



**K-25 Oral History Interview**

**Date: 5/18/05**

**Interviewee: Keith Lowery**

**Interviewer: Bart Callan**

DOES NOT CONTAIN  
OFFICIAL USE ONLY INFORMATION

Name/Org: Keith Lowery ETTP Date: 4 Nov 15  
CISCO

As a BJC ETTP Classification Office  
Unclassified-Sensitive (U-S) Information  
Reviewer, I have reviewed this document and  
determined the document does not contain  
U-S information (i.e. no UCNI, ECI, or OUCI  
information).

BJC ETTP CO U-S Reviewer/Date: [Signature]  
12 June 07

~~OFFICIAL USE ONLY~~

May be exempt from public release under the Freedom of Information Act (5 U.S.C. 552)  
Exemption number and category: #2 Circumvention of a Statute  
Department of Energy Review required before public release.  
Name/Org: Gary W. Snyder 721567 Date: July 31, 2005  
Guidance (if applicable): CG-SS 4 September 2009

~~OFFICIAL USE ONLY~~

Lowery, Keith

[crew talk]

[1:00:06]

**Lowery, K.:** In '45. Anyway, --

**Callan, B.:** I'm going to probably prompt you for some of this information again once we get started so we have it on camera. Are we going? Okay. Let me just kind of start out the interview here. Basically just please feel comfortable talking about whatever you want to.

**Lowery, K.:** All right.

**Callan, B.:** When you speak, it's just like we're having a conversation. Don't worry about what's going on over there. You want to talk to me and not to the camera.

**Lowery, K.:** Okay.

**Callan, B.:** Questions that I ask -- And I don't think you're going to have a problem with it. When you respond, try to respond paraphrasing in complete sentences. Like if I ask you where you were born, don't say New York and that's it. Because then if it gets used for a documentary or something, my voice isn't going to be heard. It's going to be the sound bytes that come directly from you.

**Lowery, K.:** All right.

**Callan, B.:** So I'll start you out with a hard hitting question. Go ahead and say your name for me and spell your name out as you'd like to have it preserves.

**Lowery, K.:** Dames Keith Lowery. D-A-M-E-S K-E-I-T-H L-O-W-E-R-Y.

**Callan, B.:** Okay. And how old are you?

**Lowery, K.:** I am 82.

**Callan, B.:** Okay. And tell me about where you were born and kind of expand on your childhood.

**Lowery, K.:** I was born in 1923 in Morristown, Tennessee. Went to school there. Graduated from now it's Morristown East High, and I was a 4-F. The Army didn't want me. And there was three others came down here and were turned down in the service. We came down here to Knoxville and hired in. We didn't know what was going

Lowery, Keith

2005 NETS, LLC

on, but that was how I wound up here.

**Callan, B.:** So you came here directly after high school?

**Lowery, K.:** Yes.

[1:03:01]

**Callan, B.:** Okay. How old were you?

**Lowery, K.:** Right at 21.

**Callan, B.:** Okay, and for those that don't know, and actually I don't. What does 4-F mean? What is that?

**Lowery, K.:** 4-F meant you couldn't be drafted. In other words, you could be drafted, but they didn't want you. When the trains were using coal and we left Morristown and went through the tunnels going into Chattanooga to Fort Oglethorpe and that smoke did me in. And I couldn't go but about three to four feet. Was stopping to, you know, breathing hard.

One of the other boys wore magnetic -- magnified glasses, and he couldn't see to get out of this room. Another one had an enlarged heart that evidently they didn't diagnose back in the '20's. And another one had a little calcification of hip. But that was a little bit of history about the three others that came down here at the same time in 1943.

**Callan, B.:** Okay. So what was it that attracted you to come out here to work at K-25?

[1:04:17]

**Callan, B.:** Well, there was nothing going on much in Morristown, and we heard about Oak Ridge. And we decided we'd come to Knoxville and apply for a job. And none of us had any real experience. I wound up doing payroll and timekeeping for non-laboring class at K-25 under Jones.

Another one worked as a sheet metal worker, although all he did was drive blueprints to and from the main office. And another one, he did some sheet metal work. Another one learned -- They brought him in and he was doing electrical work training.

**Callan, B.:** What were your first recollections when you arrived out here? Did

Lowery, Keith

2005 NETS, LLC

they shuttle you up to Oak Ridge?

**Lowery, K.:** They brought us out to Oak Ridge through what is now known as White Wing. And we went to the employment office, and they would interview you a little bit and decide where you want to go to work.

**Callan, B.:** Did you know that you were hired on the spot pretty much?

[1:05:38]

**Lowery, K.:** Yes.

**Callan, B.:** So it was almost like anybody that came up looking for work was able to find it then.

**Lowery, K.:** Anybody came to work. They had back then the Tennessee law was that the women could only work ten hours a day and only so many hours a week. And we had -- The ratio was about 20 women to every man. And the men wound up working a heck of a lot of overtime.

**Callan, B.:** Pretty good ratio though.

**Lowery, K.:** Yeah, pretty good ratio -- I tried to date my 20. [laughter]

**Callan, B.:** Why don't you give me a run down of the different jobs that you held while you were working out at K-25? What years did you work there? And what were your different jobs?

**Lowery, K.:** I hired in -- When I hired in at Jones, and I worked with Jones until March. And I didn't want to stay in construction. And I heard about Ford, Bacon and Davis. So I decided that I would employ, apply there. And Dr. Thomas, who was head of the lab, asked me, "How would I work -- How would I mix water and acid. And I said, "Well, you would mix acid in with the water. You don't do it the other way." And this is some of the stuff that I had learned in high school chemistry, which I was very much interested in.

[1:07:10]

But I hired into the lab, and everything had code names. This is not classified. Fluorine was called C2-16. HF was called H2-16. Liquid nitrogen was called L-28. Dry nitrogen in the piping was called G-74 -- and among other code names that they had. And I like never got used to not using code names when they did away

Lowery, Keith

2005 NETS, LLC

with them.

**Callan, B.:**

Was there a formula or something to those code names? Or how did they get those names? Do you know?

**Lowery, K.:**

Uh, no. Liquid nitrogen, one of them was -- I'm just trying to think. Well see, in the ratio of chemistry. And, but I will tell this story. The tank, the liquid nitrogen of course had to be vented. And I was out at work on the midnight shift, and somebody came in. And they had a shakedown place where the train would come in bringing boxcars. And they'd drop the gate and the gate -- it isolated it and the guards would go down and shake the place down and try to see if anything was going on.

[1:08:38]

And the fella came in and asked me, he said -- This was on the night shift. He came in and said, "We got a tank out here that's degassing." And said, "Do you think you could come out here and tell us if it's dangerous?" I went out there and it was liquid nitrogen. And I said, "It won't hurt you. It will just freeze you to death." [laughs] So that's some of the stories.

**Callan, B.:**

What are some of the other stories?

**Lowery, K.:**

Well, Ford, Bacon and Davis -- Let's see. Like I said, I went over to Carbide in March -- in February. And but I worked on pilot plants at K-25 various stages of uranium. And then I wound up working in the lab. And I was in charge of field and industrial hygiene for about ten years from '53 up 'til '63 'til we went back to about 2,000 employees and I pulled back into the lab and worked in that. I led a research group.

[1:09:57]

But the reason why they put me out in this industrial hygiene, a fella was leaving, and they said, "Well, Keith grew up with this place, so he's got it. So he's going to wind up taking this field, in charge of the field and industrial hygiene." This is why they agreed so well. The people -- We had close contact with the dispensary.

**Callan, B.:**

Okay, and industrial hygiene. Explain to me what that is.

**Lowery, K.:**

Industrial hygiene where we were actually doing analysis of what is airborne that would be detrimental to a person's health. In other

words, like trichloroethylene parts or parts per million with a maximum was 200 parts per million. So they switched over to perchloroethylene, which the maximum allowable limit in the breathing zone was 400.

And we were always doing different thing to try to figure out. We took air samples of wherever a person was working to see if there was anything that was detrimental to their health.

[1:11:15]

**Callan, B.:**

Okay. What year did you come out to K-25?

**Lowery, K.:**

I went to work at K-25 in May 6<sup>th</sup>, 1944.

**Callan, B.:**

1944?

**Lowery, K.:**

Actually, before Bacon and Davis at that time.

**Callan, B.:**

Okay. When you first arrived out here at K-25, what were your first recollections? What did you first think when you came out here?

**Lowery, K.:**

Well, they didn't have a -- They weren't -- They were building on the U, but it was just plain mud. I wore a pair of four-buckle Artics. I had a raincoat that came down to the top of the boots. And like I said, I stayed in a private home in Knoxville until some time in March and moved into -- Well, the called it a barracks. And that was down where the visitor's overlook is at K-25. In barrack seven.

[1:12:14]

But I didn't want to stay there. I moved uptown and went and moved to Dearborn hall up in -- They were right close to Adam's cafeteria down close to Jefferson. And I stayed there 'til they closed that one down. And then I moved up to Charleston Hall up town in Jackson Square.

**Callan, B.:**

How come you didn't like the barracks?

**Lowery, K.:**

There wasn't too much going on. They didn't have tennis courts and dancing and stuff like that. They did have a rec hall that they would have beer every Thursday night. And there was always somebody getting into a fight. And I always stayed close to the door so I could leave.

But there used to be a lot of difference between the Caucasian steel workers. And they brought in a bunch of Indian steel workers from New York area. And they would talk that the Indians thought they'd steel. You know, stuff like that. Someone would get -- They'd get drunk. Like I said, I didn't go for this, but I'd stay away from them.

[1:13:29]

**Callan, B.:** So out there at the K-25 site it was still under construction. There was mud all over the place.

**Lowery, K.:** Yeah.

**Callan, B.:** Tell me other things that were going on during the construction time, because I really haven't heard a lot about the construction of the plant itself.

**Lowery, K.:** Well, since I'm originally from Morristown, one time there the buses would come from Greenville, Morristown, Rogersville, Chattanooga, Lowden, Lenoir City, everywhere -- all over the place. And it didn't matter where you came from; the bus cost was a dollar and fifty cents a week. But they would charge me a dollar to go to Morristown on the weekend and a dollar to come back. And I thought well shoot. I'll buy a whole book of tickets. So I bought a book of tickets for a dollar and a half. Used two of them and turned it back in for a seventy-five cent refund.

But I used to ride -- When I was on a straight midnight for eleven months, I used to ride to Tennessee in, which was a diesel. It came down to Knoxville through Morristown. And I would catch the train, and they ran a free bus from Knoxville to the post office out to K-25.

[1:14:53]

And one night, things didn't run during World War II always on time. And I got to Knoxville and I was running late, and the bus had already gone. So here I am 21 years old, and an older man, I guess he was in his fifties. He had missed the bus too. He said, "What are you going to do?" I said, "If I knew how to get through the switchboards." I said, "I'm going up to Ferry Hotel and call up and tell them to send a car to come and pick me up." And so we walked up, and I called up. And sure enough, they sent one out and they handed me the clipboard, and I just signed my name and

Lowery, Keith

2005 NETS, LLC

everything. [laughs] I wasn't authorized for stuff like this, but I did it anyway.

**Callan, B.:**

Nothing ever came out of that?

**Lowery, K.:**

Nothing ever came. I never heard anything about it. But of course they had dances. They'd have ballgames here at the ball field. They'd liable to have a ballgame at twelve o'clock at night.

The people talk about that there was never a strike. When they went from nothing to ride the bus here in town to a nickel or six tokens for a quarter, they had a big pow-wow down at the Jefferson cafeteria. There must have been five thousand people there, workers. A big guy up on a pickup truck hollering about they were told that they were not going to have to pay to ride the bus.

[1:16:39]

And two Navy officers that lived in Cambridge Hall -- that was primarily Navy officer's dormitory. They got up and talked to them and finally they went back to work. But it was funny. You could -- People told me that -- I'd never tried it, but they said that the plywood boxes had a little hole that was whittled in it, and you could flip it and it would sound just like you dropped a coin, and it'd --

Another short story about it -- sugar was rationed. They would have people in the cafeteria sitting down and taking spoonful and putting it in a little wax paper bag and putting it out so that they wouldn't put a big container of sugar -- but that was some of the sad stories about it.

[1:17:38]

**Callan, B.:**

Are you familiar with Happy Valley?

**Lowery, K.:**

Happy Valley was K-25.

**Callan, B.:**

Okay. And what did Happy Valley look like? What did it consist of?

**Lowery, K.:**

Dormitories -- they had trailers, hutments. I have pictures that shows the turnpike coming up to Blair Road. And it's just trailers and stuff all over the place. There was a big fire out at K-25. The firemen and the guards had to stay in those barracks or whatever



they called -- I think they called them barracks then. They had to stay there close to it. And one of them -- There were two of them. Just made out of plywood, and one of them caught fire. And that thing, I mean it was just like an inferno. Nobody got hurt fortunately.

But we used to walk over there. It was forty cents to eat all you wanted for breakfast when I was working straight midnight shifts for eleven months. And GIs were working with us. And one of the GIs, we'd walk over there and come back.

One boy that came to work in the lab, and he got what they call a million dollar wound during the war. And this was in Germany. And what happened, he got hit right here in the wrist when his buddy was with him. And he saw the moon glint on a helmet, and he reached up. This is in the Black Forrest in Germany. And he reached up to pull his buddy down and he got hit right here.

And I said Black Forrest, but they weren't in there then. But anyway they had to fuse it. So he got discharged. They call that a million dollar wound when you didn't get hurt too bad, but you got discharged.

[1:19:48]

And they was shooting dynamite into the old rock quarry down there close to K-25. And they'd always do it on the midnight shift. And they shot off -- We were walking over to the cafeteria, and they shot this off. And this guy dived plumb off of the road. [laughs] He would come out of there muddy as everything, but it was just a natural reaction from him.

[1:20:14]

**Callan, B.:**

When you were working out here at the facility, did you meet any famous people? You know, people like Groves or Oppenheimer?

**Lowery, K.:**

I saw Groves one time at K-25. And they had a BXM converter. And there were two cars came down, and I never seen so much brass in my life with their forty-fives on their hip and everything. But Colonel Nickels that lived up on Olany (phonetic sp.) Road was actually the man who ramrodded this place.

And, but there used to be a little airport out here, which people when they talk to me they don't even remember. But down going toward K-25 there was two cub planes that -- They stayed -- They

kept them in a barn. And the cars that did parole had white numbers written on the top of them. But they had radio contact with each other and that was run by the Army. But they quit after a while.

But now they had -- I don't know whether you're familiar that they brought horses in. On the outside perimeter, they brought horses in from one of the Army bases and they had guards on those.

[1:21:39]

**Callan, B.:** No. I hadn't heard that.

**Lowery, K.:** Well, they had a barn down there they kept the horses. They brought them in from Fort Oglethorpe. Fort Oglethorpe kept a bunch of them, and so they had them down there in the barn, and they actually used the horses to ride the perimeter, especially before they put the fence up.

**Callan, B.:** How long was it before they had the fence up all the way around this?

**Lowery, K.:** I don't really remember exactly when that happened. Another short story. They talk about the guard shacks were dated back to World War II. They were not built until 1949. They had the guard places, but the ones like going to K-25, those two buildings down there. Those stone buildings and going into Y-12. They were built in 1949 when they got ready to open up the gates. They did not go back to World War II. And, but like I said. It's sort of funny.

[1:22:52]

There is a couple of -- They're not in operation, of fire alarms up in Jackson Square. And what you did. You had to be a certain wheel before you were able to get a phone here in town. And they actually had these alarm systems set up in the Groves Center, Elm Grove, all of them different places and other places close to the houses. If anything happened, you'd run down there and pull his lever and it punched holes in a tape in the fire department, which they had several of those. And it would punch holes in it, and that told the firemen where the fire was, where the emergency was.

But there's two of those poles, those alarm things that are up there in Jackson Square. They were rusted red, and somebody just recently just painted them all black. But one of them's got a bulb, a light bulb in it that actually -- I don't know how old that thing is,

Lowery, Keith

2005 NETS, LLC

but it has burned forever.

**Callan, B.:**

Tell me a little bit more again. Before we started the interview, you were talking about some of the different companies that were involved in the construction. It was Ford, Bacon and Davis was one that you were initially working for. What were some of the other companies that were involved in the construction and what did they do?

[1:24:34]

**Lowery, K.:**

Comstock and Brian out of New York City was the electrical contractor for J.A. Jones, which was the prime contractor at K-25. And Midwest Piping and Supply out of St. Louis was the process piping. And Poe Piping and Heating out of North Carolina was the water system.

Another short story -- they didn't have bathrooms as such then. And they had one place down there they had a six-hole outhouse. And I wish I could have took a picture of it. [laughs] -- because I had never seen anything like that.

**Callan, B.:**

So there was just one big room with --

**Lowery, K.:**

It was a long room. It had six holes privy.

**Callan, B.:**

Pass the newspaper.

**Lowery, K.:**

Hum?

**Callan, B.:**

I guess you could pass the newspaper back and forth.

**Lowery, K.:**

Well, you could. But it was funny. Like I said, [laughs] I'd never seen anything like it. And there was more than one. There was a couple of them. But one of them was on the northeast corner of the U building.

[1:25:50]

**Callan, B.:**

It sounds like you kind of came in and out of Oak Ridge quite a bit with the different neighboring towns. What sort of perceptions do you get from people who didn't work here? What did they think was going on? Or what did they think about all the activity out here at K-25 and Oak Ridge?

**Lowery, K.:**

Most people didn't talk too much about it except some of the

Lowery, Keith

2005 NETS, LLC

stores. They used to run buses into Knoxville on Monday night. Stores did stay open on Monday night. And they ran a free bus so that people could go into Knoxville. And, but they were always jammed up. They kept pieces of plywood under the seats so that they actually had people sitting in those seats and sitting in the isles going down the middle of it.

[1:26:44]

The people said, in Knoxville said you could always tell the ones from Oak Ridge because they always had mud on them. And I guess they were right. [laughs]

**Callan, B.:**

Were you ever questioned or did anybody -- Let's switch out the tape real quick. Our tapes only run for 30 minutes, and so I don't want to go onto a whole --

[End Tape 1, Begin Tape 2]

[2:00:09]

**Lowery, K.:**

Uh, I didn't think he was going to come out of it because there was too much burn and everything.

**Callan, B.:**

Wow.

**Lowery, K.:**

But I even worked down at the labor building a firehouse. I was down there too.

**Callan, B.:**

Do you want to talk about the powerhouse next? Because I haven't heard much about the powerhouse.

**Lowery, K.:**

You want the powerhouse or the S-50, thermal diffusion plant?

**Callan, B.:**

Both. Let's talk about the powerhouse first.

**Lowery, K.:**

Thermal diffusion was -- They spent 25 million dollars on it for about ten, eleven months. And they junked it. But their pressure was so high. They had capillaries in a sheet. And they hit it with the uranium and it's supposed to go through the little hole. But like I said, they spent 25 million dollars on it in about ten, eleven months. And they junked it.

[2:01:27]

I went down. I was sent down there from Ford, Bacon and Davis. It was the 1401 building, the Ford, Bacon and Davis building to do

Lowery, Keith

2005 NETS, LLC

some sampling. And their equipment was only good for about 14.7 pounds, which is atmospheric pressure, is about 14.7 pounds. I went in there and I said, "What kind of pressure do you have?" And they said, "Sixty-pound gage." And I said, "My equipment will not handle anything that high." [laughs]

So I went back. I told my boss, I said, "I'm not going to go mess with it because it's too dangerous." So --

**Callan, B.:** What were you testing for?

**Lowery, K.:** I was going to take some samples of uranium. And they referred to it as tea. That was a code name for uranium. Have you heard this one before?

**Callan, B.:** Not tea.

[2:02:28]

**Lowery, K.:** It was called tea. Just plane tea. And our lab -- Incidentally, our lab had -- Was working in the process and Ford, Bacon and Davis and chemistry involved in the tanks with HCL, sulfuric acid and all of that. And, but they had another section in the lab that actually did specifications. In other words, the government wanted to do -- They set up a thing where they did the actually octane and gasoline, paint, and concrete about everything to specifications that you would have on stuff like that.

And they actually brought the stuff in from all over up in Pansi (phonetic sp.). And they would bring boxes of paint that they bought, and they would run the federal specifications on it. So --

**Callan, B.:** If people inquired about what work was done here, how would you describe it?

**Lowery, K.:** I'd tell them I didn't know.

[2:04:01]

**Callan, B.:** What about now. How would you describe it?

**Lowery, K.:** I'd say it was very interesting. I loved what I was doing. I learned a lot. And I have very pleasant memories of it.

**Callan, B.:** What are some of your most vivid recollections of the time that you spent at K-25?

Lowery, Keith

2005 NETS, LLC

**Lowery, K.:**

Well, I guess when I was in industrial hygiene for ten or eleven years. I think I enjoyed that because I was roaming all over the plant all the time. I even actually went to X-10 or ORNL, whatever you want to call it. And also Y-12 to do some analytical work. And although I didn't go over there permanent or anything like that. But I would go over there maybe for a week. [clears throat] Excuse me.

But we had some instruments that they didn't happen to have. So we had contact with the industrial hygienists at Y-12 and also at X-10 and K-25. I wasn't an industrial hygienist. I just did the legwork.

**Callan, B.:**

What did you like the most about working at K-25?

[2:05:37]

**Lowery, K.:**

The most?

**Callan, B.:**

Uh-huh (affirmative).

**Lowery, K.:**

I think the comradity (phonetic sp.) with the people. You -- It was -- Everybody was working to get the work done and although there was a lot of people that knew what was going on. There was a lot more, especially in the lab. And there was one fella that I'd talked to when we were at a car away from anybody hearing us.

I got recruited for security on the side. And when Agent Sorenson -- He says, "I'm Agent Harris. I would like to come and talk to you." And I thought what did I say and where did I say it?

We had to fill out a form every week and anytime we heard somebody talking out of turn, out of school or anything so to speak what they were doing, we were to turn them in. We had a phone number to call.

One guy that worked on the thermal diffusion and he was in this beer place down on Jefferson. And he was beating his guns. And so I had been on the phone and I call up to come and get him. And they said, "Which one is it?" And I said well everybody wore khaki britches and khaki shirts then. And I said, "That one over there." And they said, "Which one." And I said, "Okay. I'll go touch his chair."

[2:07:12]

And I had never seen a two-way mirror, but I knew. And so they come over and grab him and take him out. And you talk about a person who sobered up. I went with the other car, and they were telling him -- I was telling them what he was saying. And they talked to him and I don't know what. But they could fire you for it.

The specifications were that you would wear the badge or whatever, identification on the outside up here on the upper left shoulder, toward the shoulder. The girls sometimes would put a pin, fasten a badge down on their leg, close to the bottom of their skirt. And sometimes the security would tell them they can't do that. But it was really something.

I guess there was two or three people that I would talk to that actually -- they was in the lab that really knew what was going on. And it was just one of those things. But like I said, we would talk where somebody could hear us. [laughs]

[2:08:39]

**Callan, B.:** Just out of curiosity, the letters that you had or the forms you had to fill out and mail that every week, what was the address that it was mailed to?

**Lowery, K.:** I don't remember the address, but they would change the name of it. ACME Credit Company was one of them.

**Callan, B.:** That's what's I've heard, the ACME. There were a few other people that I've interviewed that had to do the same thing. It was the ACME Credit Company.

**Lowery, K.:** Okay. That was the last one. I did keep the letter, the last letter that they sent me, because it mentioned the fact that the Japanese were still fighting. [clears throat] Excuse me.

**Callan, B.:** Let's see. Let's talk a little bit more about the working conditions in the work environment. And you said that you had quite a bit of background in security. So tell me how security worked around K-25.

[2:09:32]

**Lowery, K.:** Well, on a running test in, there was a fella that came in. I'll give you one example, another example. He came in, and he always

looked like he needed a shave on Monday. And they would put this sweeping compound down and around there. And I'm up there running estimates and stuff. And he kept coming around and wanting to know what I was doing. I told him I didn't know what I was doing.

And he didn't shave all week. But he didn't talk like somebody uneducated. He talked like an educated man. And of course they were hiring people that couldn't even read or write to do janitorial work back then.

And so I decided I'd check him out. I come to find out he was security with the Army. [laughs] And they just said thank goodness somebody's checking him out. It was one of those things.

[2:10:41]

I was in the central control room one time. Somebody opened up a brief case and there was a letter. One of these envelopes came out to ACME Credit Company. I believe that was the one. But anyway, they changed the name of it every so often. But, [laughs] when he (Indiscernible) I thought ah ha. I know who you are. But I didn't say anything to him about it.

**Callan, B.:**

You were working in security and they were --?

**Lowery, K.:**

I was working in the lab, but I was handling some security. I got recruited for this. Anything that I saw that looked out of the way or I heard or anything, I was to report it.

**Callan, B.:**

And so that Army security guy was checking you out and you were checking him out.

**Lowery, K.:**

Well, he was too noseey, and I decided I'd better check him out. [laughs] But they did pick up somebody. I did call a fella that's still alive lives over in Clinton and asked him what this guys name was. But down in the middle of 1401 was the offices and the labs and all that. And, but they came and got one guy. They didn't even give him time to get his coat or anything. I mean they just come in there and practically lift him out of the chair.

[2:12:06]

And, our understanding -- We never did hear anything of what happened to him. But we understood that he had gone to school at



Lowery, Keith

2005 NETS, LLC

the University in Berlin. And so I don't know whether they really did anything to -- or what happened. But we never heard a thing from him.

**Callan, B.:**

Hum. Tell me about the badges and what the number meant on the badges. We were talking about that.

**Lowery, K.:**

Badges with J.A. Jones when I first came in, the prefix number was a one, which meant you were a non-laboring class. Two dash so and so number was a electricians and three was carpenters. And I don't remember the others. But that was the way they differentiated from which class.

Now when I went to work for Ford, Bacon and Davis, you had color code to dare go to different areas. And they had guards actually brokino.

[2:13:18]

Now they brought in -- They brought in a bunch of barrels. Little silver-like barrels. And they set them down there in the building, and they put a chain thing around it and had a guard sitting there in a chair. And I thought well what is in those barrels. So I decided I was going to try to find out what was in the barrels. I did find out what was in the barrels. But probably I shouldn't have done it. But it was just something. I was young and curious about everything.

**Callan, B.:**

Are you going to tell us what was in the barrels or not?

**Lowery, K.:**

I found out what was in the barrels.

**Callan, B.:**

What were the physical working conditions like where you were at?

**Lowery, K.:**

Beg your pardon.

**Callan, B.:**

The physical working conditions like in the facility?

**Lowery, K.:**

Physical.

**Callan, B.:**

Hot, cold.

[2:14:16]

**Lowery, K.:**

It was pretty hot. Down in the basement area they had 36 running

test stands down there. And they were running -- Elliott pumps were running fourteen thousand two-hundred and seventy-three RPMs. And I'm getting a little too close to classification I guess. I better back away from this. But they had what they call a diffusion vacuum pump. And oil. And it'd just tick, tick, tick, tick.

But they had one fella. I don't know whether he was past 65 or not, but he was always wiping around on it with cheesecloth. And one day that cheesecloth got tied into this motor and I'd say. You talk about noise. Everybody was just about heading for the door. But, and they told him not to do that anymore.

But we've had -- I've got some pictures where I was in an explosion in one building. And it almost -- It actually hit me just about the time this metal hit that lead that it was cold and it was going to erupt. And I was backing away. Fortunately, I backed away far enough that I didn't really get a whole lot of it. It went down in my shoe. It went through my sock. And I had a few words about this. [laughs]

[2:16:06]

**Callan, B.:**

Okay. I had another follow-up question to that, and it just kind of floated out of my head. Oh, it sounds like you're pretty familiar with I guess the construction of the facility all together. Can you kind of give me a description of the different floors of the building? Like you had the basement or the vaults. And what were those used for? And then we had the operations floor. And what was that like? And just kind of go through the whole sequence of the different levels of K-25. Can you do that?

**Lowery, K.:**

Okay. I can say this. They had A converters, B -- Have you heard all this?

**Callan, B.:**

I've heard some about converters.

**Lowery, K.:**

We had A converters, B converters, C converters, D converters, and E converters. Now the first one, the A was big. And then as it separated 235 it went down to a B. And each one of then got smaller. Now the E converter was down at the bottom of it. And they had pumps and stuff running on that. But they would take the -- Actually, they took the enriched uranium from K-25 and took it to Y-12 to further enrich it.

[2:17:37]

But 1401, my understanding they had cranes in each bay. And it did look like a -- Oh, an automobile assembly line. And we heard that this is where they got the blueprints. They modified it. It had a basement area in the northwest corner. And they had giant pumps, giant fans that actually changed the air every six minutes.

Going over to process on the southeast corner was where the big A converters were. And then it went down and around and came back around. Now when you got in to 29, the converters were bigger. And 31 to 33 were double A and triple-triple A. And they were huge. And, but what they did, they further stripped down the uranium to 235 from uranium.

In other words, like normal it's .15 percent. And they got it down to .2, .02 I think or .2. And, but that was -- But like I said, the process -- I've got pictures inside. I think I've got pictures of inside one of the cells. But we worked on one time when they had a power failure, 19 -- Around 1950. And a possum had gotten into the electrical system. And Oak Ridge had come out and said that production was the highest it had ever been. And on July the fourth, that weekend, that's when that possum got in there and kicked the power off at K-25.

[2:19:55]

And there was two other fellas and I were working on special gas to clean them out. And we were told to be over to process and be ready to go at ten o'clock. It was Thursday night and we worked -- I don't know how many hours, but I felt like I was just about a zombie. [laughs]

But down -- They had a basement area. They had storage. And they were using a coolant, CH16, CF C716. And, but the process, like I said, it was about the same way all the way around.

**Callan, B.:**

Okay. What about above the operations floor there was the pipe gallery. Can you describe the pipe gallery?

[2:21:01]

**Lowery, K.:**

The pipe gallery actually was in between --

**Callan, B.:**

Not operations, but the main floor, then the pipe gallery, and then there was the control --

**Lowery, K.:**

Yeah. You had the main floor and then you went up to the pipe

gallery and the converters in each cell. And they had a line recorder sitting up at about every one. And, but the vibration of some of the buildings would vibrate and they would get in sequence together when the -- do like this in the southwest corner of the U. And when it hit this cycle, the foam would jump up and down, but then it would get out of sync in a short time.

But we always laughed, especially if we get somebody new and take them over there and let it happen to them. [laughs]

**Callan, B.:**

How often did that harmonic --

**Lowery, K.:**

I don't remember how often, how often that happened. But they used to use induction furnace. I don't mean induction furnace but electrical, sort of like a microwave to heat seals and take them apart. And you had to push your hand up there to turn it on.

[2:22:30]

Well, somebody had put their hand in and had metal. It pushed it and it got heated. So they put two of them. You needed both hands for pumping it in there. But I used to get -- They kept a four-foot fluorescent light bulb laying in there. And before they put the two places up there, I'd take -- They used me as a training program when they hired new employees in the lab. And they would put them out with me for maybe three or four months to learn what was going on in all the plant area.

And so they -- When they did this, I would take them down there and take -- I said, "Look. I got so much uranium in my system." And I'd stick -- push the button and push the end of the fluorescent tube in it and it would light up. And you know, it just, it was fun to do stuff like this.

**Callan, B.:**

[laughs] Do you have any other stories like that?

**Lowery, K.:**

Beg your pardon.

[2:23:47]

**Callan, B.:**

Do you have any other stories that are like that?

**Lowery, K.:**

I've got -- I don't know whether you've heard the one about the fella dressing up like a female and --

**Callan, B.:**

No. I haven't heard that one. Please do tell.

Lowery, Keith

2005 NETS, LLC

**Lowery, K.:** Shall I use names?

**Callan, B.:** You may.

**Lowery, K.:** A fella named Ted Kapraski who happens to be dead now. P.J. Marlino that I worked with on pilot plants and everything. Marlino, he said I could use his name incidentally. He dressed -- Marlino dressed up like a female and was saying he was Kapraski's wife. And they got an E apartment. And they actually moved in. And Kapraski wasn't there, but P.J. was there. And they found out about it, and they went and the MPs came down, two of them. And knocked on the door and P.J. answered the door. They said, "You're here illegal." P.J. -- And said, "We come to move you out." He said, "You can't do that." He said they took the billy stick and split it across my chest, pushed me out of the way, and told the two guys in the truck to get this stuff out of there and not supposed to be.

But here P.J. said he went to the door and the MPs of course would wear their forty-fives on their hips. Said boy they were loaded up you know. [laughs] But they lost their apartment.

**Callan, B.:** So all they did was just move them back to the dorms then?

**Lowery, K.:** He moved into the dorm.

**Callan, B.:** Okay. He's just telling me we've got five minutes left on this tape. So --

**Lowery, K.:** Okay.

**Callan, B.:** Tell me about the health facilities out there. What kind of health facilities were available?

**Lowery, K.:** They had a called first aid. And they would -- Minor, minor things, they would take care of it. Like I had a cut one time, and they did some suturing and everything like that. But they would keep up with you. You had to go over there. They would also at one time they were doing proctology exam to see if you had any polyps or anything like that. And, but when I was out in industrial hygiene, I had a lot of contact with the first aid, the dispensary.

[2:26:32]

And one fella had a habit of coming through the area of the

welding shop and drinking coffee and wasn't putting any money in it. And they went and doctored it up. And he came in the dispensary. And actually it was moth balls that somebody had beat up and put it in there as sugar. And that can be pretty dangerous.

**Callan, B.:** Pretty cruel joke. Yeah.

**Lowery, K.:** Yeah. But like I said, I don't remember a lot of stories. [laughs]

**Callan, B.:** You remember quite a few actually. Let me switch tapes out real quick, because we've got quite a few more questions. Are you doing all right? Did you want to get up?

**Lowery, K.:** I'm doing okay.

**Callan, B.:** Okay.

[End Tape 2, Begin Tape 3]  
[3:00:10]

**Callan, B.:** -- badges and these items. I haven't --

**Lowery, K.:** Bill Wilcox was a big wheel. And he goes wild when he sees my notebooks.

**Callan, B.:** Oh, really?

**Lowery, K.:** And he says, "Where did you get them?" And I says, "I'll never tell you." [laughter]

**Callan, B.:** So was it just stuff here that you wanted us to shoot?

**Lowery, K.:** Well, (Indiscernible) look at this. I don't have a camera, I mean a -  
-

**Callan, B.:** Well, you can just show Josiah, and then he'll take that stuff in there and shoot in while we're interviewing.

**Lowery, K.:** Oh, take it.

**Callan, B.:** Yeah. You can show him right now.

**Lowery, K.:** You want me to show it now?

**Callan, B.:** Yeah.

Lowery, Keith

Lowery, K.: Okay.

[crew talk]

Lowery, K.: These are just stuff that we carried around for notebooks back then.

Callan, B.: Okay.

Lowery, K.: See the ES, EC, and Carbide and Carbon Chemical Company.

Callan, B.: Okay. Is that the U.S. Army --?

Lowery, K.: It's a U.S. AEC.

Callan, B.: Engineering Corps?

Lowery, K.: Ah, this has got some little old procedures and stuff in it. But that's not -- And I talked to people and they've been out here as long as I have and they don't remember all that. And I don't know why I remember it. [laughter]

Callan, B.: No. You've got a very, very vivid memory. I'm impressed with it. I got a note from Gary, and we talked about the thermal plant, but we did not talk about the powerhouse.

Lowery, K.: Okay.

Callan, B.: Tell me a little bit about the powerhouse.

Lowery, K.: The powerhouse, when they were building that in '43 and '44, the powerhouse actually did not put out sixty-cycle power. Is this what you wanted me to talk about?

[3:02:17]

Callan, B.: Well, just the powerhouse in general. Just describe the powerhouse. What it was used for. You know, for someone that has no idea what the powerhouse was.

Lowery, K.: The powerhouse was generated electricity. And they had some -- They didn't come out with sixty cycle. The TVA or most of your electrical stuff is sixty-cycle power. And, but you couldn't get speed out of the motors that they had back then without some special power. So this is why they built the powerhouse. And also they used the power for thermal diffusion and everything.

Lowery, Keith

2005 NETS, LLC

But they had -- I was trying to think of some of the other. 440 cycle was some of the power that they put out. And, but most of the time they were running, the motors were running about 1700 something RPMs -- that was AC pumps, Allis Chalmers pumps.

And they would fluorinate those things to coat the impeller inside to cut down any corrosion. And when they leak tested the piping before it went in the process, they used helium. And it would -- The seal, the little sort of like a radio tube or a tube in an old radio. And it had platinum coating on the inside. And this was the center for in case there was a leak. Then they would take a little jet thing and put the helium around it and it would show up, indicate on the alarm system. So that meant they had to go back and re-weld it because the process was running way below atmospheric pressure. And, I know that much, but I better not say too much about that one. [laughs]

[3:04:44]

**Callan, B.:**

Okay. Let's get back over to I guess health related questions. What sort of regular testing was performed on the people that worked at the facility?

**Lowery, K.:**

They -- We went to Y-12 to have what they call a full body count. And they would take this thing and get in this sort of like a bank vault. Get in there and stay maybe 20 minutes, 30 minutes and had an aluminum table that you laid on. And not the whole table, sort of like a lawn chair, an aluminum lawn chair type thing.

[3:05:40]

And you would go over there and take a shower and everything and get in that thing and they would take a test on you. And see if you drank a lot of milk or something like that, hadn't had too much stuff in your body.

The noise level that they had out there, especially down in the basement area, there was 36 Elliotts running that fast. You had to talk; you had to lean right over. Just holler right in somebody's ear. And they did not give us hearing protection back then. Of course, they didn't know that this was going to interfere later on. But I have two hearing aids to take care of that.

But I will tell another little story if it's okay.

**Callan, B.:**

Please.



Lowery, Keith

2005 NETS, LLC

**Lowery, K.:**

I was not married, and I was working straight -- I was rotating midnight shift. And I had been out on a date on Saturday night, and I had to go into work at midnight. And the fella in front of me put a ammonium hydroxide bottle, a full bottle in between in the hood in between two hot plates, which was actually a no, no. You don't want to heat stuff.

[3:07:16]

And I thought oh boy. So I said -- Here I had this tie still on. It would pull down and everything. And I raised the hood, and evidently the vibration blew the bottle. It was ammonia hit me, and I couldn't see. And I knew that there was water in the sink right behind me.

So I come back, and I get this thing, and I start peeling clothes off. I am pouring water all over me. But I knew where the door was, so I went out the door. And this guard out post eleven. Here I am. All I have on is my undershirt and that tie and my shoes and socks. And I come out the door. [laughs] And he starts laughing. And I said, "Dad blame you. Call up to the ambulance to come and get me." [laughs]

But like I said, that was one of the funny things. It wasn't really funny at the time.

**Callan, B.:**

No. I imagine not. [laughs] Oh, was there any other time that you were ever hurt while working at K-25?

[3:08:23]

**Lowery, K.:**

I was in 1098E building, which was the heat treating building. They were going to lead the coolant heads for the Freon system. And they decided they were going to speed it up. Build a big round tank. I guess the thing was 12 foot across. And they had HCL in one of them, which would treat the -- And then they would dip it down into this hot lead. It would heat it up with gas.

And like I said, about the time that they were going to drop it down, took it out of that. Two metallurgical people were down there too. There was quite a few to see it. And I was down there from the safety end, safety part.

Anyway, about the time they get it down and it's going to touch it, it hit me that this stuff was going to erupt because of the heat down

Lowery, Keith

2005 NETS, LLC

here and the cold up here. And it went up shooting through the holes, those Freon condensers. It went up in to the ceiling. And a big bunch of it hit me right here. Went down my shoe. I had a whole lot of -- I didn't bring the picture with me, but I think I do have the picture with me. But I hopped around. I pulled my shoe off and the lead had gone through my sock and on my instep it sort of peeled some of the hide off. But I wasn't very happy. But they put me on -- I had to wear moccasins for about two weeks 'til it healed up.

[3:10:14]

**Callan, B.:**

Overall do you think that I guess the company and the supervisors; they put a lot of emphasis on safety? Was there pretty good safety measures taken and procedures?

**Lowery, K.:**

Yes. Sometimes you would -- As far as safety, if one person would maybe do something and somebody in there would see something wrong and turn it in. And they would -- May be I would go out. Sometimes I'd have a welding, the head of the welding shop and head of the motor shop. And sometimes they would strike and arch in the welding shop, and the trichloroethylene fumes would come over and it would generate phosgene. And the welders would quit working, and if this happened. And sometimes I would get called to get in. But I'd wind up in between both of them. [laughs] They were both hollering around.

But really and truly, I always wondered why they put the welding shop that close to that type of work. All they had was a metal fence in between with grading up above and everything. And the fumes would go over. Why they put it that way, I don't know. But they changed things around.

[3:11:55]

Another one --

**Callan, B.:**

Go ahead.

**Lowery, K.:**

Another one in 1401 -- they -- to cut the pieces off of a battle ship to round the radar section. And the radar section is got lead, or not lead but iron about like that. And it's got a thin layer about a quarter-inch lead. Then have a small, short layer on the outside.

And I was in 1401. And I see this, this cloud of reddish-looking

Lowery, Keith

2005 NETS, LLC

smoke going up in the air. And I thought well, what's going on over here? I didn't know about this. So I go over there, and the welder is cutting this stuff. It's supposed to go to ORNL.

[3:12:47]

And he's cutting it, and I thought -- I had never heard of lancing powder. And what it is they put real fine powder, iron powder on that and it helps cut it. And they weren't too happy. I told everybody they were going to have to wear respirators.

So I got the idea that they were -- When I found out what it was used for, that there may be some lead in it. So I stuck my knife in there, and sure enough. Went back to the lab. Did a quick check on it and the thing had a lead shield in it. I said, "Oh, boy." Everybody's got to wear one now -- even the ones around the perimeter of it.

Like I said, there was all sorts of things that I would run into. But I enjoyed it. And I was curious enough to -- That I was always wanting to know why or how it was done and this and that and the other.

**Callan, B.:** Going back to specific recollections of the Manhattan Project.

**Lowery, K.:** Okay.

[3:13:52]

**Callan, B.:** Did you have a pretty good understanding of what the function of the facility was before the bomb was dropped?

**Lowery, K.:** No. Oh, yes. Before the bomb was dropped. We didn't know about the test bomb. But we did know. Some of us knew that, what they were doing. But we didn't know when it was going to happen.

When they did the test bombs after the war was over in the Pacific, there was a lot of fellas that were recruited to go on the ships in that -- when they were doing those testings. Some of my friends.

**Callan, B.:** What was your reaction to the news on August 6, 1945?

**Lowery, K.:** I was elated that it was going to -- It would wind up and it was going to help stop the war.

Lowery, Keith

**Callan, B.:**

And what was the atmosphere around Oak Ridge like?

**Lowery, K.:**

Everybody was jubilant. And, in the fact of the matter, everybody was talking about it. I mean, they were talking. So many people were out talking about it that you could almost hear it miles away. But it was really something.

[3:15:29]

**Callan, B.:**

How do you think that history will view the Manhattan Project and its outcome?

**Lowery, K.:**

I think with the outcome that the Manhattan Project is going to be looked at that it was a lifesaver actually of both sides. The Japanese and the United States people. Because when you take people like Kamikaze fighters and people that you can brainwash. And I'll use the term brainwash. It's awful hard to vision, visualize them unless you hit them with a brick or something or other that they would quit.

**Callan, B.:**

So overall you feel that it was I guess that history will look at the Manhattan Project with a positive light.

**Lowery, K.:**

Yes.

**Callan, B.:**

Okay. Can you explain what the expansion program is and when did that begin?

[3:16:33]

**Lowery, K.:**

The what program?

**Callan, B.:**

The expansion program. This was a period of operation after, from like 1946 until around 1964. It was the expansion project and in the Cold War era when the plant was operating. How did things change from its initial operation?

**Lowery, K.:**

Well, actually during the Cold War, they did tighten up on security. And we did some -- Actually went for a fall out shelter simulated. And they had -- Actually they had canned water. They had candy. High protein, high sugar candy in barrels down at the powerhouse area down at the bottom.

Of course, the firehouse was not operating at that time. And, but we would all -- They'd take a whole group and go down there. And what I was doing was trying to figure out how many people

were there and how many square feet. I wanted my number of square feet. [laughs]

And actually, we had so many down there that really you couldn't have laid down without being on somebody. [laughs] But we actually did some evacuations and stuff like that. And it was one of those things.

But there's a lot of people that worked out here that don't like the idea that the bomb was dropped. That President Truman was wrong. But I think he was absolutely right.

[3:18:33]

**Callan, B.:**

How did the role of the facility change after the Manhattan Project? What was the function of the facility during that time?

**Lowery, K.:**

Primarily it was to enrich uranium to a small amount for nuclear reactors. They had two flagpoles in front of the ad building and an American flag on one side. And when Sweden brought in some UF6 in bit cylinders. And they would feed it in. They would pay so much to get it enriched probably to five percent, which is about what they used in nuclear power reactors.

And, but they'd always run a flag up whatever country. Japanese flag or the Swiss flag or whoever was happened to be sending in stuff to be enriched. They would run the flag up. And they usually had people around. They had what they call a sampling section in K-1004A. And they would actually take samples of it to see that it was .711 percent 235. And they would pay so much for each pound that they had in there to enrich.

[3:20:08]

And primarily this is what the function of the place was during the Cold War.

**Callan, B.:**

So the source uranium, did it come from -- The countries brought their own uranium in?

**Lowery, K.:**

They brought their own. And most of it came from South Africa.

One other story. The material that they brought in was only .69 I believe. I'm not sure about this number. It's somewhere close to it. And the sampling kept coming out with a mass spectrometer kept coming out .69 something instead of .71. And if you paid so

much for enriching this to five percent, then you're going to pay a lot more for it.

Well, they didn't believe it. They sent stuff all over the place to analysis. And everybody kept coming back the same thing.

[3:21:20]

And they found out that they surmised something in nucleonics about a year later. There was a magazine called Nucleonics, and they said it way back millions of years ago that they probably had a nuclear excursion in South African in that area due to just the mass, which depleted 235.

**Callan, B.:**

Interesting. Really interesting. Do you have any other recollections about K-25's operations during the Cold War period that you want to share?

**Lowery, K.:**

No. Not really.

**Callan, B.:**

What are your thoughts about the activities accomplished at K-25 revolutionized the world?

**Lowery, K.:**

Say that again.

**Callan, B.:**

What are your thoughts about how the activities accomplished at K-25 revolutionized the world?

**Lowery, K.:**

Well, I think the enrichment process revolution -- electrical generating from nuclear power. We're on a shooting spree. I think we're on about 22 percent in this country. And some of these other places are much more than we are. And 65 and on up.

[3:22:50]

There's too much intermingled environmental things that says you can't do this. You can't do that. And so it bothers me that they've got that much power to federally stop these advances.

I do know -- I have some friends that work in specifications inspecting nuclear power plant. And any time you have this you're gonna -- any type of power plant, you're gonna have possibly danger.

But three-mile island was something that -- But the safety guards did stop it. And so far we haven't really had anything except in

Lowery, Keith

2005 NETS, LLC

that Russia thing. So I'm sure that engineering would take care of them.

**Callan, B.:**

Good answer. What would you say was your most challenging assignment as an individual, member of a group and also what was your most significant accomplishment?

[3:24:02]

**Lowery, K.:**

One of my mine was my boss came in and wanted to know if I could run a certain type of material. And I used x-ray fluorescent to run it. And it was tungsten hexafluoride and uranium hexafluoride.

And they wanted 91 percent tungsten hexafluoride and 8.5 percent uranium. And they didn't want it deviated more than about 25 percent. And I thought oh boy. So my boss wanted to know if I could run it. So I go look at my charts, and I figured out, yes I can do it.

And it took me longer to crank up. It took me longer than eight hours a day. I was out there sometimes pretty late at night. But after -- It was a challenge the thing to really figure out how to do it.

But I enjoyed stuff like that. And, but I don't know. I didn't enjoy working on the pilot plant. I mean, I read where they were talking about reducing the UF6 into cylinders, the depleted uranium, and they wanted to reduce it to powder form to -- so that they don't have to worry about the degassing and leaking through.

[3:25:55]

The plugs on these big twelve-ton cylinders. They used to lead the plugs for the threading and put it in. But they would leak through after a certain length of time. And the material, if they reduced it to a powder form. And actually, they used a plain old garden hose on a pipe on a tower and fed the UF6 in. And that was a pretty dirty mess. I didn't even like to work on that on. [laughter]

But I don't know. Fortunately, in my 45 years out there, I worked on so many different things that were really a challenging thing. One other thing. Fluorine. I was a group leader over a bunch of girls taking fluorine analysis. And this was back in '44. And we used a ten percent KI solution, which would liberate the iodine and then we'd titrate (phonetic sp.) it with a starch indicator and sodium zile (phonetic sp.) sulfate.

But when it went up to 20 some percent, and it would flash when you took the sample in and put the KI solution in, the potassium iodine solution in it. And it didn't titrate very high. So, but if you put inert gas. So what it did put -- It has a manometer on it. It took 50 millimeters of pressure and then pressured it up to about 600. And atmospheric pressure is seven hundred something. It pressured it up to about 600. And then added the potassium iodine then you didn't get the flash. And it worked fine.

[3:28:04]

But like I said, I sort of enjoyed working on these oddball things.

**Callan, B.:**

Okay. We're going to switch out tape one more time. And just got --

[End of Tape 3, Begin Tape 4]

[4:00:04]

**Lowery, K.:**

-- it on the Tennessee and try to come down Knoxville. Now that was the old depot, southern depot. Had to walk all the way up Gay Street to the post office. And up on Cumberland. And, but it was one of those things that I figured I could get away with it.

But you had Sealy was the vice president of Midwest Piping and Supply.

**Callan, B.:**

Okay. We're back on. Did you want to finish that one before we go back on?

[4:00:51]

**Lowery, K.:**

Yeah.

**Callan, B.:**

Okay. Go ahead. Hook up again. We were talking about challenging assignments. Let's talk more about women at K-25. And you said that there was quite a ratio of women to men out there.

**Lowery, K.:**

Yeah.

**Callan, B.:**

What sort of roles did women have working out there, and how were they treated?

**Lowery, K.:**

They -- I don't remember any supervisor in the women. They



mostly were men. The blacks had a separate water fountain. We had one girl that worked as a janitor, and she came to the lab and probably knew more of what was going on to do in the lab than the people that was in there. And she had graduated from this two-year Morristown Normal Industrial College, black college in Morristown, Tennessee.

[4:02:00]

And I'd talk to her sometimes. And we'd talk about Morristown since I'm originally from there. And, but I always wondered. You know, I really truly, back then I even thought that it would be better if they'd hire somebody like that. But a lot of janitors and stuff did not read or write.

But they had a few that did what they call glass blowing. And I think they had one or two in that a long with two or three other guys. We had one GI that was really good if you needed a glass blower. One of the girls in the lab was cleaning. They'd take the tube, the indicating tube when they were using helium for indicator for leaks. And after a certain period of time it would coat the inside of the tube. And it had platinum coating.

And the platinum coating would have to be taken over. The glass blower would cut it, cut the top off of it, the glass with a wire and bring it apart and bring it over there to the lab. And they would put it in this little tray and clean it.

Well, one of the girls actually used aquaregia. Aquaregia will dissolve platinum. And it dissolves coating on the tubes. And there was quite a hell raise over that one because it took a while to get some more tubes.

[4:03:50]

**Callan, B.:**

So what sort of jobs did women typically have there other than --?

**Lowery, K.:**

They were -- They did fluorine analysis and secretarial work and work in the lab. We had quite a few work in the lab. And there was one time we had -- There were three men. And we had to have two people on this pilot plant. And I was working day shift until midnight.

Well, the first night the time I get out and catch a bus and come into down close to the YW now and get in bed, it seemed like I no more than laid down and the alarm or the clerk out there pushed a

Lowery, Keith

2005 NETS, LLC

button and it woke me up. And I get up. Clean up. Go out and get something to eat. Had to catch a bus down there.

Well, I didn't get much sleep. So the next night we were still on it. I said, "I'm going up to the ladies restroom and go to bed."

[4:05:00]

So I went up. I stripped down to my clothes. They had army cots in there with blankets and pillows and everything. I said, "Now you guys come and get me at seven o'clock." And they got busy and didn't come and get me. And all of the sudden I woke up and there was a woman working the lab named Willie Shafen (phonetic sp.). She's from Knoxville. And she is shaking me. And she says, "Keith. What are you doing in here?" And I says, "Oh, good gracious. What time is it?" She always came in early. Thank goodness it was her that come in there and got me. So she guarded the door so I could get dressed. [laughs]

But like I said, it's one of those things.

**Callan, B.:**

Okay. Did your wife, she worked at K-25 as well?

**Lowery, K.:**

She worked -- She was recruited out of Morristown and worked at Y-12, and then she worked at K-25 with end field and electric.

[4:06:04]

**Callan, B.:**

And how did you guys meet?

**Lowery, K.:**

She's from Morristown, Tennessee. And I was two years ahead of her in school. And after the war was over, and then all the available girls were getting married. And I happed to be up there, and she was in the drug store. And I talked her into skipping a date that she had that night and dating me. So we started dating. And I drove to and from Oak Ridge on the weekend. And I had several women that would ride with me. So --

Then we started dating off and on, you know. Finally got married.

**Callan, B.:**

Okay. These are just kind of some broad perspective-type questions. Why don't you describe to me what -- And you already have to some point. But describe to me what future generations should remember about K-25.

**Lowery, K.:**

I think that they should remember that primarily that it was a

Lowery, Keith

2005 NETS, LLC

miracle that they were able to do this job and to get it finished in that length of time. And I think that it had a lot to do with the stopping World War II and also helping against in the Cold War. And I am proud to have been a part of it.

[4:08:02]

**Callan, B.:** If you were writing a story about Oak Ridge and K-25, what topics would you cover?

**Lowery, K.:** Oowee (phonetic sp.). I'd cover some of the stories about everybody working toward one end to get the job done. And people, especially the people that didn't know what was going on. And they knew they had a job to do.

And, but I'd just like to see it remembered, like I said, it helped the United States in the Cold War. And that it was a remarkable job.

**Callan, B.:** Okay. Sounds good. Anything else that you wanted to discuss or say or expand upon before we wrap up the interview? Because that was all the questions I had.

**Lowery, K.:** No.

**Callan, B.:** Ready to get out of the hot chair?

**Lowery, K.:** [laughs]

**Callan, B.:** Well, Keith. Thank you very much. I really enjoyed that interview.

[End of Interview]