Just as a favor, they would get my name and they would contact me and ask if we could handle the disposal of whatever. A lot of it was radioactive compounds they would pick-up in pharmacies across the country in the State. It would be just a chemical, but it was still radioactive. It's hard for one pharmacy to get rid of a radioactive jar, for example, and most States are better equipped now than they were 15-20 years ago.

Hamilton: Were you ever called down to work on any kinds of x-ray machines that some of these departments may have operated?

Kincaid: No, I was never involved in a machine. I did a lot of measurements on machines during the XES studies.

Hamilton: I thought it was mentioned in Terrill's history of some work at the Smithsonian.

Kincaid: Yes, somebody contacted Terrill from the Air & Space Museum. They had all of these aircraft and space vehicles that they had put in orbit. A lot of them had radium dial components in these capsules and they were on display. The Smithsonian would let people go through these space capsules and they had these radium sources to provide light for the astronauts so they could see the

dials. We did a survey and told them which ones they could leave with no problem and others which they will have to remove. And they did that. But we did the survey.

Hamilton: As the Radiation Safety Officer, you had responsibilities for the film badge program. Is that something that was ongoing when you came on board or actually were you one of the original program.

Kincaid: The PHS hospitals and all the other people eventually found out that they had been using radioactive material. The word got around and somebody decided that you cannot keep taking a sample here and a sample there. So they had the rad health representatives from the regions at some of the rad health meetings and they arranged it with (John C.) Villforth so that we would take those sources, but the rad health people would pick up the real small sources and they would send them back to Rockville. I would gather them and keep them until I had enough to package and send out for burial.

Hamilton: We were talking about film badges.

Kincaid: We got into film badges because of the radium program. We had no say so providing radiation detection devices to general public, but we would help people when they ask for our help to get rid those sources.

Hamilton: It was a requirement from very early on from the Atomic Energy Commission that people involved with working with radioactive materials and x-ray, etc. that they had some sort of badge that would indicate radiation exposure. Initially, they were

just pieces of film and later they became TLD's. At the early juncture of the program was the bureau actually doing their own readings on those badges or did they always sent them out for a commercial firm to do the reading?

Kincaid: Most of the time we sent them commercial. Out at Murphy's lab, in Rockville, they had a couple densitometers that could be used to measure film badges. But we really never got into reading the films that way.

Hamilton: Were there ever any major overexposures of center or bureau people?

Kincaid: Once in a while, we would get a film back from an Indian Health Service dispensary somewhere out in the middle of the desert. They just wanted to see if the TLD worked. So they would zap them, you know, put them under the machine, and we would get this report of a hell of an exposure. We would contact the rad health rep and he would investigate and they would confess what they had done.

Hamilton: They just wanted to know if you were on your toes.

Kincaid; They just wanted to see what would happen, I think.

Hamilton: One of the things that was recognized as the significant achievement in the area was the development of a Radiation Safety Manual. I don't know if it was started just for PHS facilities and then expanded into a general document, but you still go into nuclear medicine departments around the country and still find that document being used.

Kincaid: There were five or six people in the bureau that put together a 5 or 6 page thing to start with and over the years they have picked up on it. I haven't seen one in years so I don't know what it looks like anymore. It was just basic radiation protection.

Hamilton: In the middle 60's, you said that you were called up to the (Pennsylvania) Health Department regarding the flooding of the Susquehanna River.

Kincaid: All up and down the river, but what worried people at the time was when the river overflowed its banks on a huge curve in the river, there was a graveyard under 10-15 feet of water, and when the water receded, there were a lot of coffins unearthed in the Wilkes-Barre area. It was strange to see those coffins. There was no radiation link but it was one of those assignments that someone thought the bureau should look into.

Hamilton: Speaking of the Susquehanna, when the Three Mile Island had their episode in 1978, you were radiation safety officer then, again the bureau got called in to assist the State of Pennsylvania and the United States government. You were involved in that situation?

Kincaid: Yes.

Hamilton: Did you make trips to Pennsylvania to support other bureau people up there?

Kincaid: Yes, it wasn't myself. The State had people there and the Atomic Energy Commission had people there. We had additional

qualified people there onsite over time. I was there for the emergency part of it then the State would take over.

Hamilton: Did we supply film badges or anything? Was that part of our program at that point?

Kincaid: We did early before we start using TLD's. Routine stuff that we supplied.

Hamilton: Any other particular areas?

Kincaid: It was nice to be on the US Savannah. It was a great ship. It was the first of its kind.