ORAL HISTORY INTERVIEWS

Felix W. Cook Sr.

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STATUS OF INTERVIEWS:
OPEN FOR RESEARCH

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Brief Chronology

1938–Born in Shreveport, Louisiana, and raised in nearby Benton

1962–Graduated from Southern University in Baton Rouge

1962–Started work at the Bureau of Reclamation and entered the rotation engineer program

1963-1965–Drafted into the U.S. Army and served in Korea.

1965–Returned to Reclamation to work in the Power Technical Design Unit

About 1966 or 1967–Became a member of IEEE

1972–Certified as a Professional Engineer in Colorado

1984–Appointed to the Colorado Board of Registration for Professional Engineers, and Professional Land Surveyors by Governor Richard (Dick) Lamm

1978–Promoted to be head of the Power Technical Design Unit, Power Systems Section, Electrical Branch

1978–Masters in Public Administration at the University of Denver

1982–Section head, Power Systems Section, Electrical Branch.

1984–Appointed to the Colorado Board of Registration for Professional Engineers, and Professional Land Surveyors by Governor Richard (Dick) Lamm

1986–Assistant chief, Division of Electrical, Mechanical, and Plant Design

1987–Chief, Electrical Branch

1988–Reappointed to a second 4-year term on the Colorado Board of Registration for Professional Engineers, and Professional Land Surveyors by Governor Roy Romer

1988-1989–Chaired the Colorado Board of Registration for Professional Engineers, and Professional Land Surveyors

1992-1993–Participated in the Senior Executive Service Developmental Program including stints in: the Department of the Interior office of Program and Budget; acting manager in the Loveland project office; acting assistant commissioner-engineering and research; acting assistant regional director in the Pacific Northwest Region.

1993–Deputy Assistant Commissioner-Engineering and Research

September 1993–Assistant Commissioner-Engineering and Research

April 1998–Director, Technical Service Center

January 1999–Retired from Reclamation

STATEMENT OF DONATION
OF ORAL HISTORY INTERVIEWS OF
FELIX W. COOK, SR.

In accordance with the provisions of Chapter 21 of Title 44, United States Code, and subject to the terms, conditions, and restrictions set forth in this instrument, I, Felix W. Cook, Sr., (hereinafter referred to as "the Donor"), ofLakewood, Colorado, do hereby give, donate, and convey to the National Archives and Records Administration (hereinafter referred to as "the National Archives), acting for and on behalf of the United States of America, all of my rights and title to, and interest in the information and responses (hereinafter referred to as "the Donated Materials") provided during the interviews conducted on March 28, and May 23, 1994, and on December 23, 1998, at Building 67 on the Denver Federal Center and prepared for deposit with the National Archives and Records Administration in the following format: cassette tape recordings and transcripts. This donation includes, but is not limited to, all copyright interests I now possess in the Donated Materials.

2. Title to the Donated Materials remains with the Donor until acceptance of the Donated Materials by the Archivist of the United States. The Archivist shall accept by signing below.

3. a. It is the intention of the Archivist to make Donated Materials available for display and

research as soon as possible, but the Donor places the following restrictions upon their use: these interviews in all forms and formats shall be closed to research until April 1, 1999.

b. The Archivist may, subject only to restrictions placed upon him by law or regulation, provide for the preservation, arrangement, repair, and rehabilitation, duplication, and reproduction, description, exhibition, display, and servicing of the Donated Materials as may be needful and appropriate.

4. Copies of the Donated Materials may be deposited in or loaned to institutions other than the National Archives. The Bureau of Reclamation may retain copies of tapes, transcripts, and other materials.

The Archivist may dispose of Donated Materials at any time after title passes to the National Archives.

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// 3/9
Date Signed Felix W. Cook, Sr.

INTERVIEWER: Bnt Allan Storey

Having determined that the materials donated above by Felix W. Cook, Sr., are appropriate for preservation as evidence of the United States Governmenfs organization, functions, policies, decisions, procedures, and transactions, and considering it to be in the public interest to accept these materials for deposit with the National Archives and Records Administration, I accept this gift on behalf of the United States of America, subject to the terms, conditions, and restrictions set forth in the above instrument.

Date: .

Signed:_____ Archivist
of the United States

Introduction

In 1988, Reclamation began to create a history program. While headquartered in Denver, the history program was developed as a bureau-wide program.

One component of Reclamation's history program is its oral history activity. The primary objectives of Reclamation's oral history activities are: preservation of historical data not normally available through Reclamation records (supplementing already available data on the whole range of Reclamation's history); making the preserved data available to researchers inside and outside Reclamation.

The senior historian of the Bureau of Reclamation developed and directs the oral history program. Questions, comments, and suggestions may be addressed to the senior historian.

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For additional information about Reclamation's history program see:
www.usbr.gov/history

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Oral History Interviews
Felix W. Cook Sr.

Storey: This is Brit Allan Storey, senior historian of the Bureau of Reclamation, interviewing Felix W. Cook Sr., the acting assistant commissioner for engineering and research, in his offices at Building [67] ~~57~~[1] on the Denver Federal Center on March the 28th, 1994, at about 1:45 in the afternoon. This is tape one.

Mr. Cook, the first thing I'd like to ask you is where you were born and raised and educated and how you eventually ended up at the Bureau of Reclamation.

Born in Shreveport, Louisiana, in 1938

Cook: Okay, that's a fair question. I was born in

1. Note that in the text of these interviews, as opposed to headings, information in parentheses, ( ), is actually on the tape. Information in brackets, [ ], has been added to the tape either by the editor to clarify meaning or at the request of the interviewee in order to correct, enlarge, or clarify the interview as it was originally spoken. Words have sometimes been struck out by editor or interviewee in order to clarify meaning or eliminate repetition. In the case of strikeouts, that material has been printed at 50% density to aid in reading the interviews but assuring that the struckout material is readable.

The transcriber and editor also have removed some extraneous words such as false starts and repetitions without indicating their removal. The meaning of the interview has not been changed by this editing.

n.b. Though contrary to former practice, the punctuation of Sr., Jr., II, III, etc., in formal writing has changed. These are used only with the full name, are considered an integral part of the name, and they are no longer set off by commas, e.g., "Felix W. Cook, Sr., worked for Reclamation." in the new practice becomes "Felix W. Cook Sr. worked for Reclamation."

Shreveport, Louisiana, November the 13th, 1938. I have one of these calculators that you can find out what day of the week that was, and it turned out that was on a Sunday. So I know I was born on a Sunday.

Education was the next?

Storey: Yeah.

Went to Grade School in a One Room Schoolhouse

Cook: I attended high school . . . . Well, let me back up. I attended elementary school in a one-[room] schoolhouse that involved about eight grades in one schoolhouse with one teacher.

Storey: One-room schoolhouse?

Graduated from Benton High School, near Shreveport, in 1957

Cook: One-room schoolhouse. And I must have attended that through the seventh grade. And then after that I got the opportunity to go to the high school. It was called Benton High School, and that's where I finished Benton High School in the year of 1957.

Attended Southern University in Baton Rouge, Louisiana, and Graduated in 1962 with a Degree in Electrical Engineering

Following completion of high school, I went to college. I was enrolled in Southern University

in Baton Rouge, Louisiana from 1957 to 1962. Graduated in '62 with a degree in electrical engineering. I at that time–this is another story I wanted to share with you–Southern University had a placement center, but it wasn't very effective. You would go there after you graduated, and the placement director was named Dr. McKay. I recall asking Dr. McKay, I said, "I have graduated from Southern University now. Do you have any job opportunities for me?" And to this day I recall his response is that, "No, I do not, but if you find anything out, let me know, I'm looking for something myself." And so the placement center wasn't very helpful.

Offered Jobs by Reclamation in Denver and by the Navy at the Bremerton Shipyard

I filed applications, the SF-171, sort of filled it out on my own, didn't have any instruction, never had any summer employment or anything with a government agency before. So this was all new to me. I filed for a job in Bremerton, Washington, with the Navy shipyard, and also sent an application to the Bureau of Reclamation. Bremerton shipyard actually came back and made me an offer to come to work for them.

Accepted the Job Offered by Reclamation

And about two weeks, a week later, the Bureau of Reclamation made me an offer. And so I then had to ponder which one of those jobs I wanted to take. And it turned out I decided that

Bureau of Reclamation in Denver, with the kinds of work that they was engaged in, seemed to have been the best job for me. So I wrote back, I'm not sure I was totally honest with Bremerton shipyard as to why I was leaving, but I gave them some reason why I couldn't accept the job. And it was very nice, said that if things didn't work out for me, please [feel] free to get in touch with them.

Joined Reclamation in January of 1962

And so that's how I came to work with the Bureau of Reclamation. That was in January of '62. I remember it very clearly, because I maybe didn't say this earlier, but I grew up on a farm, and the only time I ever went to the city was in my father's truck, very infrequent, maybe once a year to buy school clothing. So I wasn't familiar with the busing system at all. And so when I came here, I was staying with someone over here on York Street in Denver. They told me how to catch the bus. I caught the bus, came out to the Federal Center–never forget, it was snowing that day–and spent most of the day in personnel, signing papers and things of that nature. And going back, it was a heck of a time because I kept passing the street I was supposed to get off on. I was riding, riding, and riding. I went to ask the bus driver, "Have I passed York Street?" and he said, "Oh, yeah, we passed that about a mile down the road. I'll give you a transfer. You get on this bus here, and it'll take you back to that street there." Well, I got on that bus, and sure enough, missed York Street again and I

was heading in the opposite direction. I went to the bus driver and said, "Have we passed York Street?" "Yeah, we already passed York Street." So I think it was something like eight-thirty, nine o'clock when I got home that night. I had been spending a lot of time riding the bus, so that was one of my first experiences when I got here.

Rode in a Carpool from East Denver

Shortly after that I met some people who worked here. I think Albert Robinson and Robert Wright also worked out here, and I began to ride in a carpool with them, and that gave me an opportunity to sort of learn a little bit about the city then.

Went Through the Engineer Rotation Program and Had a Field Assignment in Sioux City, Iowa

So that's some of my rough starting here with Reclamation. I was involved in the engineers' rotation program which you are rotated, oh three months intervals throughout Reclamation, and then fortunately I had a field assignment in Sioux City, Iowa.

Drafted into the Army in 1965 and Spent His Last Tour in South Korea

I did remember that somewhere half-way in my *first* year I got a statement from my draft board saying that they wanted me to come in and have a physical for the armed services. So I thought I'd get smart. I said, "Well, what I

can do . . . ." Being from Louisiana I knew sort of what the policy was down there. Certainly most of the black kids got drafted down there. A lot of the whites, obviously, they would evade the draft. So I said, "If I can change my draft board to a place like Colorado, a much more liberal state, I have a better chance of not getting drafted." Well, little did I know your draft board is the same as your Social Security number–once you got a draft board, you never change your draft board. So I think when I went down they sort of laughed at me and said, "No, your draft board, as long as you live, will be in Louisiana." And so I wrote the draft board at that time and said, "Look, I'm working for the federal government and it's a very important job," and I really embellished what I was doing. I don't think I mentioned stuff like national security or nothing like that, but you know, working on these here complex dams, I thought they would sort of understand that and say, "Well, okay, then, we're not going to bother you." And I did tell them that I finished my rotation engineers' program in a year. And almost to a year that date, I got a letter from my draft board saying, "Welcome, this is your reporting date." And so I reported to the draft board, got inducted, and it turned out that at that time I started out with a salary, I think, of like $6,300. That was *big money*, I mean more money than I ever made.

I went into the Service as a Spec 4, E-1 they called it, was the rank. I think my salary was fifty-three dollars a month. And so you can see that's about six hundred dollars a year. And

after about a year I became a Private First Class, and then went up to seventy-eight dollars a month–still less than a thousand dollars a year. And I was only in for two years. Just before I left the service, I got promoted to a Spec 4, and I think that was a hundred and twenty dollars a month. But believe it or not, I was able to save money–well, there was nothing to do with it! (laughs) And so returned back to . . . .

Returned to Reclamation from the Army in 1965

Went in the Service in '63, and returned back to Reclamation in January of '65. And for the most part, have been with Reclamation in the E&R [Engineering and Research] Center, except for my SES [Senior Executive Service] Developmental Training Program and assignment that I had as assistant regional director in the PN [Pacific Northwest] Region from March of '91 to March of '92. The rest of that time has been spent in the Denver Office.

Received a Masters in Public Administration from the University of Denver in 1978

As I said, I received a degree in electrical engineering from Southern University. I received a masters in public administration degree from the University of Denver in 1978. I am a Registered Professional Engineer in the State of Colorado.

First Federal Engineer Appointed to the Colorado State Board of Registration for Professional Engineers and Professional Land Surveyors

Where He Served Two Four-Year Terms and Chaired the Board for Two Years

I was the *first* federal engineer to be appointed to the Colorado State Board of Registration for Professional Engineers and Professional Land Surveyors. I was appointed by Governor Dick Lamb. I was reappointed to my second term by Roy Romer. I believe it was in '88, and that appointment lasted through '92. Two years of those times I was actually chairman of the board of the Colorado State Board of Registration for Professional Engineers and Professional Land Surveyors. And I consider that to be a highlight of my professional career, because when I first came to work for the Bureau of Reclamation, the folks who had certificates on their walls were the folks who I really looked up to. I mean, these were the folks who had really proven their worth, and I really admired that.

This is sort of a side note, but I made this statement once, "I'm going to get registered if it kills me!" Well, when I took the Professional Engineers' examination, it almost killed me because I developed a nosebleed. And thinking back on that, it was probably a tremendous amount of stress I was under. I'm sure all people are under a lot of stress. But I remember that my nose started bleeding, I went to the bathroom and washed my nose in some cold water, and I used all it takes to stop it from bleeding. I went back to take the exam, [after] about an hour [I] started bleeding again, and I went back in the bathroom again, washed my nose again, stayed a little longer, came back out,

and it seemed like about another thirty-five minutes it started bleeding again. And at that time I just said, "The heck with this examination! I've first got to take care of myself." So I went in the bathroom, washed my nose in cold water, came back, laid my head on the back of the desk for about thirty minutes, didn't do anything, and fortunately that was enough to stop my nose from bleeding. I went ahead on and fortunately did pass the examination. So literally, it almost killed me to become registered. So you can see why I'm very pleased to be a registered engineer.

What else? That's sort of a long . . .

Storey: Okay, let's go back to Shreveport.

Cook: Okay.

Storey: You were born in Shreveport?

Lived in Benton, Louisiana, Though Born in Nearby Shreveport

Cook: I was born in Shreveport, but I actually lived in Benton, Louisiana. That's a rural area. Shreveport is, in terms of cities, it think it is the fourth or fifth largest city in the state of Louisiana. So that is where . . . . Benton didn't have any hospitals, and so the nearest hospital was in Shreveport, Louisiana, which is about fourteen miles from Benton, Louisiana. So I really was reared and raised in Benton, Louisiana, but was actually delivered in a hospital in Shreveport, Louisiana.

Storey: And what kind of farm was it that you were raised on?

Raised on a Cotton Farm

Cook: My daddy was a cotton farmer, although he raised things like peanuts, potatoes, sugar cane, all kinds of vegetables. But he didn't raise those for market. The cotton was really what he sold as a livelihood. And so we always worked very hard on the farm. As a matter of fact, my father would say that–in retrospect I understand now that he was working me to death. He would say that if you can follow Felix–I was his son–and he would tell his hired hands that, "If you would follow him, and keep up with him, I'll be pleased to pay you a day's wage, because you'd have given me a good day's work." And that's really, at that time, I didn't recognize it, but all the pressure was on *me* now, and I was working myself to death because I had an image to maintain. And again, about killing myself, trying to maintain this image for my daddy. But I was a hard worker and fortunate, I think that sort of carried over into my other career, and I've always been a pusher. I think that probably goes back to when I was on the farm, when I was sort of given the unofficial title as being the leader of the hands. So I think that I can attribute that back to that.

Storey: Were you the only child?

Cook: No, I was a child of six. And I had an older brother. But even the older brother was not as hard of a worker as I was. Then I had two

younger brothers and two sisters, one older than me, and one younger than me. But we *all* worked in the field, but I was sort of considered *the* leader, so to speak.

Storey: What kind of work was it?

Working in the Cotton Field

Cook: The work was involved in chopping and hoeing cotton, which was a *horrible* job, especially when it got to be hot in the year. And then when the fall of the year, picking the cotton. I remember that my job was to empty those big sacks of cotton. They had various lengths of the cotton sack. Some of those was like eight or nine feet long, and they could put a hundred and fifty pounds in one sack, and believe me, it takes a lot of energy to lift those sacks there. So I did all kinds of work: plowing–we had a tractor, but we also had some mules too. So that's primarily–the cotton was what really demanded all the time, because in the beginning, you have to chop the cotton, hoe the cotton, and then have to pick the cotton, and that was all picked by hand. We never did have machinery picking our cotton, we always picked it by hand. And lots of hard work, back breaker.

Storey: How large a farm are we talking about?

Cook: We're talking about a farm of probably seventy-five to a hundred acres. And that's a pretty good-sized farm, you know, back then.

Storey: And so there were six kids working on it, plus

your father?

Cook: And we had hired hands too.

Storey: How many hired hands would it take?

Cook: Oh, I would say that during the time we was picking the cotton, you have to pick it within a window I would say probably of forty-five days, because if you wait too late in the year, it begin to rain and the rain could spoil the cotton and you wouldn't get as much at market for it then. So during the time when the cotton was fully open, he might have as many as thirty-, forty people out picking cotton. Now picking cotton is a little different than when you chop the cotton. When you chop the cotton, you're on a fixed salary, and that is, as I recall, three dollars a day, and they worked from six to six. And that was a twelve-hour day, and that was a long day. Three dollars! When you are *picking* cotton, you're really on your own, because you get paid based on how much you *pick*. And so I remember that in the beginning of the cotton season, they start out with not even three dollars–I think it's $2.50 a hundred [pounds] because the cotton is considered wet, because it's just opened. As the cotton dries out in the sun a little more, it gets light and fluffy and I think it goes to something like three dollars a hundred. But if you pick a hundred pounds, you get three dollars. There were people who could pick five or six hundred pounds of cotton a day. And so the picking portion of it was a self-motivation, because the more you picked, the more you got. When you're chopping, it didn't

make any difference, a fixed rate. And so there was no motivation to do any more than you *had* to do. That's why I guess they was all keeping up with *me*! I was the motivator for when they were chopping cotton.

Storey: When you say "chopping cotton," could you tell me what that involves?

Cook: Yeah, when you first plant cotton, you plant it with a tractor, and it's one continuous row of cotton. When you go back and chop it out, you thin it out. You leave about, oh, I guess a foot between stalks. And so for various reasons, it gives the cotton sunlight and the stalks can develop a lot larger, and it also gives you the opportunity to hoe around it, because it gets grassy. You have to keep the grass out around it. So usually chopping is when you–it first comes up, you got a continuous stand, and you want to chop it out so you get about a foot spacing between each I guess "pile," if you want to say, of cotton there. And you probably leave between two to three in each of those little clusters. But the distance between this cluster and the next cluster may be about a foot or a foot-and-a-half. And that's what they call chopping the cotton out. Hoeing is when you're just going back in, now you get the grass out from around it, you know, because you have to chop it. I think you hoe it for about one or two times. But hoeing is after you've already chopped it out, and then now you're keeping the grass. Today they cross-plow cotton, and use chemicals, and I don't think there's hardly any hands that actually chop or hoe the cotton.

They do all that by cross-plowing the cotton. So that's been an improvement in that area.

Storey: You mentioned that when you were picking, you would empty the cotton. That meant keeping the records of who had picked what and all that kind of thing?

Cook: That's correct.

Storey: Is there some reason you in particular were chosen to do that job?

Cook: Well, my mother kept the records. She had the book. I weighed the cotton. The scales wasn't very calibrated either! I would weigh the cotton, and my brother would help me there, too. We would exchange that. Weigh the cotton, my mother would take down the weight, write it in one of these wire-backed books, as I recall–there wasn't any fancy ledgers or anything like that–and just kept track of those who . . . You have each of the names of those who were picking cotton, and each time they came in to weigh the cotton she would write down the weight that they brought in. At the end of the day, just add that up, and that's how much they picked that day, and they got paid the very same day. Now please do not tell IRS about this, because I don't think there was any Social Security taxes held or anything of this nature here. That was far before I ever heard of Social Security taxes or wages or anything like that being held, and that's been thirty-five, forty years ago. (chuckles)

Storey: Well, in any case, you're probably beyond the time limits! (laughter)

Cook: It wasn't my farm, it was my dad's farm! (laughs)

Storey: Did your father own the farm?

Cook: He did. He was one of the very few who owned their farm back then. A lot of the farmers leased their farms back then. I guess my dad was also, you might say, a motivator. I know he would always–they had a contest in terms of who had the biggest yield or the greatest yield per acre, and who actually was the first person to the gin with a bale of cotton that season. And I know several years he won that prize. So even he was a competitor back then. So I think he had most of the land. There was smaller farmers, but he certainly had the most land back then.

Storey: The one-room schoolhouse you attended–it was at Benton?

Going to School in a One-room Schoolhouse

Cook: Benton, Louisiana.

Storey: What was it like?

Cook: Very lonely, believe it or not. With all the grades in there, that's when a teacher was allowed to spank, whip, do anything else they wanted to do, and they had total support by the parents. I don't think I was every abused by my

teacher, but I really got spanked on my rump a lot by my teacher. And the danger is that if your parents found out that you got a spanking by your teacher, you usually got another one when you got home! So the teacher *never* had any concerns about whether or not the parents would support the teacher. And I suppose, looking back at that, you almost had to have that for some order with all the kids in the schoolhouse with one teacher. But this teacher just never had any conduct problems. I mean, you got out of line, it was only once. You didn't get out of line. As a matter of fact, the teacher would send you out to cut the same switch they're going to use to whip you with. I mean, that was demoralizing. The teacher would say, "Go get me a switch," and that's the one that she was going to whip you with. And you didn't come back with one that broke up all the time, too, because she'd just send you to get another one. So you had to at least get one that was half-way decent, that she could at least get through her whipping before it all broke up on you. Quite an experience!

Storey: Did you have the same teacher all seven years that you were there?

Cook: I did–same teacher.

Storey: Do you remember her name?

Cook: Yes, Emily Jordan was her name. She's passed away now. But I used to go back home to visit her a lot, and she was, oh, very . . . I think she was teaching even when she was in her mid-

seventies–she was still teaching school. Certainly had the respect of everybody back in the community.

Storey: Was this an integrated school?

Benton Was an All Black Community

Cook: No, no, it was all black. The community was a all-black community. There was virtually no integration at all back there. Not even in churches was integrated. So the schools was a hundred percent black at that point there. There were some whites that would live scattered out throughout the area there. No one lived that close to each other, I think maybe a half-mile was the closest your next neighbor was. But occasionally there'd be a white family, but there was no socialization at all with those families.

Storey: Now, you mentioned earlier, I believe, that this school was first to the eighth grade, but you only attended first to the seventh. Was there a reason for that?

Father Drove the High School Bus, and He Finished Seventh Grade and Then Went on to High School

Cook: Yeah, my dad was a–and that's very perceptive of you too–my daddy was the bus driver that drove to the high school that I attended. So I got the opportunity to attend a year earlier by going, my daddy being the bus driver, attending the high school, where I normally would have gone another year at this here one-room

schoolhouse. So that's how I got to go.

Storey: So he got you in a year early–or somebody got you in a year early.

Cook: *Somebody* got me in a year early.

Storey: Do you remember who?

Cook: I think he probably was instrumental in it. He was very well-known, and I think all he would have to do is go to the school in which he was driving as a bus driver and say, "I want [you] to allow my son to come," and I don't think there would have been anyone that would have said no to that.

Storey: And what school was this again, the high school?

Attended C. H. Irion High School in Benton

Cook: This was called–well, it's C. H. Irion High School, located in Benton, Louisiana.

Storey: It was in Benton?

Cook: It was in Benton.

Storey: So you actually lived out of town.

Cook: That's right. Well, the *school* was out of town. The one-room schoolhouse was just down the street from where I stayed. The C. H. Irion High School was about eight miles from where I stayed. So you had to be bused to the school–

you could not walk to school. So as I said, my daddy was a bus driver.

Storey: And I presume, since Benton is basically a black community it was also a non-integrated school.

Cook: That's true. Now, they did have Benton High School there, which was white, but there was no integration at that time. So Benton was sort of like a little suburb outside of Shreveport. A lot more industrialized than where I stayed, but yes, there was no integration, at all, of the schools. That came much, much later.

Storey: What do you remember about high school, about your high school experience?

Cook: I was in the band. I did not play football, nor did I play basketball, although I think that I was quite athletic. And the reason I didn't do that is because on the farm, I would not have had time to do that, because even when school was in, during the school days, we would get out of school, and when we got home and changed our clothes, we would go to the field, after we left school. So I would say that the reason I didn't play in the sports is that being on the farm, I just did not have the time to play sports. I always wanted to play sports, though.

Storey: What instrument did you play?

Cook: I played the alto saxophone, and even played in a jazz band. It was a little school jazz band we would play in for some functions at school. And I thought I got rather good at that! But

didn't pursue [it]. I think that my brother might have played the saxophone after I left high school.

Storey: What got you interested in becoming an engineer?

Parents Pushed the Kids to Go to College

Cook: Well, I knew I wasn't going to work in that field all my life! Because I'd always been . . . . Well, my parents have always pushed us to go on to get a higher degree. It was never a question of whether or not we would go to college, it was assumed we *would* go to college. And all of my sisters and brothers *did* go to college. So it was just a unwritten policy we all would go to college. How I got involved in engineering, I don't know. I think I was interested in civil engineering at one time. I'm not sure what particularly . . . Because I didn't have anything in high school that would have demonstrated to me that electrical engineer[ing] was the field to go in. Maybe in college you take the basic courses, and maybe during the time that I was taking some basic courses, I sort of got a feel for going into electrical engineering, or maybe some of the friends I developed close relationships [with] were going into electrical engineering. So right now, it's not very clear why I chose the electrical engineer[ing] over any other discipline, but I'm glad I did!

". . . the electrical engineers in *this* organization have always considered themselves being a step-child to the rest of the organization. . . ."

And we'll get into that maybe later on, but the electrical engineers in *this* organization have always considered themselves being a step-child to the rest of the organization. We always consider this to be a civil engineering organization. Before we never had an electrical engineer to go beyond branch chief. We never had an electrical engineer become a division chief, certainly never had an electrical engineer become a deputy assistant engineer.[2] Those were always reserved for civil engineering folks. And so in some respect I guess I sort of broke some ground there by breaking some of the norms there.

But I don't know how I chose electrical as opposed to other disciplines.

Storey: Were you inclined to go into sciences of some sort?

Cook: I've always been inclined to go into science. *Always* was good in math. And I thought that that was sort of prerequisite to any discipline of engineering. So I've always liked math, still do today, and I think that was . . .

END SIDE 1, TAPE 1. MARCH 28, 1994
BEGIN SIDE 2, TAPE 1. MARCH 28, 1994

Storey: Did you go to Southern University with the idea you were going to go into engineering as a discipline? Or was it less focused than that?

2. L. N.. McClellan served as chief engineer from 1948 to 1958, and he was an electrical engineer.

Cook: It was less focused than that. I'm not sure I knew what I was going to major in when I first went to Southern University. But I think that probably during my [sophomore] ~~freshman~~ year, instead of during my [freshman] ~~sophomore~~ year, I begin to firm up some ideas as to why I wanted to go into engineering. But when I went to Southern University, no, I was not that focused.

Storey: When did you first start work in the fields, that you can remember. Or can you remember?

Working in the Cotton Fields at an Early Age

Cook: You know, that's not very clear in my mind. I want to say somewhere around the age of ten-, eleven. Part of the work I did–I wasn't leading a group at ten or eleven. I remember I was a water boy at a early age. Water boy means that when the hands are out there in the field, you go and bring water to them, because the hands don't *stop* to go get water. There's not a fountain no place, and so you got this here big, oh maybe four-gallon pail with a dipper in it. Everybody drank from the same dipper, and you just carried water from one hand to the other one. So I *did* that very early. I would say that before I started leading the other workers I probably was fifteen or sixteen, something like that, I guess.

Storey: When did you stop working in the fields?

". . . I worked all the way through college . . . if *we* worked on the farm, he would pay for our tuition.

And so as a result, he never *paid* us for working, but he did *pay* for our tuition. . . ."

Cook: Well, I went to college, as I understand, when I was eighteen. But I would go back home. School was over with in the early part of May, and so all the summers I worked until school actually started in the fall. So I worked all the way through college–sort of an agreement I had with my daddy is that . . . . I'm not sure that was such a good deal, but if *we* worked on the farm, he would pay for our tuition. And so as a result, he never *paid* us for working, but he did *pay* for our tuition. But I think as much as I worked, I would have had some extra money! (laughter)

Storey: Does that mean you had to have other jobs to cover fees and room and board and that sort of thing?

Cook: No, he paid all the fees. So he did pay all the fees, and my mother, when I was in college, would send me, oh, I know every three or four months she'd send me twenty dollars or thirty dollars spending change. And that's why I probably learned to really save my money. Unfortunately, my kids obviously didn't take that after me, but I've always been a saver. She sent me money and somehow I always–before she'd send me money again, I always had some money saved from the last money she sent me. So (unclear) to save money. I guess sort of a [penny] pincher today. I don't call myself a saver, but I am very cognitive of saving money, and enjoy investing money too.

Storey: How did you do in high school?

Cook: I was a very good student in high school. I graduated–it was a pretty small class. As I recall, a class of about thirty-five, and I graduated number two in the class. And so I was not a valedictorian–what's the other one?

Storey: Salutatorian?

Cook: Yeah, that was the one.

Storey: What about in college?

Cook: In college I was–I did good in college, because when I started to work for the Bureau of Reclamation, one of the criteria in order to start as–the difference between starting as a 5 or a 7, you could start at a 7 if you had some work experience, which I did not, if you had a grade point average of a "B" or better. I found that I had to work extremely hard in college, because the high school I came from really didn't compete with the big high schools like New Orleans and Lake Charles and some of the big known cities. They was having physics and chemistry and calculus in high school, and I never heard of that stuff. And so I found the first couple of years in college was extremely difficult for me, I had to work extremely hard. And I think that if I had a better background in high school–I mean, they even have some technical high schools–I didn't have the privilege to that.

". . . I did well with the background I had, but I did

work extremely hard because I didn't come in with a real heavy background in the sciences when I went to college. . . ."

So you ask me how I did, I think I did well with the background I had, but I did work extremely hard because I didn't come in with a real heavy background in the sciences when I went to college.

Storey: And by the time you were a sophomore, so you had sort of settled on electrical engineering?

Cook: I had settled on electrical engineering by the time I was a sophomore.

Storey: Was there a professor or a group of professors that particularly influenced you while you were there?

Cook: There was one professor in particular, Dr. Douglas, was very influential with me, and *I* consider was a very, very committed instructor. I mean, he was the kind of person who if you didn't understand it, he had no problem with how much time you need to spend with him, coming back and asking questions. He encouraged that. And so I feel that he was very instrumental in getting me to pursue . . . because there were some courses that I had in electrical engineering that, you know, sort of knocked me on my keester. I recall Strength of Material, I think the first time I took that course I probably got a "D" in that course after I had studied so hard, and that can be disappointing! And so you needed to have . . . And my mother was always

encouraging–and father too–but my mother particularly was always [an] encourager. You know, when I said that I had a difficult time this semester, she would always say, "Yeah, I understand. I'm sure you worked hard at it. No reflection of you, you'll do better next time." Those are the kind of things sort of got me through.

Storey: And Professor Douglas was an electrical engineer, that's what he taught?

Cook: He was an electrical engineer, that's what he taught.

Storey: You said earlier that it was *assumed* that all of the kids were going to go to school. Did that turn out to be the case?

Siblings

Cook: That is true. One did not finish. My oldest brother did not finish school. He went for about two-and-a-half or three years, I remember got a very good offer some firm in Chicago, left school, and never finished school. He's the only one of the family that did not finish school. The other five of us did finish school. No, I'm sorry, the next to the youngest brother stayed on the farm and became a farmer. He sort of took over when my dad passed away. My dad passed away in '69, and my brother . . . And today my brother still drives the same school bus–not the same bus, the same route–that my daddy drove. So he sort of inherited his school bus job as well as the farm. He's not doing any large-scale

farming now, but he does *some* farming. But he inherited that from my father.

So those only two–it was four boys, two of us graduated from college, the two girls all graduated from college, and my oldest brother and the next to the youngest brother did not graduate from college. But they all went to . . . Now, the one that took over the farm, he never even went to college. The older one did. And I'm not sure why he didn't–he had the opportunity to go, and I think that my dad probably would have encouraged him to go, but he was sort of thinking that this was a pretty good deal for *him*, because if everybody's left the farm, and my daddy was a pretty successful farmer, he probably assumed that "If I could inherit this here, well gee, I can do better than those checkers going off to college, then." So I think it was a personal decision he made not to go to college.

Storey: You mentioned earlier that you weren't going to be on the farm.

Cook: Absolutely.

Storey: Was that a personal decision?

Consciously Chose Not to Stay on the Farm

Cook: That was a personal decision. I just knew that I had too much motivation and too much initiative to stay on the farm. I just knew that I could be successful in a place that required you to exercise motivation, initiative–if that's

making any sense to you. I just knew that I've always had that, and all I needed to have [was] some training to allow me to get in that position. So I just knew that the farm would not have been a place I'd have been satisfied staying.

Storey: May I ask where your other brothers and sisters are?

Cook: Yeah, the other brother that's the farmer is still there, still drives the school bus. The one brother is here as a teacher up in Wheat Ridge. The older brother died. He had congestive heart failure. I think he was about fifty-three when he died, and so there's only five of us left. Of the two sisters, one is in Chicago, and the other one is in Monroe, Louisiana. And then again, the brother on the farm is back in Benton, Louisiana.

Storey: But your sisters both graduated from college?

Cook: They both graduated from college.

Storey: Do they both work?

Cook: Well, one is actually retired now–the one in Chicago, and she's not the oldest one–she retired from the school system. They are very successful in real estate. They got into the real estate in Chicago, fairly young, and gosh, I don't know how many units they own now, but they own a couple hundred units–not all in the same building, obviously, but different units there. But they're heavy into real estate in Chicago. She and her husband both was in the

school system, they both have retired from the school system, and they're just sort of managing their real estate now. The other sister is a dietician, and she had six kids also. She sort of dropped out of the work force there for a while, and then she's just gone back now because she was spending time . . . . Her husband did a lot of traveling, put on a lot of seminars and stuff, so she really had to sort of spend a lot of time raising the family there. So she dropped out of the work force there for a while, but has subsequently gone back to work as a dietician.

Storey: If you were to think back and compare your family to the other families in your neighborhood in Benton, how do you think they would compare?

Cook: I think our family far exceeded . . . I think that our family *probably* was the only ones that went to college. There might have been one out of a family of five or six that went to college, and I can't think of specifically, but most of them did *not* go to college. And I would say that my family has been, for the most part, all have been fairly successful people in what they do. Even my brother back in Louisiana, now his wife is a schoolteacher, but he's fairly successful in the farming, driving the school bus. And so compared to the families, I think we certainly got whatever it takes in terms of motivation to try to improve our plight in life, if I can speak to that. I often say that we did far better than our parents, but I don't think that our kids have done better than we have done, in terms of just their own career development, if that makes any

sense.

Storey: How about your parents' education?

Mother and Father

Cook: My mother didn't finish college, but she got a teaching certificate and she taught school in her younger age. And my father, I think he, from all indications, he was a rascal in school. He was sort of a comedian–loved to joke and pull jokes on folks, and probably got in trouble with the teacher a lot–but wasn't a studious type person, I can gather. He certainly didn't . . . Gosh, I'm not sure what grade he finished, but he didn't finish high school, I'm pretty sure about that. But he was a real sharp individual, though, I mean in terms of just business-minded. Always had a good business mind on him, but I don't think the academic stuff really appealed to him that much.

Storey: It sounds like he got along with people well.

Cook: Oh, he did! He got along *very* well with people. He was well-liked. And as I said, he was sort of a jokester, he had a lot of humor.

Storey: Well, you were at Southern, and you settled into electrical engineering. How did you pick the Bureau of Reclamation and the Navy shipyards at Bremerton? Do you remember?

Cook: I just sent applications out. I'm not sure where I got the address of them. There were other places I sent applications to–some I did not hear

from, most I did not hear from. But these two responded. I must admit, I was very pleased when they responded, because I had classmates who had graduated from school and wasn't having very much success in finding jobs. I remember one classmate–this goes back to the racism again–sent his application to Duke Power Company, and they returned it to him and said that, "We don't hire colored engineers. You probably need to send this to a federal agency." And so I always remembered that, you know. He was somewhat . . . Well, he was ticked off, I guess to put it mildly. But they returned his application.

Now, interestingly enough, I was just maybe a couple of three years ago, was doing some recruiting down there, and Duke Power Company is probably one of the most aggressive companies down there. They're trying to recruit blacks and women. But that certainly wasn't their policy then!

Storey: Why did you choose government service as opposed to private industry?

Cook: I just assumed that private industry wasn't interested in black employment. Where I grew up, it just showed no interest. And I just thought that basically I'd be wasting my time with the private sector. And I think that for the most part that's true.

Again, I used to recruit a lot for the Bureau of Reclamation, and that's one of the things that I used to tell the students when I

recruited, is that, "Look, private industry has come in in recent years and they're offering you big salaries and all kind of bonuses, but I still have, I suppose, a soft part in my heart for the Bureau of Reclamation, because the Bureau of Reclamation was hiring blacks in the time when it wasn't in vogue to hire blacks, and so I always remember that they gave me an opportunity to work as an engineer when a lot of blacks was graduating from school, going to work for the post office, throwing mail and what-have-you. It was the one agency that gave me an opportunity to work for them." As I said, it wasn't in vogue to do that then. And a lot of the companies and federal agencies now, for several years they've been doing that now, and I'm glad to see that, but certainly the Bureau of Reclamation was sort of a pioneer in that area, as I see it.

Storey: Do you happen to remember whether the 171s at that time wanted to know a racial designation?

Cook: Oh, I'm sure there was designated on there, absolutely.

Storey: What was it like to move to Denver from Louisiana, other than the fact that you did it in January and had bus problems?

Started with Reclamation in the Power Technical Design Unit

Cook: Yeah, right! It was a big jump for me. I was fortunate because I came into a unit called–it

was the Power Technical Design Unit. And it was a unit sort of with high rollers: Bill Roemish used to work here, got his Ph.D.; guy, Ralph Chism had his master's degree; Fred Kuma [phonetic spelling] had his master's degree; Dick . . . I forget what his name . . . . It was one of those units that you considered was high achievers. So that's why I said I wanted to become registered, because most of those folks *were* registered or was getting registered. And that really sort of motivated me too. And so it was really an atmosphere of high achievers. And I felt honored to be there, although I didn't think that I was of that caliber–I thought those people were much further ahead of me in terms of their technical background, but I was insistent that I was going to improve *my* standings around them too then. And they was very helpful to me too. I remember when I was studying for the Professional Engineers' Examination that I would go ask Bill Roemish questions about some of the properties and stuff like that on the examination.

In the Army He Calibrated Radio and Radar Equipment

So how I felt, I really felt that the two years in the military sort of was a no-brainer. Well, the assignments I had really wasn't any–they didn't make use of my engineering background at all. Period. I went to Korea and I was part of a calibration team that calibrated radio and radar test equipment. But you just do it according to a manual. I mean, it wasn't anything that required any brains, particularly.

And so I was a little disappointed that the military didn't make use of any more of my skills, but I suppose . . . I had a good friend in the military too that, gosh, was a civil engineer, and he was in up washing test tube bottles and things of this nature here. One thing, I hope that that has changed today–I'm sure it has–is that the military really did not take advantage of the skills that they had, and they just really, I think they really could have gotten a *lot* more use of the folks they had, if they really tried to utilize the skills of some of these folks–especially the draftees.

Storey: What were your rotation engineer assignments?

Cook: Where were they?

Storey: What were they?

Rotation Assignments in Reclamation

Cook: What were they? They was all in this office here, except one. They all was within the Electrical Branch–three of them were within the Electrical Branch–and the other one was on a field assignment to Sioux City, Iowa. And I stayed out in Sioux City, Iowa, during that three-month rotation assignment.

Storey: Do you remember what you did in the first three months?

Worked on Short Circuits and Breakers During His First Rotation Assignment

Cook: Yeah, I *do* remember what I did the first three months: I worked on a short circuit program where you apply a fault to a system and then you calculate the fault currents that flow into the fault. And the purpose of that is that we need those values in selecting ratings for breakers. Breakers has to interrupt the fault current, so the breaker certainly has to be rated sufficient enough to carry that. And we do it for protect the relay in, so the relay in would trip out for a particular fault. So that was one of the things that I did.

Did Switching Diagrams

I also did switching diagrams where it would show all the equipment, the breakers, the transformers, the disconnect switches and things like that. It was sort of a layout of a switchyard. So yeah, I remember very vividly what I did when I was down there.

Storey: What about your second rotation assignment?

Second Rotation Was Working on Relay Controls

Cook: That was . . . I think that was in the control area, and I was doing mainly relay controls. At the powerplants we had the various relays and what they controlled with the powerplant and the switch yard, and I think I worked on the controls for relays in the second one.

Storey: I'm sorry, I'm a dumb historian. What's a relay?

Cook: Oh, a relay is the device that detects a fault. As an example, when you see your lights flicker in your house, if you ever do that, that means that a fault has occurred somewhere on the system. The relay has picked up, because of the ground current that flows in the relay, has picked up the current, has initiated a breaker, that's a circuit breaker, a huge circuit breaker, to open up and to close back, and all that takes place within the flick of a light. So really [I] was doing the relay settings to detect certain faults on the system and to initiate operation of a circuit breaker.

Storey: So that makes sure that your service, your electrical service is not interrupted?

Cook: Absolutely. The only thing you see is a blink of light. That means that the relay had picked up, circuit breaker is tripped, the breaker is closed back on the system, and has restored the system within that short period of time. The speed of a circuit breaker is measured in terms of cycles, like 60 cycles in one second, usually these breakers are two- or three-cycle breakers. So extremely fast operation. And so I was involved in, you know, some of the settings for those relays.

Storey: The *settings* for the relays, okay. What was your third rotation assignment? Do you remember it?

Third Rotation Assignment Was in Electrical Equipment

Cook: That was equipment. I was looking at some of

the transformers, the layout of some of the transformers, the physical layout of them. Some of the circuit breakers, the layout of them. I think mainly it might have been doing still some of the systems studies that I'd done for my first assignment. There was a lot of overlap on some of this here, so I might have been doing some of the same system analyses for short-circuit system analysis–either looking at some of the power flow from the surges that we get, where power flows in a system.

". . . I've always sort of been interested in the system approach too. And that's where I ended up, looking at the entire system, as opposed to just one aspect of the station . . ."

So I've always sort of been interested in the system approach too. And that's where I ended up, looking at the entire system, as opposed to just one aspect of the station there.

Worked on Fault Study Analysis

So when I did the fault study analysis, I would take . . . . That's how I learned about a lot of these cities, believe it or not, in Colorado. Not cities, per se, but some of the towns, because I used to have to set up the whole power system for the State of Colorado. So I remember stuff like Carbondale and over there at Aspen, and Hayden, Wyoming–because all those were substations that I had to represent on a fault study that I got data for [in order] to do that. So in doing that, I learned a lot of the little towns in Colorado because those towns had substations

that I had to represent on a system study. And so that's how I came to learn about those towns.

Storey: And then your fourth assignment . . .

Fourth Rotation Assignment Was in Sioux City, Iowa, Where Reclamation Was Installing Transformers in a Switchyard

Cook: That was the one in the field. I went out to Sioux City, Iowa, where they was installing some of the transformers that I had already been working on in the switchyard.

". . . part of the assignment was to check out the installation, make sure that they was being installed, being wired up, as they had been designed here . . ."

These were called 230, one 6, and one kV transformers and it was quite a few of them being installed there. And so part of the assignment was to check out the installation, make sure that they was being installed, being wired up, as they had been designed here in this office here.

Storey: Okay, so you were actually designing the way transformers were going to be put together? Is that what I'm hearing?

". . . I was actually making sure that they was installed or connected according to the design that was done in this office. . . ."

Cook: Yeah, the control of the wiring of them. In

other words, each of the transformers go back to some control point, or control board, we (unclear), in a powerplant. And so I had to make sure–a lot of it was checking out the wiring to make sure the wiring was properly connected from the control board to the transformer, and from the control board to the circuit breaker. And so I was doing a lot of checking out of wiring, that the wiring . . . The equipment itself was designed by a manufacturer, but we in this office here did all the control for that equipment. In other words, the wiring from this point to that point, all that wiring was done in this office here, so I was actually making sure that they was installed or connected according to the design that was done in this office.

Storey: So we were designing them here in the Denver Office, and then you went out to make sure that the design was properly installed?

Cook: Yeah. And I suppose any inspector would do the same thing. We have inspectors on some of the jobs there, would be doing some of the same thing, inspecting how the equipment is installed.

Storey: But this would be, then, a Reclamation power system of some sort in Sioux City, Iowa?

Cook: That's right, and that was before we split out. Remember that before we used to have transmission and generation. That was in '63. No, I'm sorry, '62. So we had all . . . We had a responsibility for both power generation, as well as the transmission. So right now, Western

would own the Sioux City Substation. At that time, that was a Bureau of Reclamation substation–we owned it all.

Storey: What's the purpose of the rotation engineer program?

Purposes of Reclamation's Rotation Engineer Program

Cook: I'm glad you asked that. I think that the Bureau of Reclamation probably is ahead of most agencies in terms of the Rotation Engineer Program we have. One of the purposes of that is to first of all, when people come to work for an agency, they really don't know exactly what they'd like to do. They have some idea of what they'd like to do, and so the assignments that is developed with the rotation engineer is give them various aspects of how all this come together, because the control folks have to interface with the power system folks, has to interface with the plant equipment section. If you're just working in one section, you wouldn't know how all this stuff come together. So you rotate around to find out how you're working one section interfaces with working another section. Okay?

The other advantage of the Rotation System is that you might, when you come to work for the Bureau of Reclamation–I think it's still true–you are assigned to a particular unit or section. And that's the one you expect to end up in. If for some reason you find out that there is some other place you would like better than

that assignment, there is some other place that you feel that you have better contributions you can make, then the agency tries to accommodate you to find that other assignment–even if it's outside of your rotation, the assignments you had. And the advantage of that is that if you are happy and satisfied with what you've done, you're a much more productive employee and you win and the agency wins. I mean, as opposed to sticking you someplace.

Understand if you go to work for a private firm someplace, you are hired to do a particular job, and you don't have all these other options that look around and see if that's what you want to do or you don't want to do that. And so I think Reclamation is very unique, says, "This is what we hired you to do, but there might be something else you like doing better than this here, or you fit better in that, and we'll try to accommodate you in that." I think it's a great program.

Storey: And what did you and Reclamation determine at the end of your rotation year?

At the End of His Rotation Assignments He Went Back to the Power Technical Design Unit

Cook: I went back to my first assignment. That's the one I enjoyed doing, and that's the one that I was hired in to do, so I didn't have to make a change in my assignment.

Storey: And again, that was?

Cook: The Power Technical Design Unit is where I started out at, my first assignment. That's when they were doing system studies, calculating fault currents, and things of this nature here.

Storey: Who was your supervisor then?

Bill Roemish

Cook: My supervisor then was Bill Roemish. He eventually got his doctor's degree from the University of Colorado–*Dr.* William Roemish. He has since retired, but that was my supervisor then.

Storey: Is he . . . .

END SIDE 2, TAPE 1. MARCH 28, 1994.
BEGIN SIDE 1, TAPE 2. MARCH 28, 1994

Storey: This is tape 2 of an interview by Brit Storey with Felix Cook on March the 28th, 1994.

You were talking about Dr. Roemish and where he is now, I believe.

Cook: That's correct. He lives in Lakewood. He did some teaching down at the University of Colorado for, oh, about three years. And he's done some work at Western Area Power Administration on a consulting basis. How involved he is today, I do not know.

Storey: You went to the military, and if I'm recalling correctly, you were there two years?

Cook: That's right, '63 to '65. January of '63 to February of '65.

Storey: So that was really just before Vietnam heated up, and you didn't go to Vietnam?

Cook: I did not go to Vietnam, but you're correct– Vietnam was heating up. Before I got out of the service, it was the requirement of the sergeant to ask you whether or not you wanted to reenlist. And so that was a standard practice. He didn't bother with me, because he knew I had a degree and I got drafted, so he just said, "I assume that you want out of this place as soon as you can." And I said, "You're correct, I do." But yes, Vietnam was just beginning to heat up when I was leaving Korea.

Storey: So then you came back to Reclamation in January of '65?

Cook: February, I believe.

Storey: Oh, excuse me, February of '65.

Cook: I left in January of '63.

Storey: Okay. And you came back to Dr. Roemish's unit?

Cook: That's correct.

Storey: And how long were you there?

Became Head of the Power Technical Design Unit

Cook: Well, actually, eventually I became the unit head, when Bill Roemish got promoted to the section head, I became the unit head of that unit there.

Storey: Do you remember when that was?

Cook: Ahhh, yeah. I think that was in . . . mmm, let's see, '63 . . . I think it was like '76, I believe, or '78–I think '78 is when I got promoted to the unit head.

Storey: So you'd spent about thirteen years in the unit?

Cook: That's about correct.

Storey: What kind of projects were you working on while you were there?

Worked on Switchyards While in the Power Technical Design Unit

Cook: Ah, pretty much all the . . . the switchyards we had going. I think Grand Coulee Third Powerplant was a big job I was working on. Oh, again, after my rotation engineer, Sioux City. We did a lot of work on closing that out. Oh, and just Glen Canyon, Hoover–pretty much all the projects either had work going on, or we were back in doing something like upgrading breakers, transformers in the switchyard. If transformers happened to burn out, replacing transformers. So we was involved in new projects, as well as doing O&M [operations and maintenance] on old projects. And O&M continues today–that's an ongoing type thing

where we're going back in, replacing that equipment, because it has failed or because it's ratings has been exceeded because the system had grown to a point that the ratings have been exceeded, *or* the transformers are being overloaded because of the system growth. And so those are some of the conditions why we have to replace equipment.

Storey: Okay, why don't we start with Grand Coulee and the Third Powerplant.

Third Powerplant at Grand Coulee Dam

Cook: Okay.

Storey: As a non-engineer, how would you explain to me the kinds of issues that you have to deal with to design–am I correct?–the electrical system for the Third Powerplant?

Cook: Right. Well, Grand Coulee is sort of unique in that it was at one time the largest hydroelectric powerplant in the world. It is still the largest hydroelectric powerplant in North America. I think there are a couple in Brazil might be larger. And that offers unique problems as well as opportunities. The machines at Grand Coulee still are the largest hydroelectric machines we have in the world. I'm not sure there are any larger than those. We have . . . these would be the larger in the Third Powerplant I'm talking about. I'm not talking about the left and right powerplant. We've got three powerplants there: got the left and right, which is the older powerplants. Those are

smaller machines, originally was a hundred and eight megawatts upgraded to a hundred and thirty megawatts. But these I'm talking about now is six units, three of them are six hundred megawatt machines, and three are seven hundred megawatt machines. Interestingly enough, the Russians wanted to bid those machines, and one of the reasons the award was not granted to that, is that American manufacturers wanted the expertise and the design of those huge machines.

"One of the . . . unique features of Grand Coulee is that the short circuit forces there . . . is so large that it takes special equipment to be able to handle that. . . ."

One of the other unique features of Grand Coulee is that the short circuit forces there, due to the number of machines, is so large that it takes special equipment to be able to handle that. As an example, we write them to our specification, we may or may not test a particular transformer. We say, at the government option, we may *test* this transformer, *test* the design of it. Most of the manufacturers don't take that seriously, because we don't usually *test* the transformers. And usually, the place that we have to test the transformers is not large enough to really put a real severe test on it. *However*, manufacturers needed to be aware of, when they [were] building the transformers for Grand Coulee, because that's a place that we *indeed* can get a large fault current, and one we did.

"We tested one of the manufacturer's transformers there, and we blew the transformer up. And I think the manufacturer made a statement that, 'If I had known you really was going to test the transformer, we probably would have given you a different design.' . . ."

We tested one of the manufacturer's transformers there, and we blew the transformer up. And I think the manufacturer made a statement that, "If I had known you really was going to test the transformer, we probably would have given you a different design." So extremely high fault currents there. (laughter) But they said, "Didn't think you would test it." And so Grand Coulee has a extremely high fault capacity there, and due to the high fault capacities there, we have to be very accurate in our relay calculations–again, getting back to the relays–because the relays need to be able to take these faults off as quickly as possible, because we can't allow it to burn any length of time. You just really start arcing and we *going to* have a hellacious fire up there.

Because of the Possibility of Large Fault Currents, the Third Powerhouse Has One-cycle Breakers

I was telling you about how fast the breakers are: Grand Coulee, believe it or not, has one-cycle breakers. At one time, it was the state of the art, it was almost *two* cycles. It was almost impossible to get a one-cycle breaker. We do have one-cycle breakers at Grand Coulee. And just because of the tremendous fault currents

there, it is necessary that we remove that fault as quickly as we can before we get any major equipment damage.

Those are some of the uniqueness of Grand Coulee.

Storey: Well now, when you say that we have one-cycle breakers at Grand Coulee in order to protect the plant and the system, how did we get one-cycle breakers for Grand Coulee?

Obtaining One-cycle Breakers for the Third Powerhouse

Cook: Well, we put a specification out. We asked for one-cycle breakers, and we had an indication there might be some manufacturers who was interested or could make the one-cycle breaker. At that time, we knew that all could not make a one-cycle breaker.

And one of the problems you have–getting back to the *uniqueness* of Grand Coulee–is that when you–it's furnished a one-cycle breaker, you'll have to go out and test these breakers to find out Are they indeed a one-cycle breaker, or a one-point-four-cycle breaker? And sometimes we find out that the breakers don't interrupt in one cycle, but something *more* than one cycle. And so the manufacturer has the responsibilities of adjusting. You can adjust a breaker. But as you hunt we get that. We just knew that we wanted that kind of a breaker, so that we could interrupt the faults as quick as we could.

And interesting, we have people on various professional society lead-ins: IEEE [Institute of Electrical and Electronic Engineers] and some of these committees that develop standards for transformers and circuit breakers. They get an idea as to what is the state of the art, what is possible in the industry out there. And we had indications that certainly there were manufacturers who could indeed build a one-cycle breaker. And that's sort of how we ended up buying a one-cycle breaker.

Dealing with System Stability

Also, based on Bonneville Power Administration [BPA] requirements, too. Bonneville Power Administration is the marketing agency out of Grand Coulee, and also too, not trying to get *too* technical, but we have what are called system stability. In other words, if you have a fault in the system, how long can the fault stay there before the system becomes unstable? The faster the breaker is, the more likely the system will remain stable. And so if you've got a one-cycle breaker as opposed to a *five*-cycle breaker, if you're going to only interrupt the disturbance in five cycles, your system is going unstable already. And then it begin to cascade down, tripping breakers the other part of the system there. If you can isolate the fault extremely fast, it gives you greater stability. You can keep your system–you can have a fault in the system, clear it, close it back, without disrupting the system there. And that was one of the major advantages of that, is that the system stability allows you to have greater

system stability with the real fast breakers.

Storey: Now let's see if I can put this in *my* kind of terms, and tell me where I go astray. Grand Coulee, because we had *huge* generators and a *huge* generating capacity, caused unique problems and we had to identify where the potentials for the problems were, and then we had to cause new equipment to be designed both in terms of the generators and in terms of the electrical transmission system, to meet this new technology. Is that right?

Cook: Yes. Well, meet the new technology or meet the requirement of the marketing agency, Bonneville Power Administration. In other words, if Bonneville Power Administration can–they delivers, market all the power from Grand Coulee. And we do get faults in the system–that's inevitable. If we can design a system to allow these faults to occur and to clear them in such a fast time, it gives them more ability to market the power uninterrupted from the plant. And so it involves in helping the marketing agency with this ability of the system, which they're responsible for. So it all plays in–that's the neat thing about it, is that what we do at Grand Coulee affects what the marketing agency, BPA, is doing out there at the end of that line too. And so we have to do it all in conjunction with Bonneville Power Administration.

Storey: After Grand Coulee, did one-cycle breakers become an industry standard or anything?

Cook: I don't think so, and mainly because we . . . No, you still can get one-cycle breakers, but there's very few. Again, I'm talking about *this* country. Again, I don't know of any plant that has nearly the capacity that Grand Coulee has. And so the *need* for additional one-cycle breakers in this country here is probably we don't have that need, *per se*, then. But other third-world countries, Brazil and some of these other folks who still build these huge, huge hydroelectric dams, are probably very much in demand for these one-cycle breakers.

Storey: I guess as a novice as far as engineering is concerned, I sort of have this image of you go to the company and say, "I want 5,000 transformers," (chuckles) and they sort of come off in packages, and they're sort of standardized. And I'm getting the sense from you that none of this stuff is really standardized.

Cook: No, this stuff is not standardized.

Storey: It's all *custom* work?

". . . certain equipment that we buy is standardized equipment because we don't have the *need* for special equipment. Grand Coulee [Third Powerhouse], I would say that nothing was standardized. It was pretty much all special equipment due to the amount of power being generated at that plant there. They just don't see those kind of breakers sitting on a shelf . . ."

Cook: That's true. Now, certain equipment that we buy is standardized equipment because we don't

have the *need* for special equipment. Grand Coulee, I would say that nothing was standardized. It was pretty much all special equipment due to the amount of power being generated at that plant there. They just don't see those kind of breakers sitting on a shelf–they would have to be special designed.

Storey: What about things like retrofitting Glen Canyon, or retrofitting Hoover? Is that special order equipment?

". . . a different reason than Grand Coulee. It's special order because manufacturers just don't keep a lot of this stuff on the shelf. But it's not difficult to get what you request. And that's why we have–sometimes we write performance specifications . . ."

Cook: I think it's special order, but a different reason than Grand Coulee. It's special order because manufacturers just don't keep a lot of this stuff on the shelf. But it's not difficult to get what you request. And that's why we have–sometimes we write performance specifications, we write detailed designs for specifications, performance specifications that we don't care, we just says, "We want you to design us a transmission line that [transmits] ~~generates~~ power from Point A to Point B, and we don't care how you do that." It's not critical. If we want to have a *more detailed* specification, we say, "We want you to design this line from 'A' to 'B' and these are the *characteristics* that this line must have. You must make sure you address all these particular needs." So I would

say some of the designs we do can be classified as "off the shelf" designs; others would be special type designs.

Storey: Now for instance, I believe right now–you mentioned that you had worked on Hoover.

Cook: Uh-huh.

Storey: But right now I believe they're increasing the capacity of Hoover, is that right?

Uprating the Generating Units at Hoover Dam

Cook: That's correct, yes.

Storey: And they're doing that by adding custom elements or something?

Planning How to Operate Hoover after the Original Power Contract Expired and the Original Contractors Were No Longer Operating the Powerplant Units

Cook: They're doing it by increasing the existing generators. And by the way, you were speaking of things that people have gotten involved in. I was on a . . . I guess you'd call [it] a planning group with Western Area Power Administration and some folks from Hoover. And we put together a master plan how we would eventually operate Hoover. See, Hoover once was operated by each of the [power] allottees. Hoover got Los Angeles Department of Water and Power, Southern California Edison, several power companies that operate out of Hoover,

and they all was individually coming into Hoover. They had certain machines dedicated to L-A, certain machines delegated to Southern California Edison, and to whatever.

"The master plan . . . brought all the power into Mead substations . . . They say, 'We want a certain amount of power delivered to us at this particular time.' The operators at Hoover decide how to meet that demand. . . ."

The master plan eliminated all that and we brought all the power into Mead substations, so the allottees– that's the power users–do no longer comes into Hoover and operate any particular machine. They say, "We want a certain amount of power delivered to us at this particular time." The operators at Hoover decide how to meet that demand. It used to be the allottees could actually send a signal directly into a machine into Hoover and operate the machine.

Reclamation Operators Can Meet Power Demands Using the Most Efficient Combination of Machines in the Powerplants at Hoover

And that was so inefficient, because a lot of time they were not operating the machine at their most efficient point of operation. So now, the system is now is that we got a master plan for Hoover that we eventually–they have some 287 kV transmission lines in there. Those will all come out, they'll be replaced with 320 kV transmission lines. Some of the switchyards would be abandoned, or either dismantled. And

I was part of a team years ago that put together a master plan as to how Hoover would ultimately look. And each year they're designed to call into that master plan. Now, you say we're increasing capacity? Yes. Hoover machine was originally rated at 82.5 megawatts. Those was the size of the Hoover machine. They have now been uprated to 130 megawatt– the same machine but rewound, the machines there. Newer machine, newer insulation, more efficient machines. And so the capacity has been significantly increased at Hoover.

Storey: And that's done by custom work in the machines?

Cook: Yeah, basically new machines. I mean, I would say that that might be some of the–some portion of the old machine they can use. But due to the new insulation that you have for . . . Well, just the new technology. I mean, that's a fifty-year-old plant there now. And so I would say that they might be able to use some of the old core of the machines, I'm not sure, but basically you're looking at pretty much a new machine, maybe using part of the same frame and some of the old components of those machines. But [I] don't know the details how they do that, but basically we have upgraded those machines, and part of the machine, we might have been able to use part of the machine, or they might be using new components in the machine.

Storey: Has Reclamation developed any of the technological innovations in the electrical systems that you're aware of?

Cook: Meaning what?

Storey: In our own labs did we develop any innovations?

Cook: Oh yeah, the research laboratory over there has been working constantly on new schemes by which we can increase the efficiency of the Hoover machines, and I know that they installed one about–it was called a voltage control system by which they have increased the efficiency of the Hoover plant by I think one percent efficiency, and the one percent efficiency equates to something like five million dollars a year in increased revenues from the plant there. So yeah, that's been done by our Research Laboratory folks. Bert Milano's shop is the one primarily been engaged in that.

Storey: Do you remember any other specific projects from your early years in the E&R Center.

Worked on Laying out Switching Arrangements for the Wind Farm Turbines in Medicine Bow, Wyoming

Cook: Yeah, I was very instrumental in laying out some of the switching arrangements for the wind turbine farms that we were looking at. You might recall we had a machine in Medicine Bow, Wyoming, but we was at one time looking at developing a farm, a wind turbine farm, where we would have had literally *hundreds* of machines, and I don't know what the generating capacity was there, but I was engaged in laying out the switching arrangement for that farm and

tying all that together, to some kind of major substation, because it seems to me that at that time that was the emphasis in wind generation. Unfortunately that emphasis dropped off, but I was quite involved in that. Actually, the Medicine Bow machine, I actually did the switching arrangement that tied the Medicine Bow machine into the power system, and was involved in doing the (unclear) calculations for that system there.

Storey: And we only ever built the one machine?

Cook: We only built the one machine.

Storey: Why didn't we build more? Why didn't we pursue that?

"That machine, obviously, was trouble-plagued, because it was the largest of its kind. Maybe that was the reason. The Bureau probably needed to get away from being the biggest of everything. The Grand Coulee machine was riddled with problems because of the state of the art. . . ."

Cook: I don't know why we didn't pursue that. That machine, obviously, was trouble-plagued, because it was the largest of its kind. Maybe that was the reason. The Bureau probably needed to get away from being the biggest of everything. The Grand Coulee machine was riddled with problems because of the state of the art.

But anyway, I think that if we had looked at, and concentrated on smaller

machines, I don't think we would have had the problem we had. The Medicine Bow machine, as I understand, was a full megawatt machine. It was the largest of its kind in the country, maybe in the world. And it just was plagued with problems. The maintenance of that machine became almost prohibitive.

"That's when solar was hot, and alternative sources of energy. Wind was hot then. So that was the thing to do, and when that sort of dropped off, our interest dropped off. . . . I think that we probably could have looked at something that would have been a lot more reliable if we didn't go to such a large machine there. . . ."

And in the interests of it too. It depends on what the driving interests in the country. That's when solar was hot, and alternative sources of energy. Wind was hot then. So that was the thing to do, and when that sort of dropped off, our interest dropped off. I'm sorry that we *did* that. I think it still has promise. And I think that we probably could have looked at something that would have been a lot more reliable if we didn't go to such a large machine there. That's sort of the way I looked at it.

Looking at a Geothermal Plant in California

And then I was involved in . . . Also, there was some plans to develop a thermal–out in California we had a geothermal plant where we had all this hot–we was going to go down and tap the hot steam in the earth. And we was going to generate electricity with this here hot

steam. And I know I looked at some switching arrangements for that kind of a set-up, and that didn't fly either.[3] So somewhere back there, we got a lot of preliminary plans and drawings that we did a lot in terms of alternative sources of energy that never really materialized in Reclamation.

Storey: Well, I would like to pursue this further. However, we're reaching the end of our time.

Cook: Yes, I see that.

Storey: And I appreciate it. What I'd like to ask you now is whether or not you're willing for the tapes and the resulting transcripts from this interview to be used by researchers from inside Reclamation and outside Reclamation.

Cook: I have no problem. I don't think we talked about anything that would be prohibited from the use of these tapes.

Storey: Okay, so you agree?

Cook: I agree.

Storey: Thank you.

Cook: Well, thank you then.

END SIDE 1, TAPE 2. MARCH 28, 1994.
BEGIN SIDE 1, TAPE 1. MAY 23, 1994.

3. See also the Reclamation oral history interviews by Brit Storey with Manuel (Manny) Lopez.

Storey: This is Brit Allan Storey, senior historian of the Bureau of Reclamation, interviewing Felix Cook in his offices on the fourteenth floor of Building 67 in the Denver Federal Center on May the 23rd, 1994, at about 1:00 in the afternoon. This is tape one.

Membership in IEEE

Mr. Cook, when we were talking last time, you had mentioned the IEEE. Could you tell me what that is and how you're involved with it?

Cook: Yeah, IEEE, known as "I Triple E" is the symbols for the Institute of Electrical and Electronic Engineers. It is the professional association for electrical and electronic engineers. Normally if you want to get involved in any of the professional societies, as a prerequisite they recommend that you be a member of the society that represents your profession. So if I want to become a member of one of the transformers or circuit breaker work groups, the requirement is that I be a member of I Triple E first, before becoming a member of one of the professional society subgroups or working groups. And so it's a requirement if you want to participate.

Storey: You happen to remember when you joined?

Cook: I know when I became a member of the senior . . . I became a senior member in I Triple E in 1987 because I just read it on the wall up there. I would say I probably became a member

of I Triple E back in the, probably just after coming out of [military] service. And I would say probably '66-, '67 area I became a member of I Triple E.

Storey: What about the professional societies?

Served on the IEEE Transformer Committee for Sixteen Years

Cook: I was a member on the I Triple E transformer committee, [on] which [I] represented the Bureau of Reclamation, for sixteen years. And that committee is responsible for developing the professional standards for the design, the operation, and testing of power equipment such as transformers and reactors. And so I recently resigned my membership because of my other activities, but I was on that committee for sixteen years.

Storey: Any others?

Also Was a Member of the American National Standards Institute (ANSI)

Cook: Yes, I was a member of the ANSI [pronounced "ansey"] Standards Committee, The A-N-S-I, that's American National Standards Institute. And I was a member of that for about ten years, but have also subsequently resigned membership to that. So presently I'm a member of I Triple E, but I'm not active in any of the other various professional societies.

Storey: It sounds to me like those professional societies

are subdivisions of the I Triple E. Is that right?

Cook: That is correct. In other words, I Triple E just says you are either an electrical or electronic engineer. And under that umbrella, there are a *lot* of other committees: Transformer Committee, Circuit-breaker Committee, Reactors Committee, Relaying Committees–a whole host of . . . Well, let's put it this way, it really covers *all* the electrical apparatuses that we use in our designs. It *all* comes up under the umbrella of I Triple E.

Storey: Well I think the last time we had discussed your involvement in the design work at Grand Coulee for the third powerhouse.

Cook: That's correct, yes.

Storey: *Third Powerplant,* I guess.

Cook: Third Powerplant.

Storey: You mentioned that you subsequently worked on Glen Canyon and Hoover. Could you tell me about that work please?

Working at Grand Coulee and Hoover

Cook: Primarily the work at Grand Coulee involved the 500 kV switchyard, that I was involved with. At that time–and still is–the fault current capacity at Grand Coulee had the largest capacity of any powerplant in the country. And it was very critical that the relaying and the interruption of the faults be done as quickly as

possible, [so] that we didn't get excessive damage to the equipment. It might not seem like much, but a one-cycle breaker compared to a *two*-cycle breaker could minimize a tremendous amount of damage, you could remove the fault in one cycle as opposed to two cycles, because the longer the delay stays on, the more iron burning we get in the machines, and the more damage and stress we apply to our transformers. So at that time, two-cycle breakers were sort of the state of the art. We had not had anything any faster than that. During the time that I was working there, we was looking at a one-cycle breaker that *became* the state of the art at that time. And right now one-cycle breakers are pretty common breakers in the industry now. But that was the state of the art then and there was a lot of problems we had with that because as any new design, there are problems you incur that you don't expect. We had tremendous amount of problem with the original four-cycle breakers we had. But since that time I think that there's been–those problems have been ironed-out by the industry and it's pretty much a standard piece of equipment now in the industry.

Storey: But something that was caused by the design at Grand Coulee?

Cook: Absolutely. The size of the buses and also stability, too. I forgot. I was talking about the importance of removing a fault from the system to minimize iron burning, but there was also a benefit from the standpoint of system stability. And without trying to get into a very complex

area, for instance, if you are transmitting power from Grand Coulee to the substation at Bonneville Power Administration's operating, if you can, the faster you can remove the fault, the less system disturbances you get. The longer the fault stays on, the more disturbances you get in the system and you begin to cascade. If you trip one substation, that cascades to trip another substation. The next thing, you can end up losing most of your power system.

"So the one-cycle breaker, in addition to minimizing the amount of damage that occurred to the equipment, it also increased the stability on the system too. So we're able to carry more power and less interruptions with the one-cycle breakers. . . ."

So the one-cycle breaker, in addition to minimizing the amount of damage that occurred to the equipment, it also increased the stability on the system too. So we're able to carry more power and less interruptions with the one-cycle breakers. So it had a lot of benefits, the one-cycle breaker did.

Storey: Let me ask a "dumb historian's" question.

Cook: Sure. There's no such thing as a dumb historian question.

Storey: Is it possible to make a breaker that's faster than one cycle?

Cook: I'm not aware of a breaker that's faster than one cycle.

Storey: But would it be theoretically possible?

Cook: Well, theoretical, but not very practical. And the reason for that is that the breaker times the current goes . . . If you've seen a current wave, and it goes to peak and it goes back through zero through a negative peak and back to the axis. The breaker times the zero current axis, crossing, is when they try to opens. And probably only–during one cycle it only goes through zero once. And so any time before that is you're trying to open the breaker when the current has not gone through zero. The sine (phonetic) sort of wave starts at zero, goes to a peak, comes back through zero, to the bottom cycle, and back to the axis there. And so it crosses the zero axis once in one cycle. And so that's when you're trying to trip it, when it crosses the zero axis is when it . . . Because theoretically you've got no current, but basically got current zero as it's going from the positive, like the neck of the node there, trying to make this . . . And so you can only catch that in one cycle. If you try to do it faster than one cycle, you're going to be trying to interrupt it when you're on the positive/negative side of the wave there, and you get into stuff like creating over-voltages and all these other bad things that come with when you're trying to trip the circuit, and you've got all these other things working against you. So I say, practically, you're probably not gaining much, and you're probably getting into other difficulties trying to get something faster than a one-cycle breaker.

Storey: Okay. Was it Glen Canyon you worked on after

that?

Worked on Uprating Glen Canyon Machines

Cook: Yeah, worked on Glen Canyon. As I recall, I was mainly in a supervisory capacity when we was working on Glen Canyon, but mainly doing uprating of the Glen Canyon machines. Right now I don't know when those machines was put in, but one of the things that Reclamation–you might be aware of this, Brit–we have not be building a lot of new powerplants, but we have been uprating the existing powerplants. For instance, as I recall, Glen Canyon started out with machines–I want to say rated a hundred and eight megawatts, a little over a hundred eight megawatts. And we uprated those machines to a hundred and thirty megawatts, each of the machines. And I think we had something like eight machines there. Hoover we did the same thing. It was a larger uprate at Hoover.

Uprating Machines Requires Assuring the Entire System, Including Buses, Transformer, and Breakers Can Deal with the New Current Loads

So we basically was uprating the machines. Now, when you uprate the machines, you uprate the interrupting capacity for the plant, you uprate the continuous current carrying capacity, because the bus we designed, when you feed all this current from the machines into the bus, the bus has to be able to carry it continuously. In addition to being able to carry a *fault* on the bus, it must have to carry this current continuously

without overheating the bus there. So one of the things we look at is to find out how much have we increased the current-carrying capacity of the bus, and we need to look at the transformers, because they was originally designed to carry the lower-rated machines. And there is some overloading we *can* do of transformers, but we need to look at whether the temperature, what ambient temperature, how long we're going to be overrated there. And so that was one of the things we was faced there, just looking at now. We'll uprate these machines now, how it fits into the existing equipment we bought years ago. And so that was mainly the exercise was involved there.

Storey: So how do you uprate equipment when we don't have new construction going on?

Cook: How do we uprate it?

Storey: Yeah.

". . . the benefit of uprating these plants is that we're selling peaking power now . . ."

Cook: Well, it has to do with water capacity. See, the way I explain this again here, is that we can release so much water over a period of twenty-four hours. We can release that same amount of water over a period of twelve hours. It just depends on how fast we want to release that. Now what we get into, we get into what we call base loading, which has a continuous load. We get into *peak* loading. And the benefit of uprating these plants is that we're selling

peaking power now, as opposed to base rate power. Peaking power, it has peak demands for it. The rate could be twice what it's a base-loaded plant is. And so the *benefit* you get is that you're selling peaking power at a much higher rate now.

You can benefit the additional investment in uprated machines as opposed to just base loading the plant. I hope that I'm making . . . In other words, you get the same amount of energy over a shorter period of time, but you get it at different times of the year.

Pump-storage Plants like Mt. Elbert

For instance, it was once asked of me, "How do you justify pump storage plants?" You know, we have a pump storage plant in Mt. Elbert. We have an upper reservoir and we have a lower reservoir. And so what we do is that during off-peak times we pump from the lower reservoir to the upper reservoir. And someone would say, "Well, gee, what's the trade-off here? You got to have power to pump it from the lower reservoir to the upper reservoir, and then you're going to generate . . . ." The machine, these are pump motors here now. They act as a motor when they're pumping the water from the lower reservoir up to the upper reservoir. They act as a *generator* when we let the water *out* of the upper reservoir, run it through the turbine, and we generate electricity down and we catch the water in the lower reservoir. So what's the trade-off? The trade-off is the time you *do* that. You pump it up at night when [Colorado] Public

Service Company, which is our customer, don't need the power. I mean, you're asleep, all the refrigerators and stuff is basically–it's not running–so there's surplus power in the system there. And so you can buy this power [at] almost nothing because they don't have any demand for it. So we pump the power up at night when there's no demand for this power–very low rate–and then we *generate* it when they *need* it during the time when all the factories are going full-time during the daytime. They need all that energy. We pump it down then, and we sell the power at a much higher rate, and that gives you the benefit between the pumping power and the generating power. And that's the economic payoff from a pump storage plant. And that's sort of how we do our uprates here.

"We time when we sell the peaking power to justify the additional capacity. . . ."

We time when we sell the peaking power to justify the additional capacity. I hope all this makes sense!

Storey: Yeah. And so your work at both Glen Canyon and Hoover was on the uprating?

Originally power contractors operated specific machines in the Hoover Powerplant for their own systems, but "That was a very, very inefficient way to operate the system, because some machines have certain points on their operating curve that they're more efficient than other points, but they may not have been operating at those

points there. So Reclamation made the decision that, 'Okay, these entities are not going to operate these machines directly from Hoover. We're going to bring the power into Mead Switchyard,'and that's going to be what they call the load center for them. . . ."

Cook: On the uprates. Now, Hoover, [I] had a little different involvement with Hoover, because as you recall–or maybe you don't recall–[at] one time, all the allottees–and that is, as I mentioned, Los Angeles Water and Power, Metropolitan Water and Power, and all the allottees that was getting power from Hoover, they would come directly in–they had certain machines designated as their machines. And they could operate those machines directly into their system there. Each allottee operated a machine, directly into their system. That was a very, very inefficient way to operate the system, because some machines have certain points on their operating curve that they're more efficient than other points, but they may not have been operating at those points there. So Reclamation made the decision that, "Okay, these entities are not going to operate these machines directly from Hoover. We're going to bring the power into Mead Switchyard", and that's going to be what they call the load center for them. These entities will come into Mead Substation, and ask for a certain amount of power they need, but Reclamation will decide what machine's running to deliver that power. Because it might be that we could be running only three-quarters of the machines at a more efficient rate and have the other machines not even running to

supply the same amount of power." So *one* of the things that we did is to reconstruct the transmission line–that was a major job–out of Hoover to Mead, such that the transmission lines now did not go into the Department of Water and Power, L.A. Department of Power.

"These lines went into Mead Substation, and then out of Mead we fed the allottees. So that was a *major* system configuration that was involved . . ."

These lines went into Mead Substation, and then out of Mead we fed the allottees. So that was a *major* system configuration that was involved in that then.

Storey: And you were involved in reconfiguring?

Cook: I sure was.

Storey: And what did that involve?

Short Circuit Studies and Installation or Updating of Breakers

Cook: It involved a lot of studies: short circuit studies, power system studies. When I say short circuit studies, is that we talked about the one-cycle breakers, okay. It has to be able to interrupt at a certain time speed. The breaker *also* has to have the capability to interrupt the fault current too, because if we try to interrupt fault current with a breaker that cannot interrupt that fault current, it would blow the breaker up. And so when we begin to bus certain machines together, that means where we increase the fault

current there, at that situation. So we have to analyze now have we exceeded the fault current of some of the breakers–and we did indeed do that. So we pull. That means that we purchased new breakers there at Hoover and replaced some of the old breakers, because the existent fault current capability of that breaker was not adequate to handle the new uprate there. So that involved some of that.

We also involved buying some of the low-side breakers. See, you can have breakers on the *high* side of the generators, or you can have breakers on the *low* side of the generators. And it's best to, if you can, to have them on the low side of the generators, because these generators are usually switched on and off a couple of times a day. The low-side breakers is usually designed to carry, to encompass a lot more switching of the machines on and off than these big 500 or 230 KB breakers. We don't try to operate them that much.

Jumping back to Grand Coulee now, the fault current was so large at Grand Coulee that we could not purchase low-side breakers there. We could only purchase high-side breakers. So whenever we switched the machines on and off, we had to switch them at 500 KB because we didn't have low-side breakers. At Hoover now, we have both high-side and low-side breakers. So if you want to bring a machine on, or take it off, we would use the low-side breakers to do it, as opposed to the high-side breakers to do that, because the low-side breakers is designed to take a lot more switching than the high-side

breakers.

Storey: Back at Hoover, if I'm understanding this, the allottees were actually running the generators?

Cook: That's correct.

Storey: Did they actually have transmission lines down to their generators?

Power Contractors Directly Operated the Units in the Powerplant under the Original Contract at Hoover

Cook: That's correct. Well, it was a switchyard. The high-side transmission line never really tied directly into the generators. They used to come into a switchyard at 230 and then a switchyard usually has a cable or feeder circuit that goes down to the plants there. But they still would be able to control individual generators. In other words, Hoover, I think, has eighteen machines. Los Angeles Department of Water and Power might have eight of those machines, and they could operate those eight machines however they wanted to operate those eight machines. But many times it's very inefficient the way they operate those machines there. It really was sort of a . . . I'm glad we did it that way, because the machines really was Reclamation machines. The plant is Reclamation's plant. And this is getting into some of the financing, might get in some areas that I'm not that familiar with.

"But we still–we, Reclamation–still have the

responsibility for the upkeep and maintenance of the machines. So if someone else is operating your machines, they may not have the same interests in the machines as *you* would have, because they're interested in just selling power. . . ."

But we still–we, Reclamation–still have the responsibility for the upkeep and maintenance of the machines. So if someone else is operating your machines, they may not have the same interests in the machines as *you* would have, because they're interested in just selling power. And if that involves in operating a machine at the most inefficient point for the machine, it may not be a big concern for them, whereas Reclamation has the responsibility to deliver them power. But we also have the responsibility to protect the equipment too. And so this way, we could get a chance to protect the equipment, still meet their demands, what they need, but also giving priority to protect the machines there. I hope I answered your question.

Storey: Now, the Mead Switchyard, is that the one that's up toward Boulder City, maybe a mile from the dam?

Cook: That's correct.

Storey: So what was the difficulty about connecting the generators to that switchyard? Just that we had to put in new powerlines?

Cook: Just new powerlines, yeah. I don't think it was

anything technically, but you can imagine that the switchyard has been built here for years, that's running out to these various portions of the country. Now, certainly we're going to disconnect, reconstruct, reconnect, transmission lines, so it really was a *major* job. A lot of the switchyards, I think we just abandoned the switchyard when we finished. They no longer need the switchyard, because it wasn't the same setup there. We didn't personally have to feed these various entities.

". . . each of these entities had their own separate switchyards there, and by going into Mead, we didn't need to keep maintaining all these separate switchyards. . . ."

See, each of these entities had their own separate switchyards there, and by going into Mead, we didn't need to keep maintaining all these separate switchyards. We just had one *major* switchyard into Mead Substation.

Storey: And then all of their transmission lines . . .

Cook: Came out of Mead, yes.

Storey: And did Reclamation control how much power went on to each transmission system?

Cook: Ahh, well, "control" being that they would ask . . . . I guess the allottees would say, "We need 'X' amount of power." And Reclamation would be responsible for providing that amount of power. Now usually the transmission lines are designed to carry "X" amount of power, and

that's fairly conservative design. I'm getting back to your question–did we control the amount of power. Usually the amount of power they would ask for would not exceed the capacity of the line. The lines are designed, say, to carry say, just an example, a hundred fifty megawatts. But under short-term loading conditions, you might be able to put two hundred, three hundred megawatts on there. It's not going to melt the conductors or nothing like that. It certainly might heat it up, but they have built-in capacity to handle overload conditions like that. Now, you wouldn't want to run twice that rating for any *length* of time. I mean, on a long a period of time. But for short periods of time, you could do that without creating any damage to the transmission line.

Storey: Let me try to ask the question differently: They would come to Reclamation and they would say, "We need 150 kV" or whatever it is. Who actually put the power into their transmission line?

Cook: Our operators.

Storey: Okay. So did we ever have situations that you're aware of where we didn't have enough power to supply everybody's wants?

Cook: No, I'm not aware of that. Usually that is not the case.

Storey: I believe you called this "reconfiguring," when we changed the system so the allottees no longer . . .

Cook: . . . come into Hoover for their power.

Storey: Yeah, they no longer actually ran specific generators. Didn't we also upgrade Hoover? or is that more recent?

Uprating at Hoover Dam

Cook: We sure did. No, we upgraded Hoover at the same time we did that. I indicated that we had upgraded Glen Canyon, but there was a *much* larger upgrade at Hoover than there was an Glen Canyon. For instance, the original machines at Hoover was rated 82.5 megawatts. We upgraded those machines from 82.5 megawatts to 130 megawatts. That was a significant increase on the rating of those machines.

Storey: By almost fifty percent!

"It was maybe a little *over* fifty percent. . . . We also get the benefit of fifty years newer technology. . . ."

Cook: Well yes. It was maybe a little *over* fifty percent. Yeah, sure. That's right, it was a little higher than fifty percent increase on those machines there. And it basically meant there was some of the machines that they were leaving to salvage, but it basically meant a new machine when they went [to] that extensive uprating. And we benefit also when we uprated machines, too. We also get the benefit of fifty years newer technology. Those machines at Hoover are fifty-year-old machines. A lot has taken place in the technology. The insulation

they use, the heat-carrying materials, and so when we uprate them, we really do take advantage of the new technology when we uprate the machine.

"*. . . one* of the things that is *somewhat* of a trade-off, is that they tell you 'they don't build them like they used to build them.' . . . those machines was so well-designed that they gave extremely good service. We've just, again, we don't get the workmanship we're seeing in the machines that they built back then. Just seemed to be not the same high-quality work. , , ,"

Now *one* of the things that is *somewhat* of a trade-off, is that they tell you "they don't build them like they used to build them." Those machines, although they didn't have some of the electrical characteristic technology, the design of those machines was so well-designed that they gave extremely good service. We've just, again, we don't get the workmanship we're seeing in the machines that they built back then. Just seemed to be not the same high-quality work.

Storey: It isn't as good a construction now as it was then?

"Right now, the technology is better, but they find ways to maybe cut costs on the design of your machine. In other words, you just got a lot more iron in the core then, where now they're saying you don't *need* all that iron. You cut down the amount of iron, which in effect, saves the manufacturer costs. . . . we probably don't have

as heavy-duty a machine as we had then . . ."

Cook: I would say the technology is better, it's more improved. And I want to be careful here now too–it just seems to me that they . . . Right now, the technology is better, but they find ways to maybe cut costs on the design of your machine. In other words, you just got a lot more iron in the core then, where now they're saying you don't *need* all that iron. You cut down the amount of iron, which in effect, saves the manufacturer costs. And so we was saying we probably don't have as heavy-duty a machine as we had then, because they have found ways to cut corners. Now the manufacturer probably would say "The machine is just as good as the old machines," but the operators who have operated old machines will tell you that they don't build them like they used to build them. They were just heavy. I mean, helter-skelter I should say: they put a lot of iron, a lot of iron in the core, a lot of copper into the windings there–which was expensive, you know, but they just built them real helter-stelter [meaning "solid"], and they didn't cut any corners when they built them then. So maybe that's, I guess, the difference there.

Storey: Well you mentioned that basically they're replacing the machine? Are they enlarging the holes or anything like that . . . ?

Cook: I think the holes are basically the same. So that would be one of the specification requirements, that they would have to fit in the same hole.

Storey: Oh, okay. So the technology has improved to the point where it's better than fifty percent?

Cook: Oh, I would say, probably yes. It depends on specifically what we're talking about, but just in terms of–I'm thinking about the insulation now, how much the characteristics of the windings and insulation on wind designs now is much far superior, and the material they use is superior to what we had then. So there's been a lot of improvement. And one example is that I would say that–well, let us look at some of the transformers now, this will give me an example here. Some of the transformers we see on the Federal Center here, they can build a transformer now probably a fourth of the size– of the ones we see now–with just as much or more capacity than those transformers had there. So they've been able to cut down tremendously on the size of a lot of those transformers. And technically, it's supposed to deliver the same amount of power, because they have better methods of cooling the transformers, and dissipating the heat, because that's the *major* destroyer of the windings, either in a generator or transformer, is to be able to dissipate the heat from the windings there. And so they've got better ways to dissipate the heat from the windings now, and that's why you carry more current in their transformers now.

Storey: How did they dissipate the heat back then, on transformers?

"We have both water-cooled and oil-cooled transformers. . . . a powerplant where you got all

this water here, it makes sense to have water-cooled transformers. If you're out in a substation or desert someplace . . . it's most efficient to have oil cooled transformers. . . ."

Cook: Usually was . . . Those at Hoover was water-cooled. We have both water-cooled and oil-cooled transformers. Usually if you got a powerplant where you got all this water here, it makes sense to have water-cooled transformers. If you're out in a substation or desert someplace, then you're not around anyplace, it's most efficient to have oil cooled transformers. And so it's usually, the difference whether or not–powerplants traditionally are water-cooled; substations–and the Bureaus don't *own* these substations now–but when we owned those substations . . .

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Cook: Another reason . . .

Storey: . . . generators?

". . . we're environmentally sensitive to having a lot of oil around water that could seep into the reservoir, or if we have a *failure* it could get into the reservoir. And so that's why it's environmentally, economically, to use water-cooled. . . ."

Cook: Yeah. Another reason, Brit, is that we're environmentally sensitive to having a lot of oil around water that could seep into the reservoir,

or if we have a *failure* it could get into the reservoir. And so that's why it's environmentally, economically, to use water-cooled. These transformer can just rupture, too. That we don't get the oil into the reservoirs.

Storey: Now, when you say "oil," is this PCBs?

". . . PCB was a insulating material, and it's not oil, because we use *mineral* oil for the power transformers. PCB we primarily used–we used some in transformers, but primarily we used them in capacitors years ago. . . ."

Cook: *No*, this is not PCB. PCB was a insulating material, and it's not oil, because we use *mineral* oil for the power transformers. PCB we primarily used–we used some in transformers, but primarily we used them in capacitors years ago. And they had good insulating . . . Well, let me see, the advantage of PCB was fire resistance, it had high tolerance to flammability, and they was good insulators, and they was able to take away the heat from the capacitors too then. I'm just trying to think of the other advantage of PCB, but it was mainly fire-retardant and a very good ability to transfer heat from the appliance there. But primarily then, even back then, we used very few PCB transformers, unless they were real small transformers. The larger transformers even had mineral oil in them then. And primarily capacitor banks would we use our PCB in. So we didn't use an awful lot of PCB then, and percentage-wise, I don't know. But even at the height of that, it was usually some our smaller

equipment that we used the PCB in.

Storey: Um-hmm. Now when was it that you were working on the upgrading of Glen Canyon and Hoover and the reconfiguration at Hoover?

Cook: I want to say that I was working on them probably mid-80s, that I was working on–at least the reconfiguration of Hoover Dam.

Storey: The mid-80s?

Cook: The mid-80s.

Storey: Like nine years ago?

Cook: Yeah.

Storey: Okay. Now what was your position then?

Cook: As I recall, I was a section head, Electrical Branch then.

Storey: Which section?

Cook: Power Systems Section. I'm just trying to refer back to . . . Yeah, that's about, what'd we say? nine years? Yeah, that's about right, nine or ten years ago. I was head of the Power Systems Section then.

Storey: And how long had you been the head of that?

Cook: Oh, probably no more than a year or so. So it hadn't been that very long.

Storey: Was that your first supervisory position?

Cook: No, I was a unit head in that same Electrical Branch. The Power Technical Design Unit–I was head of that unit. Are you familiar with unit, sections, and branch?

Storey: I've never gone below section before I don't think.

Units, Sections, Branches, and Divisions

Cook: Before we went to the matrix system here, we had branch chiefs, section heads, and we had unit heads. Unit heads were our first level of supervision. Units used to supervise something like eight to ten people. A section would typically have three units in a section. And right now our design managers–you're familiar with design managers? It was sort of equivalent to our section heads. And our unit heads now, they used to be called principal designers now in the matrix system. Principal designer is sort of equivalent to our unit heads on the old system there. So my first level of supervision was in unit head.

Storey: And when were you promoted to that?

Cook: Oh, you're testing my memory now! I think I was promoted to unit head . . . I want to say somewhere around '76, '77, somewhere in that area.

Storey: Did you have to have any special training as a unit head?

Training Required of Supervisors

Cook: Ah, well, I was supposed . . . No, to answer your question, no, not directly. But usually you were selected–it's competition, as you recall–usually you're selected based on both your supervisory as well as your technical skills. If you have shown, because at the GS-12 level, although you're not a supervisor, you may have had the opportunity to be a team leader and have been providing some minimum supervision to a team. And based on that ability, your technical abilities, probably one of the basics that you look at when you become the unit supervisor. Now, once you *become* a unit supervisor there's certain requirements that you must have some like forty-hours per year of supervisory training. That's mandatory training. But that is not mandatory prior to . . . Well, the reason it couldn't be, you don't even know who's going to be supervisory, so you can't make mandatory training if somebody never becomes a supervisor.

Storey: But then once you *are* in a supervisory capacity, you participate in forty hours of training each year?

Cook: Each year, you have to have forty hours of supervisory training.

Storey: And did that training requirement change when you became a section head?

Cook: I don't recall that that training was . . . You still had to have certain required hours. It might

be . . . Well, I'm not sure that the section head training is any different than the unit head training, the way I'm thinking now. You're still required to have so many hours, but I don't think–*usually* when you become section head, you don't repeat the training you had. You just start out with supervising group performers, some of the basic supervision training. When you get to be a section head, you're into the upper-level management leadership-type training, motivating people and all that kind of stuff. So it still requires, I think, forty hours. You're getting different types of training at that particular level there, because if you've gotten the training required at the unit head, you've had all the basic supervision, and you're getting into a little more advanced supervision then when you get to the section head. Does that make sense?

Storey: Yeah. What kind of grade levels are we talking about for these different things?

Unit Head Was a GS-13 and You Had to Be Registered as a Professional Engineer (PE)

Cook: A unit head is a 13. Now, you're saying, "Was there any special training?"

". . . you had to be a registered engineer, because unit heads was expected to sign, technically-approve, drawings. . . ."

No, but there *was* a special requirement, is that in order to become a unit head, you had to be a registered engineer, because unit heads was

expected to sign, technically-approve, drawings. And so in order to be a unit head, you had to be registered. If you were not registered, you could not become a unit head.

Storey: And did we talk about the registration process with you last time?

Cook: I don't recall we did.

masters in public administration at the university of Denver

Storey: I don't think I marked it off. You got your master's in public administration at DU [University of Denver].

Cook: In '78, I believe.

Storey: Yeah, and then you became a Registered Professional Engineer.

Cook: Um-huh.

Storey: Tell me about that process of becoming a Registered Professional Engineer. What did you have to do?

Taking the Exams and Being Registered as a Professional Engineer (PE)

Cook: Okay. In order to become a Registered Professional Engineer, there is an eight-hour examination you must take in order to become registered in, say, the State of Colorado. If you want reciprocity or comity with another state, there was an additional eight-hour examination

you must take. And they call it the EIT or the Engineer[-in] Training examination. This covers the basics that you have in college: physics, chemistry, dynamics, thermo–all those areas there. What usually people do is, in their junior or senior year in college, they take the EIT. I did not. But that's the time to take the EIT. It's just basically all your basic engineering subjects there. You must have eight years of experience before you can take the [Professional Engineer's Examination,] ~~EIT.~~ Four years of college counts toward that time. So once you get out and work four years, for a total of eight years, including your academic degree, you're eligible to take the Professional Engineer's Examination. That is an open-book examination. The EIT at that time was a closed-book examination.

If you have a master's degree, you only need three years plus four years college. But the master's counts for five years. So your academics count for four years bachelor's, one year master's, and three years experience for a total of eight years. You got a Ph.D., well naturally you'd only need two years. A Ph.D. gives you two years additional credit for a total of six years academic and two years experience for a total of eight years. And once you're licensed, then your license . . . Colorado license, a general engineer, which mean that you don't have a particular discipline. And it was my registration certificate, which is on the wall up there, says I am a Professional Engineer, not in any particular discipline. In other words, I can practice engineering in chemical, civil,

whatever I choose to, as long as I determine that I'm qualified to do that kind of work, because I have a general registration license. Some states license specific, which means that I'm an electrical engineer, I can only do consulting in electrical engineering discipline–and cannot consult outside of my discipline. And again, as I said, if I want to leave here, go to another state, transfer my license, I must have had sixteen hours examination. If I just had eight hours examination, it's good in Colorado, you can't take it noplace else. It's just good in the state in which you got the registration for.

Storey: What does it mean to get a Professional Engineer's license?

". . . my Professional Engineer license probably was one of the most happy occasions, one of the most successful events in my whole career. It meant a lot to me. . . ."

Cook: Well, that's interesting you might ask that, because I've often thought about some of the most happy moments, the most successful things I've accomplished in my career, and I would say obtaining my Professional Engineer license probably was one of the most happy occasions, one of the most successful events in my whole career. It meant a lot to me.

". . . it says, that you have just gone a step further to prove your competency, ability to do engineering. . . . having come from the one-room schoolhouse . . . and Southern University, I guess I wanted to make sure that I could compete, so to

speak, with the big boys out there"

It basically, what it says, that you have just gone a step further to prove your competency, ability to do engineering. I guess it's almost like a lawyer without passing the bar, the same equivalency–a doctor without having passed the board. It has that kind of connotation. And having come from the one-room schoolhouse we talked about, and Southern University, I guess I wanted to make sure that I could compete, so to speak, with the big boys out there too, that I could pass this here examination.

And it was a tremendous challenge I gave to myself, because I was taking it with people who had went to CU [Colorado University], DU, CSU [Colorado State University], Notre Dame and all these big-time schools here. We all was taking the same examination. So it meant a lot to me to be able to prove that I had the technical background to pass the examination. And maybe you're not aware, I went on to become appointed to the [Colorado] Board [of Registration for Professional Engineers, and Professional Land Surveyors]. I was the first federal engineer ever appointed to the state board, and I was appointed by Governor [Richard (Dick)] Lamm, and then was reappointed by Governor [Roy] Romer, so I served eight years on the State Board and was Chairman of the Board for two of those years. I think it was '79-'81, I believe, that I was Chairman of the Board.

Storey: When did you receive your Professional Engineer's License?

Cook: If you let me read it off my certificate . . . In '72.

Storey: Did you do anything special to prepare for the exam?

Preparing for the Professional Engineer Examination

Cook: I sure did. There were Professional Engineer refresher courses that they was given at the University of Denver, as well as CU. And I took both the Professional Engineer–I indicated some students take the EIT, that's the basic, while they're still in college. I did not take that. I wish I had *known* that. It wasn't emphasized that much on my campus, but it would have been best to have taken it then. I didn't take it then, so . . .

Took the Engineer-in Training Examination

And it was several years after I was out of school and working when I took the EIT, so it was difficult to do that. So yeah, there was a refresher course for the EIT examination, and there was a refresher course for the PE [Professional Engineer] examination. And I took both of them.

Storey: How long were those courses?

Cook: It was about, I want to say three months,

refresher courses.

Storey: You went in how often?

Cook: Seemed like it was once or twice a week that I went in. I want to say maybe a couple of times a week.

Storey: Is this an examination a lot of people don't pass?

"I think the passage rate on the Professional Engineer's Examination . . . varies, what cycle you [take] the examination . . . the highs I was seeing is like sixty-five percent passage rate. The lowest I've seen has been twenty-nine percent passage rate. But I would say maybe average something like forty, forty-three . . . is probably the average passage rate. It's a pretty tough exam. . . ."

Cook: That is correct. I think the passage rate on the Professional Engineer's Examination is probably . . . it varies, what cycle you [take] the examination. When I was on the Board I used to get all the scores and everything like that. But it seems like the highs I was seeing is like sixty-five percent passage rate. The lowest I've seen has been twenty-nine percent passage rate. But I would say maybe average something like forty, forty-three passage rate is probably the average passage rate. It's a pretty tough exam.

Storey: Now as far as Reclamation is concerned, was this an *explicit* requirement, to be a unit head?

The Requirement for Unit Heads and above to Be

Registered Professional Engineers Came in after the Failure of Teton Dam

Cook: Not originally. (Unclear) came back, and again, I just got to give you the rough dates, but the requirement was put in place after the failure of Teton Dam. Reclamation didn't always have the Professional Engineer requirement. And so following the failure of the Teton Dam, we had some folks who would review, look at our processes, and how we might get better technical reviews on some of the designs, and that was put in place that we would require unit heads and above to be registered.

Storey: And the idea, at least partially, was that they were approving drawings and plans and specs?

Cook: Of a technical nature, and they at least had the capability to analyze and assess whether or not the designs was adequate. That's the idea. So you want to put someone who at least had proven that they had *taken* such a test. Doesn't always guarantee that you're going to assure you're going to get someone that's going to always give you a good design. But at least they had *met* a requirement that they had the technical competency to pass this examination here. And as a result, should have been able to be able to review those drawings and specifications.

Storey: Do you have any sense of whether Reclamation has a high percentage of Professional Engineers?

". . . percentage-wise Reclamation probably has . . . thirty-five or forty percent of people registered. Interestingly enough at some of our top levels, when we instituted the registration requirements, we did grandfather people into those jobs. . . ."

Cook: Ahhh, there's more recently than early on. I would say percentage-wise Reclamation probably has . . . thirty-five or forty percent of people registered. Interestingly enough at some of our top levels, when we instituted the registration requirements, we did grandfather people into those jobs. If you were already a section head or branch chief, division chief, you were grandfathered in. However, when the job became vacant, the [successor] ~~incumbent~~ at a job would have had to had that then. I would say that not a great percentage. And like I say, probably less than forty percent of Reclamation is registered.

Storey: When you became a supervisor with the unit, what were the new responsibilities that you had to take on?

Cook: New?!

Storey: The responsibilities that you had to take on as a unit head.

New Duties as a Unit Head

Cook: Well we did performance evaluations, which everybody tends to hate. Assigned work.

"Work would come into the branch, from the branch to the section, and from the section to the unit. . . ."

Work would come into the branch, from the branch to the section, and from the section to the unit. The units really defined specific kinds of work.

". . . the Power Technical Design Unit . . . did specific work and it . . . wasn't duplication of [any other unit's work]. So usually the protector relaying, the system analyses, equipment ratings, went to the Power Technical Design Unit where I was the unit head . . ."

In other words, the Power Technical Design Unit as opposed to the Equipment Unit or the Control Unit, did specific work and it was different–it wasn't duplication of that. So usually the protector relaying, the system analyses, equipment ratings, went to the Power Technical Design Unit where I was the unit head there. And so responsibilities were that we had to . . .

We didn't write specifications at that particular level there. Our input mainly was furnished to others who was writing specifications. In other words, others buying a breaker. They would send it down and say, "Please provide us the technical specification for this breaker here. Continuous current rating, the number of CTs, the voltage rating, the interrupting rate, and the continuous current rating," and we'll send it back to whoever's

writing the specification for it. Protect the relaying, same thing. What kind of relaying? What are the relaying schemes? All the technical characteristics of that. So how can I explain? That unit really sort of provided a lot of the technical data for others who was writing this specification there. So people sort of thought that that was sort of the–I want to use the word, but not in a tone that was demeaning to others–they thought the brain trust, so to speak. That's where all the technical . . . We really got into real technical issues, came down for resolution, or people consulted that unit for a lot of the technical resolution there. So they sort of looked at it that way.

Storey: And this unit was in a section?

Cook: Yeah.

Storey: Did the other units have distinct responsibilities, or did they do the same thing?

Cook: No, the other units had distinct responsibilities. The other units, one was involved in like substation layout. The Technical Unit would make the technical *specifications* for the breaker. The other unit would actually do the physical layout, draw the equipment, the pad it would sit on, all the physical arrangement, the connection from the breaker to the transmission line. That was that particular unit. Another unit would do the control, the supervisor, and the SCADA systems–supervisory control and data acquisition. They were responsible for a lot of the supervisory controls of the plants and things

like that. So they all had very distinct functions.

Storey: And you were in that position how long?

Became Power Systems Section Head in the Electrical Branch

Cook: I think I was unit supervisor for about six or seven years, and then became section head, and was in that position, it seems to me, about four years.

Storey: Does being section head mean that you had–I think it was three units?

Cook: That's right.

Storey: Reporting directly to you?

Cook: That's correct.

Storey: So your span of control went from eight to three, roughly?

". . . a technical specialist, that was in one of the units . . . reported directly to me. So the span of control roughly about four. . . ."

Cook: That's correct. But that was a technical specialist, that was in one of the units that reported directly to me. So the span of control roughly about four.

Storey: Now why would this person be reporting directly to you?

Cook: The technical specialist?

Storey: Yeah.

Cook: Actually, the technical specialist was the same grade as the section head. It was a technical specialist 14, and the section head was a 14. So I guess it would have been inappropriate for a 14 to report to a 13 [unit head]. And that was a little unusual because that was probably one of the few sections that had a technical 14 in it. But due to the nature of the work, he was supposed to be a specialist in water automation, SCADA application that I guess went in and did the requests and was able to get a grade of a 14, for this particular position. It goes away the new organization.

Storey: Now when you moved from being a unit chief, was it?

Cook: Yeah, unit head, they called it.

Storey: Unit head to a section chief.

Cook: Section head.

Storey: To a section head. What was the change in your responsibilities there?

How Work Responsibilities Changed When He Became a Section Head Instead of a Unit Head

Cook: Well, you're now responsible for all the work now that comes from the branch, making sure that you're meeting deadlines, you're making

sure that you have adequate staff resources. You're making sure that if there are people in one area that are not totally busy, that you get the work spread around. You are responsible for budgeting, responsible for training.

It's mainly the supervisory kind of overview or oversight, although you have unit heads, the section head was responsible of the overall supervision, the budgeting–because the unit head usually didn't do any budgeting of that particular area there. But you're responsible for the jobs that came in from the regions, making sure that there was sufficient work to cover the staff–those kind of activities. And just being accountable to getting work out on time and within budget. That would be a responsibility of the section head. It's sort of interesting, if a job didn't get out on time, probably never go back to the unit head. I mean, the section head would go back, but beyond that, it always comes back to the section head and find out why is it that the job wasn't completed within budget. They was the one that answered to upper management on the status of jobs.

Storey: And do you happen to remember when you became a section head?

Cook: Yes, I became a section head, I think, mmm, around '80 or '82, I believe.

Storey: And how long did you remain a section head?

Cook: Oh, I want to say about five years, until about

‘87, I believe.

Storey: And where did you go after that?

Served as Assistant Division Chief for the Electrical, Mechanical, and Plant Design Division

Cook: Actually . . . Well, ‘86. I was ‘82 to ‘86, and then at that time, I took a job as advertising . . . division chief was advertising to have an assistant division chief to come up for a year on a detail. That job was advertised, I was selected, and I went up and served as assistant division chief for the Electrical and Mechanical Division. I went up and served as the assistant division chief for a year.

Became Head of the Electrical Branch

During the time that I was serving in there, the branch chief job became vacant because the person there retired, retired about three months, I guess, before the end of this here one-year detail as assistant division chief. And I applied for the branch chief job and was successful in getting that. And I think that occurred in ‘87.

Storey: Do you mean the division chief?

Cook: No, the branch chief job, the Electrical Branch.

Storey: You went section to branch? Okay.

Cook: Yeah, I went section to the assistant division chief, and then to the head of the Electrical Branch.

Storey: Okay. So how many sections would there have been in that branch?

Cook: Three sections.

Storey: And did each of them have three units?

Cook: One had four units.

Storey: So we're talking . . . Oh gee.

Cook: We're talking about a branch of about eighty-six people.

Storey: Okay, that's what I was trying to get to.

Cook: Two sections had about–one, 25; one maybe 27; and the other one I think something like 33 or something like that, the one that had the four units in there.

Storey: And once again, how did the nature of your supervisory responsibilities change? What I'm trying to get at is, how the hierarchy splits up the responsibilities and the powers.

Changes to Responsibilities as a Result of Becoming Branch Chief

Cook: Okay, as branch chief now?

Storey: Yeah.

"Branch chief is considered the highest electrical engineering position in Reclamation. . . . Beyond that, you become a general engineer. "

Cook: Branch chief is considered the highest electrical engineering position in Reclamation. Beyond that, you become a general engineer. So Electrical Branch 850, branch chief, is the highest electrical position in Reclamation–*true* electrical position. And your responsibilities, [increase] greatly.

The Electrical Branch Chief Had to Sign a Very Heavy Correspondence Load

You're responsible for now running a branch of eighty-six people, again reporting to the division chief, but responsible for budgeting, training, signing a lot of technical correspondence, because all the technical correspondence that goes back out to the region, the projects, out to the clients, all come back through the branch chief's office, all that correspondence is signed by the branch chief. At that time, the Electrical Branch chief and the Mechanical Branch chief probably was generating more correspondence in this office than any other branch. I'm just trying to think of, I want to say "pieces" of a correspondence, but . . .

END SIDE 2, TAPE 1. MAY 23, 1994.
BEGIN SIDE 1, TAPE 2. MAY 23, 1994.

Storey: This is tape 2 of an interview by Brit Allan Storey with Felix Cook on May the 23rd, 1994.

. . . of drawings do you mean for approval or for transmittal, or what?

Signature Blocks on Drawings and What Signatures Meant

Cook: Yes, for transmittal. In other words, all the construction drawings, the drawings usually had six signature blocks on it. Three on the left-hand side, three on the right-hand side. The left hand uses drawing–is drawn, review, and I can't think of the other block there. On the right-hand side, those was usually all technical approval, and it was the unit head, section head, and the branch chief signed the right-hand side of the drawing. So it was usually six signatures on the drawing. And the branch chief being, he signed *as* the branch chief. And those drawings would be the drawings that would go out to the region to actually do the construction there–New Waddell or whatever it is–those drawings prepared in the branch for the substation, equipment, or whatever it is, the layout, all be signed by the branch chief, and those drawings would be sent out, and those are the drawings we actually . . . Those are the drawings you see in our files, historical files we were talking about. The branch chief, probably more branch chief signatures on drawings than any person in this here organization signed as. So a tremendous amount of correspondence is signed by the branch chief.

Storey: How much actual review was done by the unit, section, and branch chiefs?

Cook: Technical review?

Storey: Yeah, if you were approving these drawings,

were you actually sitting down and going over them?

Cook: No.

Storey: Or was it more a presumption that because the three technical people had signed, that it was going to be okay?

". . . they says, 'I have some drawings for you to sign.' . . . and there'd be a hundred and fifty drawings to be signed. And there's no way in the world that you're going to spend that kind of review on that many drawings. It'd take an hour or so just to sign the drawings. So no, I would say the branch chief was responsible for the overall technical adequacy, not any detail of design of the drawing. That would have had to be done by the unit and the section head. . . ."

Cook: I would say that the unit head had the more in-detail review of the technical drawing. That's probably the position that got the greatest review. Section head would have a less[er] level [of] review than the unit head. The branch chief would actually look at, oh, certain things in the drawings to make sure that certain things were covered on the drawings, just overall, to see if there is anything that the drawing is lacking, clarification of drawings, but no, to answer your question, many times they says, "I have some drawings for you to sign." And I go down there to sign their drawings, and there'd be a hundred and fifty drawings to be signed. And there's no way in the world that you're going to spend that kind of review on that many

drawings. It'd take an hour or so just to sign the drawings. So no, I would say the branch chief was responsible for the overall technical adequacy, not any detail of design of the drawing. That would have had to be done by the unit and the section head. So you're probably asking, "How much value-added does the branch chief add to the drawing?"

Storey: No, but I want to ask–I don't know whether it's an indelicate question, but were there ever problems with drawings that reached up that high?

Sometimes He Sent Drawings Back When They Came to Him for Signature as Branch Chief, but Generally the Technical Review Was Done at the Section and Unit Levels

Cook: Oh, yeah, there were things that I caught. For instance, my background being in transformers, sometimes I would see the drawings come through with ratings on the transformer I know [are] not correct. And the voltage ratings are not correct, and they would be sent back. Cables, sometimes mis-designated, mis-labeled. So yeah, I would say that there are times when those things were being caught, when they come up to that level there.

Storey: At the unit level, you caught things like that?

Cook: Oh, the unit level, pretty much responsible for [pre?]paring those drawings there. In other words, you're just not doing a review, a lot of time they . . . Well, the unit supervisor *probably*

was involved in preparation of some of the drawings, but yes, the unit supervisor is a lot more intimately involved in designs than the section head or the branch chief.

Storey: But you're saying, basically, at all three levels, unit, section, and branch, you would be finding things that would require changes?

Cook: You could find some things, sure.

Storey: And then, for instance, did anything ever go out to the regions and then have to come back?

Sometimes a Drawing Had to Come Back from the Region for Correction

Cook: Oh, there were things that went out to the regions that we didn't catch. Sometime the . . . contractor get ready to try to install something, and they says, "You know, the way you got this drawing showing here, we can't install this here. It doesn't fit." And so there are times we would have to make changes to the drawings. So yeah, we have caught things that . . . like that.

Storey: Let's go to more general things. When did you decide you wanted to be a supervisor? *Why* did you decide you wanted to be a supervisor?

How He Decided He Wanted to Become a Supervisor

Cook: Well that's interesting you would ask that, because at that time, there was no dual track for

advancement in the agency here.

"If you wanted to move ahead, you had to move ahead through the supervisory routes. There was no dual technical track in the agency here. And that's unfortunate, that's created a lot of problems . . . because a lot of people are good technical people, but rotten supervisors. They took the job for the money and the pay, and to move up in the system, because that's the only way they can move in the system. . . ."

If you wanted to move ahead, you had to move ahead through the supervisory routes. There was no dual technical track in the agency here. And that's unfortunate, that's created a lot of problems we had and we have today, because a lot of people are *good* technical people, but rotten supervisors. They took the job for the money and the pay, and to move up in the system, because that's the only way they can move in the system.

". . . a lot of people took the supervisory job and spent their time doing technical stuff and very little doing managing people. . . . This is still sort of a *technical*-minded organization. 'Our business is about doing *technical* stuff. All this here good-feeling stuff is not what I'm into. We shouldn't be spending a lot of time on that kind of stuff.' That was the mentality of a lot of people. And so that's why we get grievance and complaints . . ."

And I contend that a lot of people took the supervisory job and spent their time doing

technical stuff and very little doing managing people. And that's why we ended up with a lot of difficulties and problems we have in the system. This is still sort of a *technical*-minded organization. "Our business is about doing *technical* stuff. All this here good-feeling stuff is not what I'm into. We shouldn't be spending a lot of time on that kind of stuff." That was the mentality of a lot of people. And so that's why we get grievance and complaints– not saying that we wouldn't get that anyway–but I think a lot of our managers probably didn't spend enough time. And the reason they didn't, they're more comfortable with the technical stuff. That's what they studied in school. I mean, that's what they specialized in. They didn't specialize in managing a difficult employee, or trying to motivate employees that [are] almost not motivatable. I mean, it's just something they're not comfortable with. And some better than others, doing that.

". . . I've always liked working with people. I've always thought that I was fairly sensitive to people needs. So I thought that I had both technical skill as well as managerial skills. And so I guess if I had my choice, even if there had been a technical route, and a supervisor route, I probably would have taken the supervisory route . . ."

So you ask me why . . . I've always liked working with people. I've always thought that I was fairly sensitive to people needs. So I thought that I had both technical skill as well as managerial skills. And so I guess if I had my

choice, even if there had been a technical route, and a supervisor route, I probably would have taken the supervisory route, as opposed to the pure technical route. Some days, I wonder (chuckles) if that was the smart thing to do. But no, I enjoy working with people, and I think I'm probably effective with working with people. So that's why.

Storey: The next step, I guess, would have been a division chief?

Applied for and Accepted into the Senior Executive Service (SES) Federal Candidate Development Program

Cook: The next would have been a division chief, but I didn't go the division chief route. As chief of the electrical branch, I applied for the Senior Executive Service Developmental Program and was accepted into the program. And [I'm] sure you're going to ask me the dates, and that must have been '90-'91. November '90 or the early part of '91. And that program was a fifteen-month developmental program.

Worked in Two Department of the Interior Offices

As part of my developmental training, they recommend that you have three months of training outside of your agency, and I took that back in Washington. I spent some time with the Office of Environmental Affairs. John Diesel is head of that office. And Financial Management . . . Bill Kindig [phonetic spelling] and his office back there.

Storey: Those were both in Reclamation?

Served as Acting Project Manager in Loveland

Cook: No, Department of Interior, both P and B [Program and Budget]. I took a three-month assignment, and I was the acting project manager in Loveland. Steve Clark went to Grand Coulee, took the project manager [job] at Grand Coulee, vacated the Loveland office, and part of my training, I went up and served as the project manager for the Loveland office. And when I finished that–my three months in Washington was not consecutive.

Served as Acting Deputy Assistant Commissioner-Engineering and Research

I finished with the Loveland training, I went back to Washington to finish my training back there. And I think I stayed back there until about November 13–somewhere in there–and I came back as the acting deputy assistant commissioner for Darrell Webber.

Became Assistant Regional Director of the Pacific Northwest Region

I spent until March of '92 as the acting deputy assistant commissioner for engineering, and then got accepted as the assistant regional director for the PN [Pacific Northwest?] Region. And I went to Boise, Idaho, served John Keyes as assistant RD, from March '92 to March '93.

Became Deputy Assistant Commissioner-

Engineering and Research

Now in December of '92, I got my appointment to the deputy assistant commissioner position here, but I didn't come back in this office until March.

Served as Acting Assistant Commissioner-Engineering and Research and Then Acting Director of the Technical Service Center

Came back in, in March, and served as the deputy assistant commissioner for engineering and research until September when Darrell Webber retired. When Darrell Webber retired, I became the acting assistant commissioner for engineering and research and held that position through last April when I got the appointment here as the acting director of the Technical Service Center. And that brings me to date.

Storey: Okay, good. Now, in addition to your special assignments in Washington and Loveland, did you have special training courses for the Senior Executive Service?

Attended the Federal Executive Institute in Oak Ridge, Tennessee, as Well as Four Required Week-long Seminars in Various Locations

Cook: Yeah, I sure did. That was the F-E-I [Federal Executive Institute] training back in Oak Ridge, Tennessee. And as part of the developmental training, there were, I think, four seminars that the entire class had to attend, week-long

seminars. And we had one in Washington; San Antonio, Texas; Baltimore; somewhere else it seemed like we had–maybe it was three, I'm not sure. But those are week-long, for the entire class, and we would bring in speakers and we would have workshops. That was a requirement of the class. I can't think of any other requirements of the training, of the developmental . . .

Storey: The rest of it was self-designed?

Cook: Self-designed.

Storey: For fifteen months? (Cook: Yeah.) Is that what I'm hearing?

Cook: Right.

Storey: Were there any other Reclamation people in the class with you?

Other Reclamation Staff in SES Training at the Time

Cook: Yes, there were six people. Well, when they first advertised it, they selected six people and they split it up and they had two classes. The first class was Ray Bagely [phonetic spelling] and Kathy Gordon and myself, was in the first class. Second class, Jim Malila, Walt Fike, and Charlie Calhoun. They finished in the second class, we were the first class.

Storey: But there were other people in addition to Reclamation folks?

Cook: Oh yeah.

Storey: I mean it was . . .

Cook: Sure, it was Department-wide. Out of the two classes–there was twenty-five in each class, I believe–we had twenty-five, and the other class had twenty-five too. So Reclamation had six people out of a total of fifty people.

Storey: And this was different than the department's manager training program?

Cook: Oh yes, yes.

Storey: Did you ever take the manager training program?

Cook: I did not.

Storey: Okay. I think what I've heard so far is three weeks of training in three locations, and three months in Loveland and about three months in Washington?

Cook: That's correct.

Storey: So what I'm hearing so far is about seven months out of fifteen months. What did you do for the rest of the period?

Cook: Well, I spent some more time back in my job. I was still chief of the . . . . Oh, I'm sorry, when I came back here as the deputy assistant commissioner, that was part of the assignment too. So from November to March, until my

appointment, I was still on my assignment–that was still part of my assignment.

Storey: Okay.

Cook: Does that sort of fill in the gaps there? I hadn't counted up all the months.

Storey: Well, I was just wondering.

Cook: Sure, that's good. Good observation.

Storey: What do you think . . . Let's put this differently. Looking back on your training for the Senior Executive Service, what do you think was most useful, and what do you think was least useful, and how could it all be changed?

"I enjoyed my assignment as a project manager in Loveland. That was just a neat assignment. My assignment in Washington . . . didn't keep me busy enough . . . I just thought that I could have accomplished more if I had some more work to do there. . . ."

Cook: I enjoyed my assignment as a project manager in Loveland. That was just a neat assignment. My assignment in Washington wasn't–I didn't consider was the most . . . I must split those assignments out there. And Bill Kindig will kill me, because the one that I had, I got the highest ratings, was in Bill Kindig's shop. But that was the one that I thought that I . . . didn't keep me busy enough, that assignment there. I just thought that I could have accomplished more if I had some more work to do there. They

seemed to have been thrilled to death, but I didn't find I kept myself that busy.

Now what was the question? What was less . . . And that was just specific, maybe as to what I was really doing there. I think I was working on these, gosh . . . . I forget what I was working on now. ~~It's these, gosh . . . It's these [June?] . . . . It's the way that these . . . .~~ If you don't have . . . ah, sort of like a voucher, if you don't have the processing center like the Denver Office in these remote areas, they give you these general vouchers that you can sign. It's just like a check or whatever. But they were looking at doing away with those things, and so I was finding out what-all Bureaus used them. I'll think of the name after a while. It's G-something. I forget what the name of it. But anyway, I was trying to find out what-all Bureaus used those, did we still need to use those vouchers.

Working on How to Deal with Federal Income Tax Withholding from Firefighters' Pay

And another issue I was working on is that, had to do with the income tax of firefighters. IRS [Internal Revenue Service] was wanting the Department to assess income tax for firefighters. And the reason it was so difficult is that most of these firefighters didn't have Social Security numbers. They would fight fires in several states, and they couldn't determine what state you should be charging their income tax to. And what were some of the other difficulties? They'd be sleeping in one

state and maybe fighting a fire in another state. And so IRS, the department had gotten an exemption years ago that they didn't have to take out these income tax every time they . . . where they have to take out state and federal. What the department was doing, you know at the end of the year send in W-2s saying "this is the amount we paid them," or whatever it was. Well, IRS wanted to take out the money up front now. So I got involved in that whole process with Forest Service, and it was sort of interesting, the deal I got involved in that. I didn't bring it to a resolution before I left there– I just got started in that process there, but that was some of the things that I worked on back there. You know, interesting but . . .

Storey: That was within Reclamation?

Worked in Policy, Management, and Budget in the Department of the Interior

Cook: No, that was [PMB] ~~PBM~~ [office of the assistant secretary for Policy, Management, and Budget]. That was the department. That was the financial management. I was involved with Bill Kindig in his shop over there, that I was working with over there.

". . . Office of Environmental Affairs . . . was a good assignment. I actually ended up . . . got into electromagnetic fields and what causes or what perceived causes that they might have. And I drafted a policy in terms of location of transmission lines . . . around schools and stuff like that . . ."

Now the one OEA, Office of Environmental Affairs, that was, I enjoyed that, it was a good assignment. I actually ended up drafting a, got into electromagnetic fields and what causes or what perceived causes that they might have. And I drafted a policy in terms of location of transmission lines and around schools and stuff like that there. And so that was interesting. I enjoyed that assignment. So I ended up doing a draft policy of that. And then I was back there once to explain. They had all the people in from the regions and they would explain this policy to them, and then they had me to come in the room and I sort of explained the policy I had drafted while I was back there. So that was sort of a neat experience. I enjoyed that experience, I know.

The last ones, I really didn't have any I consider *real* nonproductive assignments. Most of them was very–I enjoyed. The job here, the seminar was great. The Loveland assignment was great. So I think I feel, looking back on it, I feel very fortunate that I didn't have a lot of, quote, "down time," during that development. I said fifteen months–I think it was like three months before we got started, you know, in the program, so really when I say "got started," they said, "The program has officially started, but nobody has really started doing anything." And the clock was already ticking, you know, and so there were some months were ticked even before we actually started doing anything in the program. So that's how we ended up with fifteen months on this program.

Storey: How did the Senior Executive Service Training Program change your view of Reclamation?

SES Training Broadened His Understanding of Reclamation

Cook: It gave me a broader perspective of Reclamation.

". . . I had a very narrow focus of Reclamation. . . ."

Being in the Electrical Branch all my entire career, I had a very narrow focus of Reclamation.

". . . I was in Electrical Branch . . . in I Triple E . . . Reclamation Engineer of the Year . . . member of the state Board–I just thought I was great! . . . started meeting these members of the class . . . and like the question is, 'Who is Felix Cook? We never heard of this guy before.' It just lets you know how small your circles was, you know. I mean, I thought that, 'Gosh, with all this stuff I'm involved in, *everybody* ought to know who *I* am!' Well, that just means that I had such a narrow focus of Reclamation, how we fitted with the Department and other Bureaus and that kind of stuff. . . ."

And this is a side story, but it was sort of interesting, because when So it did give me an opportunity to have a much broader view of how Reclamation fits in with the other Bureaus in the Department of Interior.

Other Bureaus and the Department of the Interior Are Asking Whether Reclamation Can Assist Other Bureaus to Reorganize

However, I did find out that Reclamation is considered by many to be one of the *leading* bureaus. You know, I think our training in sexual harassment and some of the other initiatives that we have implemented in Reclamation was looked on as being sort of the leading Bureau in some of these areas here. So I was pleased to learn that Reclamation did have a very good rapport *outside* of Reclamation with other Bureaus. Now I have just recently learned that some of the other–well, at least department heads–have gotten excited about the Bureau's restructuring and reorganization, but they're asking questions about "Can the Bureau provide guidance to other bureaus in restructuring their bureaus?" Now I'm not sure how that would work, or if that's something we want to *do*, but I've heard the department has been asking those kind of inquiries. "Do you think that we could provide assistance to other bureaus in this area here?" So Reclamation is considered by many to be innovative in some of the things that we've done.

Storey: Well that leads me into another question: We reorganized in '88 because Reclamation, I think, was beginning to recognize that things were changing. When you came back in '91 or so, to become the acting deputy assistant commissioner for engineering and research, what were the issues that were boiling, that were going then, within ACER [assistant

commissioner-engineering and research]?

ACER Was Overstaffed and We Sought Additional Work from Other Bureaus and Agencies

Cook: The issues that were going with ACER then were trying to find additional work for ACER staff. We recognized . . . That's what Darrell Webber had been working on, he and [Larry] Von Thun and others, this here ACER futures studies.[4] We recognized that time then, our traditional client work was dropping off, and there was almost a full-time job here trying to find additional work for our staff.

"We knew . . . we had excess capability. And we–especially the Electrical-Mechanical Branch–we would have liked to have done an R-I-F in those areas . . ."

4. This elusive study was located for the editor by Director Lowell D. Pimley, of the Technical Service Center in Denver–a successor organization to ACER. It is difficult to locate largely because it was known popularly and in transmittal memos as the "future study" for the ACER organization. However, the titles used on the four volumes of documents vary considerably from that. In addition, several of these documents came out in two or more versions as the "future study" proceeded. The final ACER documents appear to be:
   1. January 1993–"Charting the Future for Reclamation's Engineering and Research Organization–EXECUTIVE SUMMARY."
   2. January 1993–"Charting the Future for Reclamation's Engineering and Research Organization." This appears to be the final version of the report.
   3. August 1992–"Charting the Future for Reclamation's Engineering and Research Organization. Volume 2." This was marked "preliminary."
   4. June 1992–"Capabilities" listing ACER's various divisions and their work and capabilities–the third volume in the full "future study." It was marked "working document."

We knew at that point there we had excess capability. And we–especially the Electrical-Mechanical Branch–we would have liked to have done an R-I-F [reduction in force] in those areas that prior to the R-I-F that we're going through now, because we knew that we didn't have work there, but we knew we was getting into this impending restructure, and we just did not–it's difficult to implement an R-I-F! because it just involves a lot.

They Were Successful in Finding Work at EPA, DOE, and Other Locations

But we recognized that we had excess capabilities, so one of the things that was on the foremost mind of everybody is trying to identify additional work with EPA [Environmental Protection Agency] and DOE [Department of the Energy] and we was being very successful in doing that. I mean, we had up to about a hundred FTEs [full-time equivalents] involved in DOE and EPA work, and I guess they really liked what we was doing, and those kinds of things, but a lot of the work really did not address the excess capabilities that we have in the Electrical-Mechanical Branch. So we still have surpluses there.

". . . that was the main concern for ACER, is just finding sufficient work to keep our folks busy . . ."

But that was the main concern for ACER, is just finding sufficient work to keep our folks busy, employed.

Storey: How is ACER reacting to the fact that they had just gone through a reorganization, hoping to solve the problem, and then these issues were surfacing?

Cook: The reorganization? You talking about '88?

Storey: Yes.

ACER Wasn't Much Involved in the 1988 Reorganization

Cook: For some reason, ACER didn't get involved in the . . . Well, ACER didn't think the '88 reorganization really was ACER's reorganization. They thought that was pretty much ACRM [assistant commissioner-resources management] and ACER never did–and this is personally speaking here–I don't think ACER ever did identify with that reorganization. You know, I hear people talking about the '88 reorganization, as far as ACER is concerned, it wasn't a big deal for ACER. It was only a big deal for ACRM, the '88. That's when they had people moving from Washington here, and doing some recentralizing some functions. For the most part ACER didn't have, didn't go through that process. Their work was pretty much defined prior to that, and pretty much defined after that too. So we didn't have the same changes that we went through as ACRM went through.

Storey: Hm. What was working with Darrell Webber like?

Darrell Webber

Cook: Ah, Darrell was an interesting person, I should say.

"I basically ended up doing the day-to-day running of the office. . . . Darrell felt frustrated at the end of his career. Darrell wanted to do some things for . . . ACER, and found himself frustrated and not able to do that. . . . he really would have liked to have gotten more agreements in terms of work with the EPA and DOE . . . and wasn't able to accomplish that, and became rather frustrated with that process. . . ."

I basically ended up doing the day-to-day running of the office. And maybe that's the way it should have been. Darrell felt frustrated at the end of his career. Darrell wanted to do some things for Reclamation, for ACER, and found himself frustrated and not able to do that. And I think that he left not feeling very supported in some of the efforts he was trying to do in ACER. And he was disappointed he wasn't able to do . . . I think he really would have liked to have gotten more agreements in terms of work with the EPA and DOE, transferring some of our folks out. He would have liked to have done that, and wasn't able to accomplish that, and became rather frustrated with that process. But *I* worked okay with Darrell, I didn't have any problem.

Storey: Was there a change from your acting period to your deputy period, in ACER, and in Darrell?

Cook: Yeah. Where was it? Let me see. When I was acting, I thought that Darrell was more tied-in, or more involved with what he was trying to accomplish here. When I came back, I sort of got the feeling that Darrell had recognized by then that he wasn't going to accomplish what he had wanted to accomplish, and he was almost, like, given up on it. And so when I was here as acting, I don't think that he'd given up on his initiatives. I think he was still hoping that he could pull it off and get some support. When I came back, I got the feeling that he was pretty much resigned to the fact that he wasn't going to accomplish that.

Storey: In early '93?

Cook: Right.

Storey: Of course he retired a few months later?

Cook: In September, right.

Storey: When you went up as the assistant regional director in . . . .

END SIDE 1, TAPE 2. MAY 23, 1994.
BEGIN SIDE 2, TAPE 2. MAY 23, 1994.

Storey: . . . you went up to PN, what's your specialization is in assistant regional director was. Is there more than one, for instance? and what were you doing?

Serving as Assistant Regional Director in the Pacific Northwest Region

Cook: Yeah. We had two assistant regional directors: Ken Pedde, and we had an assistant regional director for administration, was Paul Rachetto, and he sort of addressed the personnel issues, the EEO [equal employment opportunity] issues, Job Corps, those things reported to him. With reference to Ken, we had a lot of water issues: storage, transferring water from one entity to another one. The salmon issue is coming up. So Ken was pretty much in the water, the O&M [operation and maintenance] side of the house.

"My area was primarily in construction on the power side of the house. The two projects that reported to me was Grand Coulee and Hungry Horse. They reported directly to me. . . ."

My area was primarily in construction on the power side of the house. The two projects that reported to me was Grand Coulee and Hungry Horse. They reported directly to me. All the construction folks and the construction engineer, all the design folks in the Boise office reported to me. So that was sort of how the . . . You know, Ken, as I said, O&M, water rights, land acquisitions, those kind of things, was Ken Petty. The design, construction, power operation was my functions.

Storey: So there were really three assistant regional directors?

Cook: That's correct. As I said, Paul Rachetto for administration.

Storey: What were the issues that you dealt with in your construction and power role up there?

Grand Coulee, at That Time, Had Excess Staff

Cook: Okay, some of the issues that I dealt with primarily was issues at Grand Coulee where, just as here in the Denver Office, we had excess staff there, and really didn't know what to do with that excess staff. Grand Coulee is very heavily unionized. We have a lot of craft jurisdictions at Grand Coulee that we would have liked to have rearranged and done some differently, but based on the unions' agreements or what-have-you, wasn't able to do that. And we thought that was a very inefficient way to do business at Grand Coulee, but really wasn't able to do a lot of things with that, *then*. Now later, there was an R-I-F at Grand Coulee *prior to* this buy-out we had here. I think something like forty-five people, I guess, went through an R-I-F at Grand Coulee, and that was just initiated at prior to me coming here to this office here. But that was really one of the issues that was.

Personnel Issues During the Uprating of the Hungry Horse Powerhouse

Another issue we dealt with at Hungry Horse: we had uprating the machines at Hungry Horse and we didn't expect that project to last that long, so we had a lot of temporary employees there. And the difficulty there is, that when you missed the date that you're going to get these things completed, and you begin to extend these . . . I say temporary, well I guess

temporary-term employees, I guess. They was hired for a particular period of time, a term, term employees. They don't get the same benefits–I think temporary is the name. I'm getting . . . In other words, they're hired for a specific–the reason you do that is that when the work is over with, you don't have to go through an R-I-F. You just say, "They're hired for a three-year period. And when the end of the three-year period, it's a neat day]. They no longer have employment, so you don't have to go through all the R-I-F. But when you have to extend them, you now begin to have an employee on roll for a significant period of time, and when they're not accumulating the benefits as a permanent employee. So it gets unfair to the employee to do that there. And so we was dealing with those kind of issues, that we want to continue on or we just want to find some way to scale this project down or whatever it is. So that was some of the issues we were dealing with at Hungry Horse.

Issues in the Construction Office in Bend, Oregon

In the construction business, one of the difficulties we were having there is that we had created a construction office in Bend, Oregon, because there was a lot of dams in Oregon that was scheduled to be fixed. Well what happens that none of those dams came to the forefront, and we had this construction office out there and we find out we was detailing these folks out of Bend, Oregon, all over the country there, and that was creating some problems for some of the folks too, because they was on the road. Some

was able to take their families with them, others was having to travel back to Bend, Oregon. So that was some issues that we had to deal with, and after while I think it created some real family problems. And so we was concerned about some of those issues there.

Those were some of the major issues that we was dealing with.

Storey: Well, speaking of family problems, you spent basically your whole career in Denver until I guess you applied for this position as assistant regional director in PN. Did your family move and did you sell your house and go through all of that process in order to go to Boise?

Family and Moving to Boise

Cook: That worked out real slick for me. My kids are all grown, just my wife and I, and she teaches at Metropolitan State College. She was able to come up to Boise and join me and actually become an instructor at Boise State University! And gosh, she loved that so much, until when I got ready to come back here, she didn't want to come back here! She *really* liked it, it worked out real–and I didn't think that she *would* like Boise, because . . . I had some concerns about going to Boise, to be frank about it. I had heard that it was heavily Mormon country, very conservative, probably. Didn't hear very much about minorities there, but I just knew there wasn't very many there. And it turned out that is correct. Out of a population of 140,000 people, I think it was less than eight hundred

blacks in the City of Boise. So I had some real concerns about that. But it worked out well for us. My wife came up there and set. And the only time that . . .I went up there and she was still here, and she was on a year's contract. When I came back here, she had to finish out her year's contract with Boise State there. So she had to stay up there until the end of May or something like that. Other than that, it worked out just great for us. So that was not a problem for us.

Storey: Wasn't a problem?

Cook: That was not a problem for us.

Storey: Okay, good! Well then when you came back . . . Well, why did you decide to leave there?

Cook: Leave Boise?

Storey: Yeah.

Commissioner Dennis Underwood Appointed Him Deputy Assistant Commissioner-Engineering and Research

Cook: That's when I got my appointment to the deputy job here. Commissioner Underwood appointed me to the deputy assistant commissioner's job.

Storey: Did you apply for that position?

Cook: Ah, no. See when I finished the S-E-S-C-D-P [Senior Executive Service Career Development]

Program, one of the benefits of that is that you're certified for three years, and you can be moved into an SES position, noncompetitively, any SES position that you're qualified, you can be moved into that position noncompetitively. And when I went to Boise, one of the things that Commissioner Underwood says, "I'd like for you to get some more regional experience." And prior to him leaving office, he appointed me to the other job back here. So you asked me "Did I apply for it?" no, I didn't apply for it, but I had a certificate saying I was eligible for any noncompetitive SES job in Reclamation.

Storey: What did you think of Commissioner Underwood as a commissioner?

Dennis Underwood

Cook: I liked Commissioner Underwood. I thought that he was . . .

"If there's any downside to him, I thought that he was more of a 'nuts and bolts' guy as opposed to dealing with some of the human issues, some of the organizational issues. . . . I think that he should have let his managers do most of that technical kind of stuff, and should have spent most of the time on some of the organizational-type issues there. But I liked him as a commissioner. . . ."

If there's any downside to him, I thought that he was more of a "nuts and bolts" guy as opposed to dealing with some of the human issues, some of the organizational issues. I saw some things

that he might have should have spent some more time on it, but he had a technical background by nature, and he loved getting into the technical details, my understanding is, editing, revising, rewriting stuff that really the staff should have had responsibility for doing that. So if there was a drawback, I think that he should have let his managers do most of that technical kind of stuff, and should have spent most of the time on some of the organizational-type issues there. But I liked him as a commissioner.

Storey: And how would you characterize his personality and the way he dealt with people?

"I have heard that he wasn't that confronting of others. When I say 'confronting,' [I] mean that if he had differences of opinion with you about some of the things that you wanted to do, he may not have told you directly, to your face, what he thought of that or did not think of that. You might had to find that out some other way. . . ."

Cook: . . . He dealt with me fine, and I don't know that much about how he dealt with others. I have heard that he wasn't that confronting of others. When I say "confronting," [I] mean that if he had differences of opinion with you about some of the things that you wanted to do, he may not have told you directly, to your face, what he thought of that or did not think of that. You might had to find that out some other way. Non-confrontive, I guess, is the way to . . . And that wasn't my case, but that's what I understand.

Storey: What about Commissioner Beard? How would you characterize him as commissioner?

Dan Beard

"Commissioner Beard . . . is up front, he calls it like he sees it. . . . I've called him on several issues, and right off the bat, I know exactly what the answer would be after talking with him. I like that kind of style. But unfortunately he has gotten off to a bad start with a lot of Reclamation folks. . . . I like dealing with him. . . . I found him to be up front, very responsive, very straightforth, and I just enjoy dealing with him. So *my* experience with Dan Beard has been *very* positive. . . ."

Cook: You know, it is unfortunate that Commissioner Beard has, I say, gotten off to the . . . position he is with the Reclamation employees, because I *like* Dan Beard, and the reason I like Dan Beard is that Dan Beard is up front, he calls it like he sees it. We have never had a commissioner that has been able to get results out of him as quickly as he is. You send Dan Beard a ~~message on your~~ LAN message, good chance you get a response back the same day or the following day. I think that's unbelievable, I mean, that he's that . . . I've called him on several issues, and right off the bat, I know exactly what the answer would be after talking with him. I like that kind of style. But unfortunately he has gotten off to a bad start with a lot of Reclamation folks. But I think that Dan Beard really needs to, before he leaves this

commissioner position, needs to really let the Reclamation people see both sides of Dan Beard. And I think there is a different side to Dan Beard that the folks here have not seen. And I hope that he gets a chance to present that side, because I like dealing with him. I mean, he's up front. I'll ask him a question, he'll either say "yes" or "no." I can deal with that. So I found him to be up front, very responsive, very straightforth, and I just enjoy dealing with him. So *my* experience with Dan Beard has been *very* positive.

Storey: Of course one of the things that Commissioner Beard has sort of spearheaded is the current reorganization that we're going through. I guess my first question is . . . . Well, I think it's really clear that what used to be known as ACER *has* been affected by this reorganization.

Cook: Uh-huh.

Storey: Do you now think that we have a realistic organization for the Denver Office?

Commissioner Beard's Reorganization of the Assistant Commissioner–Engineering and Research and the Assistant Commissioner-Resources Management Offices

Cook: I do. I really do. As a matter of fact, *I* feel that once we get through all the stress and the low morale and low production–all that's going through here now–I think once we get through all that, we could come out with an organization far more viable than we have today. I think the

combining of ACER and ACRM was the right thing to do. I think that the way that we have staffed the Technical Service Center to do work, I think is the way it should be staffed. It's hard to say sometime exactly–you know, some still think we might be a little heavy on folks, but we've had people to scrub the numbers several times before. And each time we make adjustments in the margin, and I don't think that right now we continue to scrub that way, we're getting any benefit from that. I think we need to get into the operation here. The first year is going to be a transition year. We're going to find out some things that we're doing we probably shouldn't be doing, and we'll need to make some adjustment for that.

". . . I feel good about what we ended up with. And I think that we're going to end up with a very viable organization . . ."

But no, I feel good about what we ended up with. And I think that we're going to end up with a very viable organization, and I don't think I'm overly-optimistic about that.

Storey: Well you know there are many people who believe that the Technical Service Center is going to disappear within two or three years. What's your response to that attitude?

Cook: *I don't buy that*. The Bureau of Reclamation is the eleventh-largest utility in the country in terms of our facilities. We have an infrastructure out there that will still have to be maintained. Not only maintained, we would

have to still be able to make additions to the infrastructure.

"I think that our staff will go down from what it is now. Right now the numbers are looking at around eight [hundred] twenty-, eight [hundred] thirty, people in the Technical Service Center. . . ."

I think that our staff will go down from what it is now. Right now the numbers are looking at around eight [hundred] twenty-, eight [hundred] thirty, people in the Technical Service Center. That number would drop, but no, I don't see . . .

". . . there's still a *need* for the kind of technical advice that the Technical Service Center would provide. . . ."

I see that there's still a *need* for the kind of technical advice that the Technical Service Center would provide.

"I think with flattening the organization we are going to eliminate a lot of the overhead. We obviously was pricing ourself out of the market. . . ."

I think with flattening the organization we are going to eliminate a lot of the overhead. We obviously was pricing ourself out of the market. I think that we have addressed that by flattening the organization, eliminating a lot of the layers of management here.

No, I don't see the Technical Center going away. I don't see what you replace it

with. There's a *need* out here that only that capability lies here. You know, all the unsafe dams and structures that we have out there. I mean, they're fixed for those things there. ~~That capability is going to be there.~~ I mean, the *need* for that capability will there.

Storey: But it isn't feasible just for the regions to staff up and take over these things that the Denver office has traditionally done?

". . . since we have gone through and scrubbed our numbers, and with the buy-outs that the regions have gotten out there . . . we're easily going to see more work coming in from the regions now. . . . the regions have lost certain capabilities out there that they're going to be asking us to do more work for them. . . ."

Cook: No, absolutely. I, frankly, since we have gone through and scrubbed our numbers, and with the buy-outs that the regions have gotten out there, I think that we–and we're just getting ready to go out to revisit our scheduling, our workload processes and things like that–I think we're easily going to see more work coming in from the regions now. I think the regions have lost certain capabilities out there that they're going to be asking us to do more work for them. Now there might be some functions we're doing here now that the region might want to do that, and I can say that probably can occur. But for the *mass* capabilities here, I don't see the regions staffing-up and doing that. I'm not even sure the regions *want* to do that.

". . . only about thirty or forty percent of our workload that we have identified, is regional work. The rest of it is BIA [Bureau of Indian Affairs] and safety of dams work. . . ."

The region program now, interestingly enough, the region program is dropping off too. And the regions are . . . When I said "dropping off," is that only about thirty or forty percent of our workload that we have identified, is regional work. The rest of it is BIA [Bureau of Indian Affairs] and safety of dams work. So if the region work drops off another ten or fifteen percent, they still only account for about thirty or thirty-five percent of our entire workload. So no, I really think that there'll still be work out there. That's an interesting concept. I hadn't heard that, but you said there's some people who feels that . . .

Storey: Oh, it's a rumor that just flies everywhere. "Oh, I have it on *good* authority that the Technical Service Center is *slated* to be abolished in three years," and this kind of stuff.

"They will tell you that if you're going to get anything done, you'd better do it in the first eighteen months of your appointment, whatever it is. Dan Beard, if he wanted to, could not go back through and do another major surgery on Reclamation. This is his one shot. I don't think he has another shot. . . ."

Cook: No. You know, actually there are people who are saying that this is the first shoe to be dropped, that the other shoe is going to be

dropped in future years: If Dan Beard is thinking of that, I know nothing about it. And frankly, I don't think that Dan Beard could pull it off. They will tell you that if you're going to get anything done, you'd better do it in the first eighteen months of your appointment, whatever it is. Dan Beard, if he wanted to, could not go back through and do another major surgery on Reclamation. This is his one shot. I don't think he has another shot. Now, I haven't talked to Dan Beard about that, but I can read, I've been around long enough to know what the possibility, the reality of that. He has done his one major shot. It's been a major shot. He doesn't have a second chance. This is it, for Dan Beard. I don't see another shoe to be dropped. That's where I'm coming from.

Storey: Speaking of the commissioners again, did you know any of the commissioners prior to Mr. Underwood?

Cook: I don't think I met any. I knew them, but I don't think I ever met . . . Underwood was the first commissioner I ever personally met.

Storey: Okay. Well, in that case, I guess I have one last question I would like to ask you, and that is, obviously you're a very successful black man in Reclamation.

Cook: Well I wouldn't go that far! (laughs) Brit, you're being a little strong there!

Storey: Have you ever felt that you were discriminated against in Reclamation in applying for jobs or

anything like that? Or have you ever *seen* discrimination?

Feelings about Discrimination in Reclamation over the Years

Cook: I would say that when I first came to work for Reclamation, I truly believe I was discriminated against. When I first came to work for Reclamation, I mean, it was like during the 60s when they didn't have very many blacks working for Reclamation.

". . . you could tell that some of the jokes, the language, the conversations that they had was pretty racist . . ."

I was working in one of the units then, and you could tell that some of the jokes, the language, the conversations that they had was pretty racist, because one day I was in there working and some guy said, "Did you see that So-and-So on TV the other night?" And I guess that he forgot that I was new in the section there, and it was a little quiet. Everybody sort of looked around, and this person recognized that I was working in the unit there. But it sort of indicated that it was sort of typical that they said those kind of things before then. And so yeah, I sort of felt–not personally at that point there, but just the general atmosphere, that blacks wasn't accepted, you know, in the organization.

". . . early on, probably a couple of my ratings indicated that I had some prejudiced supervisors. But I would say that I truly have felt very fortunate

in my latter years, that I haven't particularly felt that discrimination. I think it's a combination of several things: I worked hard . . . I still put in maybe nine-, nine-and-a-half hours every day–no compensation, not even looking for any compensation–I prepared myself professionally, I've gone the extra mile to do that. . . . I had a supervisor in recent years that I don't think that I could have continued to work for, but I don't think of it so much as prejudice as being just a regular ass for anybody who works for him?. . . ."

> Oh, I would say early on, probably a couple of my ratings indicated that I had some prejudiced supervisors. But I would say that I truly have felt very fortunate in my latter years, that I haven't particularly felt that discrimination. I think it's a combination of several things: I worked hard, I still work hard, I still put in maybe nine-, nine-and-a-half hours every day–no compensation, not even looking for any compensation–I prepared myself professionally, I've gone the extra mile to do that. And I've felt that it's paid off for me–I haven't had to fight for those things there. And I feel very fortunate I haven't had to do that. I had a supervisor in recent years that I don't think that I could have continued to work for, but I don't think of it so much as prejudice as being just a regular ass for anybody who works for him?. I won't mention any names, but I didn't particularly think there was prejudice, as much as being just an inadequate supervisor.

". . . I think it was real. But I was determined . . . I had a goal sort of set, and I wasn't going to let

that distract from that. . . . I've had a couple promotions that people would make statements to the effect that, 'Well, you know this is a really high position that you're getting,' . . . this kind of stuff here. . . . But I guess I've just been able to deal with that kind of stuff. . . . Yeah, even when I got the branch chief's job, the statement was made that this is a high position, 'We're concerned how you might . . . relate to some of the foreigners that come into this here office here." They didn't recognize that two-thirds of the world is non-white! . . ."

So, yeah, early on, yes, I did feel that. I think it was real. But I was determined that that wasn't going to . . . I had a goal sort of set, and I wasn't going to let that distract from that. And yeah, I felt very fortunate. I've had a couple promotions that people would make statements to the effect that, "Well, you know this is a really high position that you're getting," and it's almost like "we've done you a favor to promote you to this position here. We expect a lot of you," this kind of stuff here. I've gotten some of that stuff. But I guess I've just been able to deal with that kind of stuff. So it's interesting how people react to certain things. I probably was not a reactionary kind of person. Yeah, even when I got the branch chief's job, the statement was made that this is a high position, "We're concerned how you might . . ." Now, this is how insensitive or how non-knowledgeable some of our managers and supervisors were: "We're concerned how you might relate to some of the foreigners that come into this here office here." They didn't

recognize that two-thirds of the world is non-white! And to worry about how *I* would relate to some of the foreigners?! I'm more able to relate to the foreigners than *they* are! But again, that's some of the stuff. And I guess I just understand that it's the lack of understanding and the lack of just sensitivity sometimes.

"I probably could have reacted more to some of the things that have gone on, but just chose it wasn't worth it. I had goals set for myself. Wasn't going to let that distract from what I was trying to get to. . . ."

And so that's sort of where I've been. I probably could have reacted more to some of the things that have gone on, but just chose it wasn't worth it. I had goals set for myself. Wasn't going to let that distract from what I was trying to get to. Does that make any sense?

Storey: Yeah. Has Reclamation changed [in that regard] over the years?

"I think Reclamation has become a very sensitive place. I was just in a meeting this morning, we were talking about how people might react when they get their RIF notices. Thirty years ago, I don't think Reclamation was that sensitive to their employees. . . ."

Cook: It has, yes. I think Reclamation has changed quite a bit. I think Reclamation has become a very sensitive place. I was just in a meeting this morning, we were talking about how people might react when they get their RIF notices.

Thirty years ago, I don't think Reclamation was that sensitive to their employees. I think Reclamation is almost bending over backwards. I mean, they've got training scheduled for the same day people get their RIF notices, to start training them in terms of how to begin to apply for jobs, how to deal with the RIF notices, how to get help, the EAP, Employee Assistance Program, professional trainers on board, professional help for the employees. And that's good, but I don't think that Reclamation would have been doing those kind of things twenty or thirty years ago. I find Reclamation being a very caring place now. I'm sure a lot of employees may not agree with that, but at this level here, I do. I mean, Reclamation, just not too long ago, told employees, "You can use government computers, government time, to fill out your SF-171." I never heard of that before! I mean, the job notices and stuff that Reclamation advising people of, and stuff like that. I'm glad to be part of an agency that sensitive to people's needs. And I'm very proud to be part of Reclamation at this time here, with the sensitivity I see them showing to the employees. And no, I don't think we would have seen that twenty or thirty years ago.

Storey: But at the same time, it must be fairly stressful to have to be presiding over the Technical [Service] Center in the middle of a RIF.

Cook: It's *very* stressful. That's the thing that I think most people fail to recognize, that managers and directors need help. We have some very stressful times.

"It doesn't make me feel good when I have to tell people 'no.' There are people who feel very bad about the fact they're going to have lower grades in the organization. I mean, there are people who'll come in to ask, 'Can we get some more of these grades? . . .' And that's why I think that we *are* going to be successful, because we've been holding the line here. We're basically saying, 'Folks, we have to survive as an organization first. Financially we have to be a healthy organization before we even *talk* about higher grades in this organization. . . .'"

> It doesn't make me feel good when I have to tell people "no." There are people who feel very bad about the fact they're going to have lower grades in the organization. I mean, there are people who'll come in to ask, "Can we get some more of these grades? Can we get some more of these grades here?" And that's why I think that we *are* going to be successful, because we've been holding the line here. We're basically saying, "Folks, we have to survive as an organization first. Financially we have to be a healthy organization before we even *talk* about higher grades in this organization. We have to be responsive to our clients there."

". . . I'm hopeful that we're going to make a difference here, we're going to cut our overhead, we're going to be competitive, we're going to be responsive. . . ."

> And I'm hopeful that we're going to make a difference here, we're going to cut our overhead, we're going to be competitive, we're

going to be responsive. And so I feel good about that.

Storey: Well, I really appreciate your spending all of this time with me.

Cook: Well you're certainly welcome, Brit.

Storey: On the basis of our conversation earlier today, I'm assuming that you want the interview of March 28, that we conducted, and *this* interview, to be closed until you leave Reclamation. Is that correct?

Cook: That is correct.

Storey: Okay, thank you.

Cook: Well thank you then!

END SIDE 2, TAPE 2. MAY 23, 1994.
BEGIN SIDE 1, TAPE 1. DECEMBER 23, 1998.

Storey: This is Brit Allan Storey, senior historian of the Bureau of Reclamation, interviewing Felix Cook, director of the Technical Service Center, the Bureau of Reclamation, in Denver, Colorado, on December the 23rd, 1998, at about two o'clock in the afternoon, in Building 67 on the Denver Federal Center. This is tape one.

My last interview with you was over four years ago, and that was before [Bureau of Reclamation Commissioner] Dan [Daniel] Beard actually started reorganizing and everything, I think.

Cook: Um-hmm.

Storey: Tell me how you think the reorganization went and how it's functioned so far.

". . . I think that the reorganization was good. It was probably overdue in some areas, and I think that indication of what I see now is that Reclamation has benefitted as a result of that reorganization. . . ."

Cook: I think the reorganization has been good for Reclamation. I think there were some offices that needed for us to take a look at, do some re-streamline of it. I think the formation of . . .

As I was saying, I think that the reorganization was good. It was probably overdue in some areas, and I think that indication of what I see now is that Reclamation has benefitted as a result of that reorganization.

Storey: In what ways?

". . . we are more inclined to be sensitive to our clients' needs than we were before. I can speak particularly of the Technical Service Center. We are a reimbursable organization . . . we have no programmatic responsibilities or programs, and we have no appropriated funds . . . the employees don't like that, because there are employees in the organization that do not know what they will be doing six months from here. And so that creates a lot of tension and probably a little anxiety in terms of whether or not they still will have work. . . ."

Cook: I think that we are more inclined to be sensitive to our clients' needs than we were before. I can speak particularly of the Technical Service Center. We are a reimbursable organization, which means that we have no programmatic responsibilities or programs, and we have no appropriated funds, basically, so all of our work has to be recouped through work we do for our clients. Now, the employees don't like that, because there are employees in the organization that do not know what they will be doing six months from here. And so that creates a lot of tension and probably a little anxiety in terms of whether or not they still will have work.

". . . that's been good, because it basically says that how well you satisfy your client on this job might depend on whether you get another job from your client . . . in the TSC it has true meaning now. You satisfy your client if you want to continue to have work and if you want to continue to be employed. . . ."

On the other hand, I think that's been good, because it basically says that how well you satisfy your client on this job might depend on whether you get another job from your client, and so I think that the employees truly know what it means to satisfy the clients now. Before, I think we just talked about that–didn't have no meaning. At least in the TSC it has true meaning now. You satisfy your client if you want to continue to have work and if you want to continue to be employed.

I assume that that has been transferred through parts of the other organization, but I can't speak for that. I can only speak for how it has impacted the TSC.

Storey: TSC's working okay?

". . . I think there was folks who really did not think the TSC was going to survive. . . . new procedures, new processes, not having any appropriated funds, so to speak, having to go out to the clients, which was primarily the regional offices, and they were not required to come to us–still is not required to come to us–to have work done. . . ."

Cook: TSC is doing fine. This is the first year. You had indicated earlier that it had been four and a half years since we had our interview. I didn't realize it had been that long. But the TSC, as a side point, I think there was folks who really did not think the TSC was going to survive. It was new. We were setting up the new procedures, new processes, not having any appropriated funds, so to speak, having to go out to the clients, which was primarily the regional offices, and they were not required to come to us–still is not required to come to us–to have work done.

"There was some folks that said, 'This is not going to work.' . . . required to come to us, we can't just go out and do work for anybody. . . . we have to make sure that we have a basis for doing work, and so it's not like we can do any work coming into the office. There is certain works that

we can't do because the private sector complains about us competing for work out there, too. . . ."

There was some folks that said, "This is not going to work." Not only are they not required to come to us, we can't just go out and do work for anybody. I mean, we have to make sure that we have a basis for doing work, and so it's not like we can do any work coming into the office. There is certain works that we can't do because the private sector complains about us competing for work out there, too. So, yes, there was folks who said they didn't think this place was going to work.

"You asked a question, how well the TSC's doing. This is the first year that the TSC did not raise our rates to the client. . . ."

". . . when we first got started in TSC, a ten-million-dollar loan we had borrowed, just to make sure that we covered payrolls and things of this nature here, in case there was shortage of work there. We have paid that loan back now, and it's still operating in the surplus. . . ."

You asked a question, how well the TSC's doing. This is the first year that the TSC did not raise our rates to the client. We kept our rates flat. Our '99 rates, fiscal year '99 is the same as fiscal year '98, and we started out, we borrowed a loan when we first got started in TSC, a ten-million-dollar loan we had borrowed, just to make sure that we covered payrolls and things of this nature here, in case

there was shortage of work there. We have paid that loan back now, and it's still operating in the surplus. So I think that's indicative of how financially sound the TSC is.

Storey: Tell me how you *borrow* ten million dollars. I mean, obviously you didn't go to a *bank* and do it. [Laughter]

Cook: Actually, it's sort of interesting. We said we borrowed it, but it really was part of TSC's monies. This money came from the working capital funds. There was a K12 working capital fund, and I think some of the regions still have a K12. And there was a K15 working capital fund, which was equipment purchases, monies we put in to purchase equipment.

So I think it was pointed out that of that fund, maybe seven or eight million dollars of that money *was* the old assistant commissioner of engineering research monies we had put into the working capital funds. So it wasn't like we got a free ten-million-dollar gift. However, it's very difficult to go back and split out who had what in that fund. So *that's* where the monies came from. It came from an existing working capital fund.

Storey: And then the money went back from money above and beyond your costs?

Cook: That's right. We paid the ten million dollars back. We didn't say, "We don't owe ten million dollars." We just paid ten million dollars back.

Storey: To the working capital.

Cook: To the working capital.

Storey: Is that a revolving fund sort of situation?

Reclamation's Working Capital Fund

Cook: It's a revolving fund, and whether or not you are aware or not, I think OMB [Office of Management and Budget] has been taking a look at that, because that fund grew to have Reclamation-wide–the working capital fund was up around–all our working capital funds, I should say, sixty or seventy million dollars. That was sort of like a carryover each year, and so OMB said, "Wait a minute. Why are you carrying this kind of monies over? This money really should be given back to whoever it came from."

I don't know all the ramifications of that, but last year I know that we contributed something like twenty-five million dollars back to OMB out of the working capital fund. So that still left us with maybe forty-plus million dollars. There is some concern that they will continue to come back to us and look for excesses. They call it excesses. We just maybe call it operating funds, operating balance. So that's where the monies come from.

Storey: I would think there might be some tensions and glitches, whatever, in setting up a new program like this where you have professional meetings and you have training and things like that, that

you need to cover. How was that dealt with?

TSC's Budget Is about $70,000,000–Between Three and Four Million Is Policy and Administration Funds to Cover Things like Professional Society Meetings, Interagency Agreements, Executive Staff, and Diversity Activities

Cook: As I said, we get very little appropriated funds. We do get some appropriated funds. TSC has a budget of roughly seventy million dollars, and we probably get between three and four million dollars' appropriated funds, used to call them GAE [general administrative expense]. I think they call them policy admin [P&A] now. All that three to four million dollars, that money runs my office, pays for my salary, my secretary's salary, and then we have funds for development of manuals and standards. We also have funds for professional society meetings and attendance for professional society meetings, and interagency agreements, also some funds for the activity we do in the diversity areas with some of the HBCU [historically black colleges and universities], HACU [Hispanic Association of Colleges and Universities], Native American schools.

TSC's Billable Rate and How it Is Set to Cover Costs

So your question is, how do we provide training. That covers a great deal of training, and in addition to training, from that would come out of our working capital fund, and that's

how we establish our billable rate each year. Our billable rate, we sit down and we say, "How many billable hours will we be able to charge our client? What costs are we going to incur?" Some of the costs that we have no control of, for instance, space, GSA charges us space. That's about eleven, twelve million dollars comes over to us from the Management Service Organization for service provided for that.

So in our billable rate we have to recapture all that cost there, so if the appropriated funds we get don't cover all the training, then the training would have to come out of our working capital fund K-8 account.

Storey: Has it put the squeeze on training and professional meetings, or are we doing okay there?

Cook: I think we're doing okay. I think that you might get a different assessment of that. I think if you talk to the employees, they probably never get enough training. If you talk to the managers, the folks who are responsible for doing an evaluation of the results of the training we have, they will probably say the training is adequate. So, yeah, my personal opinion is that I think we probably are getting enough training.

". . . I'm not sure we always use our training funds very wisely and very efficiently. We have in many cases sent people to training as a reward, to get them out of the office and get them a nice trip someplace in Southern California or Florida, and it may be very questionable just how much benefit

we got from that training. . . ."

One of the things–and this is something I just wanted to comment on–I'm not sure we always use our training funds very wisely and very efficiently. We have in many cases sent people to training as a reward, to get them out of the office and get them a nice trip someplace in Southern California or Florida, and it may be very questionable just how much benefit we got from that training. So I'm not sure that *all* our training monies have been spent–the last dollars had been wisely spent. So I think that now, especially the way TSC operates, we look very closely at training now, and there's probably a lot more scrutiny put on training than there has been in the past.

Storey: I presume most of the TSC's work is with the regions and the area offices, not to the D.C. office much.

Cook: That is correct. I don't know the percentage, but we don't do very much work for the D.C. office. Primarily the work that we probably do for the D.C. office would be through probably your organization, PAO [Program Analysis Office], which means we have a client liaison that works with the PAO. Native American Affairs, we do some work for them, but the lion's share of the work *is* with the region and area office.

". . . we do about 25 or 26 percent of our total work comes from outside of Reclamation and so the other 74 or 75 percent is Reclamation. . . ."

As an example, I think we do about 25 or 26 percent of our total work comes from outside of Reclamation and so the other 74 or 75 percent is Reclamation. That would include dam safety, the regional office, and so forth. The other 24-, 25 percent I indicated would be other Federal agencies–National Park Service, Fish and Wildlife, FEMA, the [U.S. Army] Corps of Engineers–would make up the difference, and some international training that we do.

Storey: Let's talk about that *non*-Reclamation work, 24, 25 percent. What kinds of things are we doing?

Kinds of Work Reclamation Is Doing for Other Bureaus

Cook: Well, with FEMA, it would be the emergency-type work. For instance, if a hurricane comes through, flooding in the Midwest, flooding in California, we go out and do what they call DSR, Damage [Survey] ~~Assessment~~ Report, and that's actually how Federal monies is spent. We go out, we do an assessment of the damages, turn the reports in, and based on those reports is how the communities and individuals are being paid for the damages. That's part of it.

The Corps of Engineers basically have hired us to work with them on some of the levee rehabilitation in California, especially Sacramento area. With reference to FEMA–no, that's FEMA.

EPA [Environmental Protection Agency], we do a lot of the hazardous waste cleanup stuff for them, the sites. They have sites in Colorado, throughout the nation. They employ us to come in and do an assessment of those sites, hire contractors to clean those sites up. So that's primarily the kinds of–and with the National Park Service and Fish and Wildlife, we probably do most of their major dam inspections, an assessment of their high-structures dams. So that's the nature of what we would do for the Park Service and Fish and Wildlife.

Storey: Well, what kind of issues come up in dealing with these other agencies? I presume there're some tensions, there're some disconnects, there're some things that work really, really well.

Cook: Well, yes. Each agency probably has their own problems. Let's start with BIA [Bureau of Indian Affairs] and the tribes. The issues comes up there is that somehow they think that we have excess monies we can work with, and that if we have a contract with them, agreement, service agreement, we end that service agreement and there are work that needs to be done at the end of that, they many times would say that, "We've already hired you to do this job, so why are you coming back to us for some more money? Why don't you just take here this whatever that is?" Well, that's not within the scope of the work and we don't have the money to do that, so that creates some tensions there, too.

". . . TSC has, I suppose, [been] criticized for being expensive, doing work. However, the TSC has challenged any office, any agency to lay their costs on the table, side by side, and we will show them where we're no more expensive than they are. I think the only difference between the TSC cost is that we truly do know what it costs to do business. . . ."

With some of the other agencies, it's been the cost that TSC has, I suppose, criticized for being expensive, doing work. However, the TSC has challenged any office, any agency to lay their costs on the table, side by side, and we will show them where we're no more expensive than they are. I think the only difference between the TSC cost is that we truly do know what it costs to do business. We don't think that some of the other agencies have a clue as to what it costs to do business.

". . . you ask them, 'What are you paying for space cost?' 'Well, we don't pay the space cost. administrative pays our space cost.' 'What do you pay for this here?' 'Well, we don't pay for that. That comes from another pot.'. . . *we* pay for all that, and so when you really find out, when you're comparing who's expensive and who isn't expensive, you've got to compare apples to apples . . ."

The reason I say that is that a lot of their activities is funded through certain sources. Like you might check with BIA and you ask them, "What are you paying for space cost?" "Well, we don't pay the space cost.

administrative pays our space cost." "What do you pay for this here?" "Well, we don't pay for that. That comes from another pot."

Well, *we* pay for all that, and so when you really find out, when you're comparing who's expensive and who isn't expensive, you've got to compare apples to apples, you know. Many times we're *not* comparing apples to apples; we're comparing apples to bricks. That's why we get the criticism as being too expensive. But they tend to come back to us time after time to have work to do for them. So that's an indication that maybe they don't think we're that expensive.

Storey: What other kinds of things?

". . . we find . . . we're in competition with our own Reclamation people. . . . the regional office and some of the area offices in doing some of the same work. . . . We think that's probably a duplication of staff. . . ."

Cook: I mentioned early on that we operate fairly uniquely, and the fact is that the region and area office don't have to come to us to have work done, and we find in a lot of cases we're in competition with our own Reclamation people. The TSC is in competition with the regional office and some of the area offices in doing some of the same work. We don't think that's helped it. We think that's probably a duplication of staff.

". . . the private sector thinks that Reclamation

should not be doing any of the work that we do, and that everything that we're doing should be done in the private sector. . . ."

Some of the areas we've had, as I said, the private sector thinks that Reclamation should not be doing any of the work that we do, and that everything that we're doing should be done in the private sector. There are some folks in the private sector would say it can be done more efficient, less cost, and the whole gamut. I don't subscribe to that. But there are pressures from the private sector that, "Reclamation, you just stay out of this stuff here and let the private sector do that."

So we have that challenges as well as the challenge from internally. So it is a constant challenge we have, but we've been able to figure a way to manage that in the last four years.

Storey: If I understood it correctly, Commissioner Beard did not like Reclamation working for other agencies, because he thought that was the other agencies' responsibility. Has that changed as we've changed commissioners and as the TSC has evolved?

". . . Commissioner Beard really did have a different agenda when he came into this organization . . . I suspected that Commissioner Beard did not like the fact of the huge civil works projects that we have built, primarily the dams . . . he felt that Reclamation would not continue to build those projects if you can indeed get rid of

the capability . . . we had, such that we no longer had the capability to perform those activities. . . ."

Cook: Yes. I think that Commissioner Beard really did have a different agenda when he came into this organization, and there might be those who would disagree with this, but this is my suspect. I suspected that Commissioner Beard did not like the fact of the huge civil works projects that we have built, primarily the dams, and one of the ways that he felt that Reclamation would not continue to build those projects if you can indeed get rid of the capability that we have. So I think that was an effort to minimize or at least limit the capability we had, such that we no longer had the capability to perform those activities.

Eluid L. Martinez

This Commissioner [Eluid L. Martinez] certainly has not felt that way, and in all fairness to Commissioner Beard, I'm not sure that he left the agency feeling that same way. I can't speak for how he felt, but I think that he may have changed somewhat and might, indeed, have supported some activities that we was doing. So I think during his period of time, that could indeed have been a change.

This commissioner here has been very supportive of at least TSC doing outside work, not for the sake of just making payroll, but I think the commissioner understands the importance of maintaining our technical capability, because if we lose that, then it's

something that you don't get back very easily. In many cases, we have to work for an outside agency to maintain the technical capability, because we may not indeed have the work going on in Reclamation to *maintain* that technical capability, and we may have to find work outside to continue to maintain that technical capability. So I think this commissioner has been very supportive of that.

Storey: There was a special study done on maintaining technical capability, I believe.

Cook: That is correct. We have a team set up. It's called Reclamation RDCCT–Reclamation Design Construction Capability Team. That team is in existence today, and that team is supposed to be looking at what capabilities we have in Reclamation, not only today, but also looking at what are the needs we're going to have down the road.

As a result of that team, we have done some changes. The TSC, for instance, has created sort of a core capability for construction inspectors out of this particular office here, and they recognize–"they," Reclamation–recognize that down the road with all the retiring and hiring, that we was going to reach the point where a lot of the office could not maintain construction capabilities. There are a few active offices now–the Bend being one–but the idea was to have a core ability within the TSC that could provide support to our regional and area offices, and we've done that. We have that team in place.

Storey: And ~~this~~ is this program of maintaining that core capability ~~is~~ working well?

Cook: Well, I wouldn't say it's working well. The reason of that is that–well, one of the reasons is that people still–I should say offices shop around for the best rate they can find, and if the Bend office needs some work to be done, or the UC [Upper Colorado Region] office, I think they're shopping around to see if there's anybody who's cheaper than the TSC, and they would actually utilize those folks there.

But I think that in the long run, it hurts the organization because it's not looking at the long-term viability of the organization; it's looking for meeting an immediate need. And if we don't start looking down the road, what capabilities are we going to need down the road, and maintain that capability, it might come a point when we just don't have that capability left in Reclamation. So it had some good points to it and some not so good points to it.

Storey: I think you came to the Service Center–well, to ACER, really, before Commissioner Beard, came to the organization.

Cook: That's correct, yes.

Storey: Can you talk about how the international affairs program has evolved in that period of time, our assistance to foreign countries?

International Program Has Changed Due to a Shift in Emphasis from Technical Assistance to

Training

Cook: Well, we have been working with foreign countries even certainly *prior* to Commissioner Beard and, to some extent, certainly *after* Commissioner Beard. I would say that during Commissioner Beard's tenure and his staff– well, Ed Osann, if you recall that person, their attitude was to certainly limit our involvement *with* international work, and that's especially the technical aspect of international work.

I think that it was okay for them to provide training, but to actually provide technical expertise on review of their structures, designs, and what have you, they were not very amenable to that type of work there. And today we are still not doing a lot of that. Our international work really has dropped off. Not a lot of opportunities out there, for whatever reason, haven't materialized, and so we are primarily providing training to our international clients as opposed to providing technical assistance to our clients.

I don't see that really changing a great deal in the future, because what has happened, especially with Taiwan, is that when we sort of pulled back or indicated that we was no longer interested, those folks, you know, there are people like Japan and Canada and others who would knock on their door to do work for them, and they sort of came in to fill that void. So they're not looking back for us. They've already gotten people now who was willing to come on board and to do the kind of work that

they were wanting to be done. So they sort of looked at Reclamation as a not very dependable client, and so–not a client. I guess a customer. And so we probably lost ground. I know we lost ground in that period of time.

Storey: Do you have any specific examples of projects?

Cook: Yeah. China. We know about the Three Gorges China, but China was developing–and this was one that I may not have *all* the data, but they want to build a canal or pipeline, north-south, a *huge* project that they was certainly interested in us getting involved in that, and we basically told them, no, we could not.

There was a project, I believe, in Turkey. They wanted to build a pumping plant that would have kept some of our people busy for years and years and years down the road, a lot of good work there, and we said that, no, we were not going to participate in that. So there have been several situations where we have turned down work.

Storey: Um-hmm. Interesting. Same kind of question for our relationship with the regions and the area offices. How has the relationship of the Service Center evolved from the period when it was ACER to now, in dealing with the regions and the area offices and so on?

TSC Has Worked to Improve its Relationship to Reclamation's Field Offices

Cook: I think the relationship is better now. We

started off fairly rocky, and because–several reasons.

"ACER had the reputation with the regions and the area offices, rightly or wrong, of being a pretty arrogant organization, and created a lot of bad feelings with folks out there. . . ."

ACER had the reputation with the regions and the area office[s], rightly or wrong, of being a pretty arrogant organization, and created a lot of bad feelings with folks out there. A lot of those folks have retired and gone on, but a lot of the, I guess, people who inherited those jobs stayed on, and they remembered how ACER treated those folks there.

So, yeah, there were some folks out there who would have chosen to send work someplace else if they had the choice to do that. And some of that still exists today, and some of it will probably always exist. But I think today that the TSC especially has really gone a long ways in trying to satisfy the clients' need, trying to be cognizant of the clients' budgets and time frames, and we have made an effort to tell the client that "We're not going to spend your money unless you approve us to spend your money."

We used to spend the clients' money and just tell the client, "Pay us. That's what it cost to do the job, and I don't care if that's what we agreed to. That's the cost to do it. You pay us." And they *paid* us, and I think many times the clients didn't like that.

So one of our operating principles now is that we will not spend the clients' money unless the clients agree that that's what we're going to do. So I think we've gone a long ways in developing those relationships. I think that we still have some room to improve there, but I see more and more of the clients being receptive to bringing work into the TSC now.

Storey: I've forgotten the man's name, but the guy who used to head the dam safety during the reorganization (Neil F. Parrett). At the meetings he started pointing out what a large percentage of the work here in Denver actually came from dam safety, either directly or indirectly.

Cook: You're not talking about Neil Parrett?

Storey: Yeah, I am, probably.

Cook: Okay.

Storey: Do we still have that high percentage of work for dam safety?

Dam Safety Work Done by the TSC

Cook: Yeah. The Dam Safety Office has been one of the offices that has been pretty much transparent in its organization. I think that a lot of the regions probably still think the Dam Safety Office is part of the TSC, but they do indeed work very closely together, and we still do a large, large share of the dam safety work. Primarily most of the dam safety work is done

by the TSC. So I would say that office and the relationship with that office was good in the past. That office used to be part of ACER. And that relationship continues to be good.

Storey: Do you have any sense of what percentage that is nowadays?

Cook: It's a pretty good percentage. I would say that we probably do 20 or 30 percent of our work is dam safety work, a significant amount.

Storey: What kind of change–

END SIDE 1, TAPE 1. DECEMBER 23, 1998.
BEGIN SIDE 2, TAPE 1. DECEMBER 23, 1998.

Storey: What kinds of changes have you seen between Commissioner Beard and Commissioner Martinez . . . and your relationship to them?

"I would certainly like to see someone with the commissioner's commitment and dedication to what we're doing, with the political savage [savvy] that Dan Beard had. . . ."

Cook: It's interesting. I would certainly like to see someone with the commissioner's commitment and dedication to what we're doing, with the political savage [savvy] that Dan Beard had. Dan Beard had a lot of political ~~savage~~ [savvy], but didn't necessarily see things the same way we did. I think the commissioner is certainly on board–not on board, I should say–is certainly consistent with maintaining technical capability, but doesn't seem to have the political ~~savage~~

[savvy] to carry out a lot of the things that I think he would like to carry out.

So I see one commissioner not so committed, but with a lot of political ties, another one very committed but maybe not so much–don't have the political ~~savage~~ [savvy] to carry a lot of these things out. So, intentions are good, but maybe just don't have the political clout to carry the stuff out.

Storey: There are people around Reclamation who say that Patty Benecke's really running Reclamation. What do you think?

Cook: [Laughter] Is this a set-up question, Brit?

Storey: No, it isn't. But since you're leaving–since you're leaving, I can ask you where others can't answer this question.

Cook: I'd say that Patty Benecke has a strong influence in the activities of the Bureau of Reclamation, and I think the commissioner probably listens very closely to Patty Benecke.

Storey: Yes. That's the sense a *lot* of people have within the organization. As I say, you're a person who's leaving and it isn't going to affect you the way it might some of the others.

Why are you retiring?

Reasons for Retiring

Cook: I'm retiring because it's time to do something

differently. One of the guys who retired–you know, when people retire, you remember some things they say. They stay in your mind. But this gave a story, he says sort of like the baby cub that played with the little baby skunk for several months or what have you, and then after a period of time the baby cub told the baby skunk, he says, "I have certainly enjoyed this relationship, but I've had about as much of this fun as I can stand. It's time to move on."

So I guess what I'm saying is that I've enjoyed it and it's been fun, but it's time to move on and do something differently. Plus I am not necessarily a spring chicken. I've got a few years behind me. And I think, also, too, is that one needs to be mentally, physically, and financially ready to go, and, you know, I'm there. I think that it's healthy to have something beyond just your work. You need to have something else going in life for you, and I'm glad to say that there's some things that I'm looking forward to doing. Not that I didn't enjoy the work, but I'm ready to move into a different chapter now, and it's that time.

Storey: Can you tell me what those plans are?

Plans for Retirement

Cook: Yeah. Actually, I have always been fairly active in the community. I have been on several boards of directors. I'm presently doing that now. I work for Habitat for Humanity in a somewhat limited capacity. I'd like to get more involved with that. My alma mater, Southern

University, Baton Rouge, Louisiana, have asked me to come on sort of like a–I won't say the Board of Regency, but they want me to act in an advisory capacity to their curriculum down there after retirement. So I'll be doing some of that then.

I think that we all take something from the community, whether we admit that or not. And I think it's only appropriate that we give back something to the community, and that's what I plan on spending my time doing.

Storey: So you aren't going to ride off into the sunset on a thirty-foot fishing boat, huh?

Cook: Oh, I plan on doing some fishing. [Laughter] It won't be on a thirty-footer. I think that–I hope I can balance that with other activities, and I really do think that one of the advantages of retirement is the freedom that you have. I have always felt that I had a lot of constraints on my time, that I wish I didn't have on my time, and so it is going to be nice now to get rid of some of those constraints and let me place some priorities on my time.

Storey: So you came to Reclamation–am I reading this correctly–in 1962?

Cook: That is correct.

Storey: So you've had thirty-six years of service, more or less.

Cook: Thirty-seven. January 20th of '99, I will have

thirty-seven years of service. I came January 20, 1962. So that pretty much answers your question why I'm leaving, too. [Laughter]

Storey: Yeah. Yeah. What did you like *best* about being at Reclamation? Which period and so on?

What He Liked Best about Working for Reclamation

Cook: Well, Reclamation was my first job out of college. I was *glad* to be able to get work in my field of study. I had colleagues and people who I later met indicated that they had a very difficult time finding employment. That was during the time when it wasn't in vogue to hire a lot of blacks, minorities, or what have you, in jobs, certain engineering jobs. And a lot of them took jobs unrelated to their studies–postal work, other kinds of jobs. So I was glad to be given a job in engineering.

I have talked with friends of mine and have been surprised with some of the difficulty they had within their company and some within Reclamation. I was just wondering myself, why is it that I didn't have to deal with some of the prejudices and discrimination. And then someone pointed out to me, said, "You know, Felix, maybe you dealt with that, but you dealt with it in a different manner than some of the other ones did." And that was sort of revealing to me.

I knew it was *there,* but I just knew that–and I was glad I didn't, I didn't have to

spend all my energies fighting complaints, discriminations, and stuff like that, that I could concentrate on my career. Yeah, maybe I was able to deal with that and find a way to move past that. Maybe that was the thing that got me past that.

Storey: Some of it certainly has to do with personality.

Cook: I am convinced of that, because it was there then a lot more so than now, and it's there today, too. I'd be the last one to say that you wouldn't be able to find prejudice and discrimination in some quarters of the organization. I am *sure* it is there today, too. Hopefully we're making progress.

Storey: I think there's a lot of prejudice against *incompetence*. [Laughter] I notice I have that one myself.

Cook: [Laughter] Well, I wouldn't say that.

Storey: But, you know, I'm not implying anybody in particular. Let's go back to the Service Center.

Cook: Okay.

Storey: What do you think has worked *best* about the reorganized Service Center? And, of course, the next question, the corollary question, is, what has worked least well?

What Has Worked Best and Least Well in the New Technical Service Center

Cook: Um-hmm. I think that the Reclamation Service Center probably brought about better working relationships even between the directors of the Reclamation Service Center. As an example, between–used to be ACER and ACRM and management service. I'm not sure. I think it was an Administrative Service Office then. But there was very little working relationships with those various folks and, in all fairness, a lot of animosity. I know that even in the TSC, there was a lot of animosity about the amount of charges we get from the administrative service side of the house and the services that we get, and some of the frustrations of how we might be able to change that.

But I think that we have indeed been able to address those issues there. I think it depends on the personality of the directors that have done that, and I think that the Reclamation Service Center, as opposed to being three separate directors, as we had before, I think really operates as a team now. It doesn't mean that we don't still have our problems and disagreements, but certainly I think that we're working a lot better, and I'm not sure that the reorganization did that, as the people who was put in those positions. But the bottom line is, it's working a lot better now.

And you say what's not working so well. That's a hard one.

Storey: There isn't one area that I can put my finger on where you go "Ouch," huh? [Laughter]

Cook: No.

Storey: That's good, then.

Issues in Keeping Pace with the Changing Technology on the Computer Side of the House

Cook: No, I just really can't think of–I think all the areas seem to have had improvement in those areas. I just can't think of anything, as a result of the reorganization, it has made things worse. Now, that is not to say we don't still have *issues* we deal with, but I can't think of anything where the reorganization made things any worse, except–and I thought about this one here, Brit–there might be some areas in the computer, the IRM side of the house, where we had people who technology, our training became dated, and due to whatever policy, we kept those people on, we found jobs for those people, and that the technology has moved so quickly that it has been difficult for those people to keep up, and some of them are not keeping up. And I think that that's why we hear about a lot of the poor service we're getting, because I don't think it's a lack of not trying, I think it's just a lack of those folks just not having the skills to handle the moving technology.

So if you would say, that might be one area where we are still suffering from, because we have placed people into positions that I just don't think that they have the skills to fill those positions.

Storey: Now, are the labs part of the TSC now?

Cook: That is correct.

Storey: How are the labs doing, and how has the nature of their work changed, or has it?

How the Laboratories Were Integrated into the New Organization

Cook: It hasn't really changed a lot. What we *did* is that prior to the formation of TSC, we had a Division of Research over there, and we sort of had all the research scientist-type folks all in this one division, and all the design folks in another part of the organization. As a result of that, there is no Division of Research, and a lot of the research people now are scattered throughout the organization. So we have people who traditionally did research located in design groups, or what have you.

And so from all indication, at first I think that the people who was looked upon as being research-type folks resented that because they didn't want to lose that identity, so that sort of gave them a certain amount of status that we are researchers to be put in with the mix of everybody else, but I think as we have evolved and they understand that we must find billable rates to pay these salaries, and one of the things, too, as a side comment is that the people–when we was operating before, the Research Division and what have you, there are people in design knew that they were supporting those people over there. Those people wasn't earning their pay. A lot of them wasn't. They were being subsidized by the others. So that was really not

being received very good by the designers, so to speak, is that these people got all this here supposed to status over there, but they're not paying their own bills, and so they've been supported by other parts of this organization.

So now we don't have that, say that one part of the organization is supporting another part of the organization. I think that's been good. So, yeah, you mentioned the labs. There are so areas not only in the labs, but throughout the organization, soft spots where we don't have a good solid workload, but we try to look for opportunity to rotate, detail, transfer people around to where the work is, and I think we've been fairly successful in doing that.

Storey: Um-hmm. One of the things that I've noticed over the years, these last few years, is that sometimes people talk about the Technical Service Center, sometimes they talk about the Reclamation Service Center. Are they the same thing?

Difference Between the Reclamation Service Center and the Technical Service Center

Cook: Oh, absolutely not. [Laughter]

Storey: Explain the difference, please.

Cook: Well, the TSC is just a director under the RSC. The RSC has really three directors. The RSC has the director of ASC [Administrative Service Center], which is now finance, payroll, that group down there. Well, it has four. I said

three. It's four. It has the director of Human Resource, reports to the RSC. It has director of the Management Service Office, which is Kathy Gordon and that shop there, and then it has the director for TSC, all reports to the director for RSC.

So, the RSC has four directors that reports to them, and the TSC is just one director that reports to the RSC, as well as the other directors, MSO, personnel, and Administrative Service Center.

Storey: So the RSC is the whole organization. That's Neil Stessman.

Neil Stessman

Cook: That's Neil Stessman.

Storey: And he has these four divisions under him.

Cook: Four directors.

Storey: Four directors who are providing services to all of Reclamation?

Cook: That's correct.

Storey: Okay.

Cook: Now, it's interesting that you would ask that, because there are a lot of people in the region and area offices consistently get that confused–RSC, TSC–and I can see how they would do that, get them–seemed like we should have

come up with some different acronym for the organization, because they're too closely sound like that. But, no, TSC is just one of the offices that reports to the RSC. The TSC is, by far, the largest office, though.

Storey: Out of all the four offices.

Cook: That's correct.

Storey: Let's do a little gossiping.

Cook: Yeah, okay.

Storey: Don Glaser was, I guess, acting deputy commissioner, and that made him the head of what is now the RSC and PAO. Then he became the head of–

Don Glaser

Cook: No, not RSC and PAO. RSC and PAO has never been together. The PAO is a commissioner office, and RSC is–

Storey: Yes, but in the old days.

Cook: The old days. Okay.

Storey: When it was ACRM and ACER and so on, he had all of those functions under him. Then we reorganized and he became head of PAO. Then fairly soon, not real soon, but fairly soon, left. Do you have any insights into what was going on there?

Cook: I really don't. I don't know why Don chose to go to BLM [Bureau of Land Management], state director's job after, because I thought that he really had vision for the PAO office, having worked back in Washington, that that was sort of a natural fit for him to take that office on. When he announced that he was going to work for BLM, become the state director for BLM, I was probably surprised as anyone, and was even as much surprised when he left that after a year.

Storey: Yes. I think everybody was a little bit surprised. And now I understand he's in a consulting firm with Joe Hall, the former deputy commissioner, and some other folks whom I don't know.

Cook: That's my understanding. I'm not familiar with the group, but I understand he is working. Don did a lot of–even after Don left the state director's job, he did a lot of consulting. He was part of this here group over here. Brit, I can't think–

Storey: The Western Water Policy Review.

Newlands Project

Cook: Yeah, thank you. He was hired as the Director of that group there, and that lasted for about eight months or ten months, and so Don had that office there, too. Don has been doing some consulting for Reclamation, a special situation. I think that he went out and did some consulting for Roger Patterson, with this Carson City. It just seemed to me it was almost difficult to keep

anybody as area manager of Carson City. By the way, Betsy Rieke is there now, the area manager now. But I understand that office pretty much chewed up, I don't know, very good people, maybe seven or eight different folks within a period of a few years had been to the office there. I think Don did some consulting. I mean, did some work with Roger [Patterson] in terms of what they–the reasons that it was so difficult to keep people out there. I'm not sure that resulted in Betsy Rieke getting it or not, but I know that he did some studies on that.

But I haven't been that in tune with exactly what Don has been doing. Someone just told me the other day that Don–there was another job that the state was advertising, and I think it was similar to the job that Bill McDonald had. I'm not sure what the title is. That Don actually indeed applied for that job, and they haven't made a selection of the job yet, but here's another job that I understand–I don't know if there's justification there. But he said he applied for that job, too.

Storey: Let's see. Did you become SES [Senior Executive Service] when you came back from–let's see. You were deputy regional–

Entering the Senior Executive Service (SES)

Cook: I was in Boise, Idaho, deputy assistant regional director. I don't think they had deputies then. I was assistant regional director for the Pacific Northwest Region.

Storey: And then you came back as Deputy ACER.

Cook: That is correct.

Storey: And were you SES at that point?

Cook: I was SES at that point.

Storey: So I would presume you were attending–let's see. In those days they were the PMC, I think, and the management team meetings.

Cook: No, I was not. Actually, this commissioner reformulated his what we call the policy team now, but in those days, Jim Malila was the only one in the Reclamation Service Center– I shouldn't say that Jim Malila and Margaret Sibley–Margaret Sibley was head of personnel, which reported to Jim Malila then, because the person that reported to RSC. Those was the only two that attended those meetings. Kathy Gordon and I did not attend those meetings then.

Storey: When did you start attending?

Eluid Martinez Created the Commissioner's Policy Team

Cook: The Commissioner Martinez, shortly after that, created what he called the Commissioner's Policy Team, and he expanded the membership on that, which, for the most part, included most of his SES's, but not all of his SES's attended that, but most of his SES's attended the policy team, and that's when we started attending those

meetings.

Storey: Then I can't ask you how that group evolved.

Cook: No. That's right.

Storey: Do you have any insight into why Commissioner Martinez expanded the policy team?

Cook: I think he felt that all the offices had significant contributions to make, and I don't think that *he* felt that just the director of RSC could speak for all these offices here, because, as you recall, it's a vast array of activities we do. And I think he felt he would want to have all the offices at the table, because they had, you know, Kathy gets into policy, finance, a whole lot of things, and I think he wants to talk to Kathy directly, as opposed to going through the RSC to go down to Kathy or to go through the RSC to go to Felix. I think he says, "These people here programs are significant enough, I'd like to be able to talk to them directly, so I want them at the table." And I think that might be why he chose that.

Storey: Well, what else should we be talking about?

The Future of Reclamation

Cook: Well, I think we ought to be talking about the future of the Bureau of Reclamation, where it's going, maybe the kind of leadership that's going to evolve with the Bureau of Reclamation. I think all those are possibly issues that one

should be concerned about.

Storey: Where do you think BR is going?

Cook: I think BR is [at] sort of a crossroad. I think that Dan Beard said that he had fulfilled his mission to make it a preeminent water resource agency. I think a lot of people recognize that was just talk, it didn't mean anything, but I am seeing more and more challenges from outside of Reclamation saying, "What is your mission, Reclamation? Have you indeed met your mission, and should you be looking at doing something differently or operating differently?" And I think there will continue to be challenges of.

This here Family Farm Alliance, I believe that's some group that's meeting back in Washington in January, and I think one of the issues they want to be talking about is the mission of Bureau of Reclamation, are the Bureau of Reclamation doing work in an area they shouldn't be in, and, if so, how can we stop that.

"I think there's going to be challenges in terms of just exactly what is going to be the Bureau's role and mission. . . . that's not clearly defined now. I think that's probably one of the reasons that employees feel as much anxiety as they do now, because that role is not very clearly defined. . . ."

I think there's going to be challenges in terms of just exactly what is going to be the Bureau's role and mission. I think the Bureau

has a role, but I think that's not clearly defined now. I think that's probably one of the reasons that employees feel as much anxiety as they do now, because that role is not very clearly defined.

Storey: In some areas, at least, there's been a lot of tension that instead of a construction agency, we're a water management agency. I have heard many people, not just one, but several people, let's put it that way, say, "I don't know what water management is." How do you react to that kind of thing?

Cook: I can understand why they would say that. I mean, what is water management? Does that mean going out, turning a valve? Scheduling water deliveries? Making sure that the reservoirs have enough flood storage spaces in them? I mean, what does that entail?

"The *problem* is that Reclamation is not building any major civil works structures. What people fail to recognize, that Reclamation has an aging infrastructure, and that infrastructure *in many cases* needs a lot of attention and will continue to need attention. . . ."

Well, I start out by saying, yeah, I can understand why people would have that question. The *problem* is that Reclamation is not building any major civil works structures. What people fail to recognize, that Reclamation has an aging infrastructure, and that infrastructure *in many cases* needs a lot of attention and will continue to need attention.

And so I think that the role will continue to be that Reclamation certainly would need to be able to maintain the capability to do the modifications and to do the upkeep on our facilities. And you don't do that by just being water managers.

You've still got to have–and especially in the scientific area. I mean, here's an area that is–and I think that's what–I'm thinking as I'm going along. I think that's where the emphasis is probably going to be, in the area of the environmental area, you know, the weed control, pest control. We're doing some pretty fancy research over there now in terms of some of the poisonous weeds on farmlands, that is pretty much taking out acres and acres of land that's not in production anymore. How do we avoid that? Pests–the zebra mussel is becoming a significant problem throughout the United States. Now we've got–I'm not sure you've seen these pesty crabs that's coming into–you've heard about the mitten crabs?

Storey: The ones in the Bay Delta.

Cook: Coming into our screens and just clogging our screens up like something crazy. I mean, they haul them away by the truckloads out there. An issue that we never even knew about three or four years ago. I think these are some of the issues that we probably will be called upon to be looked upon to provide guidance in these particular areas. And that's not water management. Those are other activities. So, yes, water management is a pretty limited

definition of what this agency's all about.

Storey: You mentioned what other people we need, leadership we need for the future in Reclamation, that we ought to be talking about that also.

Reclamation Is Increasingly Politicized

Cook: Yeah. I see Reclamation becoming more and more political, politicized, and–

END SIDE 2, TAPE 1. DECEMBER 23, 1998.
BEGIN SIDE 1, TAPE 2. DECEMBER 23, 1998.

Storey: This is Brit Allan Story with Felix Cook on December the 23rd, 1998.

You were saying we're becoming more and more politicized.

Cook: Yeah, and I think that positions that we have filled in Reclamation in the past, which was probably purely career-type positions, are being filled by political-type folks that's coming into those positions. It's not all *bad*, don't get me wrong, but a lot of times those people don't have the interest of the long-term vision of the Reclamation; it's maybe a stepping stone for them to move on to something else. I can see that they're hurting the agency if we get a lot of those people who are just coming through, paying their dues, whatever you speak, and moving on to something else, and losing that continuity in terms of leadership in Reclamation.

Storey: Have you seen a lot of change in your career at Reclamation in this kind of activity?

Cook: Yeah. I think that we've seen some changes certainly back in Washington. It's going to be very interesting to see if some of the regional director jobs that's vacant are going to be filled and the types of folks they're going to be filled with. [I wouldn't be surprised if we get some political types] ~~I'm not surprised that we *won't* get some political types~~ in some of those jobs. That's yet to be seen.

Storey: What other things?

Cook: Oh, Brit, I'm about out of things of any value now.

Storey: I don't know about that. It's just that I don't know what to ask you.

Cook: Sure you do. I think that you still have a lot of committed, a lot of dedicated people in Reclamation, and I think that it would be helpful if the mission could be clearly defined, not only defined, but get Congress to buy into this here, because I heard that even Congress makes us–whenever we said that this is our new mission or this is what we're going to do, some folks in Congress said, "Wait a minute. *We* haven't approved a new mission for you. What do you mean, that this is what you're going to be doing?" So I think as long as that's hanging out there, we need to have some kind of way of getting closure to that, and really being able to articulate, "*This* is what we are all about, and

this is what we do."

I think that we will continue to get to be a smaller agency. I think that the–I should say the resources probably are going to be shifted into maybe the environmental areas, most over the civil works area, but still the need for some of those folks. And I'd like to see the agency continue, because I think there's a role for it.

"One of the things that I don't want to see happen . . . is what has happened to EPA and some of the other Federal agencies, where they have lost so many people that they have lost their *core* capability, and so they contract out everything, but they don't even have a staff capable enough to review what they're getting from a contractor. . . ."

One of the things that I don't want to see happen to this agency is what has happened to EPA and some of the other Federal agencies, where they have lost so many people that they have lost their *core* capability, and so they contract out everything, but they don't even have a staff capable enough to review what they're getting from a contractor. So they basically have a contractor to review a contract to find out is the first contractor doing what they need. When you lose that, you have really lost a critical skill and capabilities I don't think Reclamation should ever lose.

So, yes, I realize that the pressures to contract our work, but I don't think we should ever reach the point that we no longer can even

evaluate what we get from a contractor, that we don't have the capability to do that. If we do that, I think we're in trouble.

Storey: Well, if you have nothing further to add–

Cook: No, I don't.

Storey: Okay. I'd like to ask you again whether you're willing for the information on these tapes and the resulting transcripts to be used by researchers, and in your case, it was one month after you left the agency, I believe.

Cook: I think that's right. Okay.

Storey: So that's going to be about the middle of February.

Cook: I don't have a problem with that.

Storey: Good. Thank you very much.

END SIDE 1, TAPE 2. DECEMBER 23, 1998.
END OF INTERVIEWS.