Joe Sawicki

National Educational Technology Solutions LLC

K-25 Oral History Interview

Date: 3/09/05

Interviewee: Joseph Sawicki

Interviewer: Bart Callan

DOES NOT CONTAIN
OFFICIAL USE ONLY INFORMATION
Name/Org: [signature] EnP/CICO Date: 4Nov15

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 OUO information).
BJC ETTP CO U-S Reviewer/Date: [signature] 6/12/07

~~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: June24, 2005
Guidance (if applicable): CG-SS-4 September, 2000

~~OFFICIAL USE ONLY~~

[1:00:09]

[1:01:07]

Callan, B.: Okay. Let's just start off with the easy question and that's go ahead and state your name for me and spell your name out for me so that way we have it preserved on the camera.

Sawicki, J.: My name is Joseph Sawicki. I go by the name of Joe most of the time, and my name is spelled S-A-W-I-C-K-I.

Callan, B.: And how old are you and when were you born?

Sawicki, J.: I was born November 3, 1921, so that puts me at 83 years old right now.

Callan, B.: Where were you born, and expand upon that if you want to.

Sawicki, J.: Chester, Pennsylvania.

Callan, B.: And where were you living prior to coming to work at K-25 and Oak Ridge?

[1:01:47]

Sawicki, J.: Prior to Oak Ridge, I was living in Chester, Pennsylvania, and do you want me to go into details as to how I came here?

Callan, B.: Absolutely. That's one of my questions, so you can tell me how you came to work here. That's fine.

Sawicki, J.: Well, I had just graduated from college a few months before. We were on the accelerator program, so I got out in October of '43; was with Westinghouse at the time, and was in their training program, and after a couple of months on that training program, I was called to their headquarters in Pittsburgh. And there, I was in with a group of other young engineers, I guess about 15 or 20 of us that had been brought in not only from Westinghouse but other companies, too. And we were interviewed and told that they had a special job for us. Said, "We can't tell you where it is. We can't tell you what you're gonna do. But you'll probably stay out of the draft." Of course, this was during the war, and -- but that was about as much as he could tell us. And so, "We'll give you a few minutes to think about it. Let us know (laughing) whether you want to take the job or not." And I think the most of the people there accepted it. And they said we would be sent to New York City for 6 weeks for training, and then from there, we would go to the job site. Still didn't tell us where it was.

[1:03:22]

So it wasn't until we got finished, our training in New York, that we finally found out we were going to end up in a place called Oak Ridge, Tennessee. So that's how I got to come here.

Callan, B.: What college or university did you attend?

Sawicki, J.: Penn State University.

Callan, B.: What degree did you get there?

Sawicki, J.: What was that?

Callan, B.: What was your degree?

Sawicki, J.: B.S. in Industrial Engineering.

[1:03:45]

Callan, B.: When you first arrived at K-25 or when you first arrived at Oak Ridge in general, what were your first thoughts?

Sawicki, J.: It was quite an unusual sight, for me anyhow. It was just like getting into an army camp. There was trucks and vehicles and just about anything you can think of on wheels was moving, and we, of course, had to stop at the main gate, which was called Elsa Gate. And -- but the arrangements had already been made for us. They had our names and they gave us our passes and told us where we were to go. And they sent us to a dormitory, which was just like the army barracks nowadays. And it was West Village 37. It didn't even have a name; just had a number.

So we got our rooms there and then, the following day, we were going to go to the job site. And the job we were going to have was called vacuum testing. The entire process piping system had to be vacuum-tight. And by "vacuum-tight", that meant that it couldn't even have a pinhole in the entire system. And this system was over a mile long. I'm not sure whether you're familiar with it or not, but from one end of the U -- it was in the shape of a U -- from one end of the U to the other, it was about one mile in length. So all of that piping and all of the systems after that had to be tested that tight. And that was our job to operate and test and see the leaks were repaired if we found any. It was -- like I said -- it was just a few of us compared to the number of people here. There were thousands of people here doing various jobs, mostly construction. In fact, K-25

wasn't even finished yet. There was just the steel work in some parts of the building, and the part that we were going to get into was just being completed and they were moving in our vacuum test equipment to get us started in the next few days. That's -- these -- did you want me to describe the system of vacuum testing?

[1:06:04]

Callan, B.: I was just going to ask you that because I have been out to the facility, was able to drive around the perimeter --

Sawicki, J.: Right.

Callan, B.: -- and kind of get an idea of the size of the place. My understanding --

Sawicki, J.: Yeah.

Callan, B.: -- it was just a series of stages of pipe work that just went on forever and ever.

Sawicki, J.: Yeah.

Callan, B.: And I was going to ask you how was vacuum testing accomplished? You said there was just a few of you out there. It must've taken you a lot of.

Sawicki, J.: Well, first of all, they -- they had what they called a pump wagon which is, incidentally, made by Westinghouse, a Westinghouse pump wagon which had a mechanical pump plus oil diffusion pumps to create a vacuum on the system that you're pumping on; which was the cell -- inside the cell piping and the valves and the pumps and so on. And after it was pulled down to as low as we could get it, we just sprayed helium on the wells, on the valves, on the copper tubing, on the instruments, whatever had a possibility of leaking. This helium, when it was sprayed and a leak was detected, the vacuum would pull that helium into the system and then the pump wagon had a mass spectrometer attached to it; which had its own vacuum system. And if any helium was pulled in through the system, it got into the leak detector, which was a mass spectrometer as I said, it responded by a needle moving on a gauge and that was to tell you where the leak was.

[1:07:34]

So when it first started, well, there were quite a few leaks in the beginning, but then as the construction welders got better and everybody else did

their job a little better, the later cells were very few leaks if any. Does that help you understand any?

Callan, B.: Absolutely!

Sawicki, J.: Okay.

Callan, B.: I want to talk a little bit about construction. You were one that was there and was able to witness and was part of the construction. What was the K-25 environment like? I mean, what was it like to be out there during the construction?

[1:08:04]

Sawicki, J.: (laughing) It was funny that you ask such a question. The -- our first day there, it was the middle of the summer. Third week in June and the temperature was in the high 90s and the -- and we were asked if we wanted to go see the job site -- that's where we would be working -- and a bunch of us went to the carpool, picked up a vehicle, and drove there. And it was dusty, dry, dirt all over the place. And then we pulled into this particular spot where we were going to be working. We got out and saw what we had to do. While we were there, a cloudburst came, just a thunderstorm, just rained, just poured all over. We had to dash back to the vehicle. And we did; I was a little slow getting into the backseat with this guy behind me. He steps right in and puts his foot all over my (laughing) -- my backside of my pants. And we all had good dress clothes at that time because we weren't ready for work; we didn't know what we were going to be doing. So anyhow, that afternoon, we were told we could get some work clothes if we wanted them in the section just across the road from K-25; was called Happy Valley. They had a general store; they had a bowling alley; they had a little movie theater; just about everything you could think of for construction people -- for anybody, for that matter. So we all went there and bought our work clothes and laid our dress clothes back in our rooms after that. But that was our first day and our first experience. Of course, we had a lot of laughs about it afterwards, but at the beginning, we didn't think it was so funny to get mud all over us. And it ruined our shoes, of course.

[1:09:49]

But everything was rough. There was just everything under construction. Roads were gravel or dust or dirt, and then when it rained, it was mud, so. But when you look back over, we had a lot of fun, too.

Callan, B.: I wanted you to tell me -- you mentioned Happy Valley. If you could, can you expand a little bit more about what Happy Valley was and what it was like there because there's not a lot of people who remember Happy Valley, it doesn't seem like.

[1:10:18]

Sawicki, J.: Well, it consisted of a number of what they call "hutments". These were little shacks, more or less. They were about, oh, I guess, about 16 feet square, and there was room for four people. I think they had 4 single beds in there and a stove, a wood stove, or a coal stove -- I'm not sure what it was 'cause I never got inside one. But that's where most of the construction workers were housed there. But -- so, to take care of them, they also had to provide them a way of getting food to eat. They had a cafeteria for them to eat. Like I said, for recreation, they had a small bowling alley and barber shops, just about everything you need. I guess they probably didn't have any banking or drug stores or anything like that. But there must've been several hundred of these hutments there that was close by the construction site, the K-25 site.

But after we got started working, we worked 24 hours around the clock with 3 different shifts. In order to get something to eat, some of us -- one of us would take orders and go to this cafeteria, bring food back because there wasn't much in the way of eating facilities where we were working.

[1:11:40]

But in the wintertime, oh, it was terrible because there was no heat in any of the buildings 'cause a lot of the buildings were still open to -- to the atmosphere. But -- so in some cases, they did have little canteen trucks come around selling sandwiches and things that I'd order. (laughing) A few times, when we got 'em on this evening shift or this night shift, they'd be frozen it was so cold in the vehicles that they delivered 'em in. We'd get the welders to thaw them out with their torches (laughing) so we could eat them.

So -- and another thing I'd like to mention is the employees -- we had to hire a lot of people to do this work because the few engineers in our group couldn't handle all of it, and so we had to hire operators to operate the equipment, to look for the leaks, and so on. I'd say 95% of them were young women or grandmotherly type of women, were our operators. There were a few young men and one or two farmers that we hired and trained on the job, but that was -- that was our working crew that we had to work with. But they did a good job. They -- they learned quickly and they did very well.

[1:13:01]

Callan, B.: About how many vacuum testing employees were there total?

Sawicki, J.: How many employees? Well, like I said, there was 4 shifts rotating. And I would guess that we probably had as many as 15 or 20; it'd vary in number of these female operators that we had that operated the equipment. And each shift had that same number. At first, I think we started two 12-hour shifts, but then as we got more employees, we changed to a rotating shift of A,B,C, and D. And we just moved from site to site every time construction finished a cell. Can I describe a cell, or is it classified?

Callan, B.: I can't answer that. I believe there are certain things you can describe about the cell and if you're going out of bounds, they'll run in here, so yeah, go ahead and describe one.

[1:14:02]

Sawicki, J.: Well, the cell consisted of 6 stages and -- which included compressor, converter, and the piping and the valving and so on. So -- but every time they finished one cell, then we would move in with our vacuum testing equipment and test it, and then when we finished a cell, we would turn it over to operations people. They in turn would do whatever they had to do to prepare it for operations. And I don't think they did much in the way of starting any of it until they had a minimum number of cells. I'm not sure how many that was. I wasn't familiar with that -- that part of the work.

Callan, B.: Are you familiar at all with the Roosevelt cell? I guess Roosevelt was supposed to come visit at one point in time and there's a special cell out there?

Sawicki, J.: Yeah. It was one that was cleaned up and painted in various colors to illustrate the flow of the stream in the system and, as I understood it, was made especially for President Roosevelt, but he never did come here. Of course, he was, as I understand, in a wheelchair and it was very difficult for him to get around. But, yeah, he -- that's what it was. It was just a demonstration type of place that you get a better view what -- what the cell looked like.

[1:15:24]

Callan, B.: What about other famous people or some of the big scientific names like Einstein or Oppenheimer? Did you ever meet any of those folks?

Sawicki, J.: No. I think they must've came to the Oak Ridge National Lab, the scientists. That place was just full of PhD's and scientists. That was their -- that was their job, you know. But no, we never did get to see or have any of those people visit us. We did -- I think we did have some high government officials come through every now and then, but I don't remember their names.

Callan, B.: Okay.

[1:16:08]

Sawicki, J.: But they just come through, you know, in a motorcade, right through and right back out again and they didn't spend much time.

Callan, B.: Where did you live when you were working here?

Sawicki, J.: Well, as I said, I started out in the dormitory. But one of the female operators that we had in our crew, I got to dating her, fell in love, and we got married here in Oak Ridge. And we got married -- I came here in '44 and we got married in '45. And so when we got married, we were allowed to live in what they called "E apartments", a one-bedroom apartment. Housing was usually assigned according to the size of your family, so if you're just starting out like my wife and I were, why, we just had a one-bedroom. And then as time went on, why, we had our first child and that made us eligible for a two-bedroom house, which was a "A" house. And all the houses had letters, A, B, C, on up to, I think, H. There were a few of H's, but most -- most of them were A, B, C, D houses. But they had other configurations also that had different names. Some of them were duplexes. Oh, flat tops! Can't forget flat tops. Are you familiar with a flat top?

[1:17:35]

Callan, B.: I've heard mention of them. Describe them to me.

Sawicki, J.: Well, they (laughing), it's -- it was a small home built up on almost like stilts. They especially put them on hillsides in rough areas. And they were usually two-bedroom, I think. They had -- they had a kitchen, a bath, and so on. But it was literally made out of plywood. Just a frame and nail plywood on the outside and plywood in the walls, and I don't think there was any insulation, I think, because they put 'em up so fast. And 'course, during the latter part of Oak Ridge, after it got settled and organized and most of the flat tops were removed. And a lot of people bought them for lakeside cottages and homes or fishing shacks, or

whatever you wanted to use for. And they sold a lot of them that way; they were very cheap.

[1:18:31]

Yeah. Speaking of cheap, our first one-bedroom apartment, I think we paid $28 a month. And that included all utilities. Didn't have to pay for the heat, the water, the electric, anything. That was all included in it. So naturally, of course, that was quite a bargain. And then when we went up to the "A" house, then that was a little more. That was about $35 or so a month.

Callan, B.: Comparatively, what kind of salaries where you making? (laughing) If you don't mind me asking?

Sawicki, J.: Yeah. Speaking of salaries, at the time I left Westinghouse, or working at Westinghouse -- was on a training program, as I said, they just moved you from one plant to another, getting familiar with the various jobs -- I was getting 90 cents an hour. And when this fella interviewed us in Pittsburgh and said they needed us for a special job, they said they're going to give us a big raise to $1.03 (laughing) an hour, so that's what we started that on. But then as time went on, I think, just about almost every year, there would be an increase of (indiscernible).

[1:19:39]

Callan, B.: I wonder if you want to tell me more about the story about how you and your wife met. Did you guys meet on the job --.

Sawicki, J.: Yes.

Callan, B.: -- or did you meet at the cafeteria --

Sawicki, J.: No.

Callan, B.: -- or social (indiscernible), kind of related to the social environment that was there?

Sawicki, J.: Yeah. It was during the operation of vacuum testing that she came in and was one of the new hires that were training, and she happened to be assigned to my particular crew. And, of course, so I got to know her name and got acquainted with her and then started dating and fell in love, you know.

Callan, B.: Was the overall atmosphere at K-25 -- was there a closeness among all the workers, a kind of cooperation type thing where everybody got along? 'Cause, I guess, more or less, everybody worked together and had to live together as well. But do you want to talk a little bit more about what that atmosphere was like?

[1:20:37]

Sawicki, J.: Yeah. But I'm not so sure you'd consider something like a -- a family relationship because there were so many people here and not all of them lived in Oak Ridge. They had people coming in by the busloads -- hundreds of busloads of people that worked here coming in -- people as far as -- some of them almost as far as Chattanooga area, which is close to a hundred miles from here. And people from Jellico which is almost in Kentucky that were coming here.

But they did everything they could to make the people -- let's say, feel comfortable here. In the summertime, for instance, the young people were able to have dances in the tennis courts. They had tennis courts all over Oak Ridge at that time. And they had recorded music brought in, and I think it cost something like, I don't know, 10, 20 cents to get in to dance, and they danced on the tennis court surface with all the big band music. I don't know if you know what I mean by the big band music. That's Glenn Miller and his kind of bands, which was very popular for the young people and it's where a lot of them met and dated. Course, we had a couple of movie theater houses here that were used -- that people used, too, but that was one of the specialties.

[1:22:06]

Outside of Oak Ridge, there wasn't really much in the way of recreation, so they tried to provide recreation here. Bowling alleys was a big thing. That was one of the things that a lot of the groups at work. They would organize their own teams and then they had a -- well, we had a Recreation Department. They -- they did their share on trying to get bowling leagues started and they would sponsor softball in the summertime. But they did whatever they could to make things a little better and a little more sociable, more friendly.

Another place we went to was one of the branches of Norris Lake. A place called Big Ridge Park, which was a nice little swimming area, recreational area, boating, canoeing, things like that. Let's see. What else could we say?

Callan, B.: I guess you came into contact with people who didn't work at K-25 or weren't Oak Ridge residents. I'm sure they were probably curious about what was going on up here. What kind of perceptions did you hear from people who didn't work here when you came in contact with them?

Sawicki, J.: What kind of what?

Callan, B.: What kind perceptions? Just misconceptions, or thoughts or curiosities about what they had about what was going on up here.

Sawicki, J.: It seemed like there was always something in the newspaper about people wondering, "What's going on out in Oak Ridge?" You know. And of course, there were all kinds of stories about what was being manufactured out here or being built here, but of course, none of them were true because the security was very, very strict here. But -- in fact, people didn't know what they were gonna do until the very day they started doing it. But -- and you didn't dare talk about it. So, the husbands or wives, or whoever worked in these plants, why, they went home and mum was the word.

[1:24:08]

Of course, one of the humorous things about badges, you know, we all had badges clipped onto our collars to -- and had your picture on it. And you get so used to going through so many security points that you have to clip up your badge to the guard and many of us would make a mistake. And we'd get home, go into the grocery store or bank, and you'd flip up your badge (laughing) to somebody who was not a guard. Just automatic. One day, a fella in the carpool, you know, we pulled up to a stop sign where the kid was selling newspapers and he showed the kid his badge (laughing) so we had a big laugh about that.

Is that the type of questions you were thinking?

[1:24:55]

Callan, B.: Yeah, those are great stories! They really are. I mean, I love hearing stories like this. I'm sure people, either friends or family members might've asked you what you do up there. What kind of work's being done up there? Did you have an answer for them when they would ask you?

Sawicki, J.: Couldn't tell. You know, we just didn't tell them anything. In fact, many of us didn't know that we were producing, you know, uranium here, or enriching it. But many of us didn't know it until it was announced and then when the atomic bomb was dropped. And then they had a big, big

parade, big celebration, you know, that Oak Ridge did their part in putting an end to the war. And so that's when they started getting publicity as to what was going on out here.

Callan, B.: Were you aware of what you were doing before the bomb was dropped?

Sawicki, J.: No.

Callan, B.: You weren't?

Sawicki, J.: No.

[1:25:54]

Callan, B.: Did you instantly make the connection the day the bomb was dropped?

Sawicki, J.: Well, yeah. Course everybody then realized you know -- 'course we had -- we'd heard that we were dealing with uranium because that was the process gas, was uranium, UF_6 (uranium hexafluoride). So then when we heard -- knew about the atomic bomb, why then, it -- two and two added up as to what we were doing here.

Callan, B.: And on that particular day, I think it was August 6th, 1945.

Sawicki, J.: Yeah.

Callan, B.: Is that correct?

Sawicki, J.: Yeah.

Callan, B.: What was your reaction to the August 6, 1945 news and the role that you played in it?

Sawicki, J.: Well, we -- I think I felt just about like most of the others. They were quite proud of the fact that we really did do something to help because we were told, you know, because of the security and all, we were doing something very important, but didn't know exactly what it was. In fact, the -- after the vacuum testing part of my job was over, then we were transferred -- we were working for Union Carbide at the time and at the time, Union Carbide was operating the plant. And I was working in vacuum testing for a different company. So, when vacuum testing was over, we were transferred to the operations part in Union Carbide. And we then became operators.

[1:27:27]

This fellow I think I was talking to you about before, Joe Dykstra, and I were shift foremen in the top area of the plant. And that was where the material was withdrawn. But we never did see any of it because it was all enclosed. The tubing, the piping, everything; you couldn't see what it was. That's where the two of us worked. He worked on D shift and I was on one of the other shifts.

But (indiscernible), conditions were not too good. About the only times it was reasonable would be spring and fall. Summertime was way too hot; they didn't have any air conditioning anyplace in the plant. The offices, the operating area, everything was very, very hot. In fact, because of the process system itself, it generated a lot of heat and everything you touched would be, well, a little too warm to touch, in fact. And then in the wintertime, cold, you know, that is, in vacuum testing days, it was cold. But during the operation of the plant, it was hot in the wintertime as well inside of the buildings. So they didn't need any heating system; the heat was generated for the process itself to keep everything warm enough to work in.

[1:28:55]

Callan, B.: Okay. He's going to change tapes out real quick. We got to go in 30-minute rolls at a time, so I didn't wanna have to interrupt you in the middle of something.

[End tape 1, begin tape 2]
[2:00:11]

Callan, B.: -- you get a more natural response and that's really how you get interesting comments drawn out of people --

Sawicki, J.: Yeah.

Callan, B.: -- 'cause it kind of sparks their memory and.

Sawicki, J.: It says -- as I talk again, sometimes I'll say a word or two that makes me think of another story or another incident in my experiences.

Callan, B.: Well you feel free to share them? I mean, because that's the purpose of the questions that I ask is to draw out as many fond recollections as I can. Do you have any other fond memories or recollections about K-25 you wanted to share?

Sawicki, J.: Well, let me think a bit about it. The vacuum testing.... I guess I'd like to bring my wife into the picture.

Callan, B.: Okay.

Sawicki, J.: I was telling you after vacuum testing was over, we transferred into operating the -- the plant. And about that time is when my wife and I got married. And she quit work to be a housewife, but then she got bored with it and decided she wanted to go back to work. So she was hired back in again with no problem getting hired and she was assigned to the operations of what they called line recorder stations.

[2:01:40]

A line recorder station was a part of the operating buildings where, let's say, the chemical elements, the items in the process system like uranium and -- or if you had any contaminants or any in-leakage that came into the system and this is piped from the system itself into these stations that would indicated either by a gauge or a recorder or in some cases, an alarm if it was necessary. This was their way of keeping track of any contaminants in-leaking into the system. And of course, it was also a way of inventorying what was in the system. I think -- I forget what it was -- every couple weeks or so, they would take inventory to see that everything was in order. Anyhow, my wife got the job of operating this line recorder station which consisted primarily of watching gauges, turning valves, and letting supervision know if anything was out of order, in her case. But -- so she worked in the same building I did at that particular time. And -- until -- at that time we didn't have any children, then when she got pregnant, then she quit work again, so that was the last of her working career at the...

[2:03:19]

Callan, B.: Did you get to see her a lot while you were at work?

Sawicki, J.: Did I see a lot?

Callan, B.: Did you get to see a lot of her while you were at work?

Sawicki, J.: Oh, yeah. Yes. I was responsible for three buildings and she was in this line recorder station which was located just about in the center of those three buildings, so yeah, I could see her as much as I wanted to. And whatever -- it was funny that she was good at whistling, you know, a real loud whistle with your fingers? And every time she saw something unusual or something that needed attention, she would whistle for the

foreman, come check whatever it was she was wanting to have checked. And -- see, as noisy as it was, she could still overcome the noise with that whistle of hers (laughing), so she was quite proud of that, being able to do that to communicate.

[2:04:12]

Callan, B.: Echo a whole mile down the corridor, right?

Sawicki, J.: Yeah.

Callan, B.: (laughing)

Sawicki, J.: Of course, I don't know if I mentioned noise, but the noise was quite high in that building. And of course, even the newer buildings as they came along, they were even noisier and hotter. But the K-25 building was of course the first building and equipment there. In comparison, the future models was small, but still noisy and hot.

Callan, B.: What did you like most and what did you like the least about working at K-25?

Sawicki, J.: I guess the part that I liked the least was working the midnight shift in operations. The hardest -- I had the hardest time trying to sleep during the daytime. That was my difficulty. And then by the time I got to work, then I'd get so sleepy, you know, so you'd just get up and walk around and do more checking and talking to people, try to stay awake.

[2:05:16]

What was the best part? I'd guess the fact that we were all working together for a common cause and, like I said, we were all very friendly. Then, we, outside of work, we would visit each other. We'd organize little bridge clubs or the popular card game at that time was canasta. I don't know if you've ever heard of that game.

Callan, B.: Heard of it; never played it.

Sawicki, J.: Well, I haven't played it in years myself, but anyhow, the neighbors would get together on Saturday night and, you know, have snacks and play canasta. That was another pastime we had. That part was very enjoyable. Then of course, all of us were raising families then, too. And it seemed like always somebody in the group would be having a newborn baby coming to the family, but...

[2:06:15]

Callan, B.: Let me talk a little bit about the overall work environment there. You mentioned in your answer about how you came to work at K-25, you said they interviewed you, they said they wanted you guys out of here, and you ended up out here. Were you aware of background checks being completed on you before you came to work, or that whole process going on?

Sawicki, J.: Background check?

Callan, B.: Correct.

Sawicki, J.: Not until I went home for a visit, you know, I guess a year or two later and run into some people I know and they'd say, "What've you been up to, Joe?" He says, "The FBI's been up here checking on you." (laughing) So that's the first I really thought about my background being checked, you know. So I guess that's what they did to all of us. They would -- in addition to giving you that initial security check, they continued it every year or two or three. I don't know how often, but whenever I'd go back home, somebody would mention something about somebody investigating me and wondering what I was doing. Course, after the bomb was dropped, people did know what I was doing, so they all understood then.

[2:07:33]

Callan, B.: As far as co-workers communicating with each other being in a secret facility, were you all very conscious of (indiscernible) around secret information, or what was communication like?

Sawicki, J.: Well, all we were told at the time, you know, you just had a need to know. But since most of us didn't know what (laughing) -- what we were doing at the time, we understood our specific job that we had to do, but while we were doing it or what our final product was going to be, we didn't know because all we saw was all these railroad cars coming in and trucks coming in, and never saw anything going out. We couldn't figure that out. Where is -- what's happening in here? But the place where I worked, as I said, was where the final point of the diffusion process was completed and that's where the material was withdrawn. But it was not a big, huge operation; it was just a small operation at that time, so there wasn't much to see. But that's where the material was taken from, there, and then moved to one of the other plant locations.

[2:08:54]

Callan, B.: I guess the final product, it was a very, very small amount compared to the amount of input?

Sawicki, J.: Right. Yeah. Yeah.

Callan, B.: You talked quite a bit about the physical working conditions. Is there anything else you wanted to talk about? You said about it being hot and were there any other things you wanted to talk about what the working conditions were like? Did you want to comment on?

Sawicki, J.: No. I do remember one part of it that we were instructed on is cleanliness control. This is back during construction part of the days that -- that everything that came into the building to be installed had to be absolutely clean, and so in order to keep cleanliness control in effect as construction people got finished a particular part of the plant, it would be isolated by drywall material to just put up a wall separating it from the construction people on the other side of the wall because, in doing their work, they generate a lot of dirt and trash and so on. And so these walls were just torn down, put back up, and the next building; torn down, put back up, and the next building; just moved on down the line that way.

[2:10:23]

And the employees, ourselves especially in vacuum testing, we were told we had to change clothes when we got to the job site. And they had change houses or locker rooms there to change clothes, but that didn't last but a month or so and then they decided they didn't really need it. So we didn't go through that anymore, but it did last for a few weeks as I said.

Callan, B.: It was because you didn't have to change clothes anymore?

Sawicki, J.: We just worked in our normal work clothes, yeah. Before that, we would change our clothes and work with -- I don't know what they expected to happen. I guess they thought that maybe you'd bring in trash or lint or something, but the cleanliness was very, very important to the process. But I guess, I couldn't see how any dirt could get into the process; it was a completely sealed system. So I guess they realized the same thing, that they didn't need it.

[2:11:27]

Callan, B.: What did they have at the change house? Was it just a bunch of coveralls and they would wash them on site?

Sawicki, J.: The change houses were strictly what you might picture something like a locker room and were -- they'd have a special section of it where they issued pants and shirts, and that's what you'd wear. And then when you finished your job at the end of the day, you'd change back to your street clothes. But as I said, that was a very small part of the job at the beginning. It didn't last long.

Callan, B.: What was your supervisor and co-workers like? Did everyone pull their weight? Did everyone get along pretty well?

Sawicki, J.: Yeah. As I said, they were mostly -- these were people from outlying districts. Some were farmers and they -- in ages, they were probably all anywhere from 18 to being up 30 years of age, that is, in the operations part. In vacuum testing, we had a few grandparents working for us that up in close to 60 years of age working for us. But when we got into the operations part of the plant, they were mostly -- strictly young people, and a lot of them were females. Yeah.

[2:12:49]

But -- and as the operations continued to improve, why, they found out they didn't need all of these people, and little by little, they had layoffs to where they just have, I think, one operator to the building where before, when I first started, I had 45 people working for me in 3 buildings. And then a year or so later, it was down to about 5 people for the 3 buildings, working there.

Callan, B.: So what was it like being a manager? Did you have any management difficulties at all?

Sawicki, J.: What was it like to be a manager?

Callan, B.: Yeah!

Sawicki, J.: Well, I didn't think of myself as a manager. We were -- we were shift foremen, which, I guess, we were the first-line supervisors to the employee. But as long as things went well, the equipment operated well, there wasn't very much to do except keep track of it by observing your instruments and see if they're going -- doing well.

[2:13:49]

And when something did fail, why then, of course, that cell had to be isolated from the rest of the process, which is the way it was designed. It could be valved out and the rest of the process would continue to operate.

But that didn't happen too often. Somebody did a very good job in their design work 'cause the things worked real well.

I guess -- I guess the most frequent job we had, as far as maintenance, was changing seals on the centrifugal compressors that were used. But other than that, the rest of the system was all rigid equipment, which, no moving parts, so lot of instruments. The instruments had to be calibrated quite often, but seals was the biggest job.

Callan, B.: Did you eat outside the cafeteria or did you bring your own lunch?

[2:14:48]

Sawicki, J.: No, in shift work, there wasn't any cafeteria to serve you, so we just brought in our own lunch, brown bag it as they say. Yeah. No. Later on in my work and career, I guess, when I transferred to the shift organization to the dayshift organization and process engineering group, well, then we were allowed time off for lunch to go to the cafeteria, but I didn't care that much for it, either. I'd just as soon have my brown bag lunch at the time, you know.

Callan, B.: Incidentally, everybody that I've interviewed so far when I ask them that question that I asked earlier, "What did you like least about working at K-25?" -- everybody said, "Shift work."

Sawicki, J.: Yeah. (laughter) It was -- it was rough. It was hard to stay awake. It wasn't so bad on the 4 to 12, but 12 to 8 was really bad. Yeah.

Callan, B.: What kind of health facilities were available there?

Sawicki, J.: Health?

[2:15:52]

Callan, B.: Uh-huh. (affirmative)

Sawicki, J.: Well, of course, the -- I think it started out as the army operating hospital in Oak Ridge, and I guess they hired the doctors to come in and -- to take care of the patients, but there weren't too many doctors here as I recall. There was quite a few babies being born at that time. Like I said, all young people and starting to -- starting their families out here -- that lived in Oak Ridge. And -- but of course, there's been a considerable change since then in the way they op -- the way the hospitals are now with all their equipment.

Callan, B.: Were you given regular physicals or did they do regular radiological testing, (indiscernible) monitoring?

Sawicki, J.: Yeah they -- physicals were, I think they started out and called them annuals, once a year, but then they, I guess, in looking over their records, they decided it didn't have to be every year. They would then make it every two years, and then they finally called it a "periodical". Whenever they felt like it would be time for a physical, why then, you'd have a physical. But they did take pretty good care of you and let you know that if you had a problem -- that -- they did not try to correct the problem with their facilities at work. They would recommend that you see your family doctor or specialist if you needed a specialist.

But, most of the people, as I said, were young, though. Not many of them had health problems as such. It was a pretty healthy community.

[2:17:36]

Callan, B.: I got my (indiscernible), we were going to talk about the Manhattan Project, but you've talked about that quite a bit and what your reactions were when the bomb was dropped, but let me ask you. How do you think history will view the Manhattan Project and its outcome, and how do you think history will view the work that was done here?

Sawicki, J.: Well, I think everybody was quite proud of the fact that Oak Ridge played such an important part. And -- in fact, we all thought that the uranium that we enriched here in K-25 was -- was one that was in that bomb that was dropped, you know, that it may have been or it may not have been because the -- I understand that after it left K-25, it went through some other -- I don't know if it was processing, but it went through some other areas of K -- of Oak Ridge before it was sent off. And I guess the bomb was probably assembled in the -- New Mexico, I guess, Albuquerque or Los Alamos, or one of those places, I guess, got involved in it there.

[2:18:49]

Callan, B.: And you continued working at K-25 after 1945? You worked there until the mid-50s, or how long were you there?

Sawicki, J.: Well, I guess -- I stayed at K-25 till early '51. At that time, I think, in the latter part of '50, it was announced that the -- Paducah would have a gaseous diffusion plant and -- and they would need vacuum testing there. As it so happened, most of the vacuum testing, the experienced people were gone. They'd either gone back to their home jobs or were involved in other kind of work and weren't interested, so I was offered a job to

organized the vacuum test department for Paducah, which I did, which involved getting all of the materials together that we need, organizing procedures, getting logbooks and drawings, and setting up a training facility. And so this is what I had to do for the Paducah plant and I was transferred there in '51.

[2:20:00]

The vacuum testing at that particular time was part of the Maintenance Division, and this is where I worked for Mr. Winkel, that I understand you interviewed earlier. About halfway through the vacuum testing program, however, the Operations Division people realized that they would be better if their operations people were doing the vacuum testing. And that way, they would get very familiar with the piping system, the valving, and what it was that they would be operating. Whereas with the Maintenance people, when they got finished with the vacuum testing -- they would then be assigned to maintaining the process's equipment. They would not be operating it; they would be maintaining it. So, like I said, about halfway through that program, the vacuum testing portion of my job was transferred to Maintenance -- transferred to operations, however, and I stayed in the Maintenance Division as a maintenance supervisor then.

[2:21:08]

Stayed there until '63. Also, before I left there, however, I also was assigned the operation of the cooling tower or what we called the circulating water system. It was a lot, as I said, a lot of heat generated in this process and this heat had to be removed by cooling water -- or cooling material. That, in turn, was cooled by cooling towers and these were huge cooling towers. They had fans at the top of them that were as much as 24 feet in diameter, so you can try to picture something like that in operations.

So anyhow, got into that phase of the work. I was then asked if I wanted to transfer back to Oak Ridge 'cause there was a number of openings being created then, and I said yes, so that was in 1963. I came back and was assigned to Oak Ridge National Lab and worked there about 3 years. After that, that would've been -- well, maybe it was 4 years. Yeah -- .

[2:22:30]

Callan, B.: The K-25 itself was put on standby in 1964. Is that correct?

Sawicki, J.: No. I think it was in operation then.

Callan, B.: Okay. I heard that there were some operations going by, but the notes that I have say the U itself.

Sawicki, J.: The U itself? It could've been 'cause -- well, to continue with my history of operations -- work history, after I came back to Oak Ridge in '63, worked at the Oak Ridge National Lab, and then I got a chance to transfer to the Union Carbide's corporation. And they had an opening for somebody with my experience in a plant in Loudon, Tennessee. Do you know where Loudon is?

Callan, B.: No, I don't.

Sawicki, J.: It's 30 miles from here. And they make a very unusual product. They make the skin for skinless hot dogs. You wanna smile? (laughing)

[2:23:44]

Callan, B.: Is that truly what they make or is that just what you tell people that you make up there?

Sawicki, J.: No. It was a cellulose acetate product that came off in a continuous process. When they got through with it, they sold it to the packing houses that the packing houses stuffed these casings -- it was a casing that they stuffed and after the smoking process was finished, it got stripped off, leaving what looked like a skinless hot dog. You know, we produced enough casing every day to reach California. (laughing) - Just to give you an idea of how many hot dogs people eat in this country.

Callan, B.: It's just the all-American food!

Sawicki, J.: Right.

Callan, B.: (laughing)

Sawicki, J.: Well, so much for that. That had nothing to do with K-25, but after I was there about 10 years, the -- the process buildings outside of K-25, which was K-31, 33, 35, 37, those buildings were undergoing a -- what they call an improvement program where they were putting in better-designed equipment. They were being changed out and replaced with the newer equipment. And at that time, they said they were looking for experienced people for that, so I came back to K-25 and hired in again. And when I came back, I was responsible for the shift organization in Maintenance. And stayed with that job a couple of years until they started shutting things down and then I was assigned for the last 3 years of my working career in what they call Safety Analysis, where I had to describe and try to

pinpoint various hazards in all the systems in K-25, like their recirculating water systems and their sanitary water systems, fire water systems, the electrical switchyards and all the electrical equipment.

[2:25:56]

This had never been done in a -- let's say a -- a report type of information where I gave pictures and drawings and descriptions which they felt like they needed. So that's how I got back to K-25.

[2:26:18]

Callan, B.: You've pretty much given me a description of each type of job including the hot dog skin job and the different roles that you had throughout the history of K-25. What was your most challenging assignment, do you think, as a member or a group? One of the hardest tasks you got at K-25?

Sawicki, J.: Well, I guess the challenges, the biggest challenges I had were not in K-25. The first one, of course, was being completely responsible for vacuum testing in the Paducah plant where I was just strictly alone. I had to do it all by myself with -- because the other people with experience were no longer available. So I had to train the people, I had to get the materials, and I had to organize everything. And the other one was when I was working in the recirculating water system, the cooling towers, and the pump houses. They went through an improvement program also, where we had to -- all the equipment had to be removed, renovated, repaired, or replaced, and then put back in again, and so those two were very challenging to me.

[2:27:49]

Callan, B.: Back to construction, being as you were one of the witnesses of the construction because it wasn't finished yet. And let's go ahead and change tapes right now.

[End tape 2, begin tape 3]
[3:00:07]

Callan, B.: -- is different than what we're doing now and I guess this whole historic preservation process continues on where, you know, hoping that we'll be able to assemble this into some sort of a documentary.

Sawicki, J.: Will you be taking all this back to Albuquerque, or?

Callan, B.: For transcriptions right now. It's only Official Use Only material. It's not certified for public release, so basically, we're going to be transcribing the information and the information's going to be handed back to the Department of Energy until, as this thing continues to progress, decide what the next step is that they want to take 'cause this is historic preservation. Right now, I really can't speak on their behalf as how far they're going to go with this, but this is what I'm asked to do right now.

[3:00:57]

Sawicki, J.: Uh-huh. (affirmative)

Callan, B.: I wanted to talk to you a little bit about construction and you were able to witness quite a bit of construction. You've given me some good stories about that. The K-25 facility was constructed fairly quickly; a huge building was put together in, I guess, a year or less. Do you have any thoughts about or any observations that you made while the facility was being constructed? Or do you know any challenges they ran into while they were constructing it, that you saw?

Sawicki, J.: No. It did go fairly quickly. As I recall, I think our actual work started in the summer of '44, and so the bomb was dropped in August of '45, and so -- so the plant was essentially complete before that August date. In fact, when that happened, I was in Operations at that time as a shift foreman. I can't think of anything else along those lines, but I -- I just happened to remember as part of the construction work going on, while we were doing vacuum testing, as I said, cleanliness control was very important and especially on the evening shift. The operating floor level where all the valves were operated and the instruments were all lined up for each cell, where the operators would observe, they would have as many as, I guess, 30 or 40 janitors coming through sweeping the floor, and when they would line up side by side, right next to each other with the big brooms and pushing this broom down, and most of them were black people and they were singing hymns of various kinds that they (laughing), I guess, they'd been singing all their lives, and they'd be just pushing that broom and going down there and singing, and so it was quite a sight to see them doing that.

[3:03:30]

Then you'd to go another part of the construction area on lunch breaks and you'd see some of these construction people shooting dice. (laughing) So it was quite a contrast, hear people singing hymns in one area of the construction and in another part, they were over there gambling. But I didn't see much of that gang, but I did see some of it at night. You know,

during the day, you wouldn't see any of that. But -- and it just lasted for the lunch period and then it stopped.

[3:04:00]

Callan, B.: What sort of job roles did minorities have in the construction or the operations of K-25?

Sawicki, J.: As I said before, most of the employees that I had anything to do with were young females or a few grandparents. And all of them white; didn't see any other minorities of any kind. Not until got into Operations, then most of the janitorial force were black people. Were black and white, actually, but -- but then, of course, by the time the Paducah plant started, but then they were integrating all races and ended up in employees force. That's about it.

Callan, B.: These questions here are more or less final questions and just sort of a broader perspective type thing, and then of course, you'll have the opportunity to bring up any other topics that you think that I missed. Describe for me what you think future generations should remember about K-25.

[3:05:29]

Sawicki, J.: What the present -- or future generation --

Callan, B.: Right.

Sawicki, J.: -- should remember about K-25? I guess the thing that sticks out in my mind was the -- the hard work that the people who came here during construction period and had to put up with the inconveniences that were here at the time, you know, many of the roads were not paved; sidewalks were wooden sidewalks; and many of the food items were just like other places, there was a scarcity of certain items. Sugar, for instance, was a scarcity, and it was not unusual that when one of the stores would get in some product, it was scarce and the word would pass like fire, you know, throughout the neighborhood. "So-and-so's got this and So-and-so's got that." And people would run to the stores. Get in line. There was always a line for something that's worth getting.

[3:06:37]

That was another thing in the dormitory areas. They had little canteens, usually about one little canteen to every 10 dormitories or something like that, and when they would get cigarettes in, that was a scarce sight up

then, and you'd see 30, 40, 50 people in line, waiting, get their cigarettes. And a lot of them would try to talk people like myself, well, I didn't smoke, get in line, get them a pack of cigarettes. (laughing) But those are some of the things people had to put up with. But I never did hear anybody complaining, you know, they'd get in line and just be thankful they could get whatever they're in line for.

And in some cases, families where they had children growing and all, some of them had to go to Knoxville. One of the favorite places there was the marketplace where every Saturday, farmers brought in their first fresh produce, you know, where you could get eggs and butter and chickens and things of that were just guaranteed fresh because the farmers were just bringing them in. So that was kind of like a special delicacy for people 'cause they weren't always available at Oak Ridge. So those that had vehicles would just drive to Knoxville and try to get them at the farmers' market.

[3:08:02]

But they did try to help, you know, by recreational activities and things of that nature, but there's still, like I said, the hardships.

Yeah, I'll have to tell you about an amusing incident I just now thought of. This first apartment my wife and I had, in order to save some money, we took over the job of taking care of the furnace. This apartment building had 4 apartments in it, and with one heating system, and that was coal; everybody used coal. So if I would take care -- taking care of the furnace, well, they would decrease my rent about another $5 or $10 -- I forget how much it was. Anyhow, when I come in after the 4 to 12 shift, I'd be anxious to get to bed, you know, so this one particular night, I said, "Well, I'm gonna bank that furnace good tonight so I won't have to get up till about 8:00 and -- and fix it up again." (laughing) Well after I got in bed about 1:00 or so, there was a big boom, a blast, you know, all this black soot stuff was coming out of the -- the discharge -- the ventilation system of the furnace. There was hot air coming through the building and there was all this black soot (laughing) floating down throughout the house -- throughout the apartment. And of course, I had an idea what it was and I ran outside -- I had to go outside to get into the furnace room.

[3:09:39]

And all the apartment windows went up and people were yelling, "What happened, Joe? What happened, Joe?" (laughing) I said, "I don't know; I'll look!" And that's what it was. When I looked into that furnace and I could see what had happened was the coal that they gave you for the

houses and the apartments was a mixture of either powder or lumps of coal about that big and anything in between. So when I had tried to bank that fire, I put too much dust in there and it just kind of sealed the air from getting through, and finally the pressure buildup in that thing and it just went, you know, and blew soot all over the place.

[3:10:21]

Callan, B.: I bet your neighbors were thrilled, I'm sure.

Sawicki, J.: Yeah, well, that didn't happen again. (laughing) I made sure of that. I just had to get up early again and -- and take care of the furnace. But anyhow, it was worth a lot of laughs afterwards.

Callan, B.: I'm sure! You were here for the Manhattan Project. Describe your great accomplishments here and what should be acknowledged as far as what was done here?

Sawicki, J.: Well, while I was in Maintenance, I think most of us were quite proud of the fact that we were able to improve on the maintenance capabilities of the people we had. For instance, we always referred to -- when a cell was taken off stream -- as "off-stream time". And it was always impressed on us how important it was to keep everything running 100% of the time if possible, so if we shut down, they'd want it back on stream as soon as you could get it. Well, of course, the first few jobs that we got of "off-stream time" would run into several hours, maybe even days. And as time went on, particularly in the Maintenance group, we would talk to our mechanics, our welders, and so on and ask them for ideas, "Now how could you make this job not only be safer but easier and quicker?" And it was surprising how many ideas we got from the hourly mechanics. If we had this jig to do this or a special jig for that, it would cut out so much time. An example would be in Paducah, for instance, our seal changes there were running well over an hour, maybe an hour and a half to two hours. And with the aid of these jigs and the experience of these maintenance mechanics, they had cut the time down as low as 15 minutes when the average was closer to about 30 minutes. But this was in the Paducah plant and of course, the K-25 plant, or the Oak Ridge plant couldn't believe the times were that low. So we had to send our supervisors up there to observe. And then when they saw the jigs and the fixtures we were using to help save time, of course, they copied the same thing for their own plant.

[3:12:54]

But -- so that was something we were all quite proud of that we were able to keep cutting back on the off stream time. 'Cause they were telling us it was like $100 or $200 a minute or, but I think that was just a guess somebody made. I don't know what the figure was.

[3:13:12]

Callan, B.: It was complicated, management calculations they make.

Sawicki, J.: I don't know if they could even figure it out, but anyhow, it was very important to cut that time down and for seal changes, it was. And the other big change that was able to be make by maintenance people was this improvement program I told you about before where all the equipment was replaced and new equipment put back in. I don't know if you can -- you probably don't know what a cell looks like, do you?

Callan, B.: I have a rough idea.

Sawicki, J.: Well, anyhow --.

Callan, B.: (indiscernible) what they look like. I've seen some pictures of compressors or something, and I kind of have.

[3:13:53]

Sawicki, J.: But the size of the piping was quite large in Paducah. It varied anywhere from 24 inches up to 54 inches in diameter, so -- and all the equipment had welded flanges which had to be welded together (indiscernible) install the equipment. And to remove it, you had to burn the weld off with oxygen and acetylene torches. So in the Paducah plant, we had cells there that had 10 stages, which meant there were 10 pieces of equipment of each type, the motor, the compressor, the convertor, the control valves, so on. And when we first started, I guess it was taking us close to something like 8 hours to 10 hours to change the welded equipment, the convertors, the compressors. Well, when they started the improvement program, they got so well organized and got with better tools, better equipment, they were ready to change a complete cell out of 10 compressors, 10 convertors, and motors, and put them all changed out and back in again with new equipment in one shift, 8-hour shift; which was quite an improvement, which I don't think they ever reached in Oak Ridge plants.

[3:15:18]

But there again, it was the -- a lot of the hourly people and some of the foremen also, got together and figured out ways of doing it better. And

this was quite an improvement in off-stream time there. That -- that was one of the things we were all quite proud of to be able to do that.

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

Sawicki, J.: Topic?

Callan, B.: Yeah. If you were writing a story. Let's say you were going to write a book about Oak Ridge and K-25 and you're writing your outline. What would you key topics be in that outline?

Sawicki, J.: I guess the thing I would try to get across would be -- I don't know if this is in answer to your question, but -- is how all of this came together. When you stop to think we were just starting with the farmland, so to speak, rolling hills, no facilities of any kind, and getting people of all types and calibers and sizes and ages and bring them together and train them and get this job done with such a short period of time, actually, you'd certainly think of building that K-25 plant which was over -- well, about a mile long and getting it all built and on stream in such a short period of time, I don't believe that anybody thought it could be done.

[3:16:52]

And then the other part was, they didn't know if it would work. It was another thing. They learned as they went, though, and whenever a problem came up, they were able to solve it. I think that would be the thing that would stick out in my mind the most and I don't know if that answers your question or not.

Callan, B.: That answers it perfectly. Thank you!

Sawicki, J.: Okay.

[3:17:11]

Sawicki, J.: Okay.

Callan, B.: Is there anything else you wanted to discuss, say, or expand upon before the interview ends because that was all the questions I had.

Sawicki, J.: No, but I still feel proud of having worked here, you know, and the job that was done. And everybody did their little share to make it happen, and yeah -- I think -- I don't think I'd have been happy in other places doing other kinds of -- like I said, I graduated as an engineer, but I don't recall

really doing any engineering work except I guess the background helped me in a lot of ways. 'Cause my field was Industrial Engineering, but I ended up mostly in Maintenance.

Callan, B.: But it required an engineering background to do that sort of stuff.

Sawicki, J.: Yeah. It helps. Yeah. It helps. Yeah.

Callan, B.: Well, thank you for sharing your recollections of K-25 with us.

Sawicki, J.: You're welcome.

Callan, B.: It's been a great interview, and I hope we get the opportunity to --

Sawicki, J.: Could you write your name down for me?

Callan, B.: You bet!

[End of interview]