

Nevada Test Site Oral History Project
University of Nevada, Las Vegas

Interview with
Norma Cox

June 8, 2004
Las Vegas, Nevada

Interview Conducted By
Shannon Applegate

© 2007 by UNLV Libraries

Oral history is a method of collecting historical information through recorded interviews conducted by an interviewer/researcher with an interviewee/narrator who possesses firsthand knowledge of historically significant events. The goal is to create an archive which adds relevant material to the existing historical record. Oral history recordings and transcripts are primary source material and do not represent the final, verified, or complete narrative of the events under discussion. Rather, oral history is a spoken remembrance or dialogue, reflecting the interviewee's memories, points of view and personal opinions about events in response to the interviewer's specific questions. Oral history interviews document each interviewee's personal engagement with the history in question. They are unique records, reflecting the particular meaning the interviewee draws from her/his individual life experience.

Produced by:

The Nevada Test Site Oral History Project

Departments of History and Sociology
University of Nevada, Las Vegas, 89154-5020

Director and Editor

Mary Palevsky

Principal Investigators

Robert Futrell, Dept. of Sociology

Andrew Kirk, Dept. of History

The material in the *Nevada Test Site Oral History Project* archive is based upon work supported by the U.S. Dept. of Energy under award number DEFG52-03NV99203 and the U.S. Dept. of Education under award number P116Z040093.

Any opinions, findings, and conclusions or recommendations expressed in these recordings and transcripts are those of project participants—oral history interviewees and/or oral history interviewers—and do not necessarily reflect the views of the U.S. Department of Energy or the U.S. Department of Education.

Interview with Norma Cox

June 8, 2004

Conducted by Shannon Applegate

Table of Contents

Introduction: work for the AEC, recounts story of part-time work for Frank Rogers and typing first logistical support contract for REEC	1
Talks about work with Oliver Placak (USPHS) and Joe Sanders (AEC), their work in public relations and offsite radiological safety	2
Recalls creation of USPHS (later EPA) air force for offsite radiation monitoring and other environmental studies	8
Talks about the EPA farm, and use of animals in testing at the NTS	10
Doing whole body counting on humans for possible radiation exposure	12
Recounts experiences in government service, including Agriculture Research Service and National Park Service	14
Talks about creation and usage of Basic Capability accounting system in DOE	15
Influence of presidential administrations on government budgetary process	16
Republican administrations and their effect on promotion opportunities for female government employees	17
EPA concerns in the Las Vegas and NTS area	18
Talks about accidents at the NTS and her work involvement in them	19
Formation of the AEC and growth of USPHS office in Las Vegas, NV; establishment of MOL	22
USPHS (later EPA) and relationship with Downwinders; offsite radiation safety and monitoring	23
Talks about her work monitoring Mercury, NV and filling in on monitoring flights	25
Response to protests and concerns about testing, changing attitudes	27
Recalls her work doing clearances for test observers, and interviews of workers for a secret storage repository for weapons at the NTS	29
Talks about test observers, including military at Camp Desert Rock and those at News Nob	31
Impressions of atmospheric tests and their effects	32
Muses on need for, and loss of, communication skills among government workers, job relationships, and loyalty	34
Discusses family background, early life in Las Vegas, NV, college education, marriage, first job as secretary with AEC	35
Talks about early problems for women in government service	39
Work on environmental issues in southern Nevada	41
Problems for women in work, and their need to assert themselves; personal experiences	42
Conclusion: opinions on affirmative action for minorities and women	51

Interview with Norma Cox

June 8, 2004 in Las Vegas, NV
Conducted by Shannon Applegate

[00:00:00] Begin Track 2, Disk 1.

Shannon Applegate: *OK, so we're recording.*

Norma Cox: OK. Actually I started to work for the AEC [Atomic Energy Commission] in 1951.

And one of the interesting things I did, but it was a little later on, was my husband and I, first thing we did was buy a house, which we had no business of doing. So we were kind of financially strapped. And I'd made noises to my boss that I needed to find another source of revenue. He suggested to a fellow named Frank Rogers—who is the father of the new chancellor over here, Jim Rogers—he suggested to him that I was looking for work and maybe I would do what he needed to have done. Well basically what it was, was to type the first contract—

[Break for phone call]

So anyway he was looking for someone to type up the first REECo [Reynolds Electrical and Engineering Company] contract which he had just written. So he came over and I typed it in my kitchen in our new home. But anyway that was when they took over. Before that there was a firm by the name of McNeil something or other that had the first logistical support contract. And Frank Rogers at that time actually worked for Zia Corporation [Company], which was a big contractor too for the AEC. But anyway that was kind of an interesting experience.

And that's how you got on board with the AEC and found out that they were starting an office?

No, no, I found out at Nellis [Air Force Base]. No, I had been working for the AEC for several years when this happened, because as I said we were actually located on Main Street, and before that when they started the office they started it on Fremont.

So the contract that you typed up, that was for REECo.

Yes, the first contract that was issued by this office.

Oh, OK, but you were already an employee of the AEC.

Yes. Oh yes. And I just did it [the contract] as part-time work, but I thought it was kind of interesting because the new chancellor is Frank Rogers's son, and I remember Frank Rogers when he was that high [indicating height].

And now he's the chancellor.

Yes. And it was very—I mean, megabucks; he's a very wealthy man. But anyway, it's that I kind of forgot some of what we really talked about.

Well, it seemed like that we talked in very broad strokes over your whole career, which we are very interested in. We have a lot of environmental stuff that we're doing in parks and services and so I have a professor that was really interested in your take on the Grand Canyon and, you know, all of that. I mean he found that extremely interesting so, you know, wherever this goes today, whether it goes away from the Nevada Test Site, it's all very fascinating to us.

Oh, OK. Well then, you know, one of the things—I know the people in the old AEC and now DOE [Department of Energy] don't recognize that when I worked for EPA [Environmental Protection Agency] I was probably one of the principal contacts. The principal contact was always the director because he served on the control panel, you know, deciding whether tests would go or not. But I was the one that defended the budget. I was the one that was responsible for employment of people. I was the one responsible for the contracts that maybe the AEC would issue for us. Also some of the interesting things that happened, I don't think we talked about, was in the early days. Not everybody was real keen on the testing program, particularly in the outlying areas.

And this was in the 1950s?

Yes. And so my boss, Joe Sanders, and Ollie Placak, who later became my boss when I went to work for the Public Health Service, those two men would climb into a pickup truck with shovels so they could get themselves out of the sand, and they drove all around the test site—up into Ely and Cedar City and St. George, Utah. They're the ones that really convinced people in the outlying areas that the testing program wasn't going to hurt them.

Oh, OK, so they did PR [public relations].

They did PR.

Now did they do that on their own or—?

No, Joe Sanders was head of the AEC and Ollie Placak—the AEC had asked the Public Health Service to send out a contingent of people that knew something about radiation. In those days, there was very little known about radiation. Ollie Placak, I think he was classified as a sanitary engineer but he was basically a research chemist. And then as I said Joe Sanders was just the manager, and they went around and sat down at dinner tables with people and talked to them and was able to convince them that testing was OK.

[00:05:00] *And did they get them to sign something that the people—?*

No.

Or it was just to calm protests.

Just to calm the—you know. There wasn't a lot of protest but people—it was oh, it was a big unknown. And at that point in time they did not have the knowledge about weather; they did not have the knowledge about seismic that they have in more recent years. And so when they set off a test they really didn't know which way it was going to go, the seismic motion, and they didn't know much about the weather patterns and where that was going to go.

I left the AEC because as I mentioned to you, they wouldn't give me a leave of absence. And so when my husband got better and was ready to go back to work, they had filled my position and so I went to work for Ollie Placak because I had done some work for him. He and Mel Carter, I think those were the only two people that were here from the Public Health Service, they were in the same office as the AEC.

Oh, OK. And the Public Health Service came out as a result of the test site.

Yes.

OK. OK. That makes sense.

Yes, they came out to do the off site radiological safety. They did not want to do the on site, so at first it was LASL [Los Alamos Scientific Laboratory] and then later it became REEC Co that did that.

That did the on site?

Yes.

Oh. Why didn't Public Health want to do the on site?

I think there was always a quarrel about the ethics of it. I think the thinking was, you couldn't do both and really remain impartial, and so they opted to do the off site. Which for the AEC was the best thing going because when I went back to work they had filled my position but Ollie Placak said they had wanted him to hire a secretary, so he hired me. And I started with the Public Health Service and there was myself and Mel Carter and Joe Sanders and a fellow by the name of Dick Gilmore. There were four of us. Well, we eventually grew to about 450 people and most of it was for work for the AEC. So we had a large reimbursable contract with the AEC.

OK, so the Public Health Service was being contracted out by the AEC.

Right. Yes.

OK. So you were still kind of working for the AEC even though you were with Public Health Service.

Yes. Right. So as I say, the people from the AEC just didn't realize, I mean they were kind of shocked when I show up at the AEC dinners and the Public Health Service people are now EPA. They don't have any concept that that's where my beginnings were. But anyway, it was fortunate for the AEC because what they were able to do—when they had an operational period—they brought out some people from Washington. But most of the people came out of state health offices—they were heads of state health offices—or they brought them out of schools that had some specialty in radiation. And they would bring them out in groups of about thirty, and then they would go if the op—well, the operational period did last more. I think they were only there for six weeks and then the other group would come in. And they were sent around to all the outlying areas. What they did, they collected milk, water, food samples; put out what they call fallout trays so any fallout would come down on the trays and they could measure it. They carried Geiger counters in case the wind did blow—it did blow toward Cedar City and St. George on a couple of occasions—and they would be there to make sure the people got showered and got a new set of clothes and—

Oh really.

Yes, and you know, the thing that really upsets me today is everybody speaks as if it was done so cavalierly, and it wasn't. I know it wasn't because I was there operating the radio while these [00:10:00] guys were all around, and I ended up typing all the results.

Oh really.

Yes, I put together the booklets. Now I'm told by Mel that the booklets are now in the hands of LASL but from what all I hear, nobody has any records anymore, so I don't know.

Now how far around did they go? Was there a certain radius around the actual test?

Yes. I think it was about 300 miles. And in order that they could maintain contact, they established a state-of-the-art radio and it's still used at the test site. It was a pretty remarkable system.

Do you know who came up with that?

Well, there was a fellow named Paul Buchholz, and I don't know whether it's him. I don't remember the other names. Most of them came out of Albuquerque. But REECo was given the responsibility for the radio contacts, and I don't know whether it was them or actually within the AEC that they did all that. But it was 300 miles around so all the little communities had a monitor up there.

Right, and they took it very seriously and they were methodical and—?

Yes, they were very methodical. The only problem was that in those days the state-of-the-art was limited as far as Geiger counters or any—you know, they didn't have much sensitivity towards radiation in the instruments—and of course the standards that were set were set much higher than they're set now. Well, they now have the instrumentation that they can measure it, but those days they didn't have it.

And the standard, how did they set the standard?

It was set by I think probably Public Health Service.

OK, so it was just through the knowledge that they had at the time that--

Yes. In fact one of the fellows [Harold Andrews] that I admire probably as much as anybody was the fellow that worked for NIH [National Institutes of Health], which was then under what was then the Department of Health, Education, and Welfare. Public Health Service was also under. But he was one of the fellows I spent some time with—my first trip to Washington—he took me

on a tour of NIH, but anyway he had written a first primer on radiation. Because I remember when the guys came out and they'd studied it in college and here was—.

So why did you go to Washington?

Oh, well, the Public Health Service initially had the people in Washington doing all the personnel and their finance and everything, so since I was going to do it locally I went in to meet them and, you know, just orientation.

Oh, right. To get trained and all.

To get trained, yes. But I had a marvelous time.

How long were you there?

A week.

So you got to see all the sights and—.

Yes. And then my tour guide was a young fellow that headed up the group that was fighting the repository in New Mexico—salt dome mine. Anyway he took me around and he was really a cosmopolitan, so I got to see art galleries, I got to see the zoo it was really a lot of fun.

Vacation.

Yes. Well, I had work to do. I spent the day working and then the— we got to do some things.

Now was Ollie Placak, was he a scientist?

Yes, he was a research chemist.

OK, so when he would go and talk to people, he knew what he was talking about. He was up to date on all the latest information and—.

Anyway, later of course they decided they needed more information about radiation [00:15:00] levels leaving the test site. Well, in between, Public Health Service was given. They converted the program from just doing it during operational periods to continuing it through the year. So

they needed somebody more full-time than bringing all these people in; I think we did about three operational periods.

Now when you say “operational periods” are you talking about just the test or—?

No, I’m talking about a series of tests, like Hardtack [II].

Oh, OK. And that would span just a few months.

Yes. But anyway they decided they needed to expand the radiation testing and so the Public Health Service was given authority to organize an air force.

How do you mean, “organize the air force”?

Well, you know, they do aerial monitoring, because they were finding some of the—when they had an unexpected event or an accident—the radiation would end up in Chicago. It would be past the 300 miles.

Oh, it’d be that far.

Yes, because they were testing bigger devices, and so we built their air force. It was interesting because what they did, we had this one commissioned officer, who still lives here. Anyway he would go over to Davis-Monthan [Air Force Base] and pick up old military aircraft that had been put out to pasture, and we got that and they bought new motors and everything. Well anyway, the interesting thing about that was you have to have legislative authority to have airplanes in the federal government. I don’t know how it is now. You know, certainly agencies have them now. Then, only the military could have airplanes. And so it was one of my jobs to justify having the air force, which is always interesting because Congress could never understand why we had airplanes.

Right. So did you have to write up a proposal?

I had to write up a defense for it, and spend many hours on the telephone justifying it to somebody that was going to have to go in and argue it in front of Congress. But anyway, that air force was eventually turned over to, I think, EG&G [Edgerton, Germeshausen, and Grier] probably and is still with EG&G.

How many planes did you acquire?

We ended up with thirteen. Also in the meantime, when we became the EPA, then EPA did this lake eutrophication study all across the United States because the lakes, notably the Great Lakes, were dying. And so we had quite a few helicopters and what they would do is they'd land or hover just above the water and they'd drop this instrumentation and take samples so they could follow what was happening to the lakes.

So you grew from five people to an air force.

Well, I mean it was more than just the air force. The air force wasn't that big, but the first part of the air force was for AEC; the second part was for EPA.

Now did you house all the planes at Nellis, or were they—?

No, they were at McCarran. And we had to hire pilots. I picked up my personnel officer from Nellis, and at Nellis they had a real big personnel department and so each person did one certain job. Well, she came to work for me and she had *all* this, you know. She was drawing up position descriptions for airplane mechanics, for airplane pilots. We even had a farm out at the test site, which we ran for the AEC; it was paid with AEC money. And we had animal workers, and we had a great variety—.

Was the farm under the Public Health Service first and then—?

Well, we'd become EPA. It would become EPA. And I don't think the farm exists now.

[00:20:00] *I've heard about the EPA farm. Yes, there's a lot of pictures with the cow and—.*

Oh yes. Sam.

Yes. Oh, was that the cow's name?

Yes. There were many Sams. They were always dragging them off to some sort of state fair somewhere.

Oh really?

Yes.

So they'd go as an attraction?

But they had the rumin plug and they'd reach in and get the—.

Oh, so Sam would go travel and work the circuit.

Yes.

So was that as part of just teaching the public about—?

Radiation, yes. Yes.

OK. Oh, that's interesting.

Yes. But have you heard of a program that was out at the 400 area?

No.

Well, that was a program to determine whether or not nuclear engines could be used in spacecraft.

I think you told me about this in the last interview, and you got to see the track and—.

Yes. But then our people also ran some biological experiments, and one of them I remember was using mice and setting them out so far from the nuclear engine that was running around, and they had to buy sun visors for the mice.

No! They bought them or did they have to make them?

Well, they might've been able to use a child's, I don't know.

So why did they have to have sunglasses?

Because it was so hot in the sun for those animals.

Oh, that is so funny! So they had little animal sunglasses. Oh, that's funny. Well, we've heard that there were dogs out there they had to put little booties on them because it was so hot and they used the little golf—.

Yes. Well, I remember, I was showing a group from Washington our trailers out there. Another thing, in those days, the government workers agencies didn't buy refrigerators. And we always had to have a refrigerator—they used to keep the animal samples in. And anyway, I was out there and this one person from Washington was very concerned that we had a refrigerator, and so I said, well, we keep animal samples. Oh sure! I opened it up and there was a frozen beagle. And they saw that I wasn't fibbing and—.

Right. So you did experiments on dogs and cats?

Yes. We had biologists and they did experiments on dogs.

Do you know what kind of experiments they did or—?

Well, most of them was the radiation effects. That's what the farm was for, too.

I heard something about pigs. This was in the real early days, that they'd put uniforms on the pigs?

Well, they did use pigs. Now, I don't remember anything about them having uniforms on. But the pigs they used because the pig skin is closest to the human, and so that's why they used them.

Right. So did you have a lot of scientists coming in and out of Public Health Service on grants, is that how it worked?

No, we had a lot employed. In fact most of our employees were the technical people, either scientists—but we had water specialists, we had research chemists, we had many nuclear physicists.

And how would new experiments come up? Like would someone just think of something that would be valuable?

Well, they were always concerned about biological effect and so that's what most of them were for; to try to determine what the effect on animals were. We even had a whole body counter and I guess the place it's located in is still there. People from around the test site, family members were brought in and they were put in the whole body counter. Every once in a while they got a request from one of the hospitals—this is before the MRIs [magnetic resonance imaging] or anything—and they could do a whole body count.

Oh, was that like you would go through a machine and it would tell you how much radiation?

Yes. Right.

Oh, OK. And so people from the outlying areas could utilize that if they—?

Well no, what they did was they'd bring people in, and of course they had to be willing to come, but they brought children in, and unfortunately most of that data's been lost, which is just really too bad.

[00:25:00] *Did it look like an MRI machine?*

Well, they had to have shielding, I vaguely remember but what they did is they went into something like an MRI machine—some of them got claustrophobic—then they would shoot them with the sensors and determine whether they had radiation.

Oh, OK, so it wasn't like an X-ray. It was more just trying to detect radiation levels in someone's body.

Yes.

Oh, that's interesting. And did they do that out at the test site?

No, they did it right over here, in the university [UNLV].

Oh, right on campus.

Yes, and do you know where the EPA buildings are?

No.

Oh. Well, they've got some temporary buildings but there was a series of five buildings. We had the biology building, we had the—or were there four? I guess there were four. I mean it started as a water lab and then it became the biology building, and then the administration, and the area monitoring, and then biology was down here.

So you actually worked on campus.

Yes, I worked the longest period. I went to work for them in 1957 and I worked for them until 1974.

And then you went to San Francisco.

Right, from there.

In 1974 you went to San Francisco. OK. And then when did you retire?

In 1981.

In 1981. And you retired with a GS-15 [government service] status, which was pretty high. I was telling everybody about that after the interview.

Well, I always felt it was something I should've gotten right here, but as I explained to you I didn't, so I got it later. But the best thing about it, it led to some marvelous experiences. With Agriculture I learned all about water and farming and all that, but mainly about water. And now in my volunteer work people consider me somewhat of an expert. And then with the [National]

Park Service we had all of the western—I mean we had the parks in California, Arizona, Nevada, Hawaii, Guam. So I got to do quite a bit of traveling with that.

And that's what you did in 1974. You went to San Francisco and you worked with the Park Service.

Oh well, I first worked for the Agriculture Research Service. And then I left there and went to work for the Park Service in about 1978.

OK. Now when you started with the EPA you started clerical and then did you just move up through—? How—? There were—?

Yes. Well, as I said there were only four of us, and more people kept coming in. They'd give me additional responsibilities, and when I left I was a GS-13.

What was your title?

I was management officer.

OK. And were you in charge of the whole office structure? Was that—?

No, I was charge of personnel, budget and finance, general services, and safety. I guess that was it.

That's quite a load.

Yes, it was quite a load.

Would you have to put the budget together?

Yes.

OK. And then that was the other question I was going to ask you. You had talked about how you came up with the Basic Capability for accounting. Now why would the EPA use that accounting?

Well, the EPA didn't use it. Actually we had two accounting systems. We had the EPA accounting system and we used the DOE accounting system. And so people got so irritated

because we had two different accounting systems. And the reason I thought we needed to go to Basic Capability, because initially they had these operational period and that. They would give us money for those, but when we were doing them on a continuing basis, we never knew when somebody was going to throw in some extra work. [00:30:00] So we wanted the ability to hire a basic capability or the basic number of people, and then if we needed to supplement that, they could provide us that money on a test basis, which as I said it took a long, long time to get them to see that.

To get the AEC to see that?

Yes.

OK. And that was the presentation that you made.

Yes. Many, many times.

And you presented that in front of the AEC, not Nevada AEC but just the government?

No, I presented it to the people of the Nevada Operations Office. It had become the Nevada operations office then.

Now the Basic Capability, you said you created that, right?

Yes.

And did you create that out of the AEC accounting system, from what you learned there?

Yes. Well, that actually was more of a budgeting thing. We had to account for the money that was spent by tests or projects. But we got the money in just a big chunk of money, and when DOE had lots of money it was no problem. We'd say, well, we need more, they'd give us more. But eventually they started running into budget limitations and so it became a problem if we didn't have the money and didn't have the people to provide the service they needed. So I mean it just seemed logical that you would—.

And you said the EPA still uses that, right?

No, not the EPA. You know, the EPA never used it.

OK. The AEC?

Yes, or DOE. And how I found out about it, I was on this *ad hoc* committee and this guy from Nevada Operations Office came in and bragged about how they were the only operations office that budgeted basic capability and I thought, Oh my God.

Oh, that is funny.

Well, I thought it was funny too but, you know, I wish I'd kept the booklet that I put together for Bob Miller but I didn't. You get so much stuff—you get rid of it but—.

And from my reading, the budgetary process was pretty convoluted. It seemed very complicated just within the AEC itself. Would the budgetary process change depending upon the administration, you know, which presidential administration was in office, or would it stay pretty much the same?

Actually it didn't used to change too much but—well, I can remember, I was with the EPA when Nixon got into office. And just between us, I don't know what persuasion you are, I mean they both do it but it's much, much more rampant when the Republicans are in there. They have all these friends and cohorts they want to hire and so a lot of jobs are created to cover these people.

And that comes out of the budget, I would imagine, yes.

But no, probably the biggest difference in the way budgeting is, there's been far less emphasis on science. For example, the Agriculture Research Service. When Reagan was elected he tried to abolish it and darn near did. And then, well, after Clinton got in, why, they're restoring it now.

And you would feel the effects at the EPA, right?

Yes. Well, you know what's happened to EPA under Reagan. I mean lots of people were forced out of the agency. And frankly, one of the reason I opted to retire, I could see that was the end of possibilities for women.

Yes. And that was due to the presidential administration, the power that was in office.

Yes, in office. Most of the women that I knew have sort of been [00:35:00] forced out. They're bringing in women now but they're usually people that have worked on the political campaigns and things.

Right. Now how would you feel it at the EPA, like when you said Reagan abolished or tried to abolish the agricultural research, how would that be felt there?

Oh my goodness, what happened is almost every agency was in such turmoil, nobody was doing their work. Everybody was either trying to run around and figure out do they have a job, or don't they have a job? Well, EPA here now is just a shell of what it was.

And is that due to money being taken away or people being taken away or jobs and like that?

Well, largely money taken away, and largely because a lot of things that they used to be interested in, they're not interested in anymore.

And that's the experimentation and—?

Yes.

OK. So has the EPA's mandate decreased since—because it originated in 1970, right?

Yes.

So you see it as it's really declined?

It's really declined, yes.

Do you think that that's nationwide or is it just here in Las Vegas?

No, nationwide. It's nationwide. Speak to some environmental groups, and it just—.

Is that even under Clinton because didn't Clinton try to—?

Oh no, Clinton, you know, strengthened them. But I think the thing of it is that at that point a lot of—I mean he went into office with a huge deficit and so he had a desire to try to create a balanced budget. Some of it should've been cut there's no question about it, but other programs should've stayed. One of the things that really dismays me is that here we are facing the highest drug costs in the whole world and their argument always is: we have to pay for research and development. Well, the government used to pay for most of that. You know, when it was Agriculture Research Service we had a contingent of scientists at every land grant college in the West. What we did was a lot of cooperative agreements and contracts, and oftentimes it would be industry. I mean it would be some agriculture interest group that would combine and we'd have a three-way funding of certain work, and so the burden was not that much on Agriculture, it wasn't that much on the pharmaceutical companies. But I don't know what's happened to that.

So the Las Vegas EPA, it was mainly concerned with the test site, with experimentation with that, but it also did these other things a well, with pharmaceuticals and—.

Yes. Right. Well, not pharmaceuticals but with the lake eutrophication projects.

OK. But most of its attention was focused on radiation and how that—at the test site—?

Right, yes. And you know, they don't do the rad safe now because even before I left, there was a big argument, since the money came from DOE, how untainted could it really be? And I can tell you, in the beginning it was very untainted, but I don't know about recent years.

So if the money came from the DOE, they would want favorable results, as opposed to the real accurate—?

Yes, and I think that's why they did turn it over to somebody else to do.

Are there any experiments that stand out in your mind that when you got the results in you just thought, "Oh, this is amazing data," or—?

Well there were some accidents, and then they had what were called "anomalies" which they would investigate and see why they had this higher reading. It usually turned out to be bad instrumentation.

Oh, OK, because the instruments weren't as sensitive then.

Yes, or they were off. They weren't calibrated, but—.

What accidents do you remember?

[00:40:00] Well, Sedan was an accident, but that was a different kind of accident. I don't remember the names that well of the individual tests, but I'm sure they have them.

I know that Baneberry was an accident because it leaked.

Yes, it was.

Were there some accidents during the atmospheric testing where it went too far, they knew the cloud—and that was considered an accident?

Well, it released too much radiation because the predictability—I mean they can predict the yield now down to the nth degree. At that point they couldn't. So they'd set them off and they went bigger than they thought. But as I said, I remember an incident in St. George and Cedar City where people were stopped; they stopped [them] in the cars and then **[00:41:02]** monitored them and then sent them home to shower and got them new clothes.

Were you involved in that at all or did you just hear about it?

Well, they would call in on the radio and I was the radio operator but that was all; then I typed the results.

Oh, OK. How long would you have to man the radio?

Well, when they were out in the field.

I mean would you have to pull a twelve-hour day or—?

Oh no, no, no. I never had to do that.

Normal working hours?

Normal working hours. And then at one point—when kind of something happened, I don't remember why but we were ending up—we learned how to operate the machines and counted the samples, but we only did that on a couple of occasions.

So would they actually bring in radioactive samples into the office and—?

Well, they would bring in samples. You know, the most radioactive thing they'd bring in was the—oh, they had to bring them in the sources they had to have sources to calibrate their instruments, and so they would bring them in iron pigs, what they called pigs.

Is that just like an iron box?

Yes.

But they call it an iron pig?

Yes.

And a "source" would just be some radioactive material.

Yes, something that they knew the content of, so they could use it to calibrate their instruments.

Oh, that's interesting. But you never saw that, or did you?

Yes, I saw some sources but probably the most when I first went to work for the AEC and was out there, but it was collecting Trinitite samples. And it was sand that had been fused into glass.

I heard about that at the Trinity site.

Yes, that was—well, and maybe they were Trinitite samples, yes. But anyway I was given one so I took it home and put it in my house.

Do you still have it?

No, I got rid of it a long time ago.

That's interesting. So would the scientists be all in gear when they would go out to take these samples? You know, like now I think of poison control— when they're all in yellow and—

Oh yes. Well, they did that mostly on the on site RADSAFE people, because they actually went into the area where they had taken it; but the off site people, Public Health Service people, were not. Certainly wouldn't convince anybody it was safe if they were wearing it.

Yes, that's true, if they were all in gear.

No, but you know, as I said they were an outstanding group of people and they were the heads of large engineering schools and they were—because at that point in time there weren't a lot of people trained in radiation.

Right. And would people stay once they found a job in—?

No, they were on loan from their company or from the university.

Oh, OK. So you saw a lot of people going through the office.

Yes. I think one series we had 150 officers come through.

Now would you have to process all those people or keep track of them or—?

[00:45:00] Well actually they would come in and I'd have to get names and stuff like that but not much more than that. And I had to, as I said, maintain radio contact with them when they were out in the field. But there were other people to also man the radio, so I didn't do it all the time. I had other work to do.

Yes. When did the office grow? Because you said it went from four to 450. Was there a period where it just spurted in growth?

Yes, it was actually when the AEC was formed. No, it was before that. We were first called the PHS Off Site Activities. Then radiation became a national concern and the Division of Radiological Health within the Public Health Service was formed. And that's when we started to expand.

And was that in the 1960s or—?

Probably. Yes. So there were a lot of people that came out for that.

OK. Well, that cleared up a lot. I wasn't real sure about the Public Health Service and then the EPA, so that cleared up a lot of my questions on that one. Is there anything else that you wanted to talk about during your time with the EPA or the Public Health Service?

Well, we covered the air force; that was one thing I wanted to tell you about. I'm not sure there is, yes.

OK. Well, if it comes up, if you think of something—.

Oh, well, and another thing we had, what they call a Medical Officers' Liaison network, and that was every time we brought in these officers, among them would be this contingent of medical doctors and veterinarians. And they established what they called an MOL, a Medical Officers' Liaison network: doctors in these outlying areas that they could inform when the test was going to occur and talk about the results and help them if they had any questions and that sort of thing. And then another thing we did—the vets were called up to Utah. There was a sheep killed and they thought that was radiation and it wasn't; it was halogen, or it was a deadly weed that they'd eaten.

Oh, OK. Do you know when that happened, about what time?

Had to be in the late 1960s or early 1970s.

OK. Was there a public concern?

Oh yes. I mean it was in all the newspapers.

Ohhh. Do you know how they determined it was a weed and not radiation?

Well, by this Dr. Dick Stanley going up there and investigating what they were eating, and then he took with him people that had instrumentation and took samples of the animals themselves.

Did the Public Health Service or the EPA deal with people who were Downwinders or people that—is that who they dealt with a lot?

That was who they dealt with, the people that came to be called Downwinders. Those were all the people in Utah and up in northern Nevada, and as I said within this 300-mile radius.

So would they call the office and say, we think that we've been exposed, and then you would send people out?

No, whenever there was a test they would go out just before the test. They would be in—

They would go out when a test was planned. They would go out before it, so they would be in the location where they knew the people were when the test occurred, and then they would stay there for as long as it was considered there was no problem.

So they went out there when the test was about to happen just to make sure that they could monitor the whole environment so they knew what was going on.

So they knew what was going on.

Oh, I didn't know that.

Not very many people know it.

That's very interesting. How many people would they send out?

Well, as I said we usually had fifty people going out at a time.

So how long would they stay out there?

Well sometimes they stayed a week or longer.

Really! And they would just be monitoring the environment to—?

They would be monitoring the environment, yes.

Well, that's really interesting.

And they would take these fallout trays they'd put out. They'd take film badges which they'd put on the people. And as I say they'd collect milk and water and food samples and bring them back in the lab and we had technicians or chemists that would evaluate the radiation content.

Now did they have safety procedures for if something went really wrong? Would they evacuate the area, you know, as far as—?

Well, what they primarily did, they had the safety procedures in case something went wrong. I don't know that they ever had to move people but they actually washed a lot of cars and had people showering. Then when they had them shower they monitored them pretty closely to make sure they weren't harmed. But I mean you have a lot of complaints because the incidence of cancer in those communities, but cancer is everywhere, you know. I couldn't believe it when my husband got it because there's never been any cancer in his family. But when the doctor said one out of four, I was shocked. So I think there's just an increase in cancer.

Did he work with any radioactive—because he worked on the test site too.

He worked at the test site. He was in the tunnel area for quite a while. But he was actually in the—they have the little trailers set up as offices. He was not a miner or anything like that.

He wasn't exposed?

No. The biggest exposure in the early days is guys would wear—they used to have radium dials on the watches. And the guys would lay their film badges next to them.

So it would make the watch go—oh, that's funny.

Yes. But no there were not a lot of complaints at all. The complaints occurred much later, and among the children.

Oh really? Like in the 1970s, is that when you started seeing more—?

In the 1970s and probably really after that, 1980s and 1990s, it really—.

And it was mostly the children of the—?

Yes. It wasn't the people. But they had lost a parent or somebody a family member. The other thing about it is there's an awful lot of intermarriage in these small communities. I know I said that to somebody and they said, Don't you dare!

Well no, I mean that's interesting. I mean that things you don't think about, and some things that we've discussed is how when something tragic happens in your life, it's easy to blame a big entity or you almost have to place a blame on it. And with cancer sometimes it's hard to find the real reason why because nobody really knows.

Nobody really knows. But as I say, I'm here as a testament that I don't think I got hurt.

And you said you'd gone out there with a Geiger counter sometimes.

Yes.

Did you go in actual hot areas or—?

No, no.

You were off site.

It was because if the thing had got a little off its charted course they had to send people out on an emergency basis, and there was nobody left to monitor Mercury. So I monitored Mercury.

[00:05:00]*How would you do that? Did you—?*

I just went outside with a Geiger counter.

Did you walk the whole camp?

No. Well, I walked a lot of the camp. It wasn't that big in those days.

Yes. And would you take down readings like every so many feet or was it every so often?

I think it was based on time.

Oh, OK. And then you had said that you went up in the airplane. I assume you worked those controls.

Yes, I worked those controls too.

So would you just get lucky where they'd say, Hey, we're going to go do this? You want to come along, Norma? and you would just—?

Well, on that case they needed somebody to work. They did run short of people and when they did run short of people, I'd fill in. But the only time I went on the flight that—I wasn't doing something official—was when they used to do security scans of the whole test site. There used to be a bunch of miners out there and they wanted to make sure they were out, particularly out of the way, when a bomb went off. And so anyway they hired bush pilots from Alaska, and so they would fly the test site. And so this bush pilot was taking the manager over to Alamo, Nevada and so they had some extra space and they say, You want to go? So I said, Sure, so I went. And it was an interesting experience because somebody in the plane said, Oh look, there's a cow down there. Couldn't we go down and look and see what it is? So the plane went [demonstrating sharp downward motion]. Scared me to death.

And was it a little—?

Yes, a little plane. I think there were only four of us in it. But other than that when I did something I was usually filling in for somebody. But it was a very interesting time, I'll tell you.

Did you hear much about protesters when you were working—?

Well, you know, when I worked for the AEC one of the things that was kind of my responsibility was to respond to letters from people that were objecting to the testing program. I didn't get the ones that required any serious technical knowledge. But I can remember this one woman wrote in from Pasadena, California and she said the radiation had come into her yard and broken her legs.

Really? Oh, how funny! Do you remember how you responded?

No, I just responded with something very—that radiation couldn't have broken her legs, it wouldn't have had that effect, or something like that.

Oh, that's kooky. So people in California knew what was going on and they would try to use it to—?

Well, a lot of people just didn't know. If I hadn't been around it I wouldn't have certainly known what the harm was in it.

But in the early 1950s, especially in Vegas everybody was pretty—?

Pretty supportive.

Right, of the test site and so they didn't see any ill effects or—?

No. They thought it was exciting. I can remember they had the fiftieth anniversary, I think it was, and I was invited to go out of the Nevada Operations Office. And Mahlon Gates said to them, what happened? When I left here, everybody wanted the nuclear waste. Now nobody wants it. Anyway, he blamed Tom Clark but—.

Does he blame Tom Clark for bad press or for—?

For dropping the ball essentially.

Oh, OK. That's interesting.

Yes, it was interesting because the other thing that the Public Health Service did was they maintained contact with all the governors of each state: Arizona, Utah, Nevada and California. If

there was going to be a test they were alerted to the test [00:10:00] and if there was any problem they were called. It isn't as though we weren't, you know—there was an awful lot of that coordination that kind of fell by the wayside but—.

In later years it did? Was that just because it grew so big or—?

I think it may be because it grew so big and they had to bring in people that—as I said, when the testing program began they had the cream of the crop. I mean like these officers—the officers we hired came out of Yale, came out of Cornell, came out of Harvard, and they had—in many cases—they had master's degrees, and they got in because in the Public Health Service it is a form of the uniformed service and they could fulfill their military requirement. So the Public Health Service could select the best of what was available. So they had some stellar people, but now—and the other thing now is they objected to EPA doing the off site monitoring. It was REECo that did on site and EG&G did off site, and they're both contractors. I mean they're full-blown contractors. We just had a reimbursable contract; we weren't hired off the open market.

Right, because you were a form of the government.

We were a form of the government, yes. So I don't know. I know that I got involved in the WIPP site, [Waste Isolation Pilot Plant] and I got involved in the high level waste repository, and to me it's just a different caliber of people.

Oh, than what it was when you—?

Worked there, yes.

And then when you worked for the AEC you had said that you were a part of clearing people to go out and view the testing?

Yes. Well, not only to clear the people but the other thing. I don't know whether I mentioned this or not. I've been assured it's well known now, it's very highly secret, but they have a burial spot

for nuclear devices—military armory. Anyway, when they opened that they asked me to interview all the people. Mainly they were construction types, truck drivers, and carpenters that were going to build it. And I had to at least go through with them, their experience and everything and see whether or not they could be cleared. And if I thought they could be cleared, why then they went ahead and processed them.

So you're saying there was a burial site for—?

Nuclear warheads.

Oh, OK, out in the test site somewhere?

No, it's closer.

And so you interviewed people that were going to—?

Work that, or build it and work it, yes.

And you had to make sure that they could maintain secrecy and—?

Yes.

Now these aren't active warheads.

Yes.

Now why would they be buried? Just for storage?

Storage.

OK, because they're creating all of these devices during the arms race and they have to have a place to keep it. And you know where that is?

Well, I have been very reluctant to talk about it, but a gal that worked for Dick Bryan assured me it was common knowledge, so I can now. But a lot of people know about it. They do know that these warheads are at different locations, and we had one of the biggest locations here. But anyway, the other interesting thing about that, what they used to do is the government used to do

“what ifs”. If there was an attack by an enemy, [00:15:00] everybody had kind of a little plan that they would follow in case that happened. And so I was working at the AEC at the time. I was the alternate top secret officer, and as I said I was the only one that could operate the teletype machine. We could bring no one else in to operate that teletype machine for a top secret message, because most of the people were cleared for just secret. We had this one exercise and I had to go out to this location because they had a teletype that went directly into Washington, and I was to send the message that we were all OK and all that this was just a pretend attack. But I went out there and then the first thing I met was these big husky marines with these machine guns and they took me into their operational headquarters and I had to send the message. But that was back when I think Eisenhower was president. But that was interesting.

So you were going through like a mock—?

Yes, a mock attack, yes.

Yes. So there were these big guys with guns and—wow! You just had to go in and send this.

Yes. Anyway. But I had a lot of interesting experiences out there.

So did you interview the guys that were going to build this repository? You did the interviewing for it?

Well yes, I did the initial interviewing. What I did was check and get them to fill out the forms and then look at it and then if I thought maybe they would be somebody that they wanted to employ.

Did you have different clearance criteria? Like you had said that it was easy for you to get clearance because you lived in Las Vegas your whole life. Was that a factor in—?

Absolutely. The more places they have to locate, because at that point in time the FBI did it. I don't know who does them now, but still may do them, I don't know.

So you'd have to get their information and then send it off to the FBI?

No, no, I'd just take it in. Somebody else—I mean I was pretty low down. I didn't make the final decision. I just helped them collect the information.

But you said that you cleared people to go see the atmospheric tests too.

Yes. Well, I didn't really clear them. What I did is I processed — they would teletype in and say Senator So-and-so or—they were mainly Congress people or they were news people. And anyway they would send in the information and then we'd have to set up temporary clearances for them.

OK, and that was just a matter of paperwork and getting the badges and—?

Yes, I don't want to give you the impression that I had any real authority.

That comes later in your career.

Yes, that comes later in my career. Yes, at that point—.

Now did you, and I'm not sure if this was on the other interview, but was there a difference between Desert Rock people and News Nob people?

Yes.

What was that difference?

Well, Desert Rock was where they brought people in, military people, soldiers, and they had these holes—.

Trenches?

Trenches. The soldiers had these trenches and they were standing there, they were given dark glasses, and they were to watch the bomb go off. And this is when there were atmospheric tests.

And the purpose of it was so that if they encountered it, they wouldn't freak out.

Right.

And the News Nob was a location where they brought all the congressmen and the news people and other government dignitaries to view the tests.

And would you accompany them to News Nob? Is that where you went to see the atmospheric tests?

Sometimes I went with them, yes. Sometimes I went with the AEC people to other places.

Oh, were there other places to view the tests too?

Yes. No, it wasn't just News Nob. I think there were other places. But at one point there was a lot more visitors coming out to see them than there was later. But I remember [00:20:00] this one test, they told us—there were two tests, one right next to each other—and one of them they said, You don't need to worry about this one because it's not going to have much seismic effect. Well, people were knocked over. And the next one, they said, This one is the big one; you better be sitting. Nothing.

So were you at the one where people were knocked over?

Yes.

Did you feel it? Did you—?

Oh yes, you felt them all but that one was really—the fellow that had gone with me, he was knocked over.

What's it like? What did it feel like?

Well, you know, it's just like a—.

Like a gust of wind?

Gust of wind, yes.

Was it real hot?

Yes, very hot.

Really? The first one that you saw, what was your impression of—?

I mean you knew the tremendous power it had. You had to watch them with these very dark glasses. Some people actually removed their glasses and got their eyes burned. But they were very careful about telling you don't remove the glasses. But it's awesome. It's really awesome. That's why I kept going out to see them. They're really spectacular.

And they were usually in the mornings, so you got the full effect of the light.

Yes, yes.

Was it real bright when it—?

Oh yes. You've seen nothing like it. Nothing in the whole [world]—well, the people here in town, I know I was talking to my friend and she was here when we started—I didn't know her then—but she was saying how proud they were to have seen those. They did see the mushroom cloud and all of that. I mean she was here in Las Vegas. But I was out there.

Right. You were pretty close. You could feel the gust.

Yes, I was really close. Yes. I'm sure at times we were as close as the Desert Rock boys and the News Nob boys. As I said, we stood on the News Nob sometimes, but later on they didn't have the number of people coming out for that.

Well, this is a good place. I'm almost out of time, so we can take a little break. Does that sound—?

OK.

When I was with EPA, I was a GS-12 and I wanted to go to a training that was up in the Claremont Hotel in Berkeley, California, and it was some kind of management course. I went up there and there was one other woman there—she was a nurse—and then myself. And I was a GS-12 and there were 14s and 15s in the class. Anyway, at the end of the class the facilitator asked who was the best communicator. I was shocked when they all selected me. But that was because

I listened to them I wasn't always talking at them. But you know, listening is very important; otherwise you can't communicate much, you can get kind of a clue where the other person's coming from. It's extremely important, and I've seen that so much. I've seen that so much, and that's what's happening in government. People just don't know, and then everybody is—I know my sister blames it on the computers. I don't know that that's solely the problem, but I know that in my day there was a lot more willingness and people achieved certain recognition for their ability to train people. I know Ollie Placak used to brag about what people that he had working for him had become in later years, and it was a very, very impressive list. But that was real value to him. But nowadays people don't even think about that.

Right, the mentoring is gone because—?

The mentoring is gone.

It's almost like people look at jobs as Oh, I'm going to be here for two years and then I'm going to move on to something else. So, there aren't those relationships that are built that therefore when the person leaves a lot of the company's value or knowledge about that company is gone with that person.

Yes. Right. Well, you know, throughout my early years of government, one of the strongest traits you could exhibit was loyalty. And now they preach to you, You don't be loyal to the company; you be loyal to Shannon. And you have to be loyal to yourself but you need to be loyal to the company too, if you want that company to really succeed. And I think if they're employing you, you have a responsibility to make sure they succeed.

Right. And the other thing that you brought out that we didn't get onto but it's really interesting is that you have to be willing to start at the ground level. So many people want to start, I have

my college degree and I want to start at an executive manager. And that's where a lot of management doesn't understand the operations, because they didn't start out at that level.

That's right. Well, as a matter of fact I was talking to my son-in-law. I drove back with him from my granddaughter's graduation, and he was talking about his daughter and he was getting pretty excited because she was so independent and all this. And I said, Oh Ron, don't you remember when you got out of college, you were so full of it? And college kids are, you know. But to me, anything I learned didn't hurt me; it helped me. And you know, I really was never asked to do anything that was real disagreeable. Well, I just worked for people that wouldn't have asked that of me.

Now when you decided to go to college, had your family graduated from college?

My father came over here as a German immigrant when he was seventeen, and my mother grew up in Bunkerville, Nevada, which is near Mesquite. She wanted to go to normal school, which was a teacher's training—it's two years—and she went to that. But my dad always talked about the boys going to college that's everybody's goal, and my mother said, As [00:05:00] long as the boys go to college, the girls go to college. And you know, I think there were two other girls in my high school class that went to college. I had one mother tell me she didn't know why I was going to college; I was going to get married and it was all going to be wasted.

Right. How big was your family?

There were four of us.

OK. And did all four go to college?

Yes, they all started. I and my youngest brother are the only ones that completed.

Did your parents help you while you went to college?

Yes. In fact I was offered scholarships and I took the information home, but the scholarship always says if you're ever in the position to repay this, why, you know—not repay it but offer it to somebody else, you should be willing to do that, and she said, well, I don't want to leave you with that burden, so we'll just pay for it. And so they paid for it.

Now what did your parents do?

They had a motel.

Was that here in Las Vegas?

Yes.

Where was it?

It was on Las Vegas Boulevard.

Oh really? Which motel was it?

It's gone now. It was called the Palace Motel.

How long did they run that?

They ran it until they passed away. In fact the family still has the property.

Oh, that's nice. What part of the boulevard was it on?

It's downtown.

Now was there a casino or was it just strictly lodging?

It was simply lodging. You know, what you had here in Las Vegas was a bunch of little motels where people could stay. You didn't have any hotels, anything like that. And it was, you know, people used to come through here on their way to Utah or on the way to California.

How fun as a kid, though. Did you play around in the motel and all that?

Oh yes, and I worked in the motel.

Did you really?

Yes. Actually, I had a little bit saved up to help me with my college when I went to college.

So you'd work for them and they'd pay you.

Yes.

That's nice. It wasn't strictly family needs to work for no pay.

No, they paid me and then I spent what I made, mostly on college.

Now why did you choose to go to California? You said you went to Long Beach?

Yes. Well, I didn't graduate from high school. I got bored after my junior year and decided I would go to start college. And so anyway, my brother was going. He was in Long Beach, had gone to Long Beach Junior College. At that time it was a junior college. And so I went there. And I had a half a credit in government that I had to complete, so I took a course there that completed that. And I went to school there and I was very fortunate because I was going into the merchandising field because I had an aunt that was a buyer for a big department store. Sounded like a fabulous career. And so I was going to SC [University of Southern California]. And my mother had told me, You're a girl so, regardless of what you want to be, you'd better take some office classes to be prepared if you have to work. And so I took business classes and typing and steno and accounting. And my accounting teacher really took a liking to me and she wanted to know what my plans were and I explained them to her, and she said, well, I have a student that is now the personnel manager for Bullocks Department Store, and she said, Let me talk to him. So she talked to him and he said, well, tell her not to go to SC, he said, Tell her to go to a liberal arts college like Occidental, he had gone there, and we'll train her in all she needs to know about merchandising after she gets out. We have a junior executive training program. So he helped me get into Occidental, and so I went there to complete. And he recommended that I major in economics and minor in art. Well, the minor wasn't very successful

[00:10:00] because when you get in college you're against people that really know what they're doing. And so I changed it to public speaking, and I graduated from there.

So what happened that you didn't move into the track?

Oh, what happened, my mother had a stroke, and I had to leave college for a semester to come home and take care of her. And I came home and took care of her and then went back to school and completed. She was a semi-invalid and needed help. I was very close to my mother and so I decided, I'm needed at home, so I came back to Las Vegas. So that's when the classes in steno and typing came in and that's how I got started there. But as it turned out I had no complaints, no complaints at all.

Now did you meet your husband at the Nellis Air Force Base?

Yes.

And then you got married.

Yes.

So that was nice. That's how you met him.

Yes. And then he was the one that talked me into quitting there and said he had heard that AEC would be hiring somebody, and I was real lucky there. I called and a fellow named Stan Froistad answered the phone and said, yes, they were looking at people, and he asked me a little bit about myself. At that time they hired a lot of Mormons—I'd been raised a Mormon—because they found them easier to clear; they hadn't gotten into drugs or—

Right, no record.

No record and things like that.

So anyway, he said, well, can you come in now for an interview?

And I said, I just washed my hair.

And he says, well, put it up in curlers and come in.

And I said, well, give me an hour or so.

So I went in and he hired me on the spot.

That's quite—

Yes. He turned out to be a very dear friend. He's passed; he's dead now.

It sounds like you worked for a lot of people you admired, especially in the early years.

Yes, I did.

They really molded your career track.

Yes.

Were you ever disappointed that you got hired in a secretarial position, even though you had a college degree and you knew economics and business and—?

Oh yes, I'll tell you when we started to grow, the Public Health Service wanted to put me into an administrative officer position, and that was a professional position and I'd been in a clerical position. And there's something called a Federal Service Entrance Examination. I don't know whether you knew about that or not. But anyway, they decided that I needed to take the FSEE. So I fussed and fumed, but I got a book out that had not *the* test questions but questions similar to them and studied it and went down and took the test. That was kind of a mental burden after I'd been doing all this work, to take a test to see whether or not you can do it. It wasn't going into a new position; it was just to reclassify the position I was in.

So you weren't changing job duties at all.

I wasn't changing anything. But then about six months later I got furious. They decided they needed more women, and so they said that this was going to be a GS-7 and they decided that any

college graduate that graduated with a B-average or above would come in as a GS-7. No test, nothing. Just on the basis of college. Well, I had—.

But you had already had that.

I had that. I had the B-plus average and that kind of—it really hurt me a little bit but we forget about it after a while.

Right. What are you going to do?

Yes, what are you going to do? But you know, I mean one of the things I'd learned, [00:15:00] as I said when I needed to go back to work after Jim got well, Ollie Placak said they wanted him to get a secretary. Well, it was a GS-4 and I'd actually been a six with the AEC, and I said, I won't take anything less than a five. And he says, well, I don't know how to fight it. You're going to have to fight it. So I had to write the justification and everything to get me the five.

Really! Who did you write, the—?

Well, our personnel authorities were in Washington.

So you got real good at learning how to fight the bureaucratic monster.

Yes, I did. And you know, I probably got that from—as I mentioned I used to go to coffee with those two guys and I learned a lot from them. I learned a lot from them.

Well that's why you're such a valuable resource now to the environmental causes. You know how to fight the machine.

Yes. Well, I've been back twice since I retired, to testify before Congress.

Have you really?

Yes.

Is that for the wetlands and—?

One of them was for the wetlands and the other one was for the expansion of Spring Mountain Recreation Area.

And what did you testify to, just—?

Well no, I didn't testify to Spring Mountain. I wasn't involved in that. I testified for the expansion of Red Rock, and when I went back to testify we had kind of an *ad hoc* committee of all the environmental groups in the area, and so we all got together and wrote this letter to Congress, and then I went back and presented it. And then the other time I was arguing against a power line going over the [Las Vegas] Wash and went back and testified on that one.

So they make you the spokesperson.

Well, I had the time. It wasn't that—because they'd all been involved in fighting for environmental issues.

Now you're still involved in the wetlands, right? Is that what you're—?

Right.

What other volunteer activities are you involved in?

Not so much anything else. You know, when I had the stroke I just kind of—I'm still trying to get my land legs back.

When did you have your stroke?

I had it—in July it'll be two years.

Oh really? I couldn't even tell. You're doing very well. Very well.

I am very, very lucky. But what I am finding is that at first I thought boy, I came through that like a breeze, but as years go on I find the coordination of my legs is a little something I have to concentrate on a little more than I used to have to.

But you stay real busy with the wetlands. That's where all your volunteer time is going, towards that?

Right now, yes. But I've thought about getting into something else because I need to keep busy.

Yes, right, too much time off isn't, you know—

Yes. You think about yourself too much.

Right. Yes. Well, is there anything you wanted to add to—?

Well, there's one other thing. You mentioned something a little bit ago about the problem for women. Women have to learn to speak up and do it in a non-argumentative way. But I've watched my sister, and now my daughter is falling prey to it. She works for an organization which her boss makes ridiculous demands and she's letting it eat her away and you have to be able, if it gets too much you just got to tell him.

Yes. Is that what you did, because how didn't you let some things get you down?

Well when I first started with Public Health Service and I remember one operational period, the first operational period, and they were bringing in all these officers. I was trying to type up these very long reports of the radiation data, and answer the [00:20:00] telephone and be on the radio. I finally—I didn't go directly to the boss but I went to his deputy, Mel. And Mel and I kind of grew up together. And I said, Look, I said, I just can't handle this anymore. We're going to have to get somebody else, and so we hired somebody else. But both with my daughter and my sister, I watched them let guys—because they're good and they are taken advantage of. As I tell them the problem—I've spent a lot of time in my later career training supervisors, and one of the biggest faults I find is they always supervise those people that are easiest to supervise. They never tackle the difficult ones. And since both she and my sister are

easy to supervise, they get the full brunt of the supervision. And they have to learn to stand up to that.

But that's hard, especially if you are being micromanaged, because it does eat at your self-esteem and then you feel like that if you do stand up you—I had a situation like that, and I ended up having to leave the job because I started feeling so incapable of doing anything. And my supervisor, he was a really neat man from Peru, he was paralyzed from the waist down, overcame a lot, and on a personal level a great man. But as a manager he was a micromanager and he didn't think much of women so any opinion I had, he listened to it and then out of his mouth it was his opinion. He would take credit for whatever. And it wears on you. And it's really hard to find a balance between standing up for yourself in a positive way, because sometimes that's deemed in this society as being too aggressive. You know, aggressiveness in women isn't looked upon favorably so it's hard.

Yes. Well Shannon, I've had a lot of men that I've presented them with an idea and when they presented it, it's their idea.

Oh. That's happened to you?

Oh, lots. Lots and lots of times. But I *never* made an issue of it.

Didn't it bother you? I mean didn't it—?

Oh, it bothered the heck out of me. But there are times when you can speak up and times when you can't. The worst supervisor I ever had was with EPA. When we started growing, all of our personnel work was done in San Francisco and our contracts were done in San Francisco, so they wanted those authorities. So although I'd been doing all of the preliminary work—they went up there, why, somebody just put their name on it. But they decided that they needed to bring in somebody that was trained in that or had been doing that, so they brought this guy in. What I

found was I was doing all the work and he was running around glad-handling everybody and that ate at me. But, you know, what I did? I learned as much from him as I did from anybody though. I learned how *not* to do things. And finally they could tolerate him no longer and he was going and then gone. And people used to say to me, How did you stand it?

Right. How long did you have to put up with him?

About two years.

Oh, see, that's just—I mean that's where I'm so spoiled—because you want credit for everything you do and—.

Right. Well, not only that but in my day you were grateful for almost any crumb you were given, and you don't have to take that anymore, and you shouldn't take it. But on the other hand you have to learn there is kind of a balance sometimes. But I can tell you, you learn as much from somebody that doesn't know what they're doing.

Right. Well, I learned a lot from my bad manager on how not to be a manager and so I did learn from it. But it was the longest eight months of my life. And for my husband too.

Well, it sounds like he's the kind of a guy that you can't do much about.

[00:25:00] *No, there was no changing. I would even try to talk to him about it and say this is what I need and there was just no way you were going to change his style of management so you either had to put up with it. And I was working for the University of Texas, so it was a government structure where he was not leaving, and the only way to move was through seniority or through hearing of another job. And it was pretty difficult for women to move around, especially in Texas, because it was so chauvinistic. But I learned.*

Well, you know, fortunately women have been able to achieve a lot more.

And a lot of it's been due to women like you, though, building the foundation. I mean—

And you know, it's pretty trying at times. But I remember—and I won't give you his name because he's still alive—but I was with the EPA and we had a very large petty cash fund because when the monitors went out they wanted a travel advance and we could give them thirty days' worth of money. And we'd given this one guy a travel advance and his family went out and spent it on a couch. Anyway, this fellow came in to me, and he was acting boss, and said, You've got to give him another travel advance, and I says, I'm not giving it to him. I said, You can sign it just as well as I can. If you want him to have it, you sign it. He wouldn't sign it.

So what happened? He didn't get the travel advance?

He didn't get the travel advance.

How'd you find out they bought a couch?

Well, he had explained it to us.

So he admitted that he basically took the money and spent—?

Yes.

So did you create an enemy or—?

No. This guy and I throughout our careers fortunately—he tried to get top jobs but never made it. But he and I have always had a love-hate relationship because I thought—he didn't have a college degree and to be in that organization without a college degree was pretty rough. And so he thought the answer was, you make snap decisions, quick decisions, show you're a real manager. Well, he often made the wrong one. And so I developed a relationship where I had to tell him what I would do and I wouldn't do. Another time, one person in the organization wanted their secretary fired, and so he called me in and said, You have to fire her.

Why you?

Well, because I had the personnel responsibility. And I said, we're not about to fire her. You're going to reassign her.

And did he want to fire her due to her abilities or because he didn't like her? I mean was it a real flimsy—?

No, it was her boss. But her boss was not a good manager, and she wasn't the best of all workers. But I will tell you one thing I found out in my career, that most people want to do a good job and if something is preventing him from doing that, if you can find out what it is and fix it—one of the most remarkable things that ever happened to me was I was in Agriculture and we were looking for a finance person, and they had to know cost-based budgeting. You couldn't find anybody in the San Francisco area. We had ads up in the Office of Personnel; wherever there was a big employer of people, we had ads there. And we couldn't find anybody. And we opened it up to other employees outside of San Francisco, and got an application from a woman in Kirtland Air Force Base, and I thought, well, you know, that's [00:30:00] connected with the AEC, she probably knows about cost accounting and cost-based budgeting, so let's consider her. Well, her employer—and I should've known this in the agency I was in then, they said if they're employed by DOD, don't touch them. But anyway—

Why?

Because they inflate all the ratings.

So you can't count on what you're getting—?

You can't count on what you're getting. So we got this one and I mean it was the most glorified rating and she sounded tremendous. Well, she came on board. I mean it was obvious, you could tell after a week, she had been, more or less, somebody that did what she was told, didn't really know what she was doing. And so they had a problem and they wanted to get rid of her. And so I said, well, you can't just get rid of her. We're going to have to try to train

her and see if she can do the job. And so they spent a lot of time training her. But it became obvious after about six months that it just wasn't going to work. And so I said, well, we're going to have to terminate her. So what you have to do is tell her what's happening and she's got so much time to shape up or she's going to ship out. And so they talked to her and she didn't budge. And so I told some of the gals that went out to lunch with her, I said, would you please talk to her and tell her that she *is* going to get *fired*. And she quit the day that she was supposed to have been fired. We gave her the termination notice. And anyway I heard later, somebody ran into her and she'd been hired back in DOE [DoD]. And she'd been a seven with us and she was hired back as a five. And she said, I just knew God was going to take care of me and He did. And I thank heavens!

So with the DOE [DoD], was it just that people had their tasks and that's all they do? I mean where there's no real—?

Well, I didn't mean DOE, to say that. DoD. DoD.

DoD. What is that? Department of—?

DoD. Defense.

OK. Department of Defense. So do the different departments have different reputations for what the people are—?

yes.

Really?

Oh yes. Yes.

Well, that's interesting. So that's why they said don't hire anybody out of DoD because they're just going to be—so she couldn't think. She wasn't self-motivated to—

No. She wasn't self-motivated. She was a real sweet woman and I'm sure she did everything if she was told how to do it, but she didn't have enough basis of her own knowledge to do the job, basically is what it was. But anyway.

That's interesting. Because that still happens too. I worked at a state fund in California where we did workers' comp. And we were part of the government but not really. We were our own—but you could just see the people that just thought they were never going to get fired. They had gotten their seniority and they were working for the government and they would only do what was asked of them and God forbid something out of the blue comes or you need help. It just wasn't any of that when you're out in the public sector where it's competition and you've got to keep moving and trying to be better than the next person. I worked there, and after about three weeks I was actually told to slow down. Yes, they said, You need to calm down and you need to slow down, because I was pushing out too many quotes, you know.

Oh my word.

Oh yes. And my first couple of weeks there, nobody warmed up to me because I had actually tested into the job. I had gone with like 450 people and taken this test, and out of it I got an interview, and out of it I was hired as an "R," which I didn't know what that was but that was higher than these other people who had been there for five years. But I had done so well on the test that they hired me in at this—and then you're at that level and the only way to move up was to test, and these people tried to take the test—and couldn't pass it. And it was just [00:35:00] an interesting culture because it was so foreign and it sounds a little bit like the government where some of the—

Well there are all kinds of people but one of the things that I learned very early on is every organization changes for the people you have in it And you have to find out what they're best at and see if you can work around the organization so that you can have them be the best.

And you saw real change in people.

Oh yes.

Why do you think that is, that they were so different?

Well, people are different but I assumed you were talking about a change in their attitude.

Yes.

Yes. Well, it was like when I worked for Agriculture, we had this fellow that he had been an animal experimental worker, I think that's what they called them. And it was a wage board job and paid rather well. And he was injured; his back was injured. And so then they had the doctors take care of him and the government provides the medical, and the doctor said he couldn't go back to this job but he could do other jobs; so we had another job, somebody that worked in the office and did the simple mathematics for the scientists. And so we offered him that job. Well, it didn't pay as well and he didn't want that; he wanted to go back on the horse. And so he filed suit. And so anyway, I went to Boise, Idaho to meet with him and to tell him if he didn't take this other job he was going to be out of luck; he was going to be fired. And we met in his attorney's office, and it was interesting. The attorney had this big cardboard box with the man's files in it and I thought that's kind of rinky-dink.

Yes. Not very professional.

Not very professional. Anyway, we talked for a while and I tried to convince him that we were doing what we could, but the research station he was at was a small one and there weren't a lot of job opportunities there if he wanted to stay in Boise, which he did. And anyway, when it was

over, as it was ending his lawyer said to him, he said, well, you better do what she says or you're going to be fired. I admit that was so funny.

That is funny. It's a good thing he had all of his files there then. So did he end up—?

He ended up quitting. He just quit.

Oh, OK. He didn't want to take the other job?

Yes, and sometimes that's the easiest solution for you, you know.

Right. Better than having some disgruntled person in a—

Yes, right, unhappy with their work and always feeling like they were taken advantage of. But as far as that was one thing that I liked. We had research stations and they all had administrative people, but when the problem became too big for them to handle they came into the regional office. And the same was true of the parks. They all had their own people but if the problem became too big, why, they came down and—.

And then you were the authority on what to do.

Yes. But I've learned that, as I say, most people want to do a good job. They just may be in the wrong job or you need to twist an attitude or something. And you know, one of the things in those days, I know in Agriculture we had two black women. One was in finance [00:40:00] and one was in procurement. And we had a lot more, but those two women were the ones that I'm speaking about. And the one in procurement was just giving her supervisor all kinds of trouble. And so they came to me and said what are we going to do? We got to get rid of her. And I started looking into it and I found out they had picked up both women from Oakland Supply Depot. And the girl that they had in finance had always worked in personnel, and the girl in personnel had always worked in finance.

So they were out of their element.

Yes, and I think it was done intentionally because they were black.

Did you see that?

Oh yes.

Really?

Yes, I saw it.

So it wasn't just if you were a woman. There were also racial things?

There were racial things too. Yes, I saw it.

And would you encounter that because you were usually in charge of personnel so—?

Yes, I saw it because I was in charge of personnel. But no, I'm a big supporter of affirmative action, particularly in the case of black people and in the case of women. I had a secretary at the Park Service that had a good mind and she had a voice that needed to be quelled every once in a while. But they opened up a training program—one of the things the government did—because when you went to hire somebody the people didn't have the training. And how could she ever compete against somebody that had been a superintendent that had the right letters? And so the government opened up training programs where people could compete and then get into the training program and then get some training and move up the ladder. Because I mean it would be very hard for somebody to compete with a college graduate that graduated from high school. And if you don't have the opportunity to go to college, and most blacks didn't have that opportunity.

Right. But they had the job experience and they could do the job. They just didn't have the credential to move up.

Yes. Well, they had the native ability, is what they had. But I saw a lot of it in my career. But anyway.

It got better, though, with affirmative action and—?

Yes, it got better. In fact, the thing that really irks me now is the people that got where they are through affirmative action; a lot of them are the ones that are decrying the system. But fortunately the Supreme Court protected it because it's very hard if you haven't been in a position where you have that experience to ever compete with somebody that has.

Right. Anything else you wanted to add?

No.

Are you exhausted?

Well, I think I've probably talked your leg off.

No, I've really enjoyed. I just don't want to exhaust you.

No. No. It's just that I didn't mean to get in here and give you all my philosophy.

Well no, that's what we're interested in. That's what I'm interested in. I mean I'm interested in the test site but I'm actually interested in women's perspectives and especially the perspective that you gained over working in the 1950s and the 1960s and that's what I find very interesting. So history now has become very mixed to what you study and what you learn from.

Yes. It's a lot more interesting, I imagine. I imagine it is.

[00:44:27] End Track 2, Disk 2.

[End of interview]