

EP 870-1-12
July 1983

Engineer Memoirs

**Major General
William E. Potter**



**US Army Corps
of Engineers**
Office of the Chief
of Engineers

EP 870-1-12
. July 1983

ENGINEER MEMOIRS

MAJOR GENERAL WILLIAM E. POTTER, USA, RETIRED

This manuscript is the product of a tape-recorded interview conducted by Dr. Martin Reuss of the Historical Division, Office of the Chief of Engineers, with Major General William E. Potter, USA, Retired, in Orlando, Florida, in February 1981.

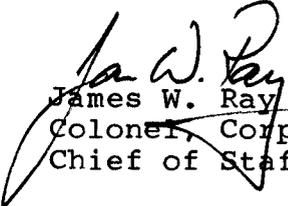


FOREWORD

Few retired officers or civilians of the U.S. Army Corps of Engineers ever set down a summary of their careers with the intention of sharing their acquired knowledge with others. As a result, our organization and the engineering profession have lost valuable information and an important perspective for present and future decision-making. This volume in the Engineer Memoirs Series attempts to correct the situation by preserving material of historical significance that is not available elsewhere.

Major General William E. Potter had a distinguished career, first as an Engineer officer and then, in private life, as a manager in two major construction projects -- the 1965 World's Fair and Disney World. I recommend this interview to thoughtful officers and civilian members of the Engineer family.

FOR THE COMMANDER:


James W. Ray
Colonel, Corps of Engineers
Chief of Staff

THE INTERVIEWER

Dr. Martin Reuss is a historian in the Historical Division, Office of the Chief of Engineers, specializing in twentieth-century water resources development. He holds a Ph.D. from Duke University and is the author of Shaping Environmental Awareness: The United States Army Corps of Engineers Environmental Advisory Board, 1970-1980.

WILLIAM E. POTTER

William E. Potter's career exemplifies how management and engineering skills learned in the Army Corps of Engineers provide the basis for professional success in both military and civilian life. Indeed, Potter's career is not one, but several. His military career began as a young cadet at West Point, from where he graduated in 1928. After an assignment on the Nicaragua survey team, he furthered his education by earning a Bachelor of Science degree in civil engineering at the Massachusetts Institute of Technology. The first assignment in which he had genuine management responsibilities was in the Pittsburgh Engineer District, where he was assigned in 1933. Beginning in the mud and water around Montgomery Dam on the Ohio River, then as a project engineer supervising the construction of Tygart Dam in West Virginia, he learned first-hand how to manage people and material in order to insure the successful completion of a major project.

During World War II, Potter served in a number of responsible administrative posts. He was battalion commander of the 25th Armored Engineer Battalion and Engineer of the Sixth Armored Division. In Europe, he served in a number of important positions in Headquarters, U.S. Army, including Chief of the Plans and Operations Branch, G-4 Section.

After the war, Potter first became Kansas City District Engineer and then the Alaska District Engineer. In 1949, he was assigned to the Office of the Chief of Engineers and for the next two years was in overall charge of the Corps' civil works activities. In July 1952, Potter became Division Engineer of the Missouri River Division. He was in charge of implementing the Corps' military and civil works activities throughout the Missouri basin. One part of his responsibilities involved supervising the construction of several dams on the Missouri as provided for in the Pick-Sloan plan, the basic planning document for water resources development in the Missouri River watershed.

Perhaps the most memorable period of General Potter's career began in June 1956, when he was appointed Governor of the Panama Canal Zone. For four years, Potter oversaw the administration of the Zone as well as the maintenance and operation of the Canal itself. In previous positions, he had developed the ability to work well with both politicians and the general public. This ability was put to the test in the Canal Zone. He was governor

at a time when Panamanians were agitating for increased control of the Canal, and Potter found himself front-page news in both Panama and the United States.

Major General Potter retired from the Army in 1960. At this time he started another career. From 1960 to 1965, he was executive vice-president of the New York World's Fair, working closely with Robert Moses in developing and overseeing fair operations. In 1965, he continued his association with enterprises that both educate and entertain when he joined Walt Disney Productions, eventually becoming senior vice-president of Walt Disney World Company. In that capacity, he was instrumental in establishing Walt Disney World in Orlando, Florida. In 1973, Potter retired again, although as a private consultant he continued to be actively involved in engineering projects around the world. Potter's multi-faceted career illustrates in microcosm the way in which the skills of the military and civilian engineer overlap.

CAREER SUMMARY

September 1928 - September 1929

Company Officer, First Engineers, Fort DuPont, DE

September 1929 - August 1931

Company Officer, Assistant Supply Officer, and Personnel Officer, Nicaragua

August 1931 - April 1932

Officer in Charge (Hydrological Studies), Nicaragua Canal Survey, Nicaragua

June 1932 - June 1933

Student, Massachusetts Institute of Technology, Boston, MA

July 1933 - August 1934

Chief Concrete Technician, Montgomery Dam, United States Engineer Office, Pittsburgh, PA

August 1934 - March 1936

Officer in Charge, Tygart Dam construction, United States Engineer Office, Pittsburgh, PA

March 1936 - July 1936

Officer in Charge, Emsworth Dam construction, United States Engineer Office, Pittsburgh, PA

August 1936 - July 1937

Student Officer, Company Officer's Course, Engineer School, Fort Belvoir, VA

August 1937 - September 1940

Assistant Professor of Military Science and Tactics, Ohio State University, Columbus, OH

September 1940 - April 1941

Supply Officer, 16th Engineer Battalion, Armored

April 1941 - June 1941

Executive Officer, 24th Engineer Battalion, Armored

July 1941 - September 1941

Student Officer, G-3 Course, Command and General Staff College, Fort Leavenworth, KA

October 1941 - April 1942

Executive Officer,
23d Engineer Battalion, Armored

April 1942 - March 1943

Commanding Officer, 25th Engineer Battalion, Armored

March 1943 - September 1943
Commanding Officer, 1138th Engineer Combat Group

November 1943 - December 1943
Assistant G-3, European Theater of Operations;
Mobilization, Chief of Troops Section, Headquarters,
European Theater of Operations

December 1943 - January 1944
Executive Officer, Psychological Warfare Division,
European Theater of Operations and 12th Army Group

February 1944 - July 1945
Assistant G-4, Chief, Planning Branch, Headquarters,
European Theater of Operations

July 1945 - April 1948
District Engineer, Kansas City Engineer District, Kansas
City, MO

April 1948 - April 1949
District Engineer, Alaska Engineer District, Anchorage, AK

April 1949 - February 1951
Acting Assistant Chief of Engineers for Civil Works,
Office, Chief of Engineers, Washington, DC

February 1951 - August 1951
Assistant Chief of Engineers for Special Projects, Office,
Chief of Engineers, Washington, DC

August 1951 - June 1952
Student Officer, National War College, Washington, DC

June 1952 - July 1952
Deputy Commandant for Education, Industrial College of the
Armed Forces

July 1952 - May 1956
Division Engineer, Missouri River Engineer Division,
Omaha, NE

June 1956 - July 1960
Governor of the Canal Zone and President, Panama Canal
Company, Balboa Heights, Canal Zone

30 July 1960
Retirement from the United States Army

1960 - 1965
Executive Vice President, New York World's Fair

1965 - 1973

Vice President, Walt Disney Productions, and Senior Vice President, Walt Disney World, Co.

1973 -

Private Consultant, Fowler Potter Associates

PROMOTION HISTORY

Grade	Temporary	Permanent
Second Lieutenant		9 June 1928
First Lieutenant		1 January 1934
Captain		9 June 1938
Major	31 January 1941	9 June 1945
Lieutenant Colonel	1 February 1942	1 July 1948
Colonel	17 May 1943	15 August 1951
Brigadier General	29 April 1952	11 April 1957
Major General	18 May 1956	1 August 1957

PERSONAL DATA

Date and Place of Birth

17 July 1905, Oshkosh, WI

Parents

William Bradford Potter and Arlie Johnson Potter

Marriage

Ruth T. Potter, Grafton, WV, 21 July 1936

Children

Two daughters, Jo Ann and Susan Ruth

Grandchildren

Mark Potter Hipp, Kent Lee Hipp, Stephen Warder Hipp, Edwin Gunner Schull, Susan Elizabeth (Kendall) Schull, and Amanda Arleigh Schull

EDUCATION

Toledo University, Toledo, OH (1923, one year)

United States Military Academy, West Point, NY (BS, 1928)

Massachusetts Institute of Technology, Boston, MA (BSCE, 1933)

Company Officer's Course, The Engineer School, Fort Belvoir, VA (1937)

Command and General Staff College, Fort Leavenworth, KA, Fourth Course, G-3 (1941)

National War College, Washington, DC, Regular Course (1952)

Command and General Staff College, Fort Leavenworth, KA,

Orientation on Tactical Employment of Atomic Weapons (1954)

CITATIONS AND DECORATIONS

Legion of Merit
Bronze Star Medal (Meritorious Service)
Croix de Guerre with Palm (France)
Distinguished Service Medal (1960)

AWARDS

European-African-Middle East Campaign Medal
American Defense Service Medal
American Campaign Medal
World War II Victory Medal
Second Nicaraguan Campaign Medal
National Defense Service Medal
Overseas Bars (3)

PROFESSIONAL SOCIETIES

American Society of Civil Engineers
Society of American Military Engineers
Military Order of World Wars
Rotary

COMMISSIONS, COMMITTEES, AND DIRECTORSHIPS

Member, Florida Council of 100
Member, Board of Governors, Orlando Regional Medical Center,
1968 - 1982
Member, Board of Greater Orlando Aviation Authority (appointed
by the Governor of Florida), 1980 -
Former Director, Carlisle Corporation; Florida Gas Company;
Trust Company of Florida; Bank of Perrine; Central Florida
Kidney Foundation; and other civic organizations

GUIDE TO CONTENTS

Early Life and West Point Years 1-5

Nicaragua 5-8

Pittsburgh Engineer District 9-14

Engineer School, ROTC Instructor 14-16

Army Assignments in the United States, 1940-1943 16-19

Army Assignments in Europe, 1943-1945 19-42

Kansas City District Engineer 43-47

Alaska District Engineer 47-54

Assistant Chief of Engineers for Civil Works 54-69, 71-74

National War College 58, 69-71

Industrial College of the Armed Forces 74

Missouri River Division Engineer 74-122

Governor, Panama Canal Zone 122-124

Executive Vice President, New York World's Fair 174-187

Senior Vice President, Walt Disney World Company 187-198

Private Consultant, Closing Comments 198-206

Q: General Potter, the first thing I'd like to discuss with you is your family background: your parents, what your father did, your mother, where you were born, and so forth. Why don't we start off talking about your parents? What was your father's background?

A: Well, the family history, I think, is pretty interesting. I had a great-grandfather who spent a lot of money preparing a very thick and large book called, The Potters in America. He started out with discovering seven Potters who'd come from England over here, oh, way back when, about just after the Mayflower. My particular branch stems from a fellow named George, who was born in England and had a son, Abel, and Abel was married in 1669, and he died in 1692. And, of course, the family seems to have been fairly prolific, but it all ended up with my father having been born in Chelsea, Massachusetts. My grandfather, at some time or other, had moved west with his six or seven children. They came west to Oshkosh, Wisconsin, and some time later, my grandfather and, I guess, most of the children, except about three, moved back to Chelsea, as a matter of fact to Everett, Massachusetts.

My father was William Bradford, who was born on October 26, 1873, and died in 1937. He and my mother were married in 1904. Her name was Arlie Bell Johnson. She was the adopted child of a Civil War veteran, who lived in an Old Soldiers' Home up in Menasha, Wisconsin. My father had several jobs. He was not well up in the financial hierarchy by any means. In fact we had a very touchy life. I remember at some time in my early age when he came home all full of joy, and his pay had been increased to \$1.00 a day!

But, he did work for the government during World War I, and as a result of that, we left Oshkosh, moved to Beloit, Wisconsin, for about a year, year-and-a-half, and then to Toledo, Ohio. And, that was just about the time I was starting in high school. I was born July 17, 1905. I had two brothers, one of whom is still alive. And in

Toledo, Ohio, I went to one of the two high schools that then existed in the city by the name of Scott High School. Went there for four years, graduated in 1922 and went to the University of Toledo, which was just then starting, for one year during which time my mother, who was a very active woman--I mean, she wasn't a sit-down housewife--proceeded to get me an appointment to West Point, where I entered in 1923, July first. First time I'd ever been away from home.

Q: Were you eager to go to West Point?

A: Oh, yes. I'd always wanted--like so many kids, we read those books My First Year at West Point, My Second Year at West Point. I forget the author, but it was a series of books, first, second, third, and fourth year at West Point. I became attracted to it, and went to West Point, and had a pretty good record there. During my senior year, my first-class year, I was made a cadet captain and put in charge of a plebe company--new recruits coming in--and one of the new plebes decided he didn't like life at West Point. And as was the custom in those days each fellow who resigned had to sign a piece of paper saying, "I was or was not hazed." He put down that he was hazed, and there was quite an investigation. As a result five of us were suspended from the military academy for a year. I came back in 1927, as a buck private, by the way, and graduated in 1928 and was able to get in the Corps of Engineers.

Q: Let me ask you a few questions about the West Point experience. Did you enjoy the academy?

A: Oh, intensely. Intensely. Even then it was a great education. But of course it was in those days aimed at producing officers for the military. As I understand it that's been--the main purpose is still to produce officers for the military--but the education is much broader. Our education aimed a great deal at military practices in that era plus a great deal of engineering.

Q: What about the discipline at West Point? I guess all the cadets when they first came into West Point had to endure something called "Beast Barracks." Do you recollect anything about that?

- A: Oh, yes. Hazing was a way of life. It was expected. You endured it. I think it was good for you! We had an old thing called running the stairs. Each area of the barracks was four stories high, and when you blinked your eye wrong, why, you were told to run ten tours of the stairs and for awhile at least I held the cadet record for time in running the stairs. Guess that's the only thing that's in my West Point bio, really.
- Q: Do you recall anything about a cadet by the name of Jack Herbert?
- A: Jack Herbert was a very dear friend of mine, yes. He, after I was suspended, and later on, told me that when he was questioned about whether he was hazed or not, he indicated that he tried to obfuscate the answer.
- Q: Wasn't there a story about Herbert's "gut and butt?" That he seemed to be protruding a bit both ways?
- A: Well, he was not a skinny guy.
- Q: And, did you haze him a bit about that?
- A: We tried to correct his posture.
- Q: What West Point classmates did you maintain contacts with during the rest of your life? Were there any particular ones that you remained close to?
- A: Well, unfortunately, of course, I was fairly close, or very close, to my own class, and they gave me permission to wear the 1927 class ring, which I've always done. But, coming back to a class that I'd assisted in hazing, it was a bit of a different way of life. So I do have dear friends of both classes, but not extensively.
- Q: Could you give me a few of the names?
- A: Luke Finley and I have seen each other several times, mostly due to the kind of life I had in the military and afterwards, and not having served a great deal with troops, keeping up these relationships has just not fitted in. But some of

them are very dear, though as I told you before, Mrs. Potter and I are not what you would call visiting people, and most of my friends since the war have been made in civilian life.

Q: I see. Let me ask you a couple of questions which I'm sort of curious about. Well, one at least: your name is William E. Potter, but you evidently rather early took the name Joe, and I'm wondering why.

A: Well, the day I reported into the military academy I was assigned to the 7th Division of barracks, in the old barracks, and each two divisions had a janitor, who was in charge of taking care of the halls. My division of barracks had a rotund, big, mustachioed Yankee, pudgy fellow by the name of Joe Potter, and the first day I was there the first-class men said, "From now on your name is Joe Potter." And, as a result I'd say that most people don't know I have another name, and they'll come to town, like you may have, not knowing my real name, and look in the phone book for Joe Potter, and you would not have found me! It's almost as good as a restricted number.

Q: [laughter] To jump ahead just for a moment, I want to get a couple of personal details out of the way. Could you tell us when you were married, how many children you have, and what their names are?

A: I was married in 1936, and I have two children, two daughters. JoAnn lives here with three of my grandchildren--Mark, Kent, and Stephen. The last two were born in Kenya. Susan lives in Honolulu, Hawaii, with three of my grandchildren--Gunner, Kendall, and Amanda. Neither of the husbands were in the military.

Q: And what's the name of your wife?

A: My wife's name is Ruth, or Ruthie, Ruthie T., and her name was Turner when I married her in Grafton, West Virginia.

Q: Let's go back then to after you got out of West Point, date of graduation, 9 June 1928. You were assigned as a second lieutenant at Fort DuPont, Delaware. What were your responsibilities at Fort DuPont?

A: Well, I guess first, to be disciplined in not being a first-class cadet, but becoming a very low second lieutenant, even of Engineers, which of course was the prideful place to be in those days, was a major change. I was assigned to one of the companies of the 1st Engineers, part of which was up at Monmouth, New Jersey. I think three companies, including the headquarters, were at Fort DuPont, and my first commander was a Captain Matthews. I stayed there just about a year doing normal company duties, you know, drilling and rifle range. We used to spend months on the rifle range in those days. Now they spend days or weeks on the rifle range. But, military training in those days was, as against today, quite simple because the equipment that the Army had in those days, the fighting equipment, consisted of a rifle, a machine gun, and a BAR, and maybe a 37 mm gun. I mean that's about all you had to worry about, and everybody knew how to take a machine gun apart and their rifle apart, an old Springfield, and it was much simpler than it is today with all the highly technical equipment that any organization has, even a company. It was long before the days of computers and advanced technology.

Q: What sort of work were the Engineers doing at Fort DuPont?

A: Just training. I reported there, I think, in September, and the next year we went up to Fort Dix to prepare some of the old mobilization barracks for National Guard occupancy later in the year.

Q: I see. So then you were at Fort Dix for awhile, and do you have any particular memories of this period? Was it just mainly a training period for you, learning the ropes as a young second lieutenant?

A: That was just about it. Learning how to administer a company, inventorying the post exchange, which you did every month in detail, keeping the company books, and drilling ad infinitum and things like that.

Q: I see. So then in September 1929, you went to Nicaragua?

A: That's right.

Q: Now, the reason why you were in Nicaragua, evidently, was to help in plotting a new sea level canal?

A: No. Ever since the--not ever since--but some years after the Panama Canal was finished, the governors of the Canal Zone and others became concerned about its future capacity. And planning way, way ahead, various surveys were made, and studies were made, as to what to do if the Panama Canal ever got to the point, or when it got to the point, that it couldn't take care of ocean traffic. So an act of Congress set up a study to examine the capacity of the Panama Canal, but also since we had a treaty in perpetuity with Nicaragua, saying that we wanted to retain the right to build a canal in Nicaragua, one of the parts of the study was to study again a Nicaraguan canal. It'd been studied, and even a little work had been done on it by a fellow by the name of Menocal, and as a matter of fact, there were several of the old French dredges sunk in the old harbor at Graytown, which had since then sanded up, so that it was no longer a commercial harbor. But we spent about a year-and-a-half on the survey. Let's see, there was a battalion of Engineers--three companies and a headquarters company, and we surveyed, physically surveyed, the route that Menocal had laid out to see if there were any changes, made lots of drillings to see whether the foundations of the locks were adequate, ran a cost estimate, did all the topography of it, and after a couple of years of that work, the battalion returned to the United States. But I was left there for about a year to supervise the collection of hydrologic data. We had rain gauges and evaporation pans, about a dozen of them in parts of Nicaragua, especially down the Rio Grande River, and once a month I would leave Granada and go down the river and collect the data. We paid people down there five dollars to collect the data and read the rain and all that.

Q: Was this canal that you were planning, was it to be a canal that had locks in it?

A: Yes. The idea of a sea-level canal, which had died under President Teddy Roosevelt after a series of

intensive studies, never really arose again until much later, when it was decided as a result of our joint studies that the Panama Canal was the place to expand when, as, and if.

Q: I see. Do you have any particular impressions of your stay in Nicaragua?

A: Well, you've got to put yourself in the position of being almost a brand new second lieutenant in the Army and living in Granada, which was the seat of the Conservative party of the government of Nicaragua. The other party, which ran the country, was in Managua. And, it was, I thought, a wonderful life. I enjoyed every minute of it. I did all sorts of things. Once a week I ran the supply boats from San Carlos down to Graytown with supplies for the Company in that sector. I did the surveying in the Brito area. My commanding officer in that effort was a first lieutenant by the name of Leslie R. Groves, who was a hard taskmaster. And, my dear friend at that time until he died shortly after World War II was Timothy Mulligan, who married a very, very fine Nicaraguan lady by the name of Julia Bernard. They had children, at least one of whom went to the U.S. Military Academy, and subsequently he resigned from the Army and went down to Nicaragua where he lives with his mother and another brother.

Q: You must have gotten to know Lieutenant Colonel Dan I. Sultan.

A: Dan I. Sultan was the commander of the battalion. The next officer under him, second in command, was Charlie Gross, who was a very interesting officer. Those two were the two top officers of the battalion.

Q: What was your impression of Sultan?

A: Very fine, good administrator. Knew what he was doing. 'Course, he got to be, what, a three-star general during the war? Very fond of him, and he and his wife did enough socially so that the organization stayed together. The organization lived in an old monastery in the city of Granada. The chief medical officer was Paul Hawley, who later became Surgeon General and head of the American College of Surgeons and also was Chief

Surgeon of Communications Zone in Europe during the war. Also a darned fine officer. We had darned good people down there. Ken Nichols was in the battalion. That's the only one I remember outstandingly.

Q: Did you get to know any of the important Nicaraguan figures, like General José Moncada? Or Portillo?

A: I met Moncada. General, Colonel Sultan, in those days, used to have those people in for dinner. Our activity down there was very important to the government of Nicaragua, so I met Moncada, who was then, I think, president. And, I also met a colonel by the name of Somoza, who later on in my career came to the Canal Zone, after he'd been--people attempted to assassinate him in Nicaragua, and President Eisenhower offered the family the opportunity of coming to Gorgas Hospital. And, he came there, and died there.

Q: Did you have any particular impression of these gentlemen, Moncada or [Anastasio] Somoza?

A: They were way up and I was way down.

Q: Did you ever get to know the opposition, that is, [Augusto] Sandino, the guerilla leader?

A: No, no. We were always aware he was there, though, and I was very close, of course, to the Marines who were then in occupancy, really an occupancy, in Nicaragua.

Q: Did you, the Engineers, have good relations with the Marines?

A: Oh, yes. Yes. They were our source of supply in Managua.

Q: According to my records, after Nicaragua, you went to MIT and received a BS in civil engineering a year later. Why MIT? There are a lot of officers who went to MIT to pick up an advanced degree in usually some branch of engineering. I'm curious about the relationship between the Army and MIT. Do you know anything about that?

A: Well, in those days it was the practice to send

engineering graduates to a civilian school for one year to round out their education. I think those schools were MIT, Cornell, University of Iowa, and maybe Berkeley, I'm not sure. But since MIT was top of the heap that's where I wanted to go, and that's where I was able to go. There were two of us there. Charlie Keller was the other one. He eventually, when we left the Army after World War II, started his own construction firm in New Orleans and was very successful and eventually became head of AGC, the contractors' organization in the United States.

Q: The Association of General Contractors?

A: Yes. AGC.

Q: Did most engineer officers get degrees in civil engineering?

A: No. Some of them in other branches--in Iowa you always took up hydraulics and soils mechanics--hydraulics, mostly.

Q: I see. Why did you decide to take civil engineering, then?

A: Well, mostly because I wanted to go to MIT.

Q: [laughter] Okay.

A: Which is a tougher school, academically, than West Point.

Q: Yes. So, then, in 1933 you graduated from MIT, and you were assigned to Pittsburgh?

A: Engineer District, yes.

Q: What were your responsibilities at Pittsburgh, and do you recall what branch of the office you were involved with?

A: The District Engineer was Colonel [Wilhelm D.] Styer, then Major Styer, whose family history is very interesting. He had brothers who became admirals in the Navy, as he became general in the Army. The idea in those days, when a new officer came to the District, you didn't stay in the

District office, doing administration and all that. You went out and got your feet dirty. And I was assigned as an engineer officer under a civilian by the name of Don Keeler, who was in charge of the building at Montgomery Locks down at Beaver, Pennsylvania, and I stayed down there quite a long time. I became involved in standing under a steam hammer driving piles, and working in a form, inspecting the placement of concrete, all the dirty foot stuff, so that we would learn what construction really was. One winter I even spent on one of the dams on the Ohio River, lifting gates. We had those wooden gates that you lifted in sections. I forget the name of them now, but it was an across-the-board, intense training in what was construction. Subsequent to that we were starting the Tygart Dam, and I was made engineer officer in charge of the construction of Tygart Dam, where I stayed for about two years. Charlie Wagner was the chief of construction under me. I had a laboratory and a little organization there, supervising the Frederick Snare Corporation, which had the bid for, I think, \$6 million to build that dam. Goodness knows what it'd cost today. But, it was the first concrete dam the Corps built east of the Mississippi, and I stayed there until Lieutenant Fowlkes, Benny Fowlkes, relieved me, and I was sent to Emsworth Dam, a navigation dam at Emsworth, Pennsylvania, which was starting out just like the one at Montgomery. I was in charge of construction of that until I left the District in 1936.

Q: By that time you had been promoted to first lieutenant.

A: Yes.

Q: On January 1, '34, according to records. Did you get involved in the '36 or '37 floods?

A: Yes, sir.

Q: Have you any recollection of your experience with those floods?

A: Especially the '36 flood. Not the '37 flood, but the '36 flood. I was called from, I think I was at Emsworth at the time, and we became a flood team, the whole District did, and all of our efforts were

devoted to trying to secure our projects, but also to assist civilians and to evacuate pigs and chickens and all that sort of thing. I spent two or three nights on Neville Island watching it get washed away by this horrendous flood. It was a great experience to see 15-, 20-ton pieces of ice bob up in the air 15 or 20 feet as they got crushed against things; made you appreciate the power of water. I surely became a devotee of flood control.

Q: Let me turn our attention to the '37 flood.

A: I'd been married and sent to Fort Belvoir to go through the Engineer school, and school started, I think, in September. That flood I believe was either January or February, and the whole group of officers were sent down to the middle Ohio. I was sent to Cincinnati and spent a lot of my time in Louisville going up and down the river, again, rescuing people, pigs, and chickens and making ready for a visit by Mr. [Harry] Hopkins, who was coming down to see the flood. He got as far as Cairo but not to my area. We did stand on the floodwalls at Cairo and again witnessed the power of water.

Q: Let's go back for a moment to when you were a resident engineer at Tygart Dam. Do you recall any particular problems with the Frederick Snare Corporation?

A: Well, you see, this company had bid the whole job, and there was a lot of engineering data available. We had drilled the site out; there were corings; and the makeup of the foundation, which was largely sandstone and shale in lenses, was known. A dam must be founded on very substantial material, and frequently during the course of the construction it was necessary to excavate more of the rock than the original plans called for in order to assure that the foundation was correct. And this, sometimes, caused dissension and arguments, and, of course, I was responsible for saying take it out or leave it. And there were arguments and claims were made, which were settled long after I left the job or the District.

Q: At Tygart you had to work with some fairly interesting people, and I wonder whether you

recollect them. How about Ben Fowlkes?

A: Benny Fowlkes succeeded me there. Very fine officer and a very gentle person.

Q: Charles Wagner?

A: Charlie Wagner. I think he was one of the greatest construction guys I've ever met. So fond of him that when I became assistant chief engineer of Civil Works I discovered to my joy that he was in charge of Chief Joseph Dam out in Washington, and subsequent to that when I came to Disney I got Charlie to come with me to Disney. And he was in charge of construction under me in the Reedy Creek Improvement District at Walt Disney World.

Q: F.E. Barrett?

A: Yes. He and I were very close. He was in my wedding party, as was Charlie. I sort of lost track of him after I left, and I don't know whether he's still alive or not.

Q: Don D. Rait?

A: Yes, I remember him but I can't place him exactly.

Q: Tygart was a PWA-funded dam. Did you have much contact with the PWA people?

A: No. Oh, I assume there were lots of rules and regulations that we had to abide by, you know, putting more people to work than were required, and that sort of stuff.

Q: Okay. Turning just to the District in general, let me throw out a few more names. You already mentioned Bull Styer.

A: Yes.

Q: What is your recollection of him?

A: A tough cookie! He was District Engineer. And he ran that District, and he knew what his job was, and he was very, very strict on maintaining proper use of funds and assuring that the image of the District was top drawer. He was a good District

Engineer, very popular in Pittsburgh.

Q: W.E.R. Covell?

A: Covell followed Styer while I was still there, and he was an entirely different type than Styer. One of the things he said about my marrying my wife--who was from Grafton, West Virginia--he said, "She's a wonderful girl, but it's a hell of a place to go for Christmas." [laughter]

Q: Charles Wellon?

A: A great engineer. Just a great engineer! He was chief of the Engineering Division. Calm, sort of phlegmatic type, knew his stuff, never got upset, a man I was proud to know.

Q: Jack Dodds?

A: Yes, I remember Jack Dodds, and he went in the Army during the war, too, I think. Nice guy. Competent.

Q: You mentioned some projects that you worked on. Let me just, for the record, be sure that there may not have been some other ones. Do you recall Crooked Creek? Were you involved in the Crooked Creek project?

A: No, but during the '36 flood the first lock and dam above Pittsburgh on the Allegheny washed out an abutment. I was put on that job to resurrect that abutment--and it involved placing an awful lot of very heavy rock where the flood had taken out the land where the abutment was sitting, and we had to reestablish the dam's capability to do its job, but that was a navigation dam.

Q: How about the Mahoning and Conemaugh projects?

A: No, I had nothing to do with those.

Q: Did you ever get involved in preparation of any 308 studies or reports in the Pittsburgh District?

A: One I remember most was the canal from Lake Erie to the Ohio River which, I don't know how many times, had been studied, but it had many supporters. It was a favorite project of the people in Ohio to

connect Lake Erie with the Ohio River, but nothing ever happened with it.

Q: But, you did get involved with it?

A: Oh, yes, a little bit.

Q: Okay. Well, I've got two dates, maybe you can help me out here. I have September '36 that you entered Engineer school, and then in your biography I have July '37. I'm not certain which is correct--can you recall when you entered the Engineer school?

A: Well, I was married on the 21st of July 1936, and of course took leave for the honeymoon, and reported into Fort Belvoir in 1936.

Q: Yes, I think that works out right. September '36. Then you graduated in July '37.

A: Yes.

Q: What was the value of your experience at the Engineer school? Did you think you got a worthwhile education?

A: It's a rounding out process--no matter what your work had been in a District, and not too many officers had District experience, I mean in the Corps, at my grade. But, it was a rounding out experience for all of us. I hadn't had any military experience except that time at Fort DuPont, and it brought you up in studies and theory of the responsibilities of, let us say, a major or lieutenant colonel. In other words, you studied the broader aspects of handling battalions and so on and so forth, but also, very deep engineering studies, too. Civil works oriented.

Q: Did you make any acquaintances there with people who you maintained friendships with later on?

A: Oh, yes. Bill Ely was one that was in my class. Oh, if I had the picture I could tell you more of them, but--I was a new bridegroom!

Q: After you graduated from the Engineer school in July of 1937 you became an assistant professor of military science and tactics at Ohio State

University. Were you happy with that assignment?

A: Well, during the time I was there my two children were born. I was a captain at that time, and, incidentally, it's the only time in my military career that I saved money! But, I liked it. It was a great experience. When I went there, I was 31 years old but, it was a great experience having to do with students, I mean young people. And, my first year there I taught the freshman classes and sophomore classes in ROTC. Sometimes those classes would have 200 or 300 people in them, and the courses were stipulated, I mean, the courses that ROTC students took were stipulated, and the students were there taking ROTC for the so many dollars a month they got, really. And, not only that, they had to take it. Nevertheless it was interesting to deal with them, and I enjoyed that first year no end. My second and third years I was put into the junior and senior classes; those who were going for commissions. And that was more fun than anything, because the classes were small, and we were able to become personally involved with the students themselves, and we, of course, had to rate them. They were going for commissions, and they were interested in getting a commission in the Reserves.

That was really very interesting, and I was very fond of it and life in the university, which then had only about 10,000 students. It was not like going to a huge university today, of course. In my last year I was made officer in charge of the military band, and you see, a student in ROTC could get credit if he was in the military band. He didn't have to go out and drill every day and that sort of thing, you know. But, the military band was the football band, and in order for it to receive credit--for the people to get credit for ROTC--there had to be an officer in charge of the band, and I was it, and I used to travel with the band when we went to Minnesota and Lansing, Michigan, and so on and so forth. I enjoyed it.

Q: Do you think more students were joining ROTC at the time because of the clouds of war that were gathering?

A: No. No. As I say, it was required, it was a land grant college, and subsequently during the war I

bumped into two or three of the people who had gotten commissions while I was there instructing. I think the strength of our Army, in case of any dire emergency, is going to be the Reserves, and of course the National Guard, but the Reserves are really the foundation upon which we've got to build. I've heard that it's becoming more popular in the last few years than it was during the time of Vietnam and that might be one thing that will facilitate forming a larger Army when, as, and if it becomes necessary.

Q: In September 1940 you were appointed Executive Officer of the 16th Engineer Battalion at Fort Knox, Kentucky, and the following April '41, you became the Executive Officer of the 22d Armored Engineer Battalion at Camp Pine, New York. I'm wondering if you can tell us about your experiences during this time?

A: Well, one thing was a precursor to that. All of a sudden the clouds of war started to show up a little bit, and the 5th Corps, which was stationed, headquartered, in Columbus, Ohio, was sent on maneuvers in western Wisconsin. And I was ordered, with several other officers, not involved with the ROTC and Ohio State, to go out to LaCrosse, Wisconsin, and make arrangements to open up real estate for those maneuvers, and I spent about, oh, I guess two months doing that before I came back and found myself ordered to Fort Knox. I was anxious to get in the Armored Force because it involved a brand new concept of engineering, and I went there and the then commander of, I guess it was the 24th Engineers, was Bruce Clarke. And Bruce Clarke was, as you well know, one of our outstanding officers. He not only was an Engineer, but he became a great tactical leader during World War II. During that time all the planning that had been done by myself and others, that without a war we would eventually retire as lieutenant colonels, changed rapidly because I went from captain to major very rapidly there at Fort Knox.

I was there about a year when the 4th Armored Division was formed, and it was sent up to Camp Pine, which is now called Fort Drum, I believe, and Bruce Clarke went up there as commander of the battalion, and myself and several other officers,

including one I was very fond of by the name of Ham Morris. We finished the building of the camp in the first place, and then went into training of that Engineer outfit. During the course of that time, Bruce Clarke was made chief of staff of the 4th Armored Division, and I forget who took over as commanding officer of the battalion. We lived in Watertown, New York. Mrs. Potter and I rented a house in Watertown, and with two children, of course. Subsequently the 5th Armored Division was formed, again back at Fort Knox, so we rattled back to Fort Knox where I was assistant battalion commander--deputy battalion commander--and Reggie Dean, was battalion commander.

Q: Did you run into General Clarke later on?

A: After the Camp Pine experience, no. Oh, I've seen him since, but professionally, no, we never ran into each other again. He went his way, up through command, whereas until I went to Europe I was totally involved in training Engineer outfits. I went from Fort Knox to Camp Chaffee as commander of the 25th Armored Engineer Battalion.

Q: You were at Camp Pine until February '42 and that month, according to your official biography, you were both commander of the 25th Armored Battalion and Engineer of the 6th Armored Division at Camp Chaffee, Arkansas.

A: Yes. That division was made up of raw draftees. First place, we had to finish the camp. When we got down there the streets were all mud and the barracks weren't finished and contractors were still at work, but we formed that division. I think General [William H.] Morris was the commanding general, and by being commander of the Engineer battalion, I was automatically Engineer of the 6th Armored Division. During that time the reconnaissance battalion was commanded by Colonel James Quill, not an Engineer. He'd been a cavalryman, I think. And he and I, and our wives, have maintained close relationships ever since. The training went successfully, and I innovated a few things that seemed to be good. I became a lieutenant colonel at that time, and then we were ordered to Camp Cooke, California.

- Q: Yes. Now, I wanted to get a clarification on that. Who exactly was ordered to Camp Cooke at that time? Was it the entire battalion?
- A: No, the division. Not Camp Cooke. We were ordered to the desert. We went to the desert and did our desert training.
- Q: Which desert was this?
- A: The Mojave. We were there, oh, several months living out in the desert and had a lot of fun. The reason for it of course was that at that time the Allies were fighting [Erwin] Rommel in the African desert, but it was an established desert training center, and we lived there for six months, something like that. My wife lived in Palm Springs.
- Q: While you were undergoing this desert training did you, as an Engineer, did you experiment with innovative kinds of desert supply operations or pipeline operations, anything like that? Was there anything like that going on?
- A: Always. From time to time at midnight, I'd sound the alert for my battalion, and we'd go tearing off into the boondocks and go somewhere or other and set up a defense, peripheral defenses, and get ready for attack, go out in separate columns, testing out our radios and communications and that sort of thing. It was quite an experience and great training and innovative training because the book hadn't been written. We got a great deal of information from the African war, including booby traps and how the desert was used and how you used the desert. In an armored outfit, of course, the Engineers were always called combat Engineers, but we were heavily armed in our Engineer outfit. And it was my duty, of course, to prepare the roads and the logistics for the fighting unit, other fighting units, the infantry and the armored brigades, to do their thing. We had maneuvers almost all the time.
- Q: As I recall it was the quartermasters, though, the Quartermaster Corps, that had the responsibility for water transportation and oil?
- A: We had the job of providing the water. We had big pumps on the canals. You know, the big irrigation

canals that cross the desert going to Los Angeles. We were able to take water out of those, and we did provide the pump stations and the loading stations and maybe the Quartermaster Corps transported the water, but the Engineers' job is to provide water for the fighting forces.

Q: So then, from the desert, did you go to Camp Cooke?

A: At Camp Cooke it was the 6th Armored Division. Then they formed an armored corps, the 2d Armored Corps. And a part of the Engineer effort in an armored corps was an Engineer group, which is made up of three battalions and a bridge company, and I was placed in charge of getting raw recruits, again, and training this Engineer group. I had three battalions and the Engineer company and a headquarters company, and we moved to Camp Cooke, which, again, was a brand new camp, and we had to do all that business of getting ready for occupancy.

Q: In April 1943 you became commander of the 1138th Engineer Combat Group at Camp Cooke.

A: That's it, 1138th. Again, as for several years, my main job was training new recruits or new draftees and officers. When I formed the group I had one regular Army officer. All the rest were ROTC officers who were sent in, and they had to learn their jobs, too, with court martial authority and that sort of thing. A broad experience for them and also for me. But, in those days, and in that age group, there was an awful lot of ambition and dedication, and it was beautifully done. You've got to remember that when we started preparing for World War II there were only 25,000 Regular Army officers including medics. And those 25,000 were the core that was to take the reserve officers, and people who graduated from officer training schools, and turn them into some sort of an Army. That's why it was experience. It was teaching the whole darn time.

Q: Well, I guess your teaching days ended about November '43 when you were transferred to Headquarters, European theater, and your first duty there was as chief of the Troops Section. Can you tell us something about those days? What your

duties were, how long you were in this position, and so forth.

A: Well, General [Jacob L.] Devers, as you know, was head of the Armored Force of the United States, and he was going over to participate in or to see the invasion of Italy from Sicily, and I said, "They surely must need an engineer officer over there somewhere." And sure enough, I got orders to go to Europe. I had been sent back from Camp Cooke to go back to Fort Belvoir to be put through a course of anti-tank defense, and while there I got orders to go to Europe, so I had to rush back to California, gather my family, drive across the country, drop them in Grafton--I was going to war right away--and I went to Washington and waited 30 days to get over there! And my assignment was going to be chief of staff of a group of amphibious brigades, the two brigades that invaded Utah and Omaha beaches. They were organized with a Superior Command. I was to be chief of staff of that Superior Command. But, when I went through London, General [Daniel] Noce, who was G-4, said he had a nice oak desk for me in headquarters, and that's the last I saw of fighting in World War II. And the main job I had at that time was the placement of troops in England that were being sent from the United States.

Q: What was your impression of General Noce?

A: Oh, what a guy! He knew his job. He was a good G-4. At that time, you see, General Devers was in command in England.

Q: But you and Noce got along well, I take it?

A: Oh, yes. Yes, we'd known each other before. One day he came to me and he said, "Joe, upstairs in this other building there's a bunch of people from the movies and the theatre and that sort of background, trying to put together a psychological warfare organization." He said, "There's nobody up there with any military experience. You go up there and you get 'em organized and develop the tables of organization and the tables of equipment, and then you're going back to the states to organize two Psychological Warfare battalions." So it took two or three days, and they finally saw that the military had to have something to do with

their activities. It was fascinating because what we were after were people who spoke languages so that we could drop 'em in Czechoslovakia and other countries and also in the battlefield. Another activity that they were supposed to do had to do with the interviewing of prisoners and the taping of their questions and answers. It was a very broad information-gathering and influence-peddling organization, so General Devers gave me a letter. Unfortunately I don't have it anymore because I turned it over to G-4 of the Army when I got back there, that said, "Colonel Potter is back here on the top priority mission of the theater. Give him all the help he needs. Et cetera."

Q: This is when you became executive of the propaganda branch--is that what it was called?

A: Yeah, but that was under Devers' organization, you see, and my superior was a brigadier general who was, I think, a brother-in-law of General [George C.] Marshall, Brigadier General Tristram Tupper. Nice guy. Anyhow, I went back and this was, I think, in November, and flew back via Marrakesh and the west coast of Africa and across to Brazil and up that way. Quite an experience also. And went in to see the Army G-4 and I said, "Here's what we want," and handed him General Devers' letter. The material and equipment we wanted was, in some cases, super secret, and he said, "How the hell did you find out about this?" And I said, "I don't even know what it is, but here's the name of it, and we want 16 of 'em.'" This battalion will have 16 of them, and other things that we needed were not yet out for distribution. There was one piece of equipment that you put a message on it that might be a page long, and it came out more or less as a dot. It was extremely rapid, and all that came out was a dot, and you had to have another machine that made that dot into the long message again. And, while they existed they were always kept in safes and the safes were in short supply. But, anyhow, the base for forming such an organization was the OSS. [Office of Strategic Services], and they were the place where I was supposed to get these multilingual people, and they took me under their wing right away. General [William J.] Donovan was in charge. I never met him, by the way. The other organization that was supposed to give me a lot of help was OWI

[Office of War Information], and the playwright Robert Sherwood was in charge of OWI. I went to see him, and when he unfolded in his chair he almost hit the ceiling. He was a very tall, thin fellow. And I got no help from them whatsoever. None at all. They had nobody to spare, so I continued to work very closely with the OSS, and we got our battalions organized. We got them sent for training, we got the equipment, and I returned to Europe.

In forming the psychological warfare battalions and getting their equipment, I received enormous help, of course, from the War Department, which furnished the equipment, some of which was highly classified. I've explained what their job was going to be, and we got very competent people, multilingual where it was necessary, and people attuned to that kind of operation. And you can see, I think, that people from the creative industry of our country were the kind of people who could project their thoughts, who were not stultified by regulations and all that sort of thing. They were the proper people to be able to visualize what psychological warfare was. And I received a great deal of help. Almost all the help I got was from OSS, and I made some dear friends in that organization. I didn't receive much help from OWI, and as a result of that, and I believe because OWI felt they were going to lose their grip on this thing, I was relieved of that duty and sent back to England. During that time General Devers had left to handle the African invasion, and General [Dwight D.] Eisenhower had moved in. There was a brand new chief of psychological warfare, and he and I did not get along. We didn't get along for a half hour and that's all it took.

Q: Do you recall his name?

A: No, I don't. However, I didn't want to stay on anymore, except for one thing, and that is the OSS guys in my battalion sort of expected that I was the father figure, and when they got to Glasgow and I wasn't there, being nonmilitary people in the first place, they sent a delegation down to London to find out where the hell I was and why wasn't I up there meeting them. Among the things that they later accomplished was that they took over Radio

Luxembourg when they got there, and they used it as a great propaganda machine. One of the really top-drawer guys in the organization, Pat Dolan, with no military background at all, was the fellow who talked the Germans into surrendering at Cherbourg, using big bullhorns. He just talked them into surrendering! There's an article in one Saturday Evening Post that describes his activities in energizing that surrender of the German troops at Cherbourg. It was very interesting to me, later on, that as we gradually overran parts of France it became necessary to take care of the civilian population. And there was an inkling at me one time whether or not I would like to head up the OWI organization that was sort of supervising the occupied areas of France that we'd freed from the Germans. I decided that I didn't want that kind of job and was able to argue General [James A.] Stratton into not releasing me. When I disengaged from psychological warfare, I was assigned to the G-4 section under General Stratton.

Q: You were the chief of the Planning Branch of the G-4 section?

A: Yes.

Q: Could you tell us what your duties were then?

A: Well, the reason I was assigned there was that Brigadier General [William] Whipple, or then Colonel Whipple, who had filled that job, was elevated to the next higher headquarters, to General Eisenhower's headquarters, where he had the same sort of job for the multinational activity. But the job of the Planning Division was to prepare the logistics plan for the invasion, and that involved moving troops, supplying troops, making sure that their movements were coordinated, working with the commanders of the divisions and corps and armies, and seeing that everything worked in moving the troops down to the coast, getting them on the ships and over to France. And it was organized in sort of a sequential activity. They were moved first to a martialing area, an area where they were supposed to be fitted out in a certain way, and then to another advanced area where they received further equipment and did other things. For instance, one of the last things they did was to

waterproof vehicles so that they could go off landing craft and land in a few feet of water and still be an active vehicle--that was a very important activity.

One of our problems, of course, was the language barrier, and that may sound peculiar, working with the British. The British had prepared all the manuals, and one of them that was hard to understand, though it was very thin. It was POMSSV--Preparation for Overseas Movement, Short Sea Voyage, the short sea voyage being from England to France. But, it described in detail what should be done. But as little examples of the problems, a truck is a lorry in England, gasoline is petrol, the hood of a car is a bonnet, I think, or is that the trunk, I don't know, one or the other. So, I got a little perturbed because we were getting so many questions, so I prepared a long chart, about a yard long, that on the side had the individual, the squad, the platoon, the company, the battalion, the brigade, the division, and the corps, and up here, time frames. I prepared these things, which explain in a chart form how logistically we were going to invade France. I printed 10,000 of 'em, I guess. I didn't keep a copy, unfortunately. I wish I had.

One day I even went up to see General [George S.] Patton with my stack of forms to pass out to his people, and had breakfast with him. I'd barely known him as a colonel at Fort Myer when I was at Fort Belvoir. During our days at Camp Chaffee my wife and I got to know his daughters very well because we were there together, and this is really the first time I ever sat down with him, at breakfast, or intimately. And I described my form and what it was used for, and how they should be passed out to the company commanders and platoon commanders and battalion commanders and so on. And he was interested and listened very politely, but during the course of it, I was sitting at this end of the table and he was up at the head of the table and there were seven or eight other people there. He looked up and in his high, squeaky voice, said, "You son of a bitch! Get down from that table, and get outta here!" His dog had gotten up. [laughter] Scared me out of my--I didn't know if I was the son of the bitch or not, you see! In London, I had a staff and planning department and we prepared

all the logistical plans for the invasion. We'd developed what we'd do after we got into France, how we'd establish our big depots of the Ordnance, the Quartermaster and the rest of them, and hospitals and so on, and I visited the places where the troops were behind barbed wire ready to load on the ships, I had general supervision under General Stratton and General [John C.H.] Lee, of course, of the operation of the mechanism for getting over there.

Q: Let me ask you, did you feel competent as an engineer officer, planning all these logistics exercises and operations? Did you feel that you had come adequately prepared to plan what must've been an enormously complicated movement of troops and equipment?

A: Yes, but then, you come right back to the exercise of command by the commanders of the troops. They knew what they had to do, they understood thoroughly that they had to be well supplied. We had top-drawer officers in charge of the Quartermaster and Ordnance departments and they worked with their opposites in the tactical units. The Ordnance officer, for instance, worked with his Corps Ordnance officers and they jointly developed what was needed and the level of supply and that sort of thing. And it was up to the planning department then to prepare for the getting, the storage, the movement of massive amounts of supplies and equipment. It was enormously complex, and was only possible because you had planning sections in all of the services, but they had to be fitted together, so that the railroad wasn't always full of Ordnance and then always full of Quartermaster. It had to be a supply system that got to the users all of the supplies of various categories that they needed.

Q: Did you have officers from the various technical services in your section?

A: I had quite a small section, and we were all general staff--most of them civilians. I mean, ex-civilians. One of the interesting things that we had to plan and supervise was a British-American operation that was to take place when the Germans started to pull out of Norway. Its name was something like "Starlight," and we had an organization

going up in Scotland that was supposed to move over there when and if the Germans pulled out. The system did work, and we had an enormous amount of help, of course, from the British who had had the same types of problems because they'd been fighting the war in France before they pulled back from France. They knew their business.

Q: After you were chief of the Planning Branch, G-4, you became chief of the Plans and Operations Branch, G-4. Is that just a change in name, or was it more than that?

A: No, when we got over to France Jimmy Stratton said, "Hell, you prepared the plans, now it's your responsibility to see that they work."

Q: I see.

A: And they didn't in many cases.

Q: We're going to get to that in a moment. I'd like to ask you a few questions that really go back to when the United States was just setting up logistics operations in the European theater, and I'd like to get your reactions to the questions. Was there a problem emanating from the War Department reorganization of March 1942, which placed the chiefs of services, the Adjutant General, and the special staffs sections having to do with the entire Army in the SOS? Do you recall anything about that?

A: No, really, I don't. I probably was cognizant of it at the time, but that's the way it was set up. If you read those green volumes, Logistical Support of the Armies, you'll see that there was a considerable amount of in-fighting. I mean, there was a problem in melding the various organizations that had existed before Eisenhower and bringing them into a joint command. I delved into that quite a bit, because while I was peripheral, it involved us because orders would come out changing reporting channels and methods of operation. And finally, it ended up, of course, with General Lee insisting and getting complete authority for the logistical operations, the SOS operations.

Q: Do you recall any problems with the establishment

of the SOS, the Services of Supply, in the European theater ahead of the bulk of the field and air forces and before the designation of the theater commander?

A: No. We knew our job, we knew what was expected of us. Whatever machinations took place at higher headquarters did not impinge upon the planning activity too much.

Q: The question about General Lee, and I want to talk about General Lee a bit more later on, but do you recall whether General Lee was particularly desirous of remaining free from either the command of [Bernard L.] Montgomery or [Omar N.] Bradley, and could you explain, to what extent you may know, of Lee's relationship to General Brehon Somervell?

A: The main thing that stuck in my mind is that General Lee's title was deputy theater commander, among other things, and I think that was resented by some of the tactical people, but he had the prime responsibility for logistical support and he did occupy a very important position as deputy theater commander. I really don't know whether there was an exercise of that authority except as a staff officer. He was an avid traveller. He visited all kinds of units and if he saw somebody without their name tags he was liable to be busted on the spot. Had his own train and traveled with a complete staff.

Q: At the end of August 1944, you had a meeting with Generals Bradley, Lee, and [Robert W.] Crawford and Colonel Whipple to discuss moving four more divisions to Europe, and evidently the result of that meeting was that the group felt that there were some logistical obstacles to moving four divisions to Europe.

A: You must remember that in moving people from England over, it was done by ship, and ships really don't know any nationality. They were under one movement control organization and were allocated for certain purposes. I didn't get into that.

Q: Okay, and I understand you may not have any recollection of this, but I'd like to ask it of

you, and if you do, fine. Talking about SHAEF now, Supreme Headquarters Allied Expeditionary Force. On 1 September it assumed operational control of all forces, this is 1 September '44, bringing the 12th Army Group under its direct control and placing the Communications Zone directly under the command of General Eisenhower's theater commander. The Communications Zone thereby attained the position at least coordinate with the 12th Army Group. Unfortunately, according to one author, the effect of this development was to perpetuate the friction between the Communications Zone and the field forces, which had developed over General Lee's position in the United Kingdom, for Lee's headquarters continued to exercise some of the independence and authority of a theater headquarters by virtue of the presence there of a theater's general and special staff divisions. In short, do you have any recollection of examples of this friction between Lee's headquarters and the operating commanders or anything of that sort?

A: No, I know that the feeling existed, but I don't have any examples. It was above my level of interest even.

Q: Okay. Well, let's go back to D-Day and the days just after D-Day. What's your recollection of the logistical problems after D-Day? How severe were they? What were the major logistical problems that you remember coming across?

A: I don't think that there were any logistical problems, as far as the first few or several days after the invasion. I mean that was intimate soldier-to-soldier contact, and I really don't remember any problems as far as that time was concerned, but problems were developing, and as you know General Bradley's army was the invasion army.

Q: It was the 12th Army.

A: Eddie [Edward] Plank--General Plank--was made advance section commander of Com Z, and his relationship to the 12th Army Group was as supply officer for the 12th Army Group. He did relate to us intimately and regularly, but the 12th Army Group felt that he was their supply officer, he was responsible for the procurement, the storage, and

the issuance. We delivered supplies to France. They came under his control, and they were stored by him in various places beyond the beach areas. And as you remember, the beach areas remained tactically important for a long time because they were not able to get through the hedgerows, and they didn't advance as fast as they could, and they had terrific fighting at St. Lo and other places, Avranches and so on--this did take a long time.

Our problem, early in the game, became unloading. Ships were manifested. What was on the ships was known. And this caused a situation since the 12th Army Group insisted on their control. Naturally, they wanted their supplies, and this developed into a habit as time passed. Frequently, and even later on, the manifest being available and the ship number being available and a certain supply that they wanted right away being known, they were unloaded, and the rest of that ship would be unloaded pro forma later on. But sometimes some of the stuff was never unloaded for weeks and more. And, I'm not saying that enormous quantities--a million tons were eventually unloaded, something like that, my figure may be way off--but, they were stored in certain areas beyond the beaches, but still under the control of 12th Army Group, and Com Z was never able to get in there and establish systems, Ordnance, Signal Corps, etc.

As a result of that, when the rear boundary was established we found ourselves in control of enormous amounts of supplies without any inventory, without any location plans; nothing had been given to us. Now when I say nothing, that may be a slight exaggeration. It may have been that some of the services did relate to the services in 12th Army Group and there was some knowledge, but it was a plague to us from then on out, and as a result of that we became victims of the same policy that had been established. If the Army wanted six-inch shells, and our manifest showed that a certain ship had six-inch shells, we would unload those six-inch shells and to hell with the remainder of the cargo of that ship! And as a result of that we found ourselves, at one time, with over 200 ships anchored out there, not unloaded and needed back in the United States to bring other supplies over. And there were very intense conversations with visitors from the United States on this. We were plagued all during the time I was there with the

inability to devote the time to find out what these supplies were on the beach. It would be interesting for you to talk to General Plank about this. His opinion may be different.

Q: So, there was no attempt to load ships with certain classes of supplies, say, priority supplies, ammunition, you know, and then unloading these ships first, the manifest would be of all kinds of supplies?

A: Whatever was loaded, and I don't know anything about how things were loaded, but there may have been unit supplies. By that I mean units of certain things that made a complete package for the supply of a division for one day or something like that. I remember one time we were highly pressured because there were not enough eight-inch shells in France. A need for them suddenly arose, and we had to go back to the U.S. and get a shipload of eight-inch shells to come over, which, I think, went into Le Havre and was sunk and was unloaded by divers to lighters rather than at just to a dock.

Q: Did SHAEF G-4 help or hinder your operations? And, did they interfere too much with operations in general?

A: No. You see, SHAEF, I think it was General Crawford, wasn't it, he had to deal both with the British and with us. He had a broader spectrum than we had. No. General Whipple was up there, and he knew our organization and I would say that more often than not we received help, and he was sufficiently knowledgeable of how we worked, because he'd been there before, that he didn't come to us in a critical way. He came to us in a way, "How can we change what we've done in the past, et cetera?"

Q: Were there any supplies that became particularly acute in terms of shortage?

A: Well, I told you about the eight-inch shells. POL pipe, pumps, and equipment. We even loaded a ship with nothing but POL pipeline out of England, and I think it came to Antwerp where we had another problem later.

Q: Did the failure to take Antwerp earlier than what

we did affect logistics operations to any great extent?

A: We were always short in port capacity. It took us a long time to clear the port of Cherbourg. The Germans sunk ship on ship on top of ship, so when you'd removed one you had one underneath it. It took a long time to make those quays available for unloading, and I personally went up there from Paris, and with the plans for the improvement of the port of Cherbourg and signed them there with a colonel who was in command of the operation of that port. And I think I made a report at one time that they weren't unloading the priority things before the nonessential things, you know.

Q: Was that Colonel Sibley, by any chance?

A: No. An old-time colonel of the Corps.

Q: Where were you physically located while working on the Com Z G-4?

A: Oh, I fought a very hard war. I was in the Georges Cinq Hotel in Paris.

Q: The criticism's been made that the Com Z moved to Paris too quickly, that in some way the move to Paris hindered communications with operating elements. Do you recall anything about that dispute?

A: Well, let me broad brush the picture. We were strangled by the inability of the armies to break loose from the beachhead. During that time even before the rear boundary was established, we were operating with the situation that existed at Omaha and Utah, plus what we were able to get out of Cherbourg, and that involved improving the railroads, and French railroads aren't the same as American railroads. So we were strangled by port capacity and were always looking for capabilities to expand that capacity, and oh, I was sent to assess St. Malo. We thought we could get St. Malo, and we heard that the Germans were about to be driven out. I went barrelling out from--at that time we had a temporary headquarters behind the beach, an encampment, all Com Z was over there. I barrelled down past Avranches and across and up to

St. Malo and found the Germans were not in any way willing to give that port up, see? And it wasn't too good a port anyhow. We even at one time thought of using Brest, but the transportation problem there would've been terrific and it took quite awhile to free Brest. So, basically we had to make Cherbourg do all it could and get those railroads fixed up as well as we could and work off of the beaches, and then all of a sudden the armies broke loose and ran, and there we were not running. Our plan for the logistics support of the armies in Europe involved the establishment of huge supply depots in the Chartres area. They were all laid on the map, this was assigned to Ordnance, this to Signal Corps, and others to others. This plan never came into being because the armies advanced so fast that we were always running like the dickens to get supplies, current supplies, to them with our transportation never able to build up these depots that we had planned.

So, when they kept that advance up two things happened. Number one was the formation of Red-ball. I went with General Stratton to visit with Bradley and the situation was explained to us, and how much faster he was going, and what could we do about seeing that he was supplied with essentials. Red Ball Express was established at that meeting. And it involved taking over all the truck transportation that could be gathered and forming truck trains. We even took the trucks away from organizations in England, and as soon as an organization landed in France, it found itself without trucks. That was a great effort, and it kept the armies going quite awhile.

In the meantime, of course, the POL pipeline was being built. It ended south of Paris, but it was not able then to deliver gasoline beyond that point. So we had the problem of delivering gasoline to the forward areas. Gasoline became in short supply! At times we even delivered gasoline by air, but one of the problems was that any time we sent a gasoline truck train up to the armies they kept the truck train to move with them! And when they finished with the jerry cans they threw 'em in the countryside, and we put on a big drive with the civilian population of France once to collect jerry cans. It produced hundreds and

hundreds and thousands of jerry cans that we could start to use all over again. There has been criticism of the Com Z effort in supplying the advancing armies, but it comes right down to this, that the needs were specific, like gasoline and .37 mm shells, or whatever, and those were the things they needed besides food. The amenities had to go by the board as fast as they were moving, and the lines became so long and the trucks so worn out that it finally stalled a bit, and of course, we got a lot of criticism about that. Finally came to the point that the decision was made by General Eisenhower that 75 percent of the supplies would go to the 1st Army, the army that was contiguous to Montgomery. Patton's army would only get 25 percent of the supplies, and that order went out, and the railroad cars and trucks were so manifested. But, General Patton had a very, very smart G-4, and he'd come back to places like Reims with his gang, and they'd change the directions on the cars! And, Com Z was just beat over the head because we weren't following the theater commander's orders!

Q: Do you recall the name of that G-4? Patton's G-4?

A: Muller. I think it was [Walter J.] Muller, General Muller. A top-drawer officer.

Q: Well, the criticism has also been made that the Com Z headquarters itself was too large in terms of manpower, and one writer noted that the Headquarters Com Z eventually took up 167 hotels in Paris before it was all over.

A: Well, let me go back one thing. When the Army advanced fast, our way of life had to provide for close coordination with SHAEF, and we had to move fast, too, and General Lee, I'm sure, did not want to move several times. It would've been fruitless for us to move to Chartres, for instance, because by the time we got established and the communications in, they'd have been to the Rhine. So, the decision was made, after, I think, long discussion. The decision was made to move there for several reasons. One was that the Germans had supply depots in the Paris area. I was with a very, very advanced unit. I arrived in Paris, I think, within a day or so after the Germans got out, with a broad staff of Ordnance, Quartermaster,

and so on, and the purpose of my going along was to see that one of those didn't take what he thought was the best facility, but took the one that was assigned to him. And Paris was a railroad hub. Railroads came in and went around Paris and then on. It was the control center of the railroads of France. For transportation this was vital. And whether our staff was too large or not, we were the supply organization. We had the job of receiving requisitions; getting them to the states after they were assembled; getting the supplies ordered, manufactured, and back to us. And in order to do that the services had to relate to the armies and to the divisions. So each one of the services had a lot of officers in Paris. If they hadn't been there they'd have been somewhere else, but I don't think the armies ever wanted to, nor were they capable of, being a supply service in addition to their fighting job. Their job was to win the war. Ours was to help them do it.

Q: Let me throw out a few names at you again, and see how many of these you might recall.

A: All right.

Q: You've already mentioned one, Brigadier General James A. Stratton, theater G-4?

A: Yes.

Q: Have any impressions of him?

A: Dedicated, tough, knew his job. I thought he was a damn good, great G-4, I really do. The problems that I described in the past eventually led to his downfall but he was the victim of a situation he inherited from the early days of the invasion.

Q: Lieutenant General George S. Patton, commanding general of the 3d Army?

A: Well, I've told you all I know about him.

Q: Colonel William Whipple?

A: Bill Whipple and I have always been friends. We were at the World's Fair together, and he's as bright a guy as you'll ever want to meet. He's a

Rhodes scholar. He's bright as the dickens and way beyond me in brain brilliance, if you want to say it that way.

Q: A person I guess you may have met later on, Major General Lucius Clay?

A: Lucius Clay was my mathematics instructor at the military academy, and we maintained a relationship, oh, I guess all during our careers. There was one of the brightest, most pragmatic men I've ever known in my life. You'd start to explain the problem, halfway through he'd give you a solution.

Q: Lieutenant General John C.H. Lee?

A: Yes, I knew him quite well. Very religious man. He believed in the regulations. He was that kind of person.

Q: He had a lot of enemies, didn't he?

A: Oh, yes, mostly because in many cases unfairly he was blamed for not getting the supplies up there, but also he insisted on his position, and Roy Lord, his chief of staff, assisted in that insistence.

Q: Would you go so far as to say Lee was a bit eccentric?

A: Oh, he was quite a purist. He didn't believe in immorality at all. He liked military discipline. The only eccentricity that I ever heard about was that one of the soldiers who was along with him all the time, and had been with him a long time, was a chiropractor, and he wanted General Hawley to accredit him medically, and Hawley couldn't do it. Caused a little argument.

Q: Major General Royal Lord? You just mentioned him.

A: Oh, I know him very well. Yes. Very peculiar guy, ambitious, ambitious as hell--a politician. You see his background before the war, and even during the early part of the war, in Washington, was in the political milieu. But, capable as the dickens. Never had any problems with him at all.

Q: Brigadier General Harry B. Vaughan?

A: Yes, nice guy.

Q: Major General Henry S. Aurand?

A: Yes, he was the chief of Ordnance. Very competent.

Q: He succeeded Clay in Europe, came from the Army Service Forces.

A: Yes. All of Lee's chiefs of Services were top-drawer guys who were dedicated to their jobs. Mostly old-time Army types, but these people I related to quite closely because of the necessity to bring together all the plans into one coordinated plan.

Q: Brigadier General John Ratay?

A: I knew him, but not that well.

Q: Colonel Cleland C. Sibley? He worked in Cherbourg discharge operations.

A: I knew him, yes.

Q: Not well, though?

A: No, his predecessor is the one who started out that job.

Q: Oh, that's the name I don't have! Colonel Claude H. Chorpensing?

A: Oh, very well, yes. You know, that's a funny story there. You're going to get to General Pick later on, I guess.

Q: Yes, sir. What can you tell us about Chorpensing right now?

A: Only that when [Lewis A.] Pick became Chief of Engineers, he brought me in from Alaska right away to be chief of Civil Works. Up until the time I got there, the chief of Civil Works was a brigadier appointed by the Chief, but the Chief of Staff made a decision that all general officer appointments had to go through the regular appointment process, and no chief would have appointment for a certain specific job in his department. Other departments

had the same thing. So, General Pick was unable to appoint me a brigadier, but he put me on the job anyhow. I related on the Hill to all congressional committees and, as you know, congressional committees like the chief of Civil Works because he's the one who funds their projects. But, I prepared the budget and went up and explained it to all of 'em and defended the budget for two years. And, must've done a good job because one of the congressmen approached the Chief of Staff, and said, "By golly, you've got to appoint him brigadier like he's supposed to be. He was preceded by a brigadier, et cetera." So, the Chief of Staff told Pick to take me out of the job.

Q: Yes, I'm going to want to get back to that a bit later on. How were your relations with Chorpeneing?

A: Good. Because when I had to leave the job, the Chief put "Chorp" in as chief of Civil Works.

Q: And, you met General Chorpeneing in Europe?

A: I don't remember that. I don't know what job he had over there.

Q: He took over from Colonel Sibley as the person in charge of the discharge operations at Cherbourg.

A: Well, I should remember his operation, but I don't. I know it got so severe that they sent Lucius Clay over there to work on it.

Q: Right. Do you recall Brigadier General Raymond G. Moses, Army group G-4.

A: I knew Ray Moses before, and saw him many times, and talked to him many times. He was G-4 of--

Q: Army--I don't have which Army group--he was an Army group G-4. Must've been the the 12th.

A: Must've been Bradley's. I guess it was Bradley.

Q: Yes. How about Brigadier General Robert C. Crawford?

A: I knew him quite well, yes. He did a good job, or else he wouldn't have been where he was.

Q: Did you get along well with him?

A: Yes, I never had any problems with him. He had a deputy by the name of Sibley who was with him.

Q: Could that have been the same Sibley who was in charge of Cherbourg discharge operations? Colonel Cleland C. Sibley?

A: No, I don't think that was his name. It was Alden K. Sibley, who eventually became a major general.

Q: I see.

A: Cleland C. was several classes ahead. Let me look him up.

Q: I sometimes wonder what we would do without that West Point Register of Graduates!

A: Well, Cleland is dead. He retired as a brigadier. He was commanding officer of ports ETO, '42 to '46. I really don't remember.

Q: Aside from what you've already mentioned, do you remember any particular problems dealing with transportation in the European theater?

A: Well, no, it was a madhouse. It was a madhouse.

Q: How about the discharge operations at the ports, and in particular, Cherbourg? You evidently went down to Cherbourg and inspected there once, and you complained of misuse of wharfage.

A: Well, they were--see, we were all dedicated in those days to the essential supplies, and they were unloading everything. And, we were using in command a lot of German prisoners in the unloading operation there. The details of my objections I don't remember at this time, but I was disturbed that its full capacity was not being used at that time for the essential things.

Q: Well, what about--well, two things. Were there enough cranes at Cherbourg to unload the material, and were there enough trains coming to Cherbourg to take the material and get it to the troops?

A: We always had trouble with the French railroads. I told you their equipment was antiquated. Their rails were different than ours, so the maintenance had to be learned again. I don't know whether we used French crews. I think the Transportation Corps provided lots of the crews. The cars were small, and it was difficult--the way we worked in the United States, our cars were large and you could put a lot of tonnage on--and their way of life and their communications were different. The railroads were an enormous problem all the way through, and the British had the same problems with those railroads, and the Germans had done some disastrous work on them before we got 'em. Our supply system, for a long, long time, depended on trucks and the POL pipeline.

Q: Do you recall any problems with the cranes?

A: No, I really don't. I don't remember whether there were cranes there like there were in Antwerp or not. In Antwerp there were over 100 cranes along the quays.

Q: What about local procurement? Did you get involved at all with trying to develop local procurement operations?

A: I knew about it. Oh, I remember one time we had a terrible hassle about getting enough tonnage out of the United States to bring seedlings of potatoes over. And pit props. The mines, you know, had been flooded, and we had to get back in those mines, and we had to bring over boatloads of pit props to hold up the shafts and so on in the mines. Anytime anybody had a problem particularly dear to him, or necessary to him, like pit props, that became a major problem.

Q: Did the logistics problems operations improve once Antwerp was captured?

A: Again, and--we received some criticism about that-- I think there were 124 cranes on the quays there, and the Germans had not destroyed them. They were there and capable of working. One of the problems with Antwerp was Montgomery's slowness in getting it. The Germans were out in control of the waterway, Walcheren Island, I believe it was out there,

and he wasn't going to attack that until he had all of his ammunition and everything all ready. And, I went to Antwerp several times and was in buildings looking over the operation, and shells were landing in Antwerp from the Germans out there in Walcheren Island and other places, but when we got it, our plans were quite complete as to its operation, and there was no problem once we got the mines out of the river. But, again, transportation--and the first thing you know we had all of those warehouses on the docks chuckablock with stuff, waiting for a way to get it out through Liege down to the armies! And there was a lot of criticism as we were using it as a depot, which we were! We wanted to get the ships unloaded because Washington wanted the ships back, and moving the stuff out was a hell of a problem. I don't know how many times I went to Antwerp, but many times. Used to take a train out of Paris.

Q: But, once it was secure, I presume it expedited the whole--

A: Oh, yes! It did a good job of unloading, and in a very important place, tactical place, too, because it was right there near the armies, and Cherbourg was a long way away from the armies.

Q: Did you finally get any particular responsibilities, any particular geographical responsibilities, while working in Com Z?

A: Theater wide?

Q: Theater wide.

A: We had five sections of France where we had officers in charge of logistics and supply, and I related to them. I didn't have any command authority except I was on the staffs of General Stratton and General Lee, and of course, that gave me some sort of command authority. You passed orders on through them and so on and so forth.

Q: I see.

A: One of the most important plans we ever prepared in my section had to do with the dissolution of the theater. It was obvious we were going to win the

war, and plans were made to take troops from Europe to Japan, and maybe some were sent that way, I don't know. But, we had an enormous wealth of equipment, tanks, supplies, and all that sort of stuff. And, we developed a plan whereby the tactical organizations would go through large establishments that we established geographically and be divested of their equipment, which then could be put into transferable condition to go somewhere else. It's my understanding that General Lord, when the south France organization moved in on Lee and replaced a lot of the people, took over that job himself because he was finding himself not compatible with the new command that was moving in from the south of France, the new deputy under Lee. They never relieved Lee, but they put a deputy in there, and they brought in General [Morris W.] Gilland as the replacement for Jimmy Stratton. But, the other thing we established were these big camps like Philip Morris and Lucky Strike, the places where the troops were going to go and be reembarked back to the United States. We established all of those. So we worked both sides of the game.

Q: How long were you in Europe then?

A: I went to England in November of '43, and I think I left in July of '45.

Q: So you were involved also in supplying troops right through to the end of the war?

A: Yes.

Q: Were there any significant logistics problems once the troops got beyond the Rhine?

A: Really not, no. The place was loaded. I don't know whether we ever cleared up that mess behind Omaha Beach or not. I imagine some of that stuff was there at the end of the war, purely because it wasn't in an inventorying catalogue.

Q: Well, sounds as though there were some problems in World War II that we didn't solve in Vietnam either.

A: Supply's a terrible problem, and the supply in World War II was a lot simpler than Vietnam because you've started to get into these highly technical

devices, and I don't know if there was a helicopter in Europe! I don't suppose there was. And, there were no computers, I can tell you that. My particular headquarters, I think I had three English secretaries and one WAC. Don Neill was a regular Army officer and assistant G-4. He had charge of another aspect, Vic Rapport was Jimmy Stratton's right hand--he was his deputy. And Neil Drake was in charge of transportation in Jimmy Stratton's organization. Freeman Burford was our POL man.

Q: I see. In July 1945 you were named Kansas City District Engineer?

A: Yes. Oh, before that, in France, long after everybody else, I got the jaundice, and I was in the hospital, the American hospital there, for at least two months. And, that's when this change from the south took place, and Jimmy, in the meantime, had left. And, I got out of the hospital practically on receipt of orders to go back to the states.

Q: I see. I guess you were ready to go back to the states by that time, too?

A: Yes, I sort of don't like completed things. I like things that are going on.

Q: Had your wife and children come over and been with you?

A: No.

Q: Not at all?

A: Oh, no.

Q: So, you hadn't seen them for two years?

A: Except for that time when I came back on the psychological warfare thing, which was only a month-and-a-half after I got over there.

Q: Well, that must've been a bit difficult.

A: Yeah. Well, they stayed with her mother.

Q: I see.

A: In Grafton, West Virginia.

Q: Well, turning our attention to Kansas City, then. I have several questions to ask you. Some of them are not very well related to others, but we'll wend our way through here and see what we can do. Do you recall particular problems with local cooperation in Kansas City?

A: Well, the job of a District Engineer is to assure local cooperation, and the only real arguments that ever came up were on plans to develop flood control on the Kansas River tributaries, and there was one that was quite serious. That had to do with the first dam we were going to build near Manhattan, Kansas. There was a really energetic group formed to fight that project. They even went out to see Eisenhower after he was elected, in Denver, I think. They called themselves the Blue Belles, went out in a bus.

Q: Are you referring to Tuttle Creek?

A: Tuttle Creek. That was the prime dam, the first one that had to be built, and it was very difficult for Senator [Frank] Carlson, who realized the dam should be built, and yet there was a strong, strong activity to prevent it being built, oh, even to the extent in Manhattan, if somebody was on the committee in favor of Tuttle Creek and they had a lumber yard, nobody bought his lumber anymore. I mean it was that serious. It was a very serious problem.

Q: I want to talk about Tuttle Creek a bit more because this particular problem extends right through to when you become the Division Engineer. It's still a problem.

A: Yes.

Q: Maybe we can hold off just for a second though. Do you recall something called the Greater Kansas City Flood Control Committee?

A: As an organization, no, but probably as the individuals, yes. I never had any trouble in Kansas City with the local hierarchy. They were people who wanted things done--Willard Breidenthal, Harry Massman--a great many people like that.

Q: General [Lawrence J.] Lincoln said that when he went to Kansas City, he found that the chief of construction, a fellow by the name of McDonald, a civilian engineer, was extremely overbearing with contractors. Consequently, contractors didn't like him. Also he criticized a lot of the other senior personnel within the District. Do you recall this fellow, McDonald?

A: A very acid personality. Subsequent to his employment in the District he went with an engineering firm and proceeded to energize a squabble about Tuttle Creek and the other dams on the Kaw River. Personally, I liked him, but as I say, he was a very pragmatic, acid type of personality and didn't bend to conversations leading towards a solution. The chief engineer there was a guy by the name of McCloskey. Now, he was an entirely different guy. When I went there, you see, I was preceded by a reserve officer, Colonel Neff, who'd been District Engineer at the end of the war, and he was my deputy. I set up a very strong construction organization, and I put McDonald in charge of it, and we became close friends. But McCloskey was the chief engineer, and I relied on him more than McDonald.

Q: Do you recall--General Lincoln went on to say in an oral interview with somebody else--that McDonald used to love to go around in conferences, staff meetings, and tell everybody else what he was doing wrong. Did that ever happen when you were there?

A: Well, not in that context. I required, I set up a procedure, where the Engineers would design things. Then before they went out to bid they would go to the construction division, which would analyze them for ease of construction or problems of construction, and then that had to be fed back into the engineering department. Arguments used to take place whether this thing should be actually moved or so on, or whether the size of the pump was big enough and all that sort of thing, so he, being the kind of guy he was, he would state his things positively.

Q: I see. Do you recall giving some assistance to Fort Leavenworth while you were at Kansas City?

- A: Only I was sent up there on a preliminary survey to see whether the prison could be modernized. It was a pretty archaic facility.
- Q: What was your conclusion?
- A: That something had to be done, whether it was done or not, I don't know because then that went back to the Department of Prisons with somebody else.
- Q: I see. Do you recall anything about work at an ammunition plant at Lake City, Missouri?
- A: When I went to Kansas City, there was no place to live, but I received some help and moved into an apartment building that was not too--it was living, I mean, that was it. But, then I heard that the Lake City ammunition, small arms ammunitions facility, had a lot of houses on it, so with the exception of one or two that were maintained by resident force, I think I took over ten of the houses. And for the last year or so of my tour in Kansas City we lived at Lake City, and my kids went to school in Harry Truman's hometown, and it was great living because when the plant was built the houses were--they didn't hold back on the quality of the houses, so we had a very, very fine house.
- Q: Was the Corps actually involved in building that ammunition plant?
- A: It probably was. It probably was.
- Q: Were you involved in the reconstruction or modernization of Fort Leonard Wood?
- A: No. I think that was under the St. Louis District.
- Q: Okay. There were some problems that developed over the Harlan County Reservoir. Do you recall that project?
- A: Well, the Harlan County Dam had been started before the war but stopped during the course of the war, and I think my first dam building job as District Engineer was completing Harlan County, and the contracts were let for the completion. During the course of completing the dam it became obvious to engineers that the spillway apron probably needed

some tying down, that there might be uplift beneath it under severe spillway operations, and so a plan was developed where the spillway apron was tied down. That's the only problem that I remember with respect to it.

Q: Do you recall any particular experiences in Kansas City that you'd like to tell me about aside from what we've already mentioned? We'll come to Tuttle Creek later on, so let's skip that for right now.

A: Well, one of the problems was the reorganization of the District from a completely military construction operation to initiating again the civil works operation while continuing a great many of the military projects. For instance, we had to do with two major airfields in Kansas, one down in Missouri, one of them was named Scandia. These were being built for SAC, and we did have a very large military construction program in addition to the reinstatement of the civil program, and the civil program, involving not only the Harlan County Dam. But we initiated and finished the floodwall and levees around Kansas City up the Kansas River and up the Missouri River--down the Missouri River. And one of the interesting projects was the project of building a large bridge on dry land, just below Kansas City. A bridge had to be built because we wanted to straighten the river out.

Q: This isn't the Decatur Bridge, is it? There was a Decatur Bridge that you were involved with as MRD Division Engineer.

A: No, that was a different one. This is the one just below Kansas City, which we built on dry land, and then changed the river's channel underneath it after it was finished. The same thing was done north of Omaha later on at the Mormon Bridge. Easy way to build a bridge, by the way.

Q: Was there much time that transpired between the time you completed the bridge and the time that the river's channel was changed?

A: Oh no, as soon as the bridge was completed, and we put the new channel under the bridge and armored the banks, all we did was close off the old one and open up the new one, and the river took care of the major job.

Q: Okay, I see.

A: It was a fascinating time, because we also at that time initiated the levee projects, the agricultural levee projects, along the Missouri River from Rulo all the way down to the junction with the Mississippi River. These levees were a project in themselves, and of course, it called for a great deal of relationship to the farmers and agriculturists on both sides because they were largely for the protection of farmland. When the Missouri River flooded it used to flood the whole area, you know, and also the Missouri River, like the Mississippi, is a wild river. And it made its own new channel, and a large part of our effort on the Missouri was a continuation of something that had started years before, and that is maintaining the channel in the position that it was. You do that by armoring the banks and putting out dikes and redirecting the current.

Q: How were your relations with the Soil Conservation Service? You must've had to deal with them quite a bit.

A: That came up a little later, I think more in MRD than in Kansas City, because the Soil Conservation Service were just getting their teeth in the act. They had a job of selling to do with farmers, as you well know.

Q: In April 1948 you became the Alaska District Engineer?

A: Yes.

Q: Did you find that there was a housing problem in Anchorage when you moved up there?

A: No, I was housed on the post at Fort Richardson.

Q: How about for the staff itself? Was there a problem--do you know of any problems finding housing?

A: No, I think most of them lived somewhere in the area--right close to the area around--I don't think they were around the post, though. See, that was an Air Force base, really, with a small Army

detachment there. General Scott was up there at the time, Stanley Scott as chief engineer.

I think it was interesting how I happened to go up there. At the end of the war the military command in Alaska started to plan for the future, and at that time the strategic plan contemplated that the Russians would come over the chain, the Aleutian chain, and a large part of the construction was all designed to follow that particular precept. Sometime, a year or so after that, started right after the war, the strategists decided that the defense had to be over the pole, which caused the reorientation not only of installations but also of staffing and the kinds of troops and air forces that'd be up there. The Alaska District got in very severe problems because, as you well remember, during the war you had to get things done, and you did things, and the hell with everything else. And the mental philosophy of the District at that time was that they would build on that basis, and as a result their accounts and their costs--well, their accounts were not believable and their costs were out of line. And, this so disturbed the Congress that they did not make any appropriation for Alaska in the year that I went up there, and there was over \$100 million of work under way.

There was a large engineering outfit up there at that time that had charge of all engineering, supervision of construction and so on, very prestigious top-drawer Boston firm by the name of Fay, Spofford, and Thorndike. The construction was done by a group of four contractors mostly from the Northwest, that had been put together in sort of a consortium. They had large camps--all labor was imported, because there wasn't enough labor in Alaska, of course. These large camps were a complete barracks-type housing in effect, no families in them, but mess halls and all that sort of stuff, and they existed not only in Anchorage but up at Nome, or Fairbanks, rather, and maybe one other place. There were foundations built and walls partially up and apartments started and not finished for military housing, and a whole group of important projects that had been started and stopped because there was no money. My predecessor, a pretty smart guy, being given the job of rushing this construction through so that the

military could start to staff the things that were needed, had a brilliant thought of getting surplus military property from the Pacific, from the Aleutian chain, and from elsewhere. The war being over, bulldozers and Barber Greens [road pavers] and trucks and supplies and lumber were all available, spread all over these places, and he sent a couple ships out to pick up all these surplus supplies.

Unfortunately, the manifests of the ships that came did not necessarily say what was in the hulls of these ships, and I've always had the feeling that the supply officers of the various places where things were picked up knew what their shortages were. And they not only put the excess supplies in, but all their shortages, which didn't exist. And, when I went up there there was a terrible hodgepodge of materials. Oh, I remember going through one warehouse, and there were about ten tons of lead in there, lead ingots, and of no use whatsoever because nobody made babbitt metal anymore. Did during the war, but normally your bearings were already made, and you bought 'em as bearings. But, I had field after field after field of very important construction equipment, but the inventory didn't say what was there. It had to be reinventoried.

We also had to plan on what we would do with monies that were going to be made available to the extent of maybe, oh, I forget exactly, but maybe \$30, \$40, \$50 million. So, priorities had to be made to spend the monies where the military wanted it first spent. Among the places were four huge barracks there at Fort Richardson. Improvements, lengthening of the runway at Fairbanks Air Base, civilian housing, fire departments, a great many other things. There really was no lack of housing existing at that time for people at work, because during the war Alaska was well established militarily, and there were large forces up there, and those large forces included a lot of civilian people, but they were not top-drawer. Fortunately, we didn't have the high prices of oil in those days, and heating was not the greatest problem in the world, but we worked out--developed a plan with General [Nathan F.] Twining's staff. He was chief of the Alaska command. And, developed plans and specifications for completing these buildings, and to each one of

the specifications we attached a list of equipment that would be available for the contractor, so that he wouldn't have to bring it from the states.

And, we maintained this equipment, brought it up to date, established the fact that it was in top-drawer condition, and then I took the program and visited four cities in the United States under the aegis of the Association of General Contractors, held large meetings and told them I wanted to come up and bid, because everything else before that had been force account with these four contractors. And, believe it or not, we got good bids from firms all over the United States, and the consortium members, I think, bid on a couple of the projects themselves, but that way of life was established, and I used to go down to Seattle about once a month and open bids on the projects that were to be opened in those days, and things started to boom, and we also reorganized the housing entity and cut their rates to beat the dickens.

Q: So, the earlier system was the cost plus fixed fee?

A: Yes, mostly. Which is a nice way of life.

Q: Yes, for the contractor.

A: For the contractor. But, it takes enormous supervision, and when you get people to put in fixed bids, they're their own supervisors as far as costs are concerned.

Q: Right. You've mentioned it already, but let me ask you to expand upon it a bit, perhaps. The relationship between the Engineers and the Alaskan command seemed to be a fairly cooperative relationship?

A: General Twining told me I was his chief engineer. Now, General Scott, as you know, was an engineer officer, and he did have--there were engineers on the staff of General Twining. But as far as construction and getting things done, he said, "You're the guy I count on."

Q: So, who was actually determining the military construction program? That would've been you?

- A: They determined what they needed, and then it was up to the Corps to support it before the Congress.
- Q: I see. Did you have the opportunity to give them recommendations?
- A: Oh, yes. We were close. I used to go on trips with him. He was quite a camera hunter.
- Q: Camera hunter?
- A: Well, he'd go out after Kodiak bears with a camera, you know. That sort of thing. But the reestablishment of peacetime discipline among the people in the armed forces, and also the reestablishment of financial discipline in the Corps, recovering from the World War policies of get-things-done-the-hell-with-the-costs, you know, took a little establishing.
- Q: Did you have any particular supply problems in Alaska, getting stuff from the continental United States?
- A: Well, my predecessor established a real fine situation. We brought all of the vitally necessary and short supply things for construction from Seattle by air, and that also included frozen milk and vegetables and all that sort of thing. I mean, Alaska was horrendously expensive to live in. A loaf of bread in those days was \$1.00. 'Course, it's one dollar today! But, at that time it was 15 cents here in the states, and you lived on frozen milk that came up in cartons, and all that sort of thing, you know, and you reconstituted it, sometimes successfully.
- Q: Was Fort Richardson one of your major projects, building that fort?
- A: While I was still there--I was there a year to the day. One year to the day. And, we had just started--the plans had already been developed, but started Fort Richardson, which in theory had been a part of Elmendorf--before that I guess the proper name was Elmendorf, and we started the building of Fort Richardson about the time that I was leaving.
- Q: Any particular problems with building?

- A: Well, you always have a serious problem in Alaska, and that is with permafrost. And, you have to protect the permafrost. You just can't build on top of it, because it'll melt, and then your building will sink, and you're in a hell of a situation.
- Q: Were you getting any help in meeting those kinds of problems from the Cold Regions Laboratory, which I guess had just been started?
- A: A lot of our material, I found out, our Engineers had already got a lot of material from the Soviets. They had done a lot of work on permafrost. But, we had during the war discovered the problems of permafrost in protecting it by stilting your houses where you had it. One of the funny things was as a result there's a lot of groundcover up there, trees and forests and that sort of stuff, but they're all shallow rooted, so they'll root in the part that isn't permafrost and then spread out, and I have some movies of Mrs. Potter pulling up our Christmas tree! Again, it was an experience. I had two daughters that were, oh, let's see, this was in '48, and they were ten and nine years old. Even took a dog up with us.
- Q: Did you also work on what was called the Mile 26 Project near Fairbanks? This was evidently an extension of a runway for B-36 operations. Do you recall anything about that?
- A: No. We had to do with the operation of the oil line that came from White Horse. There's an oil line that came from there and went down to the coast, two or three oil lines, six and four inch, I guess, and those were a principal supply of fuel for the air bases.
- Q: Were those built below ground or above ground?
- A: Most of them I think were above ground.
- Q: Because of the permafrost problem again?
- A: Yes. The pump stations gave some problem, but really not. The system worked very well. I remember once going down to White Horse to look over the main station there and had to stay there for three days because it was so cold the airplanes couldn't get off the ground.

- Q: Were there any problems in advertising for bids while you were up there?
- A: I advertised widely in the United States, very widely, from New York to San Francisco.
- Q: Was this atypical? Would most Districts or Divisions do that?
- A: I think even in those days your advertisements went in the technical magazines and the professional magazines, but I would make sure they were damn well known, and I would advertise the opening in Seattle. Went down once a month, as I said.
- Q: Were there any other experiences in Alaska that you would like to mention?
- A: Well, on my last day there, for some reason or other, I took a flight and went up above the Arctic Circle and landed in a little old Eskimo village, on the ice, by the way, on the ocean ice, from where you could see across to Russia, and the Eskimos were celebrating to beat the dickens because they'd caught their first whale in a long time. They had it by the tail and they were pulling it up and gradually butchering it and throwing it over in the snowbanks to freeze, and beating the dogs off. It's the only time I got above the Arctic Circle. I was too darn busy to get up where tourists might go. It was a fascinating life, though. We have lots of movies of it.
- Q: Was your staff as large a staff as most District staffs, or was it a smaller staff than most?
- A: It was large enough, because you see before that Fay, Spofford, and Thorndike had been the staff. By the time I left I think they were in charge of surveying or more or less those jobs, but I had an excellent chief engineer and a good staff under him, and we had to develop a competent financial staff. The men were there, but setting up the systems was a problem. We were building, I think, 54 apartment buildings up at Fairbanks, and the costs that accrued to each one of those was so varying, one would be almost finished for so many dollars a square foot and another one would be barely started, and its cost per square foot was

already greater. The system of accounting, which the Congress demanded on that sort of thing. So, what I did was take all the costs that had accrued to the whole darn project and divided them among the 54 and then allocated them according to completion, and that way they all finished at the same dollar amount! Well, it had to be done, and we were also running a lumber mill down the coast of Alaska farther away, which I did away with.

Q: You closed the lumber mill?

A: Yes, the District was running this lumber mill down there.

Q: The District?

A: You had to have lots of lumber during the war, you know, and there was a lot of hemlock and that kind of tree in that area, and they were sawing trees and lumbering like nobody's business. When I got there we had some 20 million feet of lumber in storage over in Fairbanks.

Q: Did the District actually build that lumber mill?

A: I think so. I don't know what happened to it. I stopped it after awhile, but what happened to it after that I don't know. Oh, during the war those District Engineers were pretty darn competent guys about getting things done. It'd been put in the proper place where there was a big supply of lumber, and in those days you didn't have environmentalists telling you you couldn't cut the trees down. Who owned the land? I think the government did, I suppose, I don't know.

Q: In April 1949 you were appointed Acting Assistant Chief of Engineers for Civil Works. I know we've already touched upon this, but can you go over how you received this appointment?

A: Well, it goes back to the time when I was in the Kansas City District, and General Pick came back from Burma. He had started all the major works on the Missouri River. You've heard of the Pick-Sloan plan, which was the plan for the development of the Missouri River; Pick being the Engineer and [William G.] Sloan being Bureau of Reclamation.

This was an approved plan and had gone through all the Congressional steps. When he [General Pick] left--of course Fort Peck had been built before this--it had been built under the REA days or whatever the initials were, but the plan provided for the construction of Garrison and Oahe and Fort Randall and the one at Yankton. Subsequently, a power dam was added to it, about halfway down the river. But, he wanted to come back there and finish his plan, or at least get it going, and he did. He found in Kansas City a strange guy he'd never heard of, who'd been there about six months. General Pick was, like so many people, almost a genius. Liked to have people he knew and trusted around him. He had his own coterie of people who he took from the District to Burma! And when he came back they came back.

But here was a strange guy in Kansas City, and our relationship for a little while was strange, and I could see that I was not his favorite person. He had sort of a pulse-feeling fellow, not an employee of the District, but he was closely associated with them otherwise, he used for PR purposes. He sent him down to Kansas City to discover what the reaction would be if he had me relieved, sent somewhere else.

By that time I'd gotten pretty close to the people in Kansas City--this fellow has told me the story since, and he went back and told Pick, he said, "Don't you dare touch him." He says, "You'll be starting a volcano down there. Potter's well ensconced. Get 'im in the team." And, since that time I was a member of the Pick team. And, while he had his peculiarities, they were the kind of peculiarities that said, "Let's get the job done and to hell with who we walk on top of." And, oh, just an example--when he was put in charge of a large military construction program for the whole Missouri Basin at the start of the war, he could see that lumber was going to be a problem. So he bought all the lumber that was available anywhere, and everybody else that wanted lumber later had to come to him if he could spare it. And, he built camps all over. I think, I'm not sure, he built the Japanese internment camp or not, but military camps all over he did. But, that's the kind of guy he was. He saw a job, he went out, and he got it done.

Anyhow, I then became an accepted member of the Pick team, and when the problem in Alaska came up, I think he was the one who recommended to General [Raymond A.] Wheeler that I could probably straighten that problem out. They relieved the other District Engineer, and I went to Alaska on darn near a moment's notice. Mrs. Potter and the kids followed me and came up by boat. I went up by air. Had a nice house, nice living.

Q: Let me read to you one of the stories that I've heard. This is from the transcript of another person who was in OCE at the time you became acting Assistant Chief of Engineers for Civil Works. I'd like to get your reaction to this. "The best example of Pick surrounding himself with his own cronies was when he selected Potter to be director of Civil Works. I'll say one thing about Joe Potter, he turned out to be a hell of a great guy. But he selected Joe Potter. Joe Potter at the time was a District Engineer in Alaska. He was a colonel. He selected Joe Potter and he brought him in, and the job called for a general, a brigadier general at that time. So Potter never got the title of director of Civil Works. He had the title acting director of Civil Works. Well, he was on a year. I don't know how long Joe was on, a year, year-and-a-half, and then the guy told him he had to get a general in there. And he, Pick, didn't pay much attention to what his superiors in the Pentagon were telling him. So one Friday afternoon, he got the word Joe Potter was out and for him to have a general in there by Monday morning."

What the fellow was saying was that Joe Potter was brought in as a colonel by General Pick because Joe Potter was a good friend of General Pick's, but he was brought in as a colonel and the job called for a general, and General [Peter A.] Feringa who had been your predecessor, had been given the one star. And because General Pick wanted you in there, he took you in as a colonel. And it was only when there was congressional pressure that you were given-- excuse me, that's not right.

A: No.

Q: No. It was when he got pressure from the Pentagon that you were given the one star.

A: Well, a part of that's correct. The job previously, and I think by law, provided that the Chief of Engineers could appoint a colonel as chief of Civil Works and give him the grade of brigadier general. The Chief of Staff of the Army rescinded that authority and said that all general officers in the future would be appointed by the regular selection process. He's right that I was put in there as "acting" because Pick couldn't do both things. He couldn't have a general officer in there if I was going to be filling the job. So, for a year-and-a-half or so, I was acting as a colonel. And then due to the fact that by that time I had made some friends in Congress, one of them went to the Chief of Staff and said, "Why isn't Potter general?" So they solved that problem by telling Pick to take me out of that job, which he did, and brought in General Chorpene who did a fine job there.

He then made me assistant chief for Special Projects. And among those special projects was the St. Lawrence Waterway, and for about a year I was charged with reviewing the plans, seeing that the plans were right, and then selling the St. Lawrence Waterway to the Congress. It was a rather time-consuming job, and I thought I had it sold. But one of the states concerned had highly important union people who were in the mining business and the railroad business and that one state wouldn't support it. So, it didn't go through the Congress for authorization at that time, but did within the next two or three years.

But, during the time I was on that job--oh, incidentally, I might say that when I was due, after Alaska, to go to the National War College. Pick said that that wasn't necessary; he wanted me at Civil Works. So when the heat got tight, he put me into special projects. And when the St. Lawrence project was not authorized, he told me he wanted me to go to the National War College. Two Engineers went to the National War College every year, which is one of the greatest educational experiences I've had--if colleges were like that I'd stay in college all my life. It was a fascinating experience. There were top-drawer people from all over the world lecturing us every morning, and meeting in committees thereafter with the same

fellow. A staff made up of historians and strategists and all that kind of expertise. But we had everybody who was of importance in the world address our classes.

I was there a year, but to show you the kind of guy Pick was, there was one appointment that he could control. The head man or the chief or the general in charge of the Industrial College, which is on the same site as the War College, had two assistants, both of whom were brigadiers. And whoever went in those jobs was a brigadier. The National War College, at the end of the year, divided into three teams and visited various parts of the world. I was on the team that went with General [Harold R.] Bull, who was the commander of the National War College, to Europe. And when we're in Paris, he called me in one day and he said, "You've just been made a brigadier general." Pick had appointed me to that job in the Industrial College. And that automatically made me a general officer. And I think that I'm the only officer who was ever made a general officer while he was a student at the National War College.

But that's the way Pick worked around, and that's the way I got my first star. And I remember talking with General Scott and Mrs. Scott, who are dear, dear people, and they both said that they thought it was great but they thought I was a little young. And I said, "How old were you, Stanley, when you were made brigadier?," and he was a year younger than I was! [laughter]

Q: I guess that shut him up.

A: Yeah. Well, anyhow, I was to be assistant commandant--"commandant," that's a word -- of the Industrial College. And it was funny, in Europe, as soon as I became a general officer, I was due to have an aide. Well, this turned some noses up, and every time our group went to another country, why, the military commander there would make sure that I was singled out and taken care of. It was embarrassing at times.

Mrs. Potter and I were assigned a house at Fort McNair, where I was going to live, and this was after graduation. And we went to the house and

decided what color we wanted the inside painted, and what changes we might want. And she was sitting on the floor one day over there and I came over, and I said, "You don't need to worry about this house anymore. General Pick's sending us to Omaha." Whereupon she wept and carried on because it would have been a nice life there, you know. A nice club, beautiful surroundings, and an academic milieu. So we took up our furniture, and I went to Omaha as Division Engineer in 1952.

Q: Well, let me go back a bit then and pick up some things about your days as Assistant Chief of Engineers for Civil Works. Let me read something else to you, another transcript.

A: Okay.

Q: This is called snitching. "I always remember when Joe Potter came in. He called us in, and he told us he was going to put a confessional in front of his office with some crying towels on it because from now on, as far as we were concerned, we were going to be nobody, and the Division Engineers were always right." If the Division Engineers wanted anything, we automatically approved it.

Well, after about six months of that, we had rubber-stamped everything. We got six months of that. Potter calls again and said, "For God's sake, those Division Engineers are going to drive me out of my mind. They're directing me up on the Hill. I can't even go up on the Hill because of all those dumb things they're doing. Get after them." Do you have any comment on that?

A: I don't specifically remember it, but having been a District Engineer twice, you can understand my mental attitude. The Chief of Engineers' office was a restrictive device to the fine things we wanted to do. But after I got there, I found out how perfect the Chief's office was. And also, less jocularly I guess, the Chief's office had I don't know how many hundreds of projects around the United States about ready for construction, under construction, authorized and ready for construction, ready for submittal of their studies to the Congress. And it became quite obvious that our relationship with the Congress determined what was going to be done. So

our budget, and also we had an amount of money that we could frame into for all of the things that were under way. So your budget had to be made around the envelope that we had to operate in. So if I did say that, and you can understand why I might have said it, you can understand why I changed my mind.

Q: As Chief of Engineers, was Pick as unpopular as some have claimed? In fact, some have gone so far as to maintain that the only reason why General Pick became Chief of Engineers was because President Truman wanted him to be Chief. Is there any truth to that?

A: Pick was not a West Pointer. As I told you, he was a stepper on of things. I mean, he and Leslie Groves were a great deal alike. Groves admired Pick very, very much, and counted on him to no end during the war to get military construction done in the whole area, the Missouri Basin, and I think farther than that even. He really relied on him, respected him, and he gave him sort of a free hand.

Groves was not a popular officer in the Corps or in the Army because he was hard-handed in dealing with people, and Pick was exactly the same. So because of two reasons: he wasn't a West Pointer, which I think was important, I mean in generating some feelings, because the Corps had always been West Pointers. And the fact that he had operated like he did operate, and understood politics to no end. He was unpopular with a large group. So unpopular that when General Wheeler was to retire, the Chief of Staff asked him to stay on for an extended tour. But Truman wanted Pick, and finally the Army had to give in.

Q: I'd like to go through again a series of personalities and get your reaction to them. These are mainly people whom you dealt with while you were Assistant Chief of Engineers. Will Wittington, chairman of the House Flood Control Committee.

A: Oh, yes. What a guy. There was the ultimate. He'd been in charge of the Flood Control Committee for goodness knows how long. You were answerable to Will Wittington when it came to a project in his district and on the Mississippi River. I think everybody on the Mississippi River went to

Wittington to make sure that he would be for the project when it happened, or when it came up. He was a fascinating fellow to deal with. One of his ploys, I forget the name of the little river that went through his district--

Q: The Yazoo.

A: The Yazoo, I guess. There was a study on the Yazoo authorized and under way, but it never got finished. It never got finished because Wittington always wanted to say during election time, "By golly, I'm going to get that study done, and we're going to get this thing built," you know, and he could answer all questions by answering the question on the Yazoo River. He was really the traditional, old-time type of congressman. But he knew his business, and he knew flood control.

Q: Bruce Tucker? He was Senator [Richard] Russell's assistant.

A: Yes. A very funny story about Bruce Tucker. When I was due to leave the Canal Zone, and when I was an aspirant to be Chief, my successor in the Canal Zone was one of Bruce Tucker's favorite fellows. And he almost cursed me for getting him out of the way so he wouldn't be in the running for Chief. What was his name? He was my successor in the Canal Zone. He only stayed there two years. He didn't like it down there.

Q: Frank Boykin?

A: Oh, what a creature! Honest to goodness, what a creature! He used to bring bear steaks up and have dinners in Washington when it was illegal to have bear steaks. Loved his little toddy every now and again. I'd be going through one of the tunnels under one of the Houses of Congress, the House of Representatives, and here Boykin would come down the other way with a group of constituents, and he'd say, "Stop. I want you to meet one of the most important people in Washington." [laughter] I had to meet and shake hands with every one of the constituents there.

Q: How about Clifford Davis from Tennessee?

A: I knew him, yes. He was another of the traditional

types. Wore his crutch long after he was shot just so he could say, "I defend your principles up there." These guys were competent congressmen. They represented their bailiwicks. But of course, then, politics was not the same as it is today. It's an entirely different thing. You didn't have welfare, you didn't have food stamps, you didn't have all those other things.

Q: Right. Do you remember John Rankin, of Mississippi?

A: Not too well, no.

Q: He had quite a reputation as a bit of a Red baiter as I recall.

A: Oh, I guess so, yeah. The top-drawer guy was the senator from New Orleans there.

Q: Well, there was Senator Overton.

A: That's it.

Q: Of course, he died in '48 before you got there. John Overton.

A: No. I knew him on the Hill. Went to a dinner he gave in New Orleans.

Q: It must have been before you came to Washington. I'm doing some work on the Mississippi River right now, that's how I know these people.

A: He was the dean.

Q: Yes, sure enough. Overton Brooks?

A: Congressman from what's the name of that town up the Red River?

Q: Shreveport?

A: Shreveport, yes. All these guys lived and died with flood control.

Q: Yes. Let's turn our attention to some of the people who worked with the Congress but within the Corps. You've already mentioned some of them, but how about General Feringa?

- A: I knew him pretty well. He understood the job of being chief of Civil Works very, very well. Very popular on the Hill. He left there and went down to New Orleans to become the head of some company down there. Was it a power company? I think it was, yes. No, he knew the business. Not necessarily a close friend, but he knew the business.
- Q: Was he--would you classify him as an extrovert? Did he seem to get along with people?
- A: I think he was extrovertish. I mean, you had to be on that job. You couldn't be a retiring and sit-in-the-corner person.
- Q: Right. General Hugh J. Casey?
- A: Oh, one of my top favorites. This was, is, a great, great man, and his career shows it. They--he and his wife were, I think, first lieutenants at Fort DuPont when I went there and they sort of father-figured me for a while, and, oh, we had the same group of friends. And, of course his success in the South Pacific shows what kind of guy he was. A real volatile Irishman type.
- Q: General Leif Sverdrup?
- A: Sverdrup was as dear a friend as Casey. I didn't get to know Sverdrup very well until after the war when he had come back from the war and took over his company again, Sverdrup and Parcel. And if ever there was an extrovert, it was Leif J. Sverdrup. And he masterminded a great many things that happened on the Missouri River. He was totally accepted and a member of every group that existed in Kansas City and in Missouri. He wielded an enormous amount of power in Missouri. When I was with the World's Fair and wanted a Missouri exhibit, I went to Leif Sverdrup and said, "Let's get going," and he did.
- Q: Okay. How about Major General Chorpeneing?
- A: I think I've commented on him. Different type of guy than the others. Very self-assured. I don't think he had a fear of anything that had to do with civil works. He was more or less hauled out of bed to come and replace me.

Q: Major General Emerson Itschner?

A: Yes. Emma--I would say that Emma's a good friend of mine. He had to put me in a very untenable position at the end of my tour at the Panama Canal, which we'll get at later I presume. I always considered him a great friend. I'm sure he didn't want to do what he was forced to do, but I respect him.

Q: Could you discuss for a moment the effect of the Korean War on Corps work during this time, particularly since you were involved mainly with civil works? Was there a major impact on civil works operations because of the Korean War?

A: What were the dates of the Korean War?

Q: The Korean War started in '49 and lasted to about '53. So you were right there in the midst of it.

A: No, I don't remember that. The biggest project that the Corps initiated while I was there, that I had nothing to do with, was a military project up in Greenland.

Q: That was Operation Blue Jay, I think it was called.

A: Yes. And I remember sitting in meetings with Pick and Pete Kiewit, who he wanted to be the prime contractor up there, but as I said it didn't impinge on me at all except as an advisor to Pick, and I sat in meetings when they were discussing organization, scales, reimbursement, and that sort of thing. And I forget who was made District Engineer up there.

You know, going back to Casey, he and Roy Lord were two of the officers up at Passamaquoddy during the days of FDR.

Q: Right, yes. We've got a Passamaquoddy file. We have quite a number of those reports from Casey. Very interesting. You were in OCE at a time when there was real concern about Red infiltration into the government and agencies. Of course, this was a time just before McCarthy first started talking about--

- A: Yes. I don't have any memory of anything like that at all.
- Q: Okay. How about interaction with the Hoover Commission?
- A: Well, I guess as far as any recommendations of the Hoover Commission were concerned, they had to be considered as bitter enemies.
- Q: You mean the Hoover Commission and the Corps?
- A: Yes, the report of the Hoover Commission concerning the Corps. We had to consider them suspiciously. In that connection, at one time when I was in the Canal Zone, Sherm Adams came down there. And we were leaning on the locks one time, and I happened to--maybe this resulted from a Hoover Commission recommendation, but I sort of broached the question about the fate of the Corps and all that. And he said, "Damn it all, General," he said, "if the Corps was done away with, we'd have to invent it all over again." [laughter]
- Q: Paraphrasing Voltaire, I suppose.
- A: Yes.
- Q: Did you have to give testimony frequently at Hoover Commission hearings or anything like that?
- A: Never that I remember.
- Q: How about the St. Lawrence Seaway project? You mentioned it briefly.
- A: Yes. At one time, when we were all ready, I took a group of congressmen from, I guess, Montreal up the whole St. Lawrence Seaway and ending up at Duluth at the upper end. And went all over the whole thing. Went over the taconite production and all of the things that were going to use the St. Lawrence Seaway, the lock, and the Welland Canal. I tried to show them the importance of being able to have complete navigation up through there. We also dealt with a civilian organization in Washington. Danny Danelian had formed an organization after he left the government--when he was with the government he had to do with the St. Lawrence Seaway

maybe in the Department of the Interior or Commerce--Commerce, I guess. He was its chief. Its purpose was the promotion of the seaway. Subsequently, he widened it to many other things, but during the time I knew him, that was his main thrust in life, to develop the St. Lawrence Seaway. And subsequent to the time I could not get it authorized, he followed through and did get it authorized. Quite a guy. An Armenian. A great politician.

Q: How about the Tennessee-Tombigbee?

A: That was a subject that was under study. The Warrior River did have locks and dams on it already, as you know. And I went down on an inspection trip to look it over to see what the condition of them were. We had had trouble with one of the locks with expanding concrete. And we made prepared reports on the Tennessee Tombigbee. I remember somewhat presenting those reports to the Congress showing that it had a feasible economic ratio. And I really thought it was going to float. It has very good things about it. I guess it's going now, isn't it?

Q: Yes.

A: And it'll provide a very good channel for navigation if it's big enough. I don't know how wide it's going to be. They've widened it from the original plan as I remember.

Q: Considerably.

A: Yeah. Like all projects like that, there were "furs" and "aginers." But it took a long time for those who were in favor of it to win.

Another project with the same sort of contentions, and this is one that Overton Brooks was concerned with, was navigation up the Arkansas River to Tulsa and beyond. And I guess that's under way and almost finished.

Q: It's finished. The McClellan-Kerr Waterway.

A: Is that what they call it?

Q: Yes.

A: I used to know Senator [Robert S.] Kerr. What a guy he was. He wrote a book, you know. I think I have a copy of it home somewhere. He and I were great friends.

Q: Do you have any recollection of a story about how Senator Kerr got that waterway funded? I don't know whether you've heard about this, that he held up appropriations for an interstate highway until the congressman who wanted that highway built also expressed willingness to fund the McClellan-Kerr Waterway. Do you recall that?

A: He was a devious man when he wanted something done. I don't remember that particular thing, but I can imagine darn well it was done. We had already started when I was there building some of the peripheral dams, one of the big ones up there. I can't remember the name of that dam.

Q: Are there any other controversial projects you can think of you had to deal with while you were in the Chief's office?

A: Snake River.

Q: Could you tell me something about that?

A: Well, the Snake River was an enormous power project, but there were also salmon on it, just like there were on the Columbia, you know. And I don't think a solution was ever arrived at while I was there. Subsequently, some of the power companies were able to get authority to build dams on the Snake of lesser height, I believe. I used to visit that area quite a bit, and visit Chief Joseph when it was under construction. And, oh, I looked at the fish hatcheries and all those things that would impinge upon a project, such as the fish elevators and ladders.

Bill Whipple was District Engineer at Walla Walla during that time. We had a District then at Walla Walla, and Charlie Wagner was chief of construction on the Chief Joseph Dam, which they're expanding I understand.

Q: Yes. Well, the major problem on the Snake River,

then, was just the question of wildlife and fish?

A: The fish and maintaining the valley in its natural state.

Q: So it was an environmental problem?

A: Also, yes.

Q: Was it resolved while you were still in OCE?

A: I remember going to a hearing when a predecessor organization, Friends of the Earth--of course, both sides were represented at this hearing. I'm sure it was on the Snake River because of the pictures they bought. And the proponents spoke first, as usual. And they said, "The opponents of this project will tell you this, that, and thus and so, and these pictures will show that what they're going to tell you is not true. And not only that, the head man that's going to make the presentation has never been out of New York City in his life." And the fellow had to admit he'd never been out of New York City in his life. [laughter] But he had all the words. I forget who this hearing was before, but probably a congressional committee of some sort.

Q: Well, I guess maybe environmental problems first became an identifiable problem, at least an articulated one, for the Corps in the North Pacific Division because of the salmon fish problem.

A: Not only that but the wildlife. How the elk and the deer migrated, and how many were up there, and how they crossed the river, and all that sort of stuff. Yes, without having a name like "environmentalists," these people were in evidence, they had the purposes that they still have. And not as severe as the problem on that dam at Tennessee where we were going to protect the snail darters.

Q: Well, let's not take undue credit. That was the TVA, not the Corps.

A: Well, I see. Well, it's the same sort of thing, only they hadn't found out about the snail darters in those days.

Q: Right.

A: It wasn't an endangered species so much as it was protection of wildlife.

Q: Sure. Which of course you were mandated to do, to work at least with the other wildlife agencies.

In August 1951, you entered the National War College, and you've already mentioned that you really enjoyed your time there. Why were the courses there so valuable for you?

A: I think personally--first you've got to look at the makeup. The makeup was, there were a hundred students as I remember. And of that 100, about 10 were from the State Department; one from Commerce, at least one. Maybe, oh, the other military departments made up most of them. The Corps got two, the Infantry got three, or what have you. But to me, it's the kind of wide experience that an officer who's going to advance in the Army actually has to have.

I told you about the people who came to lecture us. We had Margaret Mead for instance give us two lectures. Well, that might sound a little bit peculiar, but anthropology is damn important in understanding why other nations don't feel and act like we do. And it's one of the main reasons why I feel that some of this silly stuff we do about imposing our way of life on other nations will never work, because they're not attuned to that sort of thing. For instance, Russia is a matriarchal sort of society whereas we're a macho sort of society here. I guess that's the wrong word. We had the Director of the FBI come up and talk to us. We had Allen Dulles come and talk to us. We had the great Israel diplomat.

Q: Ben Gurion?

A: No, not Ben Gurion. A big tall fellow. Very heavyset.

Q: Abba Eban?

A: Abba Eban. We had him come and talk to us. Other foreign people of equal prominence and people in the United States. And even a prime minister or two. And they were there under the strictest--we

will not say what they talked about or said--they leveled with us. And the reputation of the War College is such that they could be very free about what they said, even in the part of some of the U.S. people criticizing verbally members of Congress or other members of the department, or past Presidents, or what have you. We had lectures on world economics, and that's where I first learned that money is not money. It's a commodity like wheat and corn. Only the fact that we deal with dollars makes it any different than talking about wheat in bushels. Understanding that attitude in world economics to me is quite important.

After these lectures, we had very prominent professors at the War College. You'd divide the class up into three parts and the lecturer went to one and these others went to other groups. And you'd discuss what he said. We did two problems while we were there, which, to me, were not that important. Oh, I remember one I was concerned with was the defense of Europe or the invasion of Europe, I forget which. Anyhow, I felt we should invade through Greece rather than through France. We lost. I mean lost the argument. And the other one was to prepare a thesis on assigned subjects, and I had to prepare mine on nationalism in Latin America. I didn't even know what nationalism was in those days. I mean how it differed from love of nation, you know what I mean.

And these classes took place in the morning and every Monday you got a stack of reprints out of books you never would think of looking at. And you could read them or not read them. There were no tests of any kind. You were there because of dedication and interest in what was going on. As I say, it was the greatest educational experience I ever had. And the only thing that makes me feel badly is that it couldn't continue by having transcripts and stuff sent to us as postgraduates. I understand why they're not. The War College used to put out a book four times a year that had articles by people on various international projects. They don't do that any more for some reason, I don't know why. But very interesting things having to do with world situations and that sort of thing. But I enjoyed it to no end. In fact I don't know of any time in my career when I haven't

enjoyed what I was doing.

Q: That's nice to be able to say.

A: But I've been very lucky. I just happened to be available for Jimmy Stratton, who became chief of Civil Works after the war you know, to become District Engineer. I was on spot when Wheeler needed somebody to go to Alaska. I was on spot when Pick moved in and wanted me to be chief of Civil Works. I was on spot when the flood of '52 took place, and he wanted to replace the then Division Engineer, I was there ready to go. And the governor of the Panama Canal--when the time came, had sort of offended the Secretary of War, and Sturgis wanted me to go down there. I had been through the canal when I went to Nicaragua, it was the only time I'd ever seen it. And afterwards, instead of not being Chief hurting me, golly, it got me with Bob Moses, which was a five-year experience, and at that place I met Walt Disney. Wanted me in his organization. And how lucky can you be? Being on the proper spot at the proper time.

Q: Well, you're able to make use of those opportunities. I think that's important, too. Can we go back for a moment, General Potter, to when you were Assistant Chief of Engineers for Civil Works? You said you were in charge of some special projects. Could you elaborate on that a little bit?

A: Well, I've already described the St. Lawrence Seaway, but one of the most interesting was being the representative of the Chief's office in the negotiations with Canada on the diversion and use of waters at the Niagara Falls. Everybody has long realized the potential of the Niagara Falls for the generation of power, and both Canada and ourselves did have generating plants at the falls, but it was felt that in fact a large amount of water was available for additional generation. It was necessary, however, to always consider that Niagara Falls is a world-renowned spectacle. It's a great national asset and in the old days everybody used to go there for their honeymoon, as you well know. And it was essential that if more water was going to be used for generation of power, that the falls would still be adequately covered by water to have the same look that they've always had.

As you know, there are two falls. There's the Canadian and the American, and the Canadian are much larger and a much larger amount of water goes over the Canadian falls. The American falls have degraded over the centuries to where they aren't quite the spectacle of the Canadian falls. And there was a feeling since there had been appreciable rock falls at the American falls, that that falls might eventually become a rapids rather than a falls. So, engineering plans were developed and we discovered of course that--many years before that there had been extensive studies on the Niagara Falls on not only how they were formed, but what was going to happen to them. The rock at the top of the falls where the water goes over is a pretty hard rock, but the action of the water as it falls tends to erode softer strata that are under the top strata and this causes the top strata to fall down. So the engineering plans provided for a distribution of water over both falls by means of control structures above the falls that would send sufficient water over both falls, especially the American falls, so that both spectacles were maintained.

And the next thing that had to be done was the generation of a treaty with Canada. And I sat in, goodness knows, I don't know how many meetings with Canadian authorities, the minister of Canada, developing the treaty. And if you think it takes a long time to, for instance, to develop SALT II, I found in negotiations with Canada it's not as time-consuming but equally detailed. The position of an adverb and a comma and a semicolon and all of those things that are important in the English language, are things that are arguable for hours. And then while the language differences are not great, there are still some language differences and different meanings of words, et cetera. Fascinating but dull and boring--but you realize that those diplomats have this as a way of life, where we as engineers don't have it the same way. Nevertheless, you realize that both had to protect their country's interests.

So we finally arrived at an equitable and acceptable division of the waters, and the Canadians were all ready with another power plant to put in on their side. I don't know whether we've ever put another one in or not. I think we have. The one

we had was old and inefficient. But the plan was finally worked out, and it involved a great deal of interesting engineering. Normally when you are going to survey a river, you send people out in boats and they probe the river. You find out what the bottom looks like, and you can calculate the amount of water that's passing by. Well, you can't do that above the falls because you won't last long there. You'll go over the falls and become a newspaper article. So our surveying was done under a carefully contrived use of helicopters. A helicopter would go over, and the surveyors would be able to tell where the helicopter was, and they would be able to measure the depth of the cord and the weight that went down to the bottom, and find out what the bottom of the river looked like as far as its shape was concerned. Then knowing the speed of the water you could tell the quantity of the water that was going to each falls.

Colonel [Herman W.] Schull, who had been a roommate of mine at the military academy and subsequently was lieutenant governor of the Canal Zone when I went down there, was the District Engineer who devised this system of doing the work.

Q: Was the treaty signed while you were still there?

A: I think so, yes.

Q: Was that a necessary preliminary, do you think, to the St. Lawrence Seaway?

A: No. It had nothing to do with it.

Q: Nothing at all connected with that?

A: It was basically two things, seeing if we could get more power out of the falls, but at the same time protecting it as a national heritage and a world-wide fascination. In one of the old books having to do with the studies that had been made 50 years before, there was page after page of little blobs of color that showed what the color of the water over the falls would be if it was this thick, or that thick, or however thick. It would be interesting to look that up just for your own amusement.

And, of course, we could generate power at night at

a much greater volume than we could during the day-time. Because at night, all you see is the surface of the water.

Q: Well, these were private utility companies that were--

A: No, well, the Canadian government has an electrical authority of some sort. Who owns that power station on our side, I don't know, but I believe it is the New York Power Authority.

Q: Okay, returning to the period about 1951, you entered the National War College in 1951. Then in June of '52, you became the deputy commandant of the Industrial College of the Armed Forces, a position which you've already remarked you enjoyed immensely. About that time you became brigadier general?

A: During the time I was a student at the National War College.

Q: During--actually--before that time.

A: The stars were put on a blue serge suit in Paris. And I have a picture of that with General Bull putting them on.

Q: In July '52, you were appointed the Division Engineer of the Missouri River Division. The floods, the '52 floods, were only a few months before that time.

A: They were on their way down.

Q: Yes. Did that have anything to do with your getting that position, that they wanted somebody out there to take care of the floods?

A: I think Pick wanted somebody out there who he knew could--that he had experience with, really.

Q: Let me ask you some general questions dealing with the Pick-Sloan plan, really. Was Pick, to your knowledge, and I realize this goes back before your time at MRD, but was Pick's plan really Pick's?

A: Pick and Sloan.

Q: Well, okay. We have testimony--I've seen testimony where Pick said he didn't even know Sloan too well, and that as far as what he developed, I mean, he developed independently without too much of Sloan's help. But I'm wondering even to that extent, how much did his own staff develop those plans?

A: Oh, the staff were the workhorses. Going back just a little bit, as I remember historically, Pick developed his plan in the MRD. Sloan developed his plan in the Bureau of Reclamation. Both of them included a great many of the same things. And the problem was to avoid a knock-down, drag-out in the Congress. It seemed better to put the two plans together. And the end result was, simplifying it, that we got the mainstem dams and they got the dams on the Yellowstone and other places. They also by law are the distributors of electricity. We generated electricity at our dams and turned it over to them for distribution.

Q: Did the '52 flood have much of an effect on the development of the Pick-Sloan plan? In other words, did it perhaps accelerate the development because of fears of people and so forth?

A: Well, it had a very serious effect on a lot of the elements of the Missouri River plan. Before that, we had thought that the highest water on the Missouri River was the 1903 flood. Everything was designed around that as being the "grandpa." The '52 flood was larger and except for some massive sandbagging may have gone over some of our levees. I think it may have even gone over the floodwalls in Kansas City. So it was necessary to revise the volumetric part of the design criteria as far as heights were concerned of levees and other protective devices all the way down. As to their effect on the mainstem dam, they were large enough to take care of the '52 flood. But it did cause us to revise some of the plans for the Kansas River, maybe strengthen spillways and all that sort of thing prior to designing the dams.

Q: Well, are you saying then that the '52 flood exceeded the so-called project flood that was being used?

A: Yes.

- Q: And was the project flood the same as the 1903 flood? I would imagine there would be some sort of margin of error.
- A: Oh, yes. As far as we knew historically, that was the largest flood that had ever happened. And we do a lot of research. We go around and see high water marks and happenings on ground centuries back to see if anything else has ever happened that we could identify. But 1903 was the criteria with some margin on top of it. But nothing like the '52 flood had ever been in our planning.
- Q: Well, so then to be the gadfly for a moment, would you argue that there was poor planning on the part of the Corps not to be able to--
- A: Oh, no. I don't think so because you've got to defend these projects before the Congress and we don't always design a project on the basis of a 1,000-year flood. In an area that can't justify the cost of a large project, you design it on the basis of a 50-year flood. For instance, my gates out at Disney World are based on a 50-year flood as are the canals. You take a calculated risk and protect against the maximum flood that the economics will support.
- Q: Was there something that happened in terms of projects that had been already built on the river, the Missouri, that may have somehow contributed to this increased flood in '52?
- A: The size of floods on any Midwest river, especially the Missouri, depends upon the thickness of snow in the Rockies. And there are very fine instruments in those snow places up there that tell how deep the snow is, and they are monitored continually by the Weather Service. And then it also depends upon how fast that snowmelt gets out. And that completely depends upon the weather, the heat and the temperature up there where the snow is. That is all carefully watched all year around. You've read this year that the snow cover up in the Rockies is not as great as it's been in the past, and people are worried about what is going to happen to agriculture and power generation in the Great Basin.

I say this, that in the '52 flood, the calculation of the height of a flood at a certain place done by

hand is a very time-consuming exercise, very time-consuming. Fortunately, we had the Missouri River model at Vicksburg. And while we did a lot of calculation, as I understood it in the MRD, I came there after the peak had passed. I was told and I visited Vicksburg afterwards, that the constant telephone connection with Vicksburg, and the putting into it of information in volumes at Fort Peck, for instance, and how the Yellowstone was coming out and all that, enabled us to be extremely accurate at Kansas City or St. Joe or other places, but specifically Kansas City. As a result, we were able to give them much more warning to get some more sandbags on those levees than they would have had if we did all of that calculation by hand 24 hours a day. So the Missouri Basin model was our guide during the time of that flood and it worked 100 percent. Did you ever see those models?

Q: Oh, yes. They're fascinating.

A: Yes.

Q: I presume that the '52 flood would have accelerated demands by local interests to get the Pick-Sloan plan moving.

A: Oh, you better guess.

Q: Well, turning 180 degrees, really, in the other direction, there was a drought in the '50s too. Do you recall the drought affecting Corps responsibilities in the basin in any way, shape, or form?

A: No, I really don't.

Q: Okay. The state of Montana seemed to have been, if not the most, one of the most vociferous objectors to phases of both the Pick-Sloan plan and the Missouri Basin compact. Do you have any recollection of objections by the state of Montana? I suppose your recollections would basically have to do with drawing off water from Montana to other parts of the basin.

A: Well, sort of vaguely I do remember that they didn't feel that they were getting the benefits of the whole plan. For instance, when I went on the Hill and talked and asked authorization to increase

about that. You ought to read the testimony. You couldn't afford to neglect the appeal their testimony had before all the committees of Congress during the time I was there, or my predecessors or successors. Their local project was of great importance to them, even more so than a major project such as Garrison Dam.

Q: Well, I've seen some of it. In a letter to Governor Anderson, you hinted that inflation was a problem for projects even at that time. Do you recall any particular problem with inflation?

A: Did it exist then?

Q: Yeah, it seems to be a problem. It's been with us for awhile.

A: I hope I didn't invent it! [laughter]

Q: In that same letter, you also said that the Corps saved millions on Gavin's Point, Fort Randall, and Garrison. And I'm wondering, how did the Corps save millions?

A: Well, if you want to relate it back to the inflation, by getting the jobs done orderly but fast without delaying completion. We always seemed to be well funded for the Missouri Basin dams. I mean, rarely were we cut down, rarely. I remember one thing that happened. The Garrison Dam was on the books and had been defended before the war, and my figure may be wrong, as a \$64 million project. I probably meant that increased cost of the construction, labor wages, and the price of equipment, and all that sort of thing caused by the war. It was my duty, finally, one year because we couldn't hold off any longer--Pick would never let me tell him that the cost had gone up to \$75 million. It got to the point where we were asking for more or less finishing monies, or last phase monies, but that were going to go over the \$64 million and, "Why is that, Colonel?" I said, "Well, we've reevaluated everything." My testimony on that point is very good. I mean, you should see it. Anyhow, they finally accepted that fact that it was going to cost more than we had originally--than General Pick had originally said it was going to cost. But he protected that \$64 million--if that's the right figure--tooth and nail for a long time, until I finally had to tell him, "How the hell are

we going to ask for \$72 million when it's only going to cost \$64 million?" So you think now, the difference between 64 and 72 is \$8 million dollars. Today that's way to the right of the decimal point.

Q: Sure, right. So you think that probably what you were referring to in this letter to Anderson is simply that the expeditious construction helped to beat the rise of inflation?

A: Yes. An important part of my job was to keep close relationships with all the governors of the states, with all of their bureaucracies that had to do with our projects. See I had military construction in ten states, besides the civil works. And that involved the airport up at Minneapolis-St. Paul. I forget the name of it, but we had to do with re-vamping that airport, the military project. So that we--well, I don't want to say it's a political job, but you had to keep hands on with the political entity because their lives, politically, depended upon some of these projects in important parts of their states where the citizens realized the value of the project. And I will always remember the great support I got from many of those governors. One of them, the governor of North Dakota, just a great guy, a great guy. And the governor of South Dakota who was that Marine Corps General, Joe Foss, who received the Congressional Medal of Honor. A great hunter, also, and fisher. All top-drawer guys who were practical and sensible, but politicians who knew how to represent their citizens.

Q: We're going to talk about some of these people in a moment, I think.

A: Okay.

Q: This is a stab in the dark but I wanted to ask you this question. Did the steel strike in '52 and the collision between Harry Truman and the steel strikers in that year, did that affect Corps work at all?

A: I think the problem we had with steel was intense after the war when steel supplies were in short supply and the steel mills were reverting from civilian products. No, I can't remember anything specific--oh, yes there was, There was a great--

because of the shortage in rebars, reinforcing bars, there was quite a development of an industry to make rebars out of rail steel, old rails that had been pulled up and been replaced, you know. This was quite an active group. And the only trouble was that rail steel is more, not friable, but brittle steel than what rebars are supposed to be made of. The darn rail steel usually wouldn't let you bend in a "U" in four seconds or something like that, and we were always squabbling with the rail steel-rebar people about not buying their product except for certain specific requirements. That was a problem I remember in Kansas City.

Q: Another sort of stab in the dark. The 1950s was the era of the grain surplus problem, as you recall, surplus in the granaries and so forth. Do you recall whether this grain surplus problem affected SCS, Soil Conservation Service, plans for small reservoirs and flood control activities in any way?

A: No, except that during the time I was in Omaha, and I don't remember if when I was in Kansas City just a few years before, the Soil Conservation Service became quite a vocal group and had, of course, a large entourage from among farmers. They--those were the days when they were really trying to get contour plowing under way. They had their own reservoir planning ideas. And we had quite a squabble around Lincoln, Nebraska, I think it was--do it or we'd do it and we had to come to a meeting of minds, and we'd do certain things and they'd do other things.

Q: General Whipple gives you credit for putting a new budgeting and accounting system into operation while you were Division Engineer. He said that, and he was looking at it from the point of view of OCE at the time, he said that he thought that you were the only Division Engineer who really got this new accounting procedure into operation. And I'm wondering if you can comment on that, if you could describe the system which Whipple at least was very keen on?

A: I wish I could. [laughter] I'm glad I did it. [laughter] I've always been very cost conscious.

You see, you have to defend your requirements for money and your expenditure of money. It's always been stated that the Congress is the greatest provider of money and the poorest manager of money that exists in this world, and I guess that's true. And maybe they won't deny it. But when that money, which is a public trust, gets in the hand of the spender, he is subject to, more so today than then, rigorous examination by the Bureau of the Budget. I think the toughest questioning I ever got was going before the Bureau of the Budget with my proposed budget for the next year because they had people there who knew these projects inside and out. They kept close track of them, and they knew more about them than the congressmen did--financially. And it was essential that you knew something about how that money was being spent. The art of accounting, I don't know, is still developing. But I did have that consciousness, and I may darn well have insisted on refinements in the system then so that I would at least know how I could talk about things.

One of the things I sent up to West Point in my memoirs was a hell of a big folder of speeches that I made in the Missouri Basin and other places. Whether that's mentioned in there, I don't know. Mostly they were probably--

Q: I think it's mentioned in some of your correspondence actually back to OCE.

A: The biggest change I ever made in any accounting was in Alaska when we had to get out of a wartime philosophy of funds and into a peacetime philosophy of funds. By the time I left there, those accounts were in damn good order, and we knew what projects were costing. If you're on a cost plus fixed fee on both design and engineering and construction, you can almost defy anybody to tell you what something's going to cost.

Q: Do you recall any problems the Corps had with the Rural Electrification Administration, REA?

A: I think the struggles there, probably, were between the Bureau of Reclamation and the REA. See, we were hands off on the electricity once it left our busbars, though we felt we could have done a better job than they did. But the electricity wasn't ours.

Q: Do you recall whether the REA was pushing maybe for steam generation versus--

A: Hydro?

Q: Hydro, yes.

A: No. We wouldn't have had anything to do with that anyhow, you know.

Q: No, but these were some topics that you may have heard about, that's all.

A: You see, in Iowa for instance, and you've touched a little chord, I think there were 11 power utilities in Iowa. And I remember having arguments with some of them. And what they were about and why I was arguing with them, I don't know, but there were very positive feelings on their part that the power should go to them and, I suppose, would I support a bill in the Congress to give our Randall power to them, for instance. I don't know.

Q: How were relations between the Corps and the Bureau of Reclamation while you were in the Missouri River Division?

A: On a personal basis, very friendly. Due to the Pick-Sloan plan, what was theirs and what was ours was defined. And I don't remember--we would like to have built the Yellowstone Dam, which was a big prominent project. We thought we should build that, but the agreement that was made between Pick and Sloan was that that was theirs, and they better keep their hands off the main stem.

Q: Well, as a matter of fact, you did suggest to the Bureau of Reclamation, or suggest to General Pick actually, that the bureau and the Corps do some switching, and you suggested that Red Willow and Pioneer dams go to the bureau, and Glen Elder and Wilson go to the Corps. As a result of that, evidently Red Willow did go to the bureau, and the Corps did get Wilson Dam, but the other two dams were not switched. What were the reasons for those switches.

A: Probably--you see, what is it the 57th parallel? No.

Q: 97th, I think.

A: 97th is it. West is theirs--when that came out, I don't know. West of the 97th is theirs, and east of that it's ours. My feeling was that if a project was totally flood control, it should be the Corps of Engineers. That kind of squabble came up in California, too, you know, with the dams out there which we insisted on and we built. Of course, there was some irrigation on those things, too. But mostly they were flood control and power. And we were very defensive on having those things. I don't know if we are today, but we were then.

Q: Do you recall anything about the relationship between Nebraska's Public Power Corporation and the Bureau of Reclamation?

A" No. You know, in the Missouri Basin, especially in South Dakota and even in Nebraska, during the Great Depression, those states became quite social. And I don't mean social with parties, but socially oriented. South Dakota even has a cement plant that they operate as a state entity. Kansas is very strong in rural electrification. There are two big power entities in Nebraska. One is the Omaha Public Power, and the other is the Nebraska Public Power, right?

Q: Yes.

A: But those things resulted from the Depression when these states went into self-funding projects. Where they got the money, I don't know. But even here in Orlando, you know, we have the Orlando Utilities Commission owned by the city of Orlando.

Q: Do you recall working with Karl Mundt in developing the Big Bend Dam project in South Dakota?

A: Oh, yes. He was quite a guy, really. The problem was, the dams were all in the plan, the problem was getting them going. Fort Peck had been finished, of course. The first big dam was Garrison. And when I got there, Randall was at least half completed. Oahe I started and got well along while I was there. The Big Bend Dam came after. We'd always thought about it because it was obvious there was

quite a drop of water from above the bend to below the bend, and power generation seemed quite feasible at that point. But I had nothing to do with that whatsoever. I did do the one at Yankton, Gavin's Point, which is a control dam for plants upstream and navigation downstream. It's remarkable what those dams have done with clarifying the Missouri River.

Q: Well, was there significant opposition to the Big Bend Dam project?

A: I don't remember any.

Q: On September 2, 1954, you wrote a letter to Emerson Itschner, Assistant Chief of Civil Works, and you wrote, "I have no joy in writing this letter, but the change in policy which you are apparently making with respect to relocations hits too deeply, and in my estimation, violates so severely common practices that we've had for at least the last ten years, and probably longer, that I must express as energetically as I can my complete unhappiness with the policy that you've enunciated in your endorsement to use on a road and bridge relocation on Oahe." This strikes me as a very, very strong letter coming from a Division Engineer to the--

A: I was a spoiled brat. [laughter]

Q: Can you give us a little bit about the background of this thing? Do you recall anything about this?

A: No.

Q: Itschner evidently took a policy that you had articulated on the Oahe Dam and expressed objections to it, and you thought it was a basic change in Corps policy dealing with relocations.

A: No. Of course, there're always relocations where the small tributaries that come into a dam interfere with an old road and you have to relocate the thing. Shucks, I've been doing that ever since Tygart. We relocated a whole railroad there, and the government paid for it, the relocation. What the change of policy was, I don't know. You'll have to ask Emma.

Q: It may be in that bundle of letters.

A: Yeah. When was Itschner assistant chief? Do you remember?

Q: I don't have his exact dates, but he evidently-- this letter was sent to him while he was assistant chief on 2 September '54.

A: And see who was the Chief then?

Q: Would it be Sturgis?

A: Yeah, Sturgis, I guess. I'm glad I wrote letters like that, instead of namby-pamby ones.

Q: No, you didn't. You came right out with it. While you were Division Engineer at MRD, there was a lot of military construction going on.

A: Oh, yes.

Q: Was this military construction part of the effect of the Korean War or was this--

A: It may have been, but there were enormous military projects and smaller ones too. For instance, there was a chemical plant down there in St. Louis that--what did it produce? Some highly volatile chemical, I think. But we had quite a problem getting that thing under way. There were many projects that were put in during the war, you know, and had to be brought up to date maybe because of Korea.

Q: You were talking about the reasons for increased military construction in the Division.

A: I think there were ongoing programs. I remember when I went there, as I remember, I turned over a large part of the military construction to the Kansas City District. It wasn't enough to keep all the Districts involved, but some had a very strong military program. But while I was there, we did build big airfields and improved airfields for the Air Force in Kansas and Missouri. Another project I had, Curtis LeMay didn't like it, I built him his new headquarters building there in Omaha. He basically didn't like the Corps of Engineers. He felt

that they should do it all in the Air Force. That was always a problem.

Q: Talk about General LeMay.

A: What a guy.

Q: One of the depots you built was the Sunflower Ordnance Depot. Were there any particular problems with that depot that you recall?

A: No. One I had something to do with is that chemical plant out in Denver that produced nerve gas.

Q: Right.

A: I only visited it once.

Q: There were some difficulties with the Air Force when it came to coordinating Air Force base construction. Particularly, for instance, you had some problem with determining land use at the Lincoln Air Force Base.

A: I don't remember that particular thing, but as I said before the Air Force did not particularly appreciate the Corps of Engineers. We had our directives from the Congress--not from the Congress so much, but from the Department of Defense as to the quality of things that should be done. And I remember very well that Curtis LeMay felt that his base there at Omaha, he wanted to build quality buildings for the soldiers, but it wasn't in the bag. We were never close, I mean, never friendly. He accepted the fact that I existed, and that's about all.

Q: How did you find him? Was he--he sounds like he was a bit overbearing.

A: Oh, he's the guy who invented SAC and he did it by being rough and tough, not only on his own soldiers, but on everybody else. He really made SAC, and it was only the discipline that he put in that caused that to be the organization that it is today.

Q: But did you like him?

A: Not particularly. Not particularly, because he was impolite. Goddamn, he'd go to an important party and sit there with a cigar in his mouth. To me, that was socially unacceptable. Well, that's not too important militarily. It is as far as getting along with people in town. First time he went to play golf at the Omaha Country Club, I heard he wore his pistol the whole damn time he was playing golf. Another time, I went down to inspect a big base we were putting housing on down in Kansas, and I was a B.G., and the commanding officer was a colonel. Then I went in on an appointment to sit down with him and discuss things, and he opened a drawer and put a .45 on the desk. Well, that's alertness.

Q: Something like that.

A: Yeah.

Q: Do you recall any particular problems you had with the construction at Sedalia and Smokey Hill Air Force bases?

A: I think Sedalia was the one where we were putting in aluminum siding on the barracks, and they didn't particularly like it. And that's why I think I went down to Sedalia to talk to those people.

Another of the problems that came up--they'd gone to a new generation of airplanes after the war, and the tolerances in the runways that were in our specifications were those that were acceptable to the Air Force at the time they were approved. But the pilot sat so far forward in these newer bombers that if you had as much tolerance as we had, the pilot was going up and down like a yo-yo because he was so far ahead of the wheel. And we had to go to much closer tolerances in the surface of many of those airfields.

Q: Well, in relation to these asphalt airfields, you were afraid that some contractors would submit, what you called in one letter, "take-a-chance bids," and get burned. Do you recall that?

A: Not particularly, but you always had to watch out for several things in construction of things like that. One was the quality of the aggregate. And a

contract will try to get by with an aggregate that's proximate and will save him money, whereas the specifications will require a different aggregate. Asphalt--placing it is of vital importance. You can't place it when the surface underneath it is wet or when it's raining, or anything like that. And the contractor will want speed to save labor time, and that probably pertains to making sure that our inspection was rigid.

Q: Do you recall--was the incendiary oil plant at Denver within the Rocky Mountain Arsenal? Was that on the arsenal grounds?

A: That's not the nerve gas plant?

Q: Well, now, frankly, I'm not certain because it is called incendiary oil plant, and I take that to mean napalm. Would that be correct?

A: I don't remember that. The only one I ever visited out there in any depth was the nerve gas plant.

Q: Were there any particular problems in constructing--building that building?

A: No, it was almost done--it was really under the supervision of the Department of the Army but we had the construction contracts. And it's a very touchy project as far as safety is concerned, as you can damn well imagine.

Q: Sure.

A: And I was very much interested in that the safety requirements were not only being met, but were actually safety--

Q: What kind of special safety requirements were there?

A: Each of the floors was grilled. There was no solid floor, they were grilled, and any place anybody worked in there, there was a big shower head in case anything leaked. A fellow could pull a shower head and douse himself.

Q: You went to make Garrison into a military district to work on Glasgow, Minot, and Grand Forks

Air Force Base, but it never happened.

A: At one time there was a Garrison District, but it was totally involved in building the dam, and expanding it to do these other jobs would have saved some travel and made the administration a lot simpler.

Q: Why wasn't it approved?

A: Because the dam was getting done. You see, we had a town at Garrison, we had a town at Fort Randall, and, I think, at Oahe. And they were pretty nice little towns, and they would have had a purpose for a permanent organization. And I think on that case, I was thinking up a subdistrict, really, that would take care of Minot and what was the other one?

Q: Grand Forks, Rapid City, I think those were the three. Glasgow and Grand Forks.

A: Yes.

Q: At you Garrison and Fort Peck sites, just out of curiosity, I'm wondering what were ranks of the people in charge?

A: Resident engineer.

Q: But were these military or civilian?

A: Civilian.

Q: Okay. So you didn't have any military at these sites?

A: As I remember, maybe at one of them. I seem to remember visiting a captain at one of those sites, it may have been Garrison.

Q: Do you recall how large the organizations were at these places? I mean, about how many men or how many personnel?

A: Well, I'd say in the 40- to 50-person range, something like that. There were adequate houses there. Maybe it was much more than that. They probably did some on-site engineering too.

- Q: Do you recall the differences between these two dams, Garrison and Fort Peck, the structural differences?
- A: Well, both are earth dams, both have powerhouses. Garrison is much larger than Fort Peck, size-wise. I think its lake and its volume is much bigger than the other.
- Q: At Garrison, what effect did the Corps' taking of land have on the Fort Berthold Indians?
- A: Well, the Indian story is a long story. These reservoirs impinged on Indian lands. Indians are not the most ambitious people in the world. Their lands are really managed by the Bureau of Indian Affairs, which, as an organization, I have no use for whatsoever. They treat them like retarded children, and to some degree they make them retarded children to the extent that the Indians had been raised for 100 years or more as people under surveillance and "we'll take care of you, but it's not going to be too good, et cetera." The Bureau of Indian Affairs, not the tribes, for instance, leased their lands to cattle growers. Along the river, there was a lot of cottonwood. The cottonwood provided shade for the cattle in summer. It also provided firewood. The river had fish in it. All these things were attributes that went with the land that the Indians owned. I guess I took over well over a million acres for all the dams involved. And the Fort Berthold Indians were a great deal like the other Indians, the Sioux and the rest of them all the way down the river.

The Fort Berthold problem, I think, had been largely solved when I got up there. But the other Indian problems--I met with the Indians--they all had committees with their chief, and they were tough negotiators. Of course, the Congress passed the bill paying them for the land. I remember on one dam, I hired an appraiser who had been on the side of the Ute Indian tribe out in Colorado, and he was a winner for them. So, I hired him to do the appraisals for me on I think it was Garrison. It may have been Oahe, but one or the other. I went up and met with these Indians in their little community buildings. He appraised this one bulk of real estate at something like, say, \$2-1/2 million.

And the Indians wanted \$35 million. And out of the Congress, they got almost what they asked for, which caused me a considerable amount of dismay, of course.

But the thing I didn't like is that this money comes under the surveillance of the Bureau of Indian Affairs. Now this is then, I don't know how it is run now. And so they made a per capita distribution to the tribe of people of \$1,000 each rather than to the elected tribe officers to assure proper control. So, what did they do? They went into town, spent most of it in a week. Some of them bought television sets where there was no capability of using the televisions. Despite that they had been hand-held all the time, no hand-holding was done in respect to how they spent the money. What they got was a very, very small part of the amount that the House and Senate appropriated.

Fort Berthold's was a similar type of fight where the appraisal was a certain amount of money. All these Indian tribes had some pretty smart people--guided, of course, by people in the Bureau of Indian Affairs. Some of the things that happened are unconscionable. I mean, for instance, what was a deer worth? Well, a deer was worth what they were going to get out of the hunter. The hunter came to hunt, and the money he might spend in the corner store and the employment he might make of somebody to skin it and carry it out, and the price of that deer got up to be \$200 or \$300. And so the deer were counted. The deer weren't changed at all. They were just moved somewhere else.

They couldn't use the cottonwood anymore. But, what was the cottonwood worth? Well, the cottonwood was worth what it was worth to provide shade for the cattle, a matter of certain value. It was worth firewood, that had a certain value, and it was worth the board-feet of lumber that was in the thing. All of them were evaluated.

There was a kind of rat that existed out there in the prairies, and this rat went around all the corn-fields and pouched the corn and took it and hid it in little caches, and then the Indians would dig the caches up and have some corn. Now, that

was part of the deal, finally, that was arrived at, not by me, but by the Congress. These things were put down there to raise the price of that land. It was very frustrating negotiating. The Indians sent large groups to Washington to meet with the assistant chief deputy, Chief of Engineers, and myself, and others in arguing their position, and they had tape recorders all down the table. They knew what was said after it was over. They had a record. They weren't stupid, I'll tell you.

Q: You once thought of transferring Oahe Dam from Omaha District to Garrison. Why did you want to do this?

A: I guess that goes back to attempting to reestablish or keep our Garrison District. I think that was the Garrison District. Garrison was getting near completion and Oahe was getting started, and might just as well have them under one aegis up there.

Q: You had some engineering problems. One was at Oahe Dam with some fractured shale material being pushed up. Do you recall that particular problem?

A: Well, there were lots of problems up there that were very important. Shale is a very unstable material, but it's also plastic material and the only thing you'd have to worry about is getting away from the abutments. One of the problems at Garrison, we had to dig out part of the abutment, oh, what's this low-grade coal that the Dakotas are just full of? You know the stuff I mean. It's a low-grade bituminous coal with about two-thirds of the Btu as regular bituminous coal. But in excavating the abutments and foundation at Garrison, this stuff was going to be dug out and, you know, disposed of. But somebody got in the act. It was a very valuable material, so we had to put it in the place where the floodwaters, the waters of the dam, would cover it and save it for future generations.

We had very serious problems with the penstocks at, I think, Fort Randall, where the design was improper and we had to step--

Q: Well, Fort Randall, in fact, was going to be my next question. You tried to put huge iron tubes through

the dam to carry the water flow, and there was some difficulty with the welding procedures on those tubes.

A: Well, the design of those tubes, penstocks, was by a very preeminent, prominent Boston engineering company. The penstocks were very large. I think they were 15 feet in diameter, something like that, and an inch-and-a-half thick. They were carrying huge volumes of water under considerable pressure. And the methodology of welding them had to be followed extremely carefully. I mean, you welded here and you welded there. Nevertheless, in welding them, serious cracks developed. They were going to be reinforced anyhow, I mean, they were going to be encased in concrete with reinforcing in the concrete. To my horror, I discovered that on the plans, the construction plans for these penstocks, the engineering firm had put, "While we've designed these, it should be a requirement of the contractor to confirm that the design is all right," words to that effect. I wanted to sue them because we hired them to design it.

So, we got some university professors in the act, and the reinforcing that was going to be required was greatly in excess of the original design. In order to assure the safety of the penstocks, they were rewelded and the cracks repaired.

Q: Were they rewelded in place?

A: Yes. We put in an enormous amount of additional reinforcing and put in a lot more concrete around them. And the problem was there was so much of the space taken by the big, square bars around that we had to be sure that at least they were far enough apart to get the concrete around them. I got very disturbed that this engineering firm would do that and not be responsible for their design because they gave themselves an out by stamping that thing on all the drawings about penstocks. It was Fort Randall, as I remember.

Q: Do you recall some safety problems at Gavin's Point; poor contractor safety?

A: No. Gavin's Point, the big big day there was the closing of the Missouri River. That was quite a

thing. See, the dam was all built, but the river was being run around one end of it while it was being built. And the time came when the dam was finished, and we had to close the Missouri River and make it go through the outlet works. And we really had everybody in the world there. Secretary Brucker came, of course all the governors came, the Chief was there, and Life magazine. And I had an airplane, a DC-3. It was my second one; Chorpeneing wrecked the other one.

Q: You mean it actually crashed?

A: Yes.

Q: Was there any loss of life?

A: Oh, no. It was just enough to make the plane no good. So, I went around or sent around to various airfields, storage fields, where they had lots of planes--oh, gad, the number of planes that were on these fields was stupendous. I could have had a B-24 if I had wanted it. But, we found another DC-3 and brought it to Omaha, and gradually my pilots started to improve the interior to be a flying clubhouse again. But it hadn't been finished when these people came, and it was hotter than hell. And they all came into Omaha and then we flew them up to Yankton. And the closure started, and it took us close to 24 hours. Well-organized, big caravans of trucks with earth and rock, and just kept piling it in and piling it in, and gradually strangling the river. You always wonder if it's going to succeed, but it did succeed. And the closure was made upstream from the dam so that we could come back in later and put in a competent engineering structure closure of earthwork at the abument end. But it was in Life magazine.

Q: You must not have sent that article in your collection up at West Point.

A: I think I have it somewhere.

Q: Do you recall the Blue Valley ladies?

A: Oh, yes.

Q: Can you tell us about that?

A: Those darlings. Well, Tuttle Creek was the first dam on the Kansas River, and it was the most important dam on the Kansas River, just above Manhattan. And it was our prime project after the war to get started. But, it caused more hassle than almost any other project I've ever had anything to do with. There was total organization of people opposed to it. Part of it being an old cemetery there and they used a little old church that was there, and the farmers didn't want to lose their land. And the organization was so good that they even prepared a movie, and it starts out by showing these heavy military boots walking over the people. That's how the thing starts out. They were showing this film all over. It was obvious that I was the soldier with the boots, though it never quite indicated that.

And, as I told you before, they went out to see President-elect Eisenhower to ask him to vitiate the project when he got in. We finally got some starting money and, as I remember, the next year we didn't get any money. I mean, they were strong enough, but finally we got enough to restart it and finish the thing. And if there's anything that's popular in Manhattan and in that area, it's that lake. Oh, they think it's the greatest thing in the world.

Q: Do you recall a Mr. Stockwell? I don't have a first name, but he evidently was opposed to Tuttle, too.

A: There were people there, and not particularly him, I remember the name, but there were people there who wanted it, but didn't dare say they were for it. They didn't dare because, as I told you, people wouldn't buy cars from them anymore. It was emotional, very emotional.

Q: Were there some property acquisition problems to do with Tuttle Creek?

A: Well, there's always the problem of taking a farmer's land and the amount you pay for it. We didn't have in those days the resettlement thing. I think that's done now, isn't it? If we dispossess people now, we assist them in resettling.

Q: That's correct.

A: In those days, that didn't exist, although we did try to do some of that. Hands-on type of government law or policy did not exist at that time. So, they were paid handsomely for their farms. But then of course, and you've got to sympathize with them, their whole way of life was being disturbed and maybe their ability to earn a living was disturbed, though farms existed which they could buy and always could. They knew about these farms. And people who were in houses were paid handsomely for their houses. There was no local organization to assist them. I think the policies we have today where we assist in resettlement are very valuable policies, but I don't think it keeps people from being against major projects.

Q: Well, what was the primary opposition to Tuttle Creek, I mean, what was the reason for the opposition?

A: Old landowners, do-gooder types, you know.

Q: Well, I mean, did they feel that the project was not a valid project, or was it simply that the land was being taken?

A: Maybe they questioned the worth of the project. See, the Kaw River, as it's called in Kansas, has many tributaries, and there's another dam named Milford higher up the stream--I don't remember any particular problems with that--but the Missouri below Kansas City is a melding of the Missouri and the Kansas River. And the Kansas can produce extremely large floods because it feeds out of the Rockies, too. And I don't think there are any Bureau of Reclamation projects up at the top. They're all ours in Kansas. We had total support from the Kansas City communities, both Kansas City and Kansas, also Topeka.

Q: Is the Tuttle dam on the Kaw River?

A: No.

Q: It's on the Blue.

A: It's on a tributary.

Q: The Blue River?

A: The Blue River, yes.

Q: Do you recall any particular problems with the Soil Conservation Service regarding Tuttle Creek Dam?

A: Well, the policy or the statements of the Soil Conservation people, and it may be so now, but at least then, is that we can prevent floods by good land practices.

Q: So they felt, also, that the project was necessary?

A: Well, they couldn't have prevented the floods. Obviously they can't because you can't take care of a six or seven inch rain, or the floods from the snow up in the Rockies. You just can't do it. You see, one of the great storm belts in the United States is across Nebraska and Iowa. The most severe thunderstorms I've even been in were here. Did you know that there are more thunderstorms in the Orlando area than any other place in the country?

Q: No, I didn't.

A: Well, it always seemed to me there were more over Iowa. And, of course, we had many tornadoes and hurricanes--not hurricanes, but tornadoes. Weather's a severe thing out in that area, and snow gets awful thick and it melts all of a sudden.

Q: Do you recall any problems with the Souris project in the northern part of the Missouri River Division?

A: That was an irrigation project in the Dakotas, and I didn't have very much to do with it.

Q: Do you recall a problem with something called East bottoms and Williston?

A: Oh, yes.

Q: Could you explain that to me?

- A: I think that's one of my great victories. I think it was a levee project, but there was quite a vocal organization in Williston that wanted things and didn't want other things, if you want to put it that way. And I went up there once and attended a meeting, and they had one of these very vocal types who headed an organization. He was able to talk, and he did talk, and he lowered the boom to the extend possible. And during the course of his presentation, he turned to me and said, "General Potter, it's my understanding that the Corps never makes a mistake. Does the Corps ever make a mistake?" And I said, "We sure do." And that took the wind right out of his sail. And afterwards he said, "You killed my argument when you said that."
- Q: A project you mentioned before in Lincoln was the Salt-Wahoo project, and one person who was particularly interested in it was a man by the name of Robert Crosky.
- A: Yes.
- Q: Can you tell me what the Salt-Wahoo project was and why Crosky was so interested in it?
- A: Well, this is one of divergences of opinion between ourselves and the Soil Conservation people.
- Q: Crosky worked for the Soil Conservation Service?
- A: Well, he was sold on that, and it's not a big stream, but it has quite an effect, I think, on Lincoln. And it was a serious problem to get something done within the constraints of an economic feasibility study. We did work on a plan. The District Engineer in Omaha was very valuable in working that out. It was in his District, of course. The District Engineers did a lot of this hand holding, and I only got in when it was necessary to show my advanced years, et cetera.
- Q: It was a levee?
- A: Canalization and levee project.
- Q: And Crosky felt what, it was not necessary?
- A: I think, I really remember that we had great

argument with the Soil Conservation Service out there.

Q: There was a delay in Fort Peck construction during the time that you were MRD Division Engineer. Do you recall that delay and why it occurred?

A: Well, the only thing I had to do there was the second powerhouse. And it may have been funding, but I really don't remember.

Q: Decatur Bridge in Iowa was a dry land bridge, and it was a subject of rather extensive newspaper coverage.

A: Well, you know, it's fascinating, and to the newspaper man that's a great thing, you know, building a bridge on dry land. And I think it was eventually named the Mormon Bridge. It's north of Omaha.

Q: Yeah, it would be.

A: Do you know that Omaha and Council Bluffs across the river were the places that the Mormons stopped on their trek to the West for at least one winter, maybe two? There's a big Mormon cemetery north of Omaha, which is kept just like a park. They're great people.

Q: Well, was this Decatur Bridge a bridge that resulted from a cutoff in the Missouri?

A: Yes, a straightening in the Missouri.

Q: Are you differentiating between a cutoff and a straightening?

A: Well, it was sort of a cutoff, yes. There was a big meander up there as I remember. We built on dry land and then directed the river under.

Q: Was there a particularly long period of time between--

A: Oh, yes, because as I remember that bridge was privately funded, and the financial geniuses behind that had a great interest in it, of course. And the placement of that bridge, the development of

that bridge as a project took a long time because they were pushing it because they thought they could get a lot of tolls from it, as I remember. And, I remember visiting with them even in New York. We didn't think it was a necessary project, but they had sufficient political clout to get it built. The only thing we had to do with it really was putting the river under it. That was the thing. Putting the river under it after it was finished. They built their own bridge. Whether it was a financial success or not, I don't know, but I don't believe it was.

Q: Well, was there a funding problem that you didn't get the river under the bridge immediately after the bridge was built, was that it?

A: Well, it took a long time.

Q: Yes. So, that's probably what attracted the newspaper coverage.

A: Yes, it took a long time before we got appropriations to move the river.

Q: We already mentioned the Fort Berthold Indians by the Oahe Reservoir. Did you have similar problems with land acquisitions and so forth when dealing with the Cheyenne and the Standing Rock Sioux Indians?

A: Always. They all were the same. Long, long negotiations, appraisals developed as we were required to, and then the overriding of those appraisals by the Congress.

Q: I want to again go through our personality profiles here.

A: Okay.

Q: We've already mentioned some of these. The Chief of Engineers during the time was General Sam Sturgis. What was your impression of General Sturgis?

A: He was a great guy. Really he was. I think, even though he was related to the Pillsburys and pretty well off, you know, he was still a farmer at

heart. He almost acted like a farmer at heart. But, he had a place in, I believe, in Wisconsin that they used to go to in the summers. And one day he called me up and says, "Why don't you and Ruthie get on the plane, come over here and spend a long weekend with us." Very personable and a great friend of mine. I admired him to no end. And because of his looks and approach, this farmer approach, you know--did you ever see him?

Q: I've seen pictures of him.

A: Yes. He was a great success with the Congress.

Q: How about Keith Barney?

A: Keith Barney followed me as Division Engineer of the Missouri River Division. A very fine man. I don't think he's forceful, I didn't think he was very forceful. I never saw him in action, but he followed the policies of the Division and the Chief very well, and I think he was quite successful out there.

Q: Gerald Galloway?

A: Oh, fine guy, just a fine guy. I've known Jerry, oh, all my life.

Q: You know he just died.

A: I know he did, yes. His son is in the Army and doing very well, I hear.

Q: He's up at West Point.

A: Yes. Jerry, a very personable Irish guy, a great deal like Casey in that way, I think. Have you talked to him?

Q: No, I haven't talked to Casey personally.

A: About Galloway, I mean.

Q: Oh, Galloway, no.

A: But a good New York Irishman. A great friend of Tim Mulligan, who died right after the war. Respect him very much.

Q: You made some point, I think, in one of your letters or somewhere along the line, that General Galloway worked out very well in MRD because of his religion as a Catholic.

A: Why I'd say that, I don't know. I don't remember Omaha as being highly Catholic. I really don't.

Q: Lawrence Lincoln?

A: Yeah, there're two Lincolns. Little Abe [Lawrence J. Lincoln] and Big Abe [George A. Lincoln]. Both of those Lincoln boys are top drawer, very top drawer.

Q: Did you have much to do with them?

A: No, not professionally.

Q: Colonel Hubert Miller, Omaha District Engineer?

A: A nice competent man.

Q: Was he a good District Engineer?

A: Oh, I think so. He was a believable type. He went from there down to Texas and did something with flood control down there.

Q: Colonel Ernest C. Adams, Acting District Engineer in Kansas City?

A: I always liked him very much. What happened to him, I don't know. In fact at one time I considered having him come to the [Panama] Canal, I mean that's how much I respected him. A little fellow, but active.

Q: What about Tommy Hayes?

A: Oh, yes. Tommy Hayes is a different type entirely. Tommy Hayes is an extrovert. Likes to run his own show. Is capable, very capable of running his own show. Very thoughtful, sort of a brilliant guy. He finally got to be Division Engineer in Atlanta. Now he heads a big engineering firm out in California. No, I respect Tommy to no end. Tommy is not the greatest subject of supervision because, like myself, he liked to run with his own ball. I

always felt that probably I was the only guy who could do that properly, but we got along fine and we're good friends.

Q: Let's turn our attention to some civilians in MRD. In Omaha District, can you comment on Jerry Ackerman and Ed Soucek?

A: Soucek. Jerry Ackerman, a superb Engineer. Worked very well with Wendell Johnson, who was chief of the engineering division. As a matter of fact he occupied prominent positions in the Society of [American] Military Engineers for several years. A damn good Engineer. Soucek I don't remember that well.

Q: George Evans? He was the resident engineer at Fort Randall.

A: Oh, yes. A very competent guy. I don't know how I can say other than what I'm saying about some of these. He was a rather tall fellow. Did a damn good job, had control of the project, and ran the project.

Q: He evidently was a very much admired person.

A: He was. He was popular as the dickens.

Q: How about Harry C. Pool?

A: Oh, Harry Pool was, as I remember, chief of personnel at MRD. He died while I was there, and he was a very good Catholic. Buried in Kansas City. Likable guy. He was close to retirement when he had a stroke and died. Sort of an upper, long-term employee of the Corps. Traditional.

Q: Yeah. Over 34 years.

A: Traditional type.

Q: Let's turn our attention to some of the politicians you had to work with. Sig Anderson, South Dakota governor. You evidently were on very good terms with him, a first name basis, and so forth.

A: Well, with all of them, I was always on a first name basis. I don't have any other comments on him.

Q: How about Val Peterson, South Dakota governor?

- A: Oh, yes. He's quite a guy. I'm very fond of him.
- Q: Do you have anything bad to say about these people?
- A: I will.
- Q: Okay. Clarence Brundsdale, North Dakota governor?
- A: There's one of the great men I ever knew. He was a real farmer, a real farmer. He got elected because he was a farmer, I think. Of course, North Dakota's a small state population-wise. But we kept up our relationship for long after he finished being governor. He went back to his farm in eastern North Dakota. Oh, I guess we were on as close a relationship as our distance would permit.
- Q: Was he involved somehow with this Williston project? Do you recall some action--
- A: The trouble--the fact that he was governor there, caused him to put the interest to me, I mean the comments to me. I remember that.
- Q: How about Richard Baumhauf? He was a writer for the St. Louis Post Dispatch.
- A: Oh, yes. Usually against everything. A critical writer. I was not especially fond of him. He did a job as a writer, you know. In newspaper reporting, if you write eulogies about people, the newspaper won't be read. You got to be against things.
- Q: Willard J. Breidenthal, President of the Riverview State Bank, and evidently very much involved with Kansas City flood control?
- A: He really was the leader of the flood control effort on the Missouri River in the lower part of the basin. I can't think of anybody who was more respected. He lived in Kansas City, Kansas, that's where his home was, but the people of Kansas City, Missouri, respected him totally. I used to travel with him. I went to Chicago with him once on a land acquisition problem of the Corps. A country banker in a middle-sized city, but he knew things. He knew how to organize, and the respect he had was nonpareil. I mean, he was great.

Q: A person who I don't really know except by name, Harry Darby from Kansas City?

A: Yes, sir. Harry Darby at one time was an appointed senator. He filled somebody's term. Whether he ever ran for reelection or not, I don't know. He was head of the Cattlemen's Association. He had a steel fabricating business. Extremely handsome and personable. He was the guy who every year when they had the big brouhaha in Kansas City down at the big cattle emporium, whatever it was, he was always the head man there who made the speeches, the emcee, and he kept that up. I think he's probably still alive.

But the people in Kansas City, Missouri and Kansas, were people of influence. I don't know how much you know about that place but Kansas City once had a man named Pendergast there, and he was about as unprincipled as they came. And they finally formed a citizens' association. Now Darby would not have been in this because he lived in Kansas City, Kansas, although I imagine he was a great help. But a man by the name of Jack Gage, who I think was a lawyer too, organized this citizens' association, and they're the ones who threw Pendergast out. They also changed the total complexion of the city council. And they're the ones who hired Perry Cookingham as city manager. And the city turned around from being vice-ridden, and I mean vice-ridden, and a totally political complex with rather questionable ways of operating. You bought your jobs, you bought your contracts, all that sort of thing. But Harry Darby is the type who with Jack Gage, Willard Breidenthal, Massman, and others, turned that city around from the Pendergast era to a city that has grown greatly.

Q: Do you recall Howe S. Davies, President of the Minot Daily News?

A: I went up to Minot several times when I was there. It had to do with the Minot Air Force Base, military construction. I knew him [Davies] quite well. He's quite a guy. Ran a good newspaper.

Q: Was he rough on you?

A: I don't think so. See we had no civil works

projects up there. We weren't taking any land except his airbase.

Q: Brigadier General Joe Foss, governor of North Dakota?

A: I knew him well. He's quite a guy. He was in the Marine Corps--finally got the Medal of Honor, you know. I think he got elected governor because of his war record, but he was a good governor and I enjoyed him to no end.

Q: Was he a bit of a populist type of governor?

A: I can't remember that.

Q: Roman Hruska, Nebraska senator?

A: Yes. He and I kept up a relationship almost until he died. Another farmer type. But a good politician. There was another senator there who I didn't appreciate that much, but I was very fond of Hruska.

Q: [Carl] Curtis?

A: Curtis, yes. I wasn't too fond of him. He was a political animal of sorts. But [Kenneth S.] Wherry was from up there too, you know. Senator Wherry, father of the Wherry Housing Act, you know.

Q: William G. Sloan, Bureau of Reclamation?

A: I met him and conversed with him, but I didn't know him that well.

Q: Chan Gurney, South Dakota senator?

A: Oh, great guy. They were from Yankton. Chan was a real politician, very personable, understanding, well-meant, that sort of thing.

Q: Clarence Cannon, Missouri congressman?

A: He was different. He was not for us generally. He'd been in the Congress a hell of a long time, and he was acid--you didn't handshake him. You didn't flamboozle him. For instance, he kept us from improving the Missouri River under the lowermost bridge, St. Charles, down in that area. He

kept us from improving levees and straightening the river and all that sort of stuff. He was a tough cookie. I didn't get along with him too well. Of course, he was chairman of the Appropriations committee, but I dealt with the subcommittee for Civil Works. We had a chairman the first couple times I appeared there from either North or South Carolina, a real southerner. And I used to think he went to sleep during the hearings. He had a staff that would always feed all the members the most awful questions to ask me. But, one time a question was asked and I thought he was dozing there. I forget my exact comment, but it was a little derogatory of the peanut subsidy. And he said, "All right, colonel, strike two projects from your budget." [laughter]

Q: I would like to know about a man I can't identify, but he appears in your letters, Everett Winter.

A: Oh, yes. Everett Winter was the head of the Missouri Valley Association. That association coordinated all civic activities, with respect to work in the Missouri Valley and on the Mississippi River. They covered the whole basin. A very powerful association, and Everett did a damn good job of operating it, running it.

Q: Ben Cowdery, managing editor of the Omaha World Herald.

A: A very, very dear friend. My two daughters grew up with his daughters. He's visited us here since. A golfer who married a rich man's daughter. The rich man headed the Omaha newspaper, what's the name of it?

Q: World Herald.

A: World Herald. And he was a real tough cookie. You see, Senator [Gilbert] Hitchcock, way back when, had formed that newspaper and Mr. Doorley married one of his daughters. When the senator died, he took over the newspaper and ran it. A very charming guy. His wife died a couple of years ago and he's since remarried.

Q: Does he live in Omaha still?

A: He has a place down on Marco Island, but I think he

lives in Omaha, too. He stayed with us a couple of years ago. Came up over Thanksgiving.

Q: How about Harry Strunk?

A: Yes. Harry Strunk from McCook, huh?

Q: Yes.

A: What a guy. I used to go pheasant hunting with him. A down-to-earth fellow, totally approved of Corps of Engineers work, sort of a spearhead on the Harlan County Dam though it was a long way from McCook. What other interests he had, I don't know, but I remember once he called me up there. They were having an Indian celebration and he wanted me to be in the parade. And son of a gun, I drove up there. That's the time my black chauffeur couldn't find a place to stay and had to spend the night in jail. The sheriff let him sleep in one of the cells during the night. As I say, I used to go pheasant hunting up there with him.

Q: Do you know what his job was?

A: Newspaper.

Q: What was Senator Francis Case like?

A: Something like Curtis.

Q: He had some particular interest in the James River?

A: Yes. what it was I can't remember, but he was a questioning sort of fellow. Not the easiest one to get along with.

Q: Peter Kiewit?

A: Oh, a very great friend of mine.

Q: When did you first meet him?

A: In Omaha. This was a one-man company that became one of the largest construction companies in, I guess, the world, but at least in the United States. He eventually became Assistant Secretary of Defense.

- Q: You did say, though, that you met with Mr. Kiewit while you were director of Civil Works--
- A: Well, I must have met him before that--see, his office is in Omaha?
- Q: Right. So you only became friendly with him when you moved to Omaha?
- A: Yes. How he ran that empire. He ran it like the Corps of Engineers. He had Districts with District Engineers and that sort of thing. He got an enormous amount of work under General Pick building camps, and that's where he really got going. He understood mass construction. He once called me and asked me to come over to his office and he said, "You know, my people think that I should go into a PR program for our company." And he said, "You know, nobody knows about me. I've always stayed in the background," et cetera. "Do you think I should have a PR program?" And I told him no. He didn't need it. In the profession, he was well known. He didn't have to be known in the newspapers and all that sort of stuff.
- Why he took that job as Deputy Secretary of Defense, I don't know. I don't know whether he enjoyed it or not either. He only died a year or so ago.
- Q: Right. Were you keeping up contact with him until his death?
- A: Peripherally. Through friends we'd get back and forth to each other.
- Q: Okay. You indicated to Governor Anderson that the reservoir control center had as one of its purposes serving decision making within the Missouri Basin Interagency Committee Authority. Do you remember anything about this reservoir control center?
- A: I established it in Omaha. I set up a room and had the boys design the controls. It had to be done more or less by telephone. That's where I could keep track of the situation on all the dams on the Missouri. How many gates were open, how much water was coming out of them, how much electricity was being generated. And through that control center, we were able to integrate the whole system. It was

important when water came out of Fort Peck, whether or not it was going to be too much for Garrison, or whether Garrison needed more. The philosophy of the Missouri Basin dams was that water was used five times on the way down to generate electricity, and that we had a bulk of storage in all of these dams. And since the amount of electricity you get out depends upon the elevation of the water in any one reservoir--the height you have gives you more efficiency, of course--that it was essential to monitor these flows and control these flows so that we got the greatest result. And at the same time, maintain the capability in the spring after the floods and after we stored our water, to let something like 30,000 cubic feet a second out of Gavin's Point for navigation and the rest of the river's operation.

So, I established that thing and we got it started. The bureau didn't have something similar, and we had nothing to do with their dams except when one of their dams was letting water out, we had to know about it as far as Fort Randall was concerned. I think it's still in operation, but I imagine it's all electronic now and computerized, and orders can be given easily.

Q: Does it work, I suppose, in association with the Waterways Experiment Station?

A: No, no. Upriver floods we can control pretty darn well with those reservoirs without using spillways.

Q: You wrote to Colonel Barney on his assuming the position of Kansas City District Engineer, that the political situation there in Kansas City was extremely complex, and he should lay low for a bit and learn the ropes, so to speak.

A: You're damn right.

Q: Could you explain what you meant by that?

A: Well, the organization that did away with [Thomas] Pendergast, as I told you, was not totally accepted by the displaced people. And there were several years after I left, of course, when these other people who had run the city the other way were able to elect a city councilman. And for the last two

or three years of Perry Cookingham's tenure as city manager, and he was one of the great city managers of all time, he was the dean of city managers, he was in there by a five to four vote. And then all of a sudden they elected somebody from the one of the districts who were against him, and there was a four to five vote and Perry left. That sort of thing existed there. There were the old-time Pendergast guys in Kansas City who, business-wise, adapted to the new regime and not only had to, but liked it. They found out it was to their good that things were operating on the up and up. So, my warning to Keith was, please find out who the people are and I'll help you all I can before you start taking sides on anything.

Q: Do you recall anything about the Union Electric Company of Missouri getting involved with MRD projects?

A: Yes. Union Electric is in St. Louis, isn't it? And, there was a dam up one of the rivers that they owned and operated but it had flood control capacity, too, and it wasn't too good a dam. And we wanted to build another dam on that same river and that's the one I told you about that, because of dissension, we had to, after I left, change its position and its height and its capacity. But they were involved in that sort of thing because they wanted the ability to generate all the electricity they could hydroelectrically.

Q: Do you recall any particular problems with the building of a veteran's hospital in Kansas City?

A: Oh, yes. At the end of the war, the Veterans' [Administration] was put under General [Paul R.] Hawley, who didn't come up in the hierarchy, and the Corps of Engineers was put in charge of building new hospitals. One that was proposed for Kansas City was to have been close to a 1,000-bed hospital. And I was told to get the design under way. I selected a local architect, but I was requested also to include another architect from, I think, Cincinnati, which I'll never do again. I mean you cannot combine two architects to do one project. There was an enormous amount of dissension between the two of them.

The state of the art in hospitals at that time was

a lot different than it is today. And the Veterans' [Administration] didn't particularly like the Corps of Engineers designing their hospitals. And there were changes and impossibilities of getting approvals. For instance, you may not remember, but air conditioning was invented during the war. And I had proposed that we provide that this hospital be air conditioned. And the VA said, "No, that passes germs around. You'll get germs all over the place if you have air conditioning." But, anyhow, instead of a general hospital with 1,000 beds, as I remember it ended up as a 200-bed tuberculosis hospital. Now, I may be wrong, but it was radically changed, and a very unpleasant experience as far as I was concerned. But, you could not get approvals on various things. We planned so that the nursing stations would see down the corridors, and that was all radically changed because that wasn't the way they worked it. It was a tough job. I won't do another one except with one architect and me in charge.

Q: While you were Division Engineer, you wrote that the Omaha people were so used to working on their big dams that they'd forgotten their planning work. Care to comment?

A: Well, did I say "on big dams," or --

Q: "On their big dams."

A: Oh, well, that refers to the District, I think.

Q: It's referring to Omaha District.

A: Well, every District has a considerable amount of survey reports to do. I suppose you still do survey reports. And those were receiving, as I remember, less than top priority, and the department in charge of them was not well staffed. These reports are the basis of our future, as you know. A survey report finally leads to an authorization.

Q: You felt that they were doing inferior work on the planning side?

A: Well, they were devoting to building the dams and that's a hell of a big job, as you know. Everybody would be centered on that kind of work rather than

on the mundane things. A survey report is not the most fun in the world.

Q: No.

A: It's a gathering of statistics and so on.

Q: Well, was that a comment on one particular division's work, the Planning Division, presumably?

A: Yes, I think so, yes.

Q: This is a philosophical problem as well as an engineering one, but let me ask you it anyway. Could you have any viable amount of navigation on the Missouri River without bank stabilization? How important is bank stabilization to navigation?

A: Before the big dams, of course, navigation depended upon continuing runoff of the river, and sometimes that got awfully low and navigation was very poor. Navigation on the Mississippi was always a success because of the waters of the Ohio and the upper Mississippi and the Missouri put in, though it's not a success this month, is it?

Q: No.

A: The water's way down. That's strange, too. The Missouri River, like the Mississippi, is a meandering river. Naturally it wants to meander. It's all in soil, very little rock, except in very few places, so it meanders just like the Mississippi. It has big ox bows and bends and so on.

Way back when, they started a bank stabilization project on the Missouri River which at least gave the pilots an opportunity to know where the channel was. And that work, I think, continues to this day. Armoring the bank, replacing revetments, and installing groins, piles, you know. But the Missouri River navigation was never too highly successful because of the shallow draft of the vessels that had to use it. It's the big dams upstream that maintained a 30,000-cubic-feet-a-second flow out of Gavin's Point, I think that's the figure, that gave them that security. Whether it's built up or not, I don't know. But we used to get quite a bit of navigation all the way up to Omaha, and

one of the cargoes that always amazed me was molasses, which they mixed with straw and fed to the cattle. They fooled the cattle into thinking the straw is something else. But an enormous amount of molasses used to come upstream to Kansas City and especially to Omaha.

Q: Well, would there be significant deterioration of the river without the bank stabilization?

A: Oh, it would go to pot. And also, you've got to remember that even while I was there and before all the works were completed, the law of the land is that if the river takes a man's farm, he ain't got no farm no more. If he's got one foot left, and then the river builds it back up, he's still got some farm. But if he loses all of his land, he has lost his farm. And if it builds up across the river, he doesn't own that farm across the river. The fellow to whose land the river accreted more land, that's his bigger farm. And the law of that is quite specific. So really bank stabilization has a secondary and equally prominent purpose of protecting the farmers, protecting their land.

Q: You were very opposed to any kind of a piecemeal approach to bank stabilization. Can you explain why you were opposed to this piecemeal approach?

A: Oh, I just wanted to get the job done. I mean, it never looked large on any program because the dams were bigger and the levees were bigger and all that, but bank stabilization was really the life blood of agriculture there along the river. If you don't have any land, it doesn't do you any good, of course. But I wanted to make sure that these farmers were protected.

Q: Was the Veatch report the same as what is called more technically, the "Report on Flood Protection in Kansas River Basin Prepared for the Kansas Industrial Development Commission"? Is that the same? This report was submitted in May 1953. It was signed by Abel Wolman, Louis Rittison, and N. T. Veatch, and for some reason it became known as the Veatch report.

A: Veatch is the engineering firm.

Q: Veatch was the engineering firm. It created a fair

amount of concern, evidently, on the part of the Corps. Can you explain what this report said and what the concern was?

A: It was a denigration of the Corps plan to provide flood control on the Kansas River.

Q: What does it suggest in place of it?

A: Nothing. I can almost say nothing. I mean, it was generated to show that a flood control plan on the Kansas River wasn't necessary. And I think our friend McDonald had to do with that.

Q: What did the Corps do to try and fight this plan?

A: Generated an enthusiasm on our side in the local people.

Q: Was there publicity in the papers and so forth?

A: Maybe for a little while. I may have answered it to some degree. We did not revise our plans in any way whatsoever, and our dams did go ahead. I sort of lost my respect for Mr. Veatch after that because he's a very competent engineer, his firm's still going, but I sort of believe in the purity of the profession. And our Kansas Basin report, of course, subject to analysis and comment, but it couldn't have been totally wrong, which is more or less what that report said.

Q: General Potter, you had the opportunity last night to look at some letters I gave you that go back to your days as MRD Division Engineer. I'm wondering if any of those letters may have jogged your memory on some issues?

A: Oh, minor things now, but major things probably then. There was a considerable argument with the Asphalt Institute as to using asphalt on runways for the major bomber commands of SAC and other Air Force installations. It's readily recognized that jet fuel dissolves asphalt, and the problem was to make sure the runways were [adequate] at all times. The resolution came, as I remember, that we would make the ends of the runway--from where a plane was taking off and when it was discharging maximum amounts of fuel--out of concrete, and the middle section of the runways out of asphalt. All

pads around the hangars and so on had to be of concrete because that's where the fuel was spilled in loading. It was one of those things that had to have both sides presented to you and, of course, the Air Force, I think, made the final decision to build them in the way we described.

The other one my memory was jogged on a bit, was the Souris project, which was a big irrigation project up in the Dakotas. It impinged upon the Missouri Basin plan because water would be required for that irrigation. I know it had a lot of argument going on about it for several years. What the solution was, I really don't remember except to the Bureau of Reclamation and the farmers up there, it was a very important project.

Q: Do you recollect anything more about this controversy with General Itschner about relocation?

A: Oh, yes. You can readily understand why I became upset. When we build dams, we make reservoirs, and those reservoirs go up the tributaries. And sometimes, in some cases quite a long ways. And in doing that, in filling the reservoir, you, of course, do away with roads that crossed what used to be pristine farmland and also you disrupt roads that go across those tributaries. It always has been the policy of the Corps and the government, the Bureau of Reclamation and others, to relocate transportation facilities so that people can still communicate easily. Now, the argument came from the fact that in many cases these roads, and especially the bridges, and the argument was about bridges, were of let's say 20-foot width, which was an acceptable width way back when they were built. But the government from time to time widens bridges to facilitate traffic and cut down accidents and all that sort of thing, and when we came to relocate bridges around the reservoirs on the upper basin, a policy was enunciated to which I strongly objected that we would pay for a bridge of similar width. Well, that was, to my way of thinking, asinine because the bridge would not be accepted by the government, what is it--the Department of Transportation, whoever it is that has to do with roads, federal Bureau of [Public] Roads, something like that--and because they would not accept it as a bridge on a federal road or on a federally supported maintained road. The bridges would have

to be up to the standards that existed. And so I objected strongly to the rather narrow view that was enunciated to only pay for the narrower bridge that existed.

Q: Oh, I see. Did any of those letters bring back any more about Tuttle Creek, that controversy?

A: Oh, it was an ongoing and bitter controversy until the reservoir really got going. And, as I told you, the people there were just happy as a dickens with the reservoir as a playground. And it brought a lot of business there, you know, motorboats and restaurants and all that sort of thing. It's an admired facility in the Manhattan area of Kansas, as is Milford and all the other dams up the Kaw River.

Q: What would you say, General Potter, were your biggest challenges as Division Engineer?

A: Well, there are several that any Division Engineer has to face up to. Especially in the Midwest, the Corps of Engineers is an important organization in every state upon which it impinges. As a result, it is necessary to deal with and relate to and hand-hold the politicians, not only the federal representatives and senators, but also the governors and the governors' departments. So, a large part of the business of a Division Engineer is travelling and meeting with those people, finding out what their problems are, trying to ameliorate any discussions that are taking place. I guess you would call that the political aspect of being Division Engineer.

The technical aspects are not especially severe because the Corps of Engineers is one of the most remarkable organizations that exist in this world. And the method of reacting to the Congress for survey reports which, in some cases, lead to authorizations of projects and then to appearing before the Appropriations committee, the Bureau of the Budget, getting approval by the President for the year's budget, and building the project--they are more or less routine. Of course, there are always problems technically that you'll discover in foundations and things like that.

Q: On 6 September 1956, after you had already left MRD, you wrote a letter to General Pick, who had

also retired by then, and it concerned General Itschner, who had just been appointed the new Chief of Engineers following Sturgis. And you write, "I am sorry that my predictions and feelings about who would be the next Chief came true. I feel that with Emma's great propensity to look at details some of our broader problems might go by the board. It will be very interesting to see who was selected to fill the important job of deputy on both sides of the shop. Of course, you know, that Jack Person is moving in the Civil Works. I do feel that Jack and Emma might come to the parting of the ways someday since Jack does have a rather progressive view towards how fast and far we should go in our various programs, and, of course the squabble with Agriculture is going to get much more severe with their new bill."

Who was your choice to be Chief of Engineers, do you recall?

A: Of course, I was not, nor was Pick, in the selection process. The only reason I would express any feeling one way or another is that when the time comes to select a Chief of Engineers, all the senior officers of the Corps have their candidates and sometimes feel sad when their candidate is not selected. I can't remember who I would have liked to see Chief, but among the people who were very competent would have been Robby Robinson, who was Sverdrup's deputy in the Pacific. Personally, he and I were great friends. Itschner was, and, I presume, still is a detail man. He had to go into the details of design of dams, the size of bolts, et cetera, and every night when he went home they could hardly make a briefcase big enough to carry. He reviewed everything as if he were running every department. He, I don't think, is what you'd call a staff-oriented person. A normal organization, the kind that I like to operate, is one where the head of the organization selects his staff officers, delegates authority to them, receives their reports, and listens to both sides and then makes a decision. But, I've worked with and for people on the other side of the picture who have to know every little detail. Despite these personal characteristics, I feel that Itschner was a very competent Chief of Engineers.

Now, he did balance his organization by having Jack Person in Civil Works. Jack was an outgoing fellow. A proper type of officer to have in Civil Works, where you are dealing with politicians regularly, and by politicians I mean those people who have an interest in civil works projects.

I don't remember who he had as the chief of Military Operations. I would say, I was probably a little extravagant in expressing my dismay because I had nothing to do with it. But I did always keep in contact with General Pick. As you remember, the policy requires that the Department of the Army will send up three names in order of priority, and the President can select any one of those. When Pick was selected, the Army sent up three names and Truman would send them back because it didn't include General Pick. And finally it was made quite obvious that they were not going to get a Chief until Pick's name was on the list. Whether it went up there in last place, I don't know, but anyhow he selected him. Of course, Pick was in the selection process for Sturgis, not Itschner.

Q: Did you confide in General Pick quite a bit and did General Pick confide in you?

A: Yes, in everything. during the first six months that he was Chief, the real power structure in the Chief's office was General Pick, Craig Smyser, and myself. And we stayed late and met often; we were in the Chief's office frequently. We would discuss things that were coming up or that were up and arguments that were going on. We would confide in him and give him our opinions. It was a very close-knit operation at the beginning. Craig was his executive assistant sitting outside his door. And this was a very unpopular thing with many officers in the Corps, of course.

Q: Before we leave the Missouri River Division here, do you have any concluding observations or anything that you may have left that you want to put into the record?

A: Oh, I was immensely proud of the organization that was there, and especially of Wendell Johnson, who, by the way, had been General Stratton's right-hand assistant in Europe during the war, and had left, I

believe, the Missouri River Division to go over there and then had come back as chief engineer of the division. Very astute, calm person, as I said the other day, it would be a good idea for you to see him even though he's somewhat incapacitated from a stroke.

Q: In May 1956, you were appointed the governor of the Panama Canal Zone for a four-year term. I wonder if you could give us the background to that appointment, and also if you can tell us how your experience with the Corps may have been of help to you as governor of the Panama Canal Zone?

A: Well, I received a call one day from General Sturgis saying, "How would you like to go to the Canal Zone as governor?" Normally, the governor--going up to being governor was a course of going through the chairs. In the past, an Engineer officer would go down there as assistant Engineer, then Engineer, then lieutenant governor, and then governor. Those officers served generally for a three-year term, especially the lieutenant governor. So there was always a choice of people. I had never been in that hierarchy, and was of course somewhat surprised. But, my predecessor had apparently had some problems. His term was up, by the way. But he had some problems, and Sturgis wanted somebody down there who he knew and knew how he would operate. So, the governor of the Canal Zone has always been an officer of the Corps of Engineers up until the treaty. And I was just one of, I forget whether I was thirteenth or fourteenth or whatever, but I was appointed by President Eisenhower and began my term after being sworn in at Washington. I'd gotten my two stars, oh, almost within minutes before that. I mean, maybe a week or so before that. So, when I was sworn in, I was then a temporary major general.

Q: You were also serving concurrently as president of the Panama Canal Company?

A: The job has two hats.

Q: Could you explain for us the way in which the government and the Panama Canal Company worked there together?

A: Let me go back and sort of round out the whole pic-

ture about the canal. We got the canal after the French had failed and after dealings that are very well described in the book The Path Between the Seas, which is an excellent book. It describes everything that happened in the Panama Canal area from the time that it was even thought of by former kings of Spain, to graphic descriptions of the French effort and then the argument that went on--the negotiations that went on about the French selling their interest to us. And we, by the same token, become owners of their franchise and entered into a treaty with Panama, the 1903 treaty, that gave us rights in perpetuity to build and operate a canal and occupy the land "as if we were sovereign," to the entire exclusion of the exercise of any powers of the government of Panama over that area.

The canal was successfully built under three different people with General Goethals being the person who finished it. How he got that job is very interesting. His predecessor--let me go back one.

The bill that set up the organization to build the Panama Canal required the appointment of a commission, and this commission resided in Washington. And they stultified any efforts to make up a really progressive operation in the construction. This caused Mr. [John] Stevens, I believe it was, who was really a great man and devised the plan that really built the canal; the excavation plan, the construction plan. He devised it, but he became so irritated with the controls that the commission put on him and, in those days you must remember there were no radios, and things had to go back and forth by ship and that was a long time between requests and reply. And things were proceeding very slowly. He finally told President Roosevelt that he was going to resign, and he put it in his letter, as I understand it, the reasons for it which I just described. And he sort of thought that President [Theodore] Roosevelt would do away with the commission or nullify its powers to some degree, but Roosevelt, on the other hand, accepted the resignation and said, "I'm going to appoint a guy that can't quit." And he appointed then Colonel [George W.] Goethals to be in charge, and of course Colonel Goethals completed

the canal. It was completed in 1914.

One of the beauties about the canal is that, you must remember, there never had been locks designed of the magnitude of the locks on the Panama Canal. The machinery had to be thought up and argued about and designed. Lock walls had to hold vital machinery. It was an innovation that should be one of the great wonders of the world, probably the eighth wonder of the world. Now that was finished in 1914. That same machinery to a large extent is still operating in those locks and working in the canal. And it's due to the fact that there's a regular maintenance procedure that makes sure that everything stays in pristine condition, is replaced, or taken out and repaired. The locks formerly used to be put out of service in one lane--there are two lanes of locks--every four years to go through an intensive maintenance procedure that lasted three or four months. They've changed that procedure now to where they replace gates so that that part of the maintenance does not have to be done on site. But the fact is that it continues to operate with that old machinery, it's only old in years. As far as the condition is concerned, it's as new as it was when it went in the canal back there in 1914. And there've never been any major repairs on the locks. To my knowledge, nothing has ever failed. There have been some major changes in things that I'll describe in a little bit.

The canal was not built by Panamanians. The canal was built with U.S. supervision and a large number of the actual builders were Jamaicans and Hondurans, who were recruited in the islands and came to the canal and actually built it. Very few Panamanians to any degree were employed. It was largely the Caribbean Island-type person, most of them from islands under the control of the English.

The U.S. citizens, and of course there were lots and lots of them in supervisory positions, stayed on after the canal was finished, a great many of them, because they knew what went in there and they were capable of operating it. But, it did generate a problem because they stayed on until they retired, the sons and daughters stayed on and followed their daddies, and in some cases the third

generation. So what you had there was a group of people, marvelous people, who knew their job 100 percent, who had narrow experience in the world. And they did create a problem because they remembered what Daddy said. The canal was built with what you called a gold and silver payroll. U.S. citizens were paid in gold and other nations were paid in silver. And that gold and silver mentality continued; it was even extant when I was there. And, as a result, it was very difficult if not impossible for other than descendants of these people or people who came down under contract, to ever get high in the labor hierarchy. No Panamanian or anybody else could ever get to be a mechanic, for instance. He could carry the mechanic's box, but that was about it. I changed that to some degree when I was there because I established an apprentice school, and we did bring a lot of people into the act in higher positions. It wasn't as severe when I got there as it had been, but the forcing of the change was a very difficult, time-consuming, and a hand-holding job.

All of these employees had been raised under the aegis of my predecessors. The governor was, I wouldn't say he was the father figure, but he was in their minds. The governor was a lot more important than he actually was. He was the guy upon whom they depended and whom they could go to. General Goethals had a Sunday morning policy: everybody could come into him and approach him on any problem that bothered them, every Sunday morning his door was open to meeting with these people who wanted to come in and talk to him. And that sort of idea continued. The governor was a person they could go to as a last resort, and he was available to listen to them. So, I found myself really--this may not be the proper way to describe it, but I think it is--going down and becoming the head of a principality because the position was a great deal like that. The governor's house was the center of activity in the Canal Zone and to a large degree in Panama also.

Also in the Canal Zone, there was the commanding general of the Caribbean Command, which covered all of Latin America; a major general in charge of the Air Force; and a major general for the Army installations, of which there were many; and an admiral

in charge of Navy installations of which there was one or two. The position of the governor with respect to them was senior. Though it sounds silly, I got one more gun in my salute than they did in their salutes.

Financially, there were two organizations there. There was the government, and the governor was the head of the government. The government consisted of the health department, the schools, the police, and all those things that normally you find in a government. And the money to supply the government came from direct appropriations that I budgeted every year; went up and met with the Bureau of the Budget, the Congress and got appropriations to run the government. The other entity was the company. And the governor was president of the Panama Canal Company also. And the Panama Canal Company ran the business aspects of the canal, and that included the commissaries, the canal itself, the collection of tolls, everything having to do with business came under the company. And so, in effect, there were two organizations operating in the same headquarters building.

The company had a board of directors. There was one stockholder for the company and that was the president. The president delegated his authorities normally to the Secretary of the Army, who appointed either the Under Secretary or an Assistant Secretary as a member of the board. The other members of the board were generally civilians appointed by the governor. There was no pay in the job, but they did meet four times a year. Sometimes once in Washington, the other three times in the Canal Zone with all expenses paid. So, the company operated just like IBM, in a smaller way of course, or any other business company. It had bylaws and all that sort of thing.

The money to support the company came from tolls from ships that went through. That money was sufficient to maintain the canal, to operate the company, but in addition, to repay the appropriated funds that the government had gotten through direct appropriations from the Congress. And enough was left over to pay interest on the debt of the canal, which was caused by the bonds issued to build it, bonds and other government expenditures that went

into building the canal. So, to my way of thinking, it was almost the only government entity that not only paid its own way, but paid back some of its indebtedness. Maybe TVA does, but I'm not sure of that. But, it was fascinating to me to have to deal with an organization that I could brag about as far as not being a drain on the federal government.

I mentioned the fact that the government operated a school system, and we operated a school system that started at kindergarten and went up through a junior college. After my departure, the junior college became a full college. I tried to discourage sons and daughters, long-time family employees, from continuing their education there. I would have liked very much to have ameliorated that business of people staying on and succeeding Daddy in the canal. And I would not, I don't think, have approved putting a full college down there because I wanted to require that they go back up to the United States and finish their education there, and maybe find out that it was a better way of life up there.

Q: Can Panamanian residents go to the junior college?

A: Oh, yes. They could go there. The school system, on the other hand, was two-pronged. There was a U.S.-based type of school with curriculum devised after accredited curricula in the United States for education for people in any state of the Union. There was a Panamanian school system to take care of the Panamanians who lived in the Canal Zone. There were two kinds of towns in the Canal Zone. One for local rate and one for U.S. citizens. And in the local rate towns, there were schools, but their curriculum was a curriculum approved by the school system of Panama, the idea being that eventually they might go back over to Panama for jobs and to the University of Panama, which was quite a big school. And in order to do that, the curriculum had to be based upon a foundation that would be approved there.

Now, not all of our employees who were Panamanians lived in the Canal Zone. A great many lived in Panama. We did not have housing for everybody. It was quite an ambitious thing for Panamanians who were not housed in the Canal Zone to finally get to

the status where they could get a house in the Canal Zone. U.S. citizens, by the way, were paid 25 percent, the going rate for similar jobs in the United States. Schoolteachers and others worked on contracts, two-year contracts.

Q: Twenty-five percent more?

A: More. In other words, one of the yearly arguments was that the base we had used to put the 25 percent on, electricians wanted to use the electrical rate, I think, of the TVA, which was a similar type of organization.

The police force, I think, had about 180 police, and they generally were long-time residents down there. Daddy had been chief of police and all that sort of thing. And the fire department, the same way. I think we had 14 fire stations in the Canal Zone, which I tried to reduce, and did reduce a couple. It seemed to me there were too many of them.

There were many towns that were built and they say one was local rate--one kind was local rate and the other type was U.S. citizens. The rents were established based upon a scale that had something to do with the cost of the house. We were continually improving homes there. There was almost an annual drawing for houses. Seniority came at the top. And when somebody would leave the Canal Zone, seniority determined who got the vacant house. The Canal Zone maintained all landscaping, mowed the lawns, kept the streets clean, painted the houses, reroofed them, had everything to do with the outside of the house, and that was furnished free also. But it kept the canal as a thing of beauty. It was just a beautiful place.

Now, if you have any questions about what I've said so far, because we can have another hour's lecture.

Q: No, sir. I, of course, have some other questions about the Canal Zone experience. Maybe--

A: I have lots of experience down here.

Q: Maybe the thing to do is to let you go ahead and talk, and then I can follow up with some questions

later on. I wanted to, of course, talk about your duties as governor of the Canal Zone, and I also want to get back to the question of whether your specific Corps experience was valuable for your work as Canal Zone governor; whether it was more important just having a good administrator down there rather than having a person from the Corps of Engineers.

Well, it was a job that the Corps cherished, of course. And it was the ambition of a great many people to go to the canal, and there were always people coming down there--officers coming down there who came in as assistant Engineers, and then Engineers, aspiring to be lieutenant governor perhaps, and later on become governor. And that did happen in a great many cases. Governor [David S.] Parker had been lieutenant governor at one time.

As to whether background and experience was valuable, yes, of course. I think that the experience and background of a man who'd been involved in civil works a great deal was very valuable because you learned to deal with civilians. You put aside your disciplinary Army regulation attitude and mentality because you were dealing with civilians. And it was a great assistance, of course, in the diplomatic side of the job. There was a great deal of contact with diplomats not only of Panama, but of all the 22 nations that had ambassadors and ministers in Panama. It was something, and this Ruthie and I had to learn, it was a highly social relationship, and there was a learning period that we both had to go through. But the job of dealing with high-ranking and important businessmen as Division Engineer was an extraordinary help doing that.

Well, maybe, I should go into what the job of the governor was and also of the president then. The activities will sort of be intermixed. The governor, since Goethals, had always been a Corps of Engineers officer. He was appointed for four years by the President. He went there as a civilian. No governor has ever worn military dress. I elected, when I went down there, to wear the same thing all the time so that I'd be recognized every time I went somewhere. I wore complete white with a dark blue tie. Suits, socks, shoes. And my successor

changed that completely. Nevertheless, it was very valuable because no matter where I went, I was recognized. If they didn't know your face, they at least knew, by golly, that the governor was walking down the street. And one of the really sad things, but it'll make you feel sort of good, over in the town of Colon, the first time I went over there, and I used to walk streets and go around and see things, to see old retainers who had worked on the canal, sitting down along the street and they'd get up when I walked by and take their hats off. I say sad, but I suppose that happened in the South in the old days, but it sure happened there too. But only in that one area over in Colon. In Panama City it didn't happen.

As governor, he governed and enforced the laws. There was a district attorney, a federal court, a judge. He was under the court of appeals of New Orleans, but there were also U.S. marshals who would issue subpoenas on me from time to time. The courts operated separately. They were not under my control. I did furnish them housing, but the judge was a U.S. judge and he operated in that capacity, and there were two magistrates, one on each end of the canal. And I appointed those, and they came under my control. They were the courts of original jurisdiction, and if their decision in the case was worthy of trial in the district court, those cases were referred to the district court. But the court of original jurisdiction, the magistrate solved a great many of those things. He was able to fine and so on and so forth.

There was a prison, which was under my control. It had about 100 happy or unhappy inmates. And the crimes that they'd committed ranged from, I guess, smuggling to beatings to almost everything but murder. The governor had the power of approving executions, which I was glad I never had to do. We had a Board of Pardons that reported to me, and I would grant pardons or ameliorate sentences and moderate sentences, just like a governor of any state.

It's interesting, there was a leprosarium that came under the control of the governor, which I visited a couple of times. And there were about 100 lepers. They were not required to be there. There was no leprosarium in Panama, and of course all the

lepers did come from Panama, but they were there. They were a peculiar type of person. They're generally happy, generally happy, except the brand new ones that come in that are sort of depressed. But they have their own little community. As I say, I visited them. I even went to their fiestas once in a while when they had them.

I guess one of the most important parts of the government had to do with the management of the schools. We had a school superintendent just like in Orlando.

The health department was of great importance. We had a colonel medical officer of the Army in charge of the health department. We operated Gorgas Hospital, and while I was there we started the redesign of that hospital, and subsequently a brand new one was built. The hospital that we did run, oh, I guess it had 300 or 400 rooms with a complete staff. I mean we covered everything. There was even a separate building for OB-GYN with a very prominent doctor from the United States, who retired up here and came down and got the job to run OB-GYN. There was a very competent surgery department and disease control. All aspects of community health were covered.

Another part of the health department had to do with making sure that malaria and yellow fever never raised their ugly heads again. They had to do with ships that came through the canal that might have health problems. As a matter of fact, we sequestered one ship that came through the canal that had an enormous amount of "Montezuma's Revenge" aboard. It was totally unsanitary. It was filthy. A brand new, reconstituted ship, but poorly operated. And we just held it up.

I even got a call from a senior senator about holding it up, and I described to him that there hadn't been any hot water on the ship. It had broken down after it left New York, and the way they washed the silver was to put it in a bucket of cold water and wipe it off. I had ambulances running back and forth from that ship to Gorgas Hospital all day and all night long taking care of those people. It was finally permitted to go on, but there were hardly any passengers aboard when it finally left.

I think probably one of the things I'm proudest of to have accomplished, and this may sound peculiar, but the wife of the senior Army general talked to me one night and said she knew that we had a remarkable school system, and it was a good school system, but there was absolutely no attention being given to the handicapped. And she gave me some examples. She gave me the example of one officer who had two children who had been unfortunate enough to have been placed in incubators and over-oxygenated and had become blind, totally blind. It was one of the things that happened in the medical profession for about a year or so until they found out that they couldn't give excess oxygen to young babies in incubators. There are also kids who never seem to get good grades even though they were pretty darn bright kids. So, I jumped into the act and got the deputy head of the similar system in the state of Illinois to come down and examine the problem, tell me what the problem was, how many people there were, and how we should go about it. And he gave me very promptly a very good survey that showed that there were a lot of students with poor sight; there were a lot of students with poor hearing; there were blind children; and there were children with mental impairments, some of whom were educable, some of whom weren't; with figures and numbers and supporting data.

So, it happened that it was about the time that appropriations were coming up, and I had no problem at all with the Bureau of the Budget or the Congress having money appropriated for this program. And I sent 16 teachers to Columbia University to learn how to handle handicapped people in all of their aspects. And when they came back, we started a testing program. And sure enough we found, in one case, a student who had an IQ that was 130 or 140 who was passing all the reading courses, but almost failing the listening courses. And we had the other side of the coin too. People whose sight was impaired who couldn't read very well. So, the first thing we did, we started giving them all a physical exam on those particular aspects, and caused them to get glasses. We put the same system in the local rate schools, too. And caused them to get glasses and hearing aids, and at the same time started taking care of the blind. We got braille typewriters and teachers who could teach braille.

As to those who were mentally retarded, believe it or not, we did find in some cases that parents had kept them at home and out of public sight. But they generally were divided into two classes, as I said, the educable to some degree and the non-educable. And we were able to get the parents of that kind of student to organize into an association, and organize play yards and that sort of thing. I used to go around and see that school two or three times a year, and I had a precious little girl learning braille, who had no education whatsoever because she was blind. And here she was hitting that typewriter, reading the things. And, as I say, of all the things I did down there, some of which were quite important, I was proudest of that particular accomplishment, and it's still going on. I still get a ticket every year asking for a dollar to join the association. I am sure it is still going on.

Another part of the government was dealing with civilian organizations. I fostered and emphasized the importance of each of these cities or towns to have an elected organization. It would be the intermediary between me and all of the people who lived in the houses. Get away from having a company town to the maximum extent possible. There was some disbelief on the part of, generally, the U.S. that this wouldn't amount to a damn, and I wouldn't listen to them and I wouldn't do anything anyhow. But I used to go to their meetings, and I'd talk at their meetings, and this was local rate and U.S. citizens too. And they finally got to appreciate the fact that it was worthwhile having this self-government entity because they could give me the local feeling that I couldn't get from the administrator of the housing department, for instance. And it worked out fine, and that has been followed on by my successors, I know, and even strengthened to some degree. How it will work under the Panamanians, I don't know, because under the treaty a certain percentage of the houses will go to the Panamanians now, and in five years another big percentage. It's all spelled out in the treaty.

We had unions down there. I don't suppose that there was a union that didn't exist. And I met with them. The strongest one and the most

vociferous one was the Pilots Union. The pilots in the Canal zone are a very strong organization. You may not know but when a ship enters the canal it comes under the complete control of the pilot. The captain of the ship has no say whatsoever. And that doesn't happen in other places. In other harbors the captain still has a negative capability, but it doesn't obtain in the Canal Zone at all. But there were electrical, and laborers, and railroads, and just union after union, and I used to meet with them to find out what it was all about in the first place because I had never had to deal with unions before to that depth. Somebody had to deal with them.

I never will forget one meeting with the electrical union, and the head of that union always looked at me with a squint and a very serious face. So one time I asked him what was the matter, was he unhappy, or couldn't he smile or something like that. And he said, "This is our third meeting and all I see is the velvet glove, but I know damn well that there's a steel fist underneath it."

Other things were accomplished. Some of this is interesting history I think. The Panama Railroad existed before the French started and was caused by the gold rush in California, of course. You should read some of the stories of people who were landed at Colon and had to walk across the 50 miles to Panama to get the ship to take them up. They're really horrible stories. But when I got down there, the railroad was and had been losing money every year in large amounts, half a million dollars. In those days, half a million dollars was something. It operated from Colon to Panama City and carried freight mostly, and also ran passenger trains. And the governor had his private car. No air conditioning, of course, but you didn't need it. The railroads go fast enough. But the equipment was sort of antiquated in the boxcars and the railroad cars and the engines.

I recommended that we do away with the railroad. No, I think my predecessor recommended doing away with the railroad. I would have, but I think he did. There was a hierarchy on the railroad. There was a president and two vice-presidents, maintenance of way vice-president; and the organization

for that little 50-mile railroad was horrendous, but it was patterned after the organization of a railroad in the United States. So, I had to defend the idea of shutting down the railroad. Incidentally, all of the unions there related back to their senior union in Washington, D.C. There was no state body. They went right back up there. And they had relations with the Congress also. So, they naturally raised a lot of hell, and I was questioned thoroughly by the Congress, and the suggestion was made that they get a regular railroad fellow to come down there and analyze the problems and see what could be done. so they sent a man down there who had just recently retired as a vice-president of the Pennsylvania Railroad. And he analyzed everything very thoroughly and he made a report. And part of the report had to do with the superabundance of officials in charge of the railroad and he felt that there was a solution to the problem. Maybe we could do piggy-back stuff from one side to the other, which was sort of silly to my way of thinking. And he convinced the Congress that the railroad could be kept and could be kept operable. Great joy by everybody, but an enormous problem to me because there were no specifics.

So, I got in touch with the president of the Pennsylvania Railroad and said, "Hey, this ex-official of your railroad has put a problem on me, and I think the Pennsylvania Railroad should help me out. Your initials are P.R.R., my initials are P.R.R., Panama Railroad, Pennsylvania Railroad. And my problem stems from your man. So, I suggest this, that you look at your organization and you find some up-and-coming guy who is not as high as a division superintendent, but some up-and-coming young guy. And remember this, that this railroad serves two ports, and nobody--very few people in your organization can have to do with the activity around the ports of the United States because they're in Ohio and Indiana and other places like that. I think here's an opportunity for you to train or give training to a young man in your organization that will really enhance his value to you. Send him down to me for a couple of years, and then in a couple of years give me another."

So, he did it. And he sent me a fine guy with a lot of vim and vigor and the love of railroads.

And we got rid of all that top hierarchy, and he became the top hierarchy. We got rid of the switch crews. You know on a normal railroad, the main operator brings the train to a switch yard and then another crew has to get on and they are the ones who work the switch yard. Got rid of that idea. He did it. We got rid of the 100-mile limitation. Railroads in the United States, the crew operates the train for 100 miles, then a new crew has to come on. That's still there. We got rid of the engineer, I mean the fireman. They're oil operated. We cut it down to what a sensible business operation would be.

This excited the unions a great deal. We had two or three unions that only had one man in them, but there was a union. Conductors, firemen, so on and so forth. So they went to the Congress and said I was disturbing and ruining standard railroad practice. It so happened that the chairman of the subcommittee that dealt with the Panama Canal was a Mrs. Sullivan from Missouri who understood the problems very well. So she told them, "Do you or don't you want a railroad? If you want to insist on the things you're demanding, then there won't be a railroad. If you continue to want a job on a railroad and [to want to] run the railroad, it's got to be the way it is." And they said, "Well, we guess we better go along with the plan the way it is."

Well, through him and his knowledge of the railroad we found freight cars and passenger cars that were surplused for needs in the Pennsylvania system or other systems, got new locomotives, got better track maintenance, got bigger track in. He did a superb job for me. And then in three years they called him back. And then they replaced him, the Pennsylvania Railroad replaced him with another fellow whose forte happened to be equipment. And, as a result, our losses went down the first year some \$60 thousand, and it may have broken even after the third year. That's something I'm a little proud of having done mostly because it improved the equipment so much.

When I got to the Canal Zone, they were about 10 percent into a major project of changing the whole electrical system from 25 to 60 cycle. That may sound peculiar, but when the canal was built, the

normal electric generation was 25 cycle. And as time passed everything in the United States and worldwide practically was 60 cycle. And it had gotten to the point where there were no spare parts for anything 25 cycle. Only in Canada were there still some relics in the 25-cycle era. As a result, refrigerators were having a terrible time keeping going because there were no spare parts or no equipment that would work on 25-cycle electricity. So the program had been started covering the whole Canal Zone to change everything to 60 cycle. It was a major program because we had generating at 60 cycle. We had no air conditioners because there were no such things as 25-cycle air conditioners. So as the cities or the towns were changed to 60 cycle, the commissaries really had a heyday in selling new refrigerators and air conditioners and flat irons and all that sort of stuff. We had a great year that year in our commissaries because of the sales of that equipment. The joy to most of the residents who had never experienced air conditioning before was to have an air conditioner. And the houses that we built subsequent to that change always had a place in every room for one of these air conditioners.

One night I was long asleep and the phone rang. I had a butler in the house, but it got to me before it got to him. And this pilot, "Governor," he says, "I'm just madder than hell." He says, "I've been on a boat for 15 hours, and I just got back here to Colon looking forward to getting in that ice cold room of mine, and the electricity was off. What are you going to do about getting electricity to [whatever the name of the town was]?" And then he said, "Oop. Just came on. Thank you a lot." [laughter] But that's how personal the governor was to people in the zone. He may have had reluctance to call me, but by God he did call me.

He fussed with me. But changing some of the old motors and generators from 25 to 60 cycle was a long, involved job. And it was let on contract and done very well. But the equipment still looks old like it did before. Only the windings were changed. Lots of motors changed in the locks, of course, and other places.

First time I went up with an appropriation that my

predecessor had prepared, there were quite a number of items for the dredging division. The dredging division in the canal was almost autonomous. It was headquartered in the middle of the canal, in a little town in the middle of the canal, where they still talk about gold and silver rate people. It was so powerful because it was the most important division during the construction of the canal. And they practically had access to the Congress separately from General Goethals. It was a powerful entity because they spent all the money, most of the money, in building the canal except the locks. And a lot of that power in their minds still obtained. And we had dredges, and every year a dredging budget was put in which they prepared. And the year I got there, it involved taking out some little islands and a few other projects that they had always put in against the day when there wouldn't be major works to do. And I went up ignorantly to the Bureau of the Budget and they worked me over quite a bit. And they said, "My goodness, here come the same old projects again, and Joe, what the hell"--I used to know them very well having appeared before them for MRD in Kansas City--"what are you going to do about that outfit?" So I said, "Let's knock out the island and keep in the budget only those essential things to keep the canal operating, and next year I will come up to you with a master plan for the canal."

When I got back, I formed a long-range planning organization, and this organization had to look not only at the growth of traffic and the projection of traffic, but also at what had to be done in the canal as the traffic increased. The constraints on traffic are--going through the canal are several, but of course the locks are one, and the capacity of the locks, and the time it takes a ship to be locked through, that's one constraint that controls how many ships can go through the canal. But the other constraint was the narrow part of the canal, 300 feet wide, that went through Culebra Cut. And if that could have been widened, then we could have had two ships passing in Culebra Cut instead of having to wait at each end of it.

And of course Culebra Cut was the real touchy thing in the construction of the canal because where it started out as a rather abrupt cut, it ended up as

a very flat cut because it was in a very peculiar material that slid under its own weight. So if we could have widened the canal to 500 feet through there, we could have increased capacity enormously. Our master plan that I took up the next year provided for the widening of the Culebra Cut over a four- or five-year period, and it was met with joy in the Bureau of the Budget because they could see that something positive was going on down there rather than going by the old standards. And the long-range planning organization really was the organization that provided for the format of budgets from then on out.

Q: Could I ask you just one question? I'm not clear. To whom did the dredging division report? Was it to the company or to the governor?

A: It's in the company. I've described things that had to do with the government and the company in this list of projects that I've described. But the only items that I have described to you that were under the government were the schools, the handicap thing; the citizen's organizations; and any reference to towns, the cities and so on; and the health department. That came under the government.

Q: So the dredging division was using appropriated funds?

A: That I had gotten, that I would get and be allocated to them for projects that they would have liked to have done rather than projects that came under what we call the long-range master plan.

Q: Well that leads me to the question, what percentage of the monies used by the company were appropriated and what percentage came from canal revenues?

A: Well, as I remember, the appropriations for the government were about \$20 million in 1957-1958. There were no appropriations to the company. The company operated on its own cash and made enough to not only maintain the canal, but to repay the \$10 million--or \$20 million, and pay off \$5 or \$6 million worth of debt.

Q: But, presumably, the dredging division could not have survived without the money it got from the government for its work?

- A: No. The dredging division was supported by the company. It was part of the company, not the government.
- Q: But without those projects that you came to the Bureau of the Budget to get funded, would the dredging division have had any work to do?
- A: Of course, they approved the budget of the company also. Another project we did was build a bridge over the canal.
- Q: This was a new high-level bridge?
- A: A new high-level bridge. It had always been desired because the only way to go from one side of Panama to the other side of Panama through the canal was to go over the bridge at Miraflores Locks, which was narrow and constrained and sometimes was out of the way when ships were going through. So, there'd been a project in the works for some time to put a bridge over the canal, and Congress finally decided to fund it. And I got Leif Sverdrup to design it, and its construction was started while I was there but not completed until I left.

And, let's see. One other project. The locomotives--you're not familiar with the way the canal operates, but when a ship comes into the locks, it's tied to locomotives that are on the lock walls and they keep it in the middle. They keep it from going backward and forward. They control that ship while it's in the locks. And those locomotives had gotten to the point where they were almost incapable of being repaired without complete rebuilding and casting of frames and all that. We had a big maintenance yard over in Colon, but the job was getting sort of out of hand, and they were not heavy enough. They were designed for ships of 5,000 to 8,000 tons, and we were getting ships through there that were 70,000 and 80,000 tons or bigger. So we designed new locomotives and took bids, and lo and behold, we had two United States' firms' bids and one Japanese bid. And the Japanese bid was much lower than the U.S. bids. I recommended to the Secretary that we buy the Japanese locomotives. Logically, this caused hoorah. And in their examination of the reply to

the Japanese, they were able to find certain things that they hadn't answered directly, things that might have vitiated the acceptance. But they couldn't quite swallow the idea that the bid was so low against the U.S. that they wanted to assign it in the U.S. So, they said, "Why don't you re-advertise and change some of the specs?" Which I did, not severely but enough.

And when we readvertised, of course, the Japanese were low again. But by then they knew what the U.S. bid was going to be. So their bid was higher than it was before. Very clever people, even as you and I. So we entered into a contract with them. Sent a man to Japan, and they built new locomotives, and those are the ones that operate the canal today.

And the last major project that I want to discuss is the house, the governor's house. It had been Colonel Goethals' house, which, as I remember, was somewhere around Culebra Cut when it was erected. Subsequent to the completion of the hotel, it had been moved to its present location, the location when I came there. But it was an old house and it was a wood house, and it took a lot of maintenance. But it was a beautiful old house, southern-style home. And my predecessor had told the board of directors that he was going to go for a new house; tear that one down and build a new governor's mansion.

I heard about that about the time I was going to be appointed, and I'd been sort of surveyed by one of the civilian members of the board of directors who came to Omaha to see what kind of guy I was, and he went around the Division with me just to see how I reacted to people and all that sort of thing. A man by the name of Ted Bacon. And so I called him and said, "Don't let him do it. I want to see it before it's done," because I like historic things and I wanted to see whether it was all right. So they didn't let him do it. So I came down there and of course admired the old house, even with no air conditioning. No, it didn't have air conditioning because we hadn't 60 cycle in that area yet. And I got ahold, through recommendations, of an architect. I believe he came from Baltimore. He came down there and I told him I wanted to save

the outside aspect of the house, but let's modernize the inside. The house was on stilts at that time. And I also wanted the view of the house to be improved by having terraces put in front of it and additions to the landscaping. And so he did a lot of design and we let the job by contract. In the meantime, I moved into the brand new lieutenant governor's house as soon as it was finished. And while we lived in the old governor's house, oh, for close to a year, we were out of it for almost another year, and during the height of the construction there was nothing left but the shell of that house, but it finally had a basement under it that had washrooms and liquor storage and a place for the servants to sleep. It was beautifully done inside, changed the main stairway, the upstairs was fixed up, a major air conditioning plant in the basement, and it ended up we had a facility that was highly usable. Certain areas like the public reception areas I did not air condition because there was lots of breeze. It was high on the hill. But we ended up with a damn good house at a cost of, which I don't know if it ever came out or not, but about two-thirds of a new similar type of mansion. It cost about \$300,000 to do that. And then we completely refurnished the inside. New furniture. We decided on what type of tables. We bought rugs and carpets and pictures. And one little private apartment where VIPs were kept was completely furnished in very fine Japanese antiques. Just a lovely, lovely place.

So we saved the old mansion and it's still there.

Q: Very nice.

A: So. That subject is the job of the governor and the president. And the next item I was going to discuss was relations with Panama. Why don't you ask all your questions having to do with that?

Q: Well, I want to ask you a followup to what you have been talking about, some of your accomplishments.

A: Well, immodestly, of course, but they should be on the record.

Q: I appreciate you saying it. You got involved in a fairly large excavation project, didn't you while you were governor there?

A: Yeah, that was the--

Q: Culebra--

A: The Culebra Cut thing that I talked to you about.

Q: Okay.

A: Widening from 300 to 500 feet.

Q: Didn't you say that it actually got started?

A: Oh, yes, I had the first two projects under contract. When I left, there were two more projects that my successors did.

Q: I just wanted to clarify that.

You're going to turn your attention to relations with Panama, so I will go ahead and ask you a few questions. Probably you were going to cover these anyway.

I want to ask you about a 1955 treaty with Panama. According to my source, it raised the annual payment that the United States paid Panama from \$430,000 to \$1,930,000. But Panamanians, some of them at least, called this treaty the Chamber of Commerce treaty because it put money in the hands of the upper class only. One clause in the treaty required that the Panamanians in the Canal Zone could not use commissaries in the Canal Zone, but had to do their shopping in Panama City. This, presumably, would have been a real boon to merchants in Panama City, who were evidently losing business to the Canal Zone. Was this treaty a real problem for you while you were governor?

A: It surely was. Maybe I ought to back up a little bit. I brought out the fact that the 1903 treaty was the original treaty. It had many things in it they were highly unhappy with, the Panamanians. We used to maintain the streets in Panama City. We collected the garbage in Panama City. We were able, under the treaty, to move in any time we wanted to in case of civil disorder and anything like that. In other words, we in effect sat over local government when, as, and if we wanted to, and the streets were maintained and the garbage was collected.

There was a treaty in the 1930s that changed some of those things and put back on them at their request, maintenance of their own facility, us not moving in militarily, taking away some of the onerous things they thought of. And also another important thing, the original treaty gave them \$250,000 a year [in] gold, and Roosevelt went off gold. And so that was raised to a comparable figure for the new value or devaluation of gold. It went up to some \$400,000, something like that.

Then came the 1955 treaty. And the 1955 treaty had many, many articles--all of them they requested--but of course they didn't get all they requested during the negotiation time. Prior to that time, our government had set up the organization I described with the government and the Panama Canal Company. What they wanted to do was make it a business organization, which made the Panamanians unhappy also, but it was not touched.

The point you brought up, the Panamanians employed in the Canal Zone but living in Panama could no longer use the commissaries. And this was a horrible blow to them. Their diet involved a great deal of use of oil, cooking oil. We used to get it in 50-gallon drums and put pumps in the drums, and they'd come by with their gallon jugs and "buy ile," as they called it. Oil, rice, pigs' feet, chicken necks, we used to import those by shiploads and sell them to the commissaries, and we were able to do it at a pretty low price. But Panamanian merchants were very unhappy, of course. As a part of the treaty they insisted on, and we agreed, that the employees who lived in Panama could no longer use the commissaries. And that causes the comment that you made, that it was for the rich guys and not the poor guys.

There was another clause in there that we would foster to the maximum extent possible, and these are not the words, the ability of Panamanian merchants to get contracts in the zone and to sell supplies to the zone. Well, first thing that happened after I got there, we'd advertised a big contract for rice. And the low bidders were U.S. firms; we raise a lot of rice in this country. And the Panamanians were about third low bidder at an appreciably higher price. And I awarded the

contract to the low bidder, of course. And they went as high as the State Department to protest that award saying that I should have awarded it to the Panamanian merchants, who were going to buy the rice from the same place and just tag on their little agent's fee. It was remarkable to me the pressure I got from the State Department to maybe bend a little to give it to them. Well, as a business man I couldn't do it. I just couldn't do it.

They raised potatoes in the central part of Panama, many miles away. The cost of the potatoes was about three times the imported value of the cost of potatoes from Maine. Well, I couldn't buy their potatoes. There were other items in that treaty that I just don't remember at this time, but it had a great impact on the residents of Panama who worked in the Canal Zone.

There was another group there that I always felt a great deal of sympathy for. I told you at the beginning that the canal had been built by Jamaicans and other islanders from the Caribbean, and the contract with them provided that after the work was finished they would be taken back to their homes. What I'm about to say is not hearsay, but it might not be totally exact. But it's the general picture of what happened. A great many of those people had been in the Canal Zone working for, oh, four, five, six years, and the Panamanians importuned them, not to go back, a large group of them not to go back, but to stay there. And a large group did stay. And of course they got retired pay from the the Panama Canal Company or government, I forget which. But it was a very, very small amount of money, because pay in 1914 was small compared to 1956. And a lot of these people lived in poverty, but they were sort of worked over or, I don't know quite the right word, but some of the lower class Panamanians would like to move in with them and try to get a piece of that little retirement pay they have. They had some minor, minor privileges in the hospitals in the Canal Zone, but I think the treaty took most of those away from them, and there were severe health problems. These dear old people would visit me and they'd always put their best clothes on, whatever they had, to see if there wasn't something that I could do to help out in the problems that they

had. I think subsequently things were done for them.

Well, there were other items. Of course, again, this is surmise on my part, but I think again it's correct, when the Panamanians, and I think most Latins are this way too--they're wonderful people by the way, but watch out for them on business--when they go into negotiations for a treaty, there's always give and take. And when the treaty is finally signed, well, they asked, for instance, that the "in perpetuity" clause be removed, and we didn't do it. But they asked for it, and they asked for a great many other things that were not in the final treaty. The mentality was that they were still getting all the things that they asked for at the beginning, you get my point? So there were arguments after arguments. Fortunately, I had a very wonderful man by the name of Paul Runnestrand, who occupied really a position of secretary of state of the Canal Zone, chief of protocol, that sort of thing. He lived through all the treaties, he's been down there for years, and lives over in Winter Park by the way now. And many of those problems were settleable by reading the treaty. No matter how good you are in devising a treaty, it still had to be translated into Spanish, and a great deal of time takes place making the proper Spanish word equal to the proper English word, and there are always arguments on that sort of thing that went on all the time.

I had a dairy, 600 cattle. Every now and again we'd get a gift. Sherm Adams gave us a wonderful bull, by the way, after he was down there. It was a wonderful, wonderful dairy. The cattle were kept in great shape. We had all the proper equipment, all that sort of thing. And we produced milk, which first went to the commissaries and then the military, but there generally was enough for both the commissaries and the military, and this offended the Panamanians to no end because they also had dairy cattle. Now, their dairy cattle weren't kept up in any sort of shape at all. Where we'd get a gallon a day, they'd get a quart a day out of their cattle. But they did have an industry, and it offended them to no end that I produced milk and my predecessors produced milk in the Canal Zone and we wouldn't buy their milk. And that was the truth.

We would import powdered milk and pasteurized milk and other milk products, but generally wouldn't buy their milk mainly because when we inspected their facilities they were not up to the standards of sanitation that we required in our own equipment. But finally, I think one of my successors did away with the dairy.

I had a, this might almost make you laugh, but we had quite a chemical operation that produced pharmacy items. One of the favorite things was a recipe that had come from canal construction days of a bottle liquid that was universally used to put on your face and hands to do away with the effects of heat, and it had great cooling powers. And, golly, we could hardly keep it in stock. We made our own aspirin, we made our own mouthwash, we made everything that you'd find in a drugstore at about half or third the price of comparable items that might have been imported from the states. It was a complete drugstore operation, and the price that it produced and still made us a profit was so far below the other kinds of stuff that there was no way there could be competition.

Under the philosophy of the treaty, they saw the big market in this cooling lotion and we said, "Okay, we'll give you the makeup of the stuff, and you'll produce it, and we'll see how it works out." Well, one of the first things they did was take out the eucalyptus or something else that was a prime element -- that people were used to having in the product, you know, part of the smell and so on. They got very irritated when we refused to put their stuff on the stores market. I think that operation is now gone.

We had an ice cream plant and made every kind of ice cream there was, modern ways and all that sort of thing. How long that lasted, I don't know but it was still going when I was there because when Mrs. Potter wanted peach ice cream, we got peach ice cream.

Q: Did you get to know the Panamanian president while you were there, Ernesto de la Guardia, Jr.?

A: All right, let me go down this subtitle I have of "Relations with Panama."

Q: Okay.

A: The Canal Zone was the most important industry in Panama. Panama, I don't remember the exact figures, but if you looked at the exports and imports, you'd find that their imports were always much higher than their exports. They didn't export an awful lot. The balance came from income from the canal. We hired their contractors. We purchased some supplies from them. Our payroll went over into Panama, a very large payroll, by the way, went over into Panama. And so we were to them, in our minds at least, the most important industry in Panama as far as their financial stability.

Incidentally, we also furnished them water, which they, in the last two years I was there, never paid for. They thought it was their water even though we purified it and pumped it and put the mains in and all that sort of thing.

We were the only Latin American country where our position as a whipping boy came ahead of the fruit company. In most Latin American countries, the fruit company is the one they beat over the head and try to get more monies from. But we were top drawer in the beating department because they always wanted more out of us.

That establishes, I think, the position of the Canal Zone with respect to the Panamanians financially but not politically because they always resented the fact that they didn't own the canal even though they had signed that treaty. I won't go into the details of the 1903 treaty. It's been published too often, and is done so well in The Path Between the Seas. But, because of public relations aspects that I have and my own personal policies, I became a very popular person in Panama, and the governorship was respected. And I'm not being immodest in saying that. It's true. I was a great friend of de la Guardia's predecessor, President [Arnulfo] Arias. In fact, Arias called me up one night in the middle of the night and said that his son and some guests were out in a boat and they hadn't returned and they felt that they might be lost at sea. Would I please help? So I got my tugs and boats and sent them out to the Pacific Ocean, and we searched the ocean and finally found

them ashore many miles outside of Panama. Their boat had gone bad and they had floated ashore. I would do that sort of thing, and I think he would have done similar things for me.

When we first went down there, I did the protocol thing of calling on every ambassador, myself, not Mrs. Potter, and there were 22 there. And then they returned all the calls to me. These were five-minute calls. You just went in and complimented them, and said how glad I am to be here, and they came and called on you. It's a diplomatic rote that happens every time a new ambassador goes to any state capital, and a time waster. But you got to know people that way.

And when they had receptions, we were invited to the receptions. I had, in those days, a very large entertainment allowance.

Q: Who was your predecessor?

A: [John S.] Seybold. With President de la Guardia, we were boon companions, close, close friends. Every now and again we'd play golf over in the Canal Zone, and after we played golf we'd go back to the governor's house, he'd call his wife up and say, "Come on over, we're staying here, we're going to have some cheese and something to eat." And she'd come over, and we'd go on into the evening. I'd get some of the Canal Zone people in and we'd have a party of 10 or 15 people. In the meantime, the front yard was occupied by armed soldiers. The predecessor of Arias had been assassinated in Panama, you know. If there was a sudden noise these guys were going around the house with their machine guns, but that was a way of life. Any time an ambassador was going to decorate the president, all of us were called to go to the presidencia no matter what time of day or night, and we'd line up in the presidencia and a medal would be awarded, and we'd all shake hands, and then we'd all go home.

With the business people of Panama, the same sort of thing existed. We did an awful lot of entertaining. I went through my diaries this morning again, and page after page for four years, this person called, and we went to that party, and we had this party. We had a great capability there

because an important part of the Canal Zone was the Hotel Tivoli. At the Hotel Tivoli, one of their first guests was President Roosevelt, Teddy Roosevelt. It was another one of those big barn buildings with no air conditioning. Mrs. Potter took this on as a project because she loved the Tivoli, and we improved the big patio in back, and we started to air condition some suites, and fixed it up so that it was viable. But it had a darn good cast of chefs and waiters, so that at the governor's house we had a butler and a cook and a maid, a very small staff. But when we entertained, we would move the staff of the Tivoli over there, and had great competence for our dinners. We could seat up to 24, I think, in the dining room, and did it frequently. Mrs. Potter worked out the menus, and got them the recipes, and supervised to the extent that when we left, the maintenance department gave us a party down in one of the maintenance buildings. And the head of maintenance, Duncan Brown, Colonel Brown, came out and said he wanted to give Mrs. Potter her fourth whip. And he said, "You've worn out the other three." And he gave her one of these big bull whips, you know.

Q: Do you still have it?

A: I guess it's around somewhere, I don't know. She is a perfectionist as you'll find out. She knew her job. She not only developed into her job, but she knew her job, and she's a great hostess and a great governor's wife.

Q: Could I just interrupt you right there for a moment because you do bring up a subject I actually wanted to ask you about? Do you think that when you were approved to become the governor of the Canal Zone, that one of the things that General Sturgis had in mind was your ability to get along with people? They were looking for a person who had a kind of a PR ability.

A: Outgoing, yes. I'm sure that was a part of it.

Q: And how about Mrs. Potter?

A: Same way. Very, very much a lady. One of the great ladies that I've ever met.

Q: Said objectively.

A: Yes, sir. I'm not comparing that with a housewife capability, but as a manager and a doer of things.

Q: Okay. I'm sorry, go ahead.

A: In my relations with Panama, of course, I told you about Paul Runnestrand, who was in effect my secretary of state, but in dealing with the military I always had what was called a military assistant. And while I was there I had three of them. The first was Major Dave Smith, and with his wife Gloria he assisted us in discovering the complexity of the job. They are an outstanding couple with whom we still maintain contact. The last one was Colonel H.C. Jones, he was then a major. He and his wife were just wonderful, wonderful people, and he took on the job of being my right hand, and his wife took on the job of being Ruthie's right hand. When we gave a party, she assisted in the planning and she manned the sign-in book. She saw that the guests came in and were introduced. She stood in the line for the reception and kept things moving.

Subsequently, he went back to the Corps of Engineers and eventually became District Engineer in New York City. We kept in very close contact because of our mutual respect for each other. They were darn near son and daughter of ours, though they weren't quite young enough to come into the category, but we always have felt that way about them. And he said that he was going to have to get out of the Army. And I said, "You're silly to get out of the Army because you'll get to be a general officer. There's no way out." He said, "I can't afford to stay in." So he retired with 22 years' service, and I employed him down here as chief of Civil Works for the Reedy Creek Improvement District, which is the government of the Walt Disney property. And, subsequently, he went over to company employ rather than District employ, and became head of the utility companies, which include the water, electricity, the distribution systems, everything having to do with utilities. It's a company privately owned by Disney, but he became head of that and did such a good job that within the last six to eight months he's been appointed to head the project in Japan where we're building a

theme park for the Japanese something like Disney World. He will be moving out there permanently quite shortly. I'm very proud that I had something to do with that on both sides.

As I told you, there are about 22 ambassadors, and we were continually going to embassies and they were continually coming to our house. One of the funny things that happened, the Spanish ambassador was a career ambassador on his last tour. A rather elderly man, and his lady was a pure Spanish type who wore the black mantilla over her head and spoke not a word of English. The ambassador hardly spoke any at all, but she spoke none. And the first time we went to their embassy for dinner or what have you, I suddenly looked up and there was my wife sitting on a sofa with his wife, and my wife doesn't even understand one word of Spanish and they were chattering away as if they were life-long friends. And I just couldn't understand it, and I kidded her about it, but believe it or not the old lady would call her at the house and they'd chat over the phone. Neither one of them knew what the hell they were talking about, but she was having trouble with one of her daughters and we were having trouble with one of our daughters and they were probably just going on about those problems. I will never be able to understand what they talked about. [laughter]

Q: You talked about the ambassadors to Panama coming to pay respects to the Canal Zone governor.

A: Yes, and I called on them first. Oh, that took a week to get them all done, you know. Some of those were pretty nice guys. Some of them were just holders-on, you know what I mean. But there were 22 of them there at that time.

There was a social relationship with Panama, and we made dear friends there who are still dear friends. One of them is the Huertematte family, one of the dowager families of Panama. The sisters married presidents. Bobby Huertematte, who graduated from Yale, still remains a very dear friend and his sister also. He at one time was one of Dag Hammarskjöld's two deputies and was in the United Nations for quite a while. Charming fellow. I bring him up as just an example of the fact that

there's great graciousness in Latin Americans, great graciousness. And they're lovely, lovely people to have to do with socially. But of course they're electric when it comes to business and expressing their feelings in other matters.

One of the things that always caused some problems was what is mentioned in the treaty as titular sovereignty. We had, under the treaty, occupied as if we were sovereign, in those words. But they retained what they said was titular sovereignty, and that derived from an idea that if we ever moved out, it would be theirs again. So they objected very strongly to the fact that no Panamanian flag was flown in the Canal Zone. Panamanian-type schools, the local rate schools, always had a Panamanian flag crossed with a U.S. flag, but the flag in front of the governor's house was a U.S. flag, and in the Canal Zone there was no Panamanian flag. And this got to be a source of bitterness. President Eisenhower finally agreed that there would be one Panamanian flag flown and it would be in a little square between Panama and the Canal Zone, in the Canal Zone in front of the Tivoli Hotel. Incidentally, under the treaty, we could no longer take commercial guests who were visiting Panama into the Tivoli Hotel. It used to be the Tivoli would be full all the time. People would come down on boats who knew about the Tivoli, and they would come there and stay. But under the treaty we could only retain guests there who had business in the Canal Zone.

Another thing, I don't know if the treaty touched this, but we had the mailboxes--we had a postal system. We issued our own stamps. I have a complete collection of the stamps that were issued from the time that I got there until we went under the new treaty. But we issued our own stamps, ran our own postal service; our stamps were beautiful things. You should see some. But in the post office nearest Panama City there were mailboxes. And despite the fact that they didn't like things U.S., a large number of those boxes were rented by prominent people in Panama, prominent Panamanians. And that way they could get mail and make sure that it wasn't going through any examination by the Panamanian postal system. And under the philosophy of the '55 treaty, I suggested to most of them that

we would close those mailboxes to their use, and, oh, gad, I got calls over at the governor's house, "It's not necessary to do that." I guess I've covered all I can think of on our relations with Panama up until we get to the time of the riots.

Q: Well, let me just go back then and ask you a question that I first posed to you a few minutes ago. Your relationship with de la Guardia?

A: Personal, excellent until the riots. After that I never saw him. I'll go into that a little later.

Q: What did you think of him as a person, I mean?

A: Charming, and she was a wonderful lady, just a wonderful lady. But I said, I've never seen him since the riots, and we were together at least every week up until then.

Q: You had a public information officer down there who you evidently thought very highly of.

A: Will Arey.

Q: That's right. He must have helped you quite a bit during those riots later on and tried to defuse some of the anti-Americanism.

A: It was impossible. It was being treated at a State Department level. He did all he could, of course. You know he became assistant head of the U.S. Travel Service.

Q: He, evidently, in an attempt to mollify some of the protestors, Panamanian protestors, he had lampposts on the fourth of July in the Canal Zone painted with both U.S. and Panamanian flags. Do you recall anything about that?

A: Oh, yes, vaguely.

Q: This is evidently something that received some very favorable response on the part of the Panamanians. You reigned over a little ceremony while you were governor of the Panama Canal Zone. The one-billionth ton of cargo came through the Canal Zone on the Edward Luckenbach.

- A: That's right, and we had a great celebration at Miraflores Locks. We issued first-day covers for it. I signed a lot of envelopes with the billionth day on it. It was quite a ceremony.
- Q: I'd like to go over some personalities again with whom you probably had some contact while you were in Panama. Some of these people were on the board of directors of the company. Wilbur Brucker, Secretary of the Army?
- A: He and I became good friends, and he visited down there several times. He always stayed at the house. Did a lot of shopping down there. He was, quote, "Secretary of the Army." He knew his position. I mean, he was not always on time for things, for instance. But I respected him. He came from Michigan I believe. Had he been governor of Michigan?
- Q: I don't know.
- A: I have a signed picture of congratulations from him.
- Q: Congratulating you for what?
- A: Oh, for a wonderful job, you know the kind of thing.
- Q: For your work in the Canal Zone?
- A: Not only that, but when I retired from the Army, he, himself, officiated at my retirement in his office and pinned on my final medal, the Distinguished Service Medal.
- Q: What can you tell me about George H. Roderick, Assistant Secretary of the Army?
- A: Pinky, Pinky Roderick. He was the man deputized by Brucker to be on the board of directors and to be chairman of the board of directors. Came from Michigan, too. He'd been high up in a furniture organization there. Knew his job. A very charming guy, and also his wife. Very, very fond of them, and really couldn't see enough of them.
- Q: Ogden Reid?

A: He wasn't on the board, but I knew him and respected him to no end. Beyond that I really can't say much. He was the--oh, wait a minute, wait a minute. He was the owner-operator of the Herald Tribune in New York.

Q: That's right.

A: Oh, yes. Yes, indeed. Liked him a great deal. He was very understanding. When I went to New York for the World's Fair I saw him there a couple of times.

Q: He evidently was on the board of directors for a while according to some information I got.

A: Maybe so.

Q: Julian L. Schley, who, of course, was a former Chief of Engineers?

A: Yes. Also, he'd been a governor, and he was on the board for a while. And he used to come down there, not frequently, but often, and he and his wife would always stay at the mansion with us. He always insisted that his ex-governorship did not take precedence over my then present governorship. And even though he was much senior to me and had been Chief of Engineers in my younger days, he would never sit on the right of the car. He made me sit on the right of the car behind the governor's flag.

Q: Some of these other members of the board of directors I don't know whether you had much contact with. Let me just go over some names. If they seem to be somebody whom you think you would like to comment on, go right ahead. Do you recall John H. Blaffer?

A: Oh, John Blaffer's father and one or two others formed one of the biggest oil companies in the United States. He was not a poor man. An extraordinarily interesting man. Besides inheriting a lot of wealth, he made so much himself that he didn't take any part of the inherited wealth from his mother and father, passed that on to his children. Had a great estate in Houston, and a 16,000-acre hunting preserve in Alabama. And I went down there twice. I visited him in Houston.

Even after I left, we maintained a friendship. I went out to visit him before he died. He died of cancer of the esophagus. A very close friend of mine.

Q: Robert P. Burrows?

A: Yes, from either New Hampshire or Maine.

Q: Manchester, New Hampshire.

A: Yes, New Hampshire. Very well thought of fellow, very pleasant guy.

Q: What about Ralph H. Cake, Portland, Oregon?

A: One of the most interesting men I've ever met. In the Republican party, he was a kingmaker. He had a great deal to do in the inner circles of the Republican party. Was a close advisor to Nixon, who did not always follow his advice. Very highly respected. Had an insurance company out in Seattle or Portland. Portland I believe. We maintained friendships and used to confide in each other for years afterwards until he died. I think he was the only one when they changed the whole board of directors under Kennedy, the only one who was reappointed on the board.

Q: Major General Glen E. Edgerton?

A: Oh, yes. Edgerton.

Q: Edgerton, retired by that time.

A: Yes, and I'd known him for a long time. I admired him and respected his advice at all times. Top-drawer officer.

Q: Was he a major general in the Corps?

A: Yes.

Q: How about Howard C. Peterson?

A: He was a big banker from Philadelphia and a valuable member of the board. All of these people were valuable members, and they used to be quite religious in coming down to the meetings when we held

them in the Canal Zone.

Q: And Charles S. Reed from Omaha?

A: Oh, a great friend, but not quite of the caliber of these other people, but in Omaha quite an important fellow. Cantankerous, sort of acid at times, severe ideas or strong ideas that we shouldn't give in an inch to the Panamanians and that sort of thing.

Q: Ralph Tudor?

A: Yes, Ralph Tudor who eventually became Secretary of the Interior. Had an engineering firm in San Francisco. Of the same quality as Jack Sverdrup. He became frustrated in the Interior because the bureaucracy underneath can always strangle. No matter what you want to do, the bureaucracy can go sideways from you. Wrote quite an article in the Saturday Evening Post on his experiences. Stayed there, I think, about two years.

Q: Then there's the American ambassador to Panama, Julian F. Harrington?

A: He was the ambassador during all the time I was there. A career diplomat, who thoroughly understood the position of an ambassador. He met me at the plane when I arrived, was always available for consultation. He didn't particularly appreciate the probably more important position with the Panamanians of the governor of the Canal Zone. I know he didn't approve of things I did.

Q: Anything in particular?

A: No, but he didn't. He would have liked it very much if I did everything through the embassy rather than going directly, but I wouldn't work that way. Subsequent to my departure, the State Department was able to establish a policy that the ambassador was more important than the governor.

Q: Who was your lieutenant governor?

A: I had two of them. When I went down there, Colonel [Herman W.] Schull was the lieutenant governor. He and I had been classmates at West Point, even

roommates. We kept in contact over the years. My youngest daughter married his youngest son in the Canal Zone. One of the great weddings that ever took place, I'm telling you. At that wedding, all the ambassadors were there. We had a band, Luco Ascaraga, who was one of the great musicians. He plays the organ. And his two sons do the maracas and the drums. He plays exciting music. Remind me, I'll play one of his pieces tonight. Travelled to the United States each year for a series of concerts. His gift to my oldest daughter who was married in Washington, D.C., after I left the Canal Zone, was to come up with his conjunto and play at her wedding. That was his gift. Another gift was from Bishop Goodyn, who was the Episcopal bishop, not only of Panama but of other countries down there. He married Susie, my youngest, in the Canal Zone, but when Joey was going to be married I asked him whether it wouldn't be possible for him to come up to the United States for a retreat, you know, a religious retreat. And he said, "No problem at all," and he came up and he married Joey in Washington.

Q: Very nice.

A: There are other people, too. My other lieutenant governor was Colonel [John] McElheny. He and I were not the most compatible people in the world.

Q: He was there during the anti-American riots?

A: Yes.

Q: Do you have some notes about the riots and their origin that you wanted to get into?

A: Yes.

Q: Why don't you elucidate that if you'd like, and then I will follow up with some questions afterwards and sort of fill in anything.

A: The next subject I'd like to discuss because nationally it was of considerable importance and had a great effect on my career, is the riots that took place in Panama against the Canal Zone in 1959. I have discussed in some detail my position with respect to the Panamanian government and the makeup of the population of the Canal Zone, and their differing philosophies.

The U.S. wages in the Canal Zone were based on U.S. wages in the states for similar expertises, increased by percent. The residents of the Canal Zone lived a good life. The wages of Panamanians employed in the Canal Zone were not as high as the U.S. citizen wages. An attempt was made to judge them more on what was paid for similar crafts in Panama but our scales were higher than was paid for similar jobs in Panama. The fact remains also that the more elevated jobs were held by U.S. citizens, and very few Panamanians could aspire to getting to a position in management in the Canal Zone. Another example: the wages of a carpenter in Panama were so far below the wages of a U.S. citizen carpenter. And there were some in the Canal Zone, the difference was laughable. Nevertheless, the level of living in Panama was also much below the level of living in the Canal Zone. The level of housing in the Canal Zone was much higher for similar types of employment than for the people in Panama.

What I'm trying to emphasize is the divergence between the way of life in one area and the way of life in another area. This caused some dissension between the Panamanians and ourselves, but the greatest dissension was the remaining elements of the 1903 treaty. The principal one was, I think, Section 2, which said the United States would occupy the canal "in perpetuity," and that sovereignty over the Canal Zone would exist in the United States to the exclusion of the exercise of any sort of power by Panama.

Panamanians gave us the zone in 1903 because we had assisted in the separation of Panama from Colombia. Panama had been a part of Colombia. They revolted against Colombia several times but it never worked. Colombia would always send up troops and crush the revolution, which always took place in Panama City because there was no other city of any importance. But due to Roosevelt's very great interest in having the canal and building the canal, we were able to so impair the ability of Colombia to get to the site of the revolution that it was successful, and we acknowledged the existence of the Republic of Panama almost immediately. And because of the distance between Washington and Panama City; and the fact that you

could only get from one place to the other by boat; and the fact that in their euphoria the Panamanians had given ambassador plenipotentiary rights to a Frenchman, Philippe Bunau-Varilla, who had been in charge of the French operation. They told him to go up north and generate a treaty, which he did, and which the Panamanians to their horror only saw after it was signed.

Nevertheless, let me emphasize the euphoria that took place in Panama when they were recognized by the United States as a separate nation, independent. Nevertheless, starting shortly after the treaty was signed, the idea of the United States owning "in perpetuity" this piece of land, which was the most valuable asset that Panama had and still has, started to grate. And many attempts were made in the treaties of the 1930s and 1955 to do away with that paragraph, which the United States would never do.

Now, we'll jump to the university system. In Latin America, universities are autonomous from the government. The government has no control over the university. They fund the university, nevertheless they cannot move in with police, they cannot have anything to do with the management of the university, and any attempt by soldiers or police to enter the campus causes riots of considerable importance. This happened in Mexico subsequently, and received quite a bit of newspaper coverage in the United States.

So this idea of the unfairness of the "in perpetuity" clause was a subject of considerable discussion in the university. Another peculiarity of university life, no matter how old a person was, if he took one course, he was a member of the student body. And by hanging around a fair amount of time he could become president, or vice-president, and be the driving force in any student organization. And people of a leftist ilk had taken over, as they had in other countries, the political action of the body of the students. There was one professor in particular who was continually inciting the students and the populace also--since there was not a dormitory in the university, people lived at home--to do something about the "unfairness" of the U.S. control of the zone.

It started to come to a head. I had a very good sort of FBI-like operation under my control, which kept me very closely informed as to things that were happening in Panama. And it all came down to the point six months ahead of time that there was going to be a real drive to get into the Canal Zone and plant flags and establish their sovereignty at the time of their national holiday in November. The details of what they were going to do became quite obvious. There was going to be a mass movement into the Canal Zone. Goodness knows what could have happened, but basically that was it. It was obvious that there was going to be damage and there was going to be breakage and burning.

So I prepared a plan to keep these groups out of the Canal Zone on both sides of the isthmus, Balboa and in Colon, though the problem there was going to be minimal. The plan involved four phases of action. The first phase was going to be sort of passive with my policemen walking around on Fourth of July Avenue, the curb on the Panamanian side being the boundary of the Canal Zone, a very indefensible position. The second phase would have been mobilizing more police and actively preventing them [the students] from entering, [and] the use of tear gas or fire hoses if necessary. The third phase was going to be the alerting of some troops. The commanders agreed that I would occupy the position of the governor of a state and the troops would be in a position of National Guard subject to my call.

Q: What was the fourth phase?

A: And the fourth phase would be barb-wiring the street and taking up an active defense against any attempts to get across.

The plan having been generated and examined by people who were interested in the Canal Zone, including the military, I asked for a meeting in Washington with senior members of the State Department and the Defense Department and any other interested department to review the plan and discuss it. We had such a meeting. I told them of my information of what was going to happen, how it was going to happen, and what the results might be if it did happen. The plan was discussed in detail

and received approval. There was only one question by a member of the State Department staff who asked couldn't I let them into the Canal Zone just a little bit? And I had to tell him no, because on our side of Fourth of July Avenue and all along the street there was considerable housing, and it's almost impossible without serious conflict to drive rioters out of a housing area. It has to be done piece by piece. There would be burning and destruction. There was agreement reached at that top level.

So we were all prepared. The logistics were worked out with the military, my police were alerted, the fire department was alerted. We were ready when the thing started.

Q: Excuse me. Let me interrupt to ask just one question. Was President [Dwight D.] Eisenhower alerted as to this plan, do you know?

A: I suppose. As I understand it, Presidents are alerted of all events of importance and foreign relations policy every morning. Whether he knew the details or not, I don't know, but I assume maybe he did. You must remember that Milton Eisenhower was very close to the President and he knew what could happen. I had known him and talked with him, but maybe not about this specific subject.

The riots started and the plan worked out perfectly, but within the course of a day I had to go to phase four. I had 180 policemen, but I only was able to mobilize about 100 because of needs elsewhere.

Q: This was on November 3, 1959?

A: Yes. One of the reasons why we had to go so rapidly into the following phases is that many of my policemen were going to the hospital with wounds resulting from rock-throwing. Riot preparation for rock supply involves casting a thin layer of concrete and breaking it up before it has its final set, and getting pieces of rock that are jagged on the end and of proper size. And these were being thrown at the police and hitting them and hurting them, and the police force was being reduced importantly. The tear gas didn't work because the wind

was blowing in the wrong direction. The hoses did work as long as we could get hoses in the right place.

Nevertheless, a huge mass of people, 4,000 or 5,000 people, did gather in that particular small area. So we went into phase four quite rapidly, and by that evening we had barbed wire along the Canal Zone and troops in field dress were manning--visibly manning--the barbed wire. This of course was just great for the media.

The thing that ruined my relationship with President de la Guardia was that as a part of my intelligence, we were able to monitor the Panamanian official radio, and we heard the president make the decision that none of the Guardia would show up in the area where the rioting was taking place. They could have taken care of the problem easily. But they were ordered to stay away. There's no police force in Panama except the Guardia Nacional, which is the National Guard. They are the local police in every town. There are no local police anywhere except the Guardia. But they never showed up; they were ordered not to show up. We taped the radio messages that directed their nonparticipation.

The press did a great service to themselves but a disservice to us. In one instance, a little girl ran across the street to the barbed wire and in theory slashed her wrists down the barbed wire, and then fell down in the street in a faint, and the photographers were there. This picture was published as far away as Vietnam.

In two or three days it was all over and things had settled down again except for the aftermath. It totally destroyed my relationship with the president, and I never saw him from that day on until I left some seven months later. It also caused quite a furor in the State Department. Everybody seemed to have forgotten that they approved the plan, and I was the person on the hot spot. Why did I do this, and why did I do that, and all that sort of thing. The State Department sent down the Under Secretary, other important people from the government. Milton Eisenhower came down. There were considerable discussions and even a reproduction in Time or Newsweek, I think Time, of a

Panamanian cartoon of me with long fangs and smoke coming out of my ears, and what a terrible person I was, and how I was Public Enemy Number One. And any popularity I had in Panama disappeared as to that day, with certain exceptions.

After all the barbed wire was down and the whole thing was over, you can imagine that the employees in the Canal Zone thought I was a great hero, and it heightened their dislike of Panamanians in general. It set up a very bad feeling between the Canal Zone people and the Panamanians, and there was no intercourse across the boundary line for a long time. My people didn't go over there, and theirs didn't come over on our side. Very bad for the merchants in Panama because our people bought a lot of merchandise over there that we didn't have in the Canal Zone, perfumes and linens and very beautiful things that were part of the tourist trade. It probably had some effect on boat tourists, too. Boats generally came through the canal from Colon, stopped in Panama for a day, and the shops were wide open as long as there was anybody around.

But, it took a long time before the serious wounds that existed between the two countries began to even get scar tissue on them. And it was many months before Mrs. Potter and I went into Panama. One great exception to their avoidance of us was that on Christmas Day, Dona Elisa Huertematte and her daughter came over to pay their Christmas call on us in the Canal Zone despite the frigid attitudes that existed.

The businessmen, even the U.S. businessmen, who did business in Panama felt that maybe I'd been too severe only as far as the end results were concerned, but not as far as what was necessary to quell the riots. There was a subsequent riot nowhere near as severe. Some of these were led by Cubans, but the second riot was done on a day when there was a torrential rainfall and enthusiasm faded.

Q: When you say "by Cubans," are you talking about Communist leaders?

A: Yes. Their technique is very good. They get on a

high point where they can direct the public. I think the best film of this is what happened to Nixon when he went to Colombia. Was it Colombia or Venezuela? Colombia, I believe. This happened shortly after my riot, and he could damn well have been killed down there. But if you look at the films of what happened down there, you'll see these men on higher, more prominent places directing the crowds to go this way and that way and shouting through bullhorns. It's a technique and a technology that is very interesting, and works, really works, because a mob is a mindless thing, you know. It will obey anybody's direction. It was scary.

Q: In the wake of the riots, did Eisenhower decide on any concessions to the Panamanians?

A: I think that it was about that time that they decided to put the flag, one flag, in Shaler Circle, which didn't satisfy them of course.

Q: Were more Panamanian products allowed into the Canal Zone to be sold or anything like that?

A: Well, our commissary bought Panamanian products and products that came through agents. You see, in Panama and in other Latin American countries, companies will have local agents that handle their products, handled only to the extent of paperwork; the actual product goes right to the buyer. And this is a very lucrative way of life. I remember one of the Panamanians when he was appointed to the Court of St. James as ambassador had 22 agencies, and his problem was to make sure that when he finished that job he'd still have the agencies when he came home. If you wanted an Arrow shirt, it had to come through one of the agencies over there. No, there was no reluctance on our buying from Panamanian sources whatsoever.

I was under a great deal of examination, but in the final run I even received a letter from Secretary Brucker praising the way I handled it and complimenting me on the great success, et cetera. And more accolades from organizations in the Canal Zone than you ever saw, but of course that was natural.

Q: There are some other questions that I want to ask

you about the Canal Zone. Do you recall any problems with a point called Contractor's Hill, a fissure, and it produced slides into the--

A: Contractor's Hill is at Culebra Cut.

Q: Oh, it is the same cut?

A: Yes. As time passes and the underfoundation, rock and shale foundations are overburdened and start to move a little bit, then you produce a crack at the top and you're liable to lose that whole face. So the policy that was started during construction of the Canal Zone in the 1900s was to slope back Culebra Cut as much as you had to in order to give a stable face. But it always slid and you could see it happening.

Q: I see. Do you recall any investigations or reports by the General Accounting Office about the Panama Canal Company, the GAO accusing the canal company of being spendthrift, and also the GAO suggesting that perhaps the control of the canal be taken away from the Army, suggesting that through the governor the Corps of Engineers somehow ran the canal? And that, it be set up as an independent office, like the TVA?

A: What probably happened, everybody had aspirations to get in the various jobs, but I don't particularly remember that one. I can tell you that I kept a pretty close hand on all our expenditures, our budgets and the way money was allocated and used, and we had a very good accounting system.

Q: You're talking about the canal company as well as the--

A: Oh, yes.

Q: Did you use any of your financing and accounting procedures that you used in the Missouri River Division?

A: Well, they were pretty well established by the time I got down there. You must realize that a part of accounting down there, which had been developed over the years, was keeping track of tonnage, ships that went through, what their manifests were, how

much their tolls were, all of that was not only well in place, but established and rote.

Q: You've been, on and off, involved with the canal through the isthmus for much of your career in a sense, because you started with the Nicaragua Canal survey in the early '30s, and you ended up your military career at least as governor of the Panama Canal Zone. So, the question is, are you, and were you while you were governor of the Canal Zone, in favor of either a drastic enlargement of the canal, or perhaps supplementing the canal with a new canal?

A: It was pretty well established, at that time, and just prior to World War II, we started to enlarge the canal by putting in a third set of locks. It was called "The Third Locks Project," and Jimmy Stratton had a great deal to do with that. There was a lot of excavation done and huge piles of excavation existed in the Canal Zone. It was stopped as the war started because projects like that were not that necessary. But, I became convinced that a new canal, or an enlarged canal, was going to be necessary pretty fast, and by pretty fast, I meant within 20 years. And, I initiated a set of studies, seven volumes I think, to analyze how we should go about providing either another canal or fixing up this one.

This was in '58, I believe, and I became familiar with the great capabilities that nuclear explosions gave us, and I had several conferences with Dr. [Edward] Teller and others. I don't know how many canal studies had been made before my time, but many, and all the information as to alternate routes already existed. So the job was pretty simple as far as evaluating what routes were capable of being looked at. And, we had the ability to move large quantities of rock with nuclear explosion, which could be made safe as far as spreading of the nuclear particles. Teller convinced me that this would be possible--and as I say, we worked very closely on this--and came to a decision that there was a route through Colombia just south of the Panamanian border, which would be twice as long. But we would have to go through only one ridge, the rest of it being low-lying ground that was easily accessible by big dredges and not very highly occupied. Very few people in the area where

it would go, and none at all, practically, where we'd have to go through the rock of the mountain chain.

My idea was that we would build a canal at sea level that was wide enough so that maintenance would be minimal after it was finished, and that we could do away with the big resident population. The canal company, in my time, had 14,000 employees, and that includes schoolteachers, of course. But, we could do away with the big resident population. We could do away with the idea of big towns and fire departments and police force and all that. All that we'd really have to have is some sort of an organization that would keep track of the ships going through and the tonnage on them and a way to collect tolls. I'd even thought that once it was finished, we might turn it over to Colombia to operate and get out of Panama. I presented this plan informally to members of the Congress. They thought that six of the seven volumes were awfully good. The seventh, going through Colombia and using atomic weapons, they didn't want to face up to at that time. But, the whole darn report, less the recommendations, was published as an official government document by the Congress without any recommendations on their part at all. Of course, nothing ever came of it, until we had the International Oceanic Study Commission, which I was not a part of, which again examined all these things, and examined nuclear explosives and came to the conclusion that the expansion of the Panama Canal, to a sea-level canal, not only was feasible but that would be the project that we'd go ahead with. I might say that the idea of sea levelling the Panama Canal had been studied in great depth, and the methods of doing it had already been established, partially by Jimmy Stratton and his group, the complexity of the dredges and how they would operate and what we'd do with the fill, et cetera, that already existed.

When it became known to the Panamanians that there was some consideration of building a canal somewhere else, they got on their high horses, and said we'd have to pay them for what we left. Huge amounts of money. Despite the fact that it would be a very usable canal, and if they could operate and maintain it, they'd get a lot of freight

through it. What I wanted to get out of was the area of dissension, and by building a canal, and somehow or other, having Colombia or the shipping nations participate in the financing, and then turning it over to maybe the United Nations, or Colombia, for operation and maintenance, sounded to me like a good idea. But it didn't quite face up to the national pride of Colombia, which would have come to the fore if such a project was ever initiated.

Q: I have to ask you, since you've been so involved with Panama, what is your opinion of the U.S.-Panama Treaty?

A: Of course, when negotiations were re-initiated by President Carter, they'd been going on for some time. To negotiate a treaty with anybody, it's not do it tomorrow and get it done. It's a long, involved operation, and even after President Carter got in the act and really got things going again, it took a long time to bring it to fruition, and the negotiations were carried on in sort of secret--down in the same island where the Shah of Iran later stayed. The governor of the Canal Zone was not asked into the meetings, but subjects that came up were put to him for comment.

As it began to look like there was going to be a big drive, of course, I had to, as a person with my background, evaluate what I was going to do or say. I was against the idea, the way it started to develop. I never made any speech against it. Senator [Russell B.] Long called me when the treaty was getting close to coming to the Senate, and asked for my opinion. I have a feeling, and I've expressed it before, that a treaty, some sort of a treaty, that not only admitted Panama's interest in the canal, but eventually ownership of the canal, would be inevitable. The problems had mostly to do with making sure that it was still operable, that the terms were fair to the United States, and that the terms on our part were not a reaction to blackmail. Perhaps it's a good thing that it's all over and the thing is established this time, but I think it basically was too rapid. People have said to me, "Well, what were you afraid of, Joe, about Panamanians operating the--Egypt operates the Suez Canal?" Well, the Suez Canal is a sea-level canal

where the only problem is dredging and maintenance. We had these locks that have to be carefully maintained, regularly maintained, and the proper amount of money spent to maintain. The treaty with Panama provides that they get a certain amount of monies, and the only way they're going to get certain amounts of money is by raising tolls, and anytime you raise tolls appreciably, at least to the extent of paying them what they say they're going to get in the treaty, you might start to have a great impingement on the income of the canal.

I used to know Mr. [Daniel] Ludwig. He came through the canal twice while I was there, and we sat and discussed the size of his ships. His ships, his newer ships, couldn't go through it now. Much too wide. Much too long. And he said, "Well, years ago we gave up the idea of planning our operations around the canal. There were two ways: the first way was to go around the horn, which is somewhat impractical. The other way is to have fleets in each ocean so that you don't need the canal. The United States is supplied with oil on the East and the West Coasts and the South Coast. Oil can come from the Middle East for the East Coast, it'll come from Sumatra and those places for the West Coast. And, his philosophy was that planning for larger ships just gave up the idea of either thinking about using the canal or plumping for a larger canal.

Q: What did you think about Mr. Ludwig? That's pretty interesting that you got to meet the fellow.

A: Oh, he was very interesting. I heard that his yacht was tied up there on the Pacific end and that Clark Gable and his wife were guests, and he was there a day, and I sent a message down that important people didn't come and do things like that without calling on the governor! By golly in an hour he was up in my office. I mean, he actually came up there, really fast. And, it happened again, only that time I didn't have to alert him, because he called and made a date and came up to see me. You've got to admire a man that from nothing can generate the biggest shipping empire in the world. And operate it. Fascinating fellow. Positive, like Lucius Clay, as far as his ability to make decisions and get things done, and, of

course, his empire's all over the world.

Q: Before we turn away from Panama, are there any concluding observations, or anything that we haven't covered that you'd like to mention now?

A: Oh, maybe minor, but I told you before how I wanted to provide ways for the people in the Canal Zone to become more attuned to the fact that it was an artificial life. And so when I would hear, as I always did, that prominent people were coming to Panama, or coming down to the Canal Zone, I'd make a date for them to come to the Balboa Theater, and I'd alert all of our employees on that end of the canal to come. In one case, Mr. [George] Meany was there to talk to them about labor in the United States. I think we probably did this a half a dozen times with very prominent, worldwide figures who always agreed to do it, and I'd get 300 or 400 employees, who, of course, got out of work for that time, to come and listen to these people about things that were happening in the United States and the world.

Q: That's nice.

A: It worked.

Q: In 1960, you left the Army. However, there evidently was some talk at the time of your succeeding General Itschner in the position as Chief of Engineers. I'm wondering if you can talk for a couple of minutes about first of all, your decision to leave the Army, and second, about this talk about your becoming Chief of Engineers.

A: Well, of course, as you realize, this is a very personal thing. But I think I'd like to get it on the record because, historically, it may not be important, but as far as the way it changed my life, it was very important.

I think I can say, without too much argument, that I was destined to be the next Chief of Engineers, and, in fact, General Itschner so informed me. He came down to the Canal Zone and stayed with us, and inspected the Canal Zone in my last year, but before the riots. And, he was highly impressed with the way the thing was operated, and what a

fine operation it was, how it was maintained as to engineering, and the projects we had under way, the kind of people we had. He met my staff and talked to them. He told me at that time that he was considering two people to recommend, myself and one other, but after the visit to the Canal Zone, he said, there's no way out, you're going to be my recommendation. That was firm.

Then we had the riots. This, of course, generated all the publicity that I've told you about in the past, and posed problems with the State Department and their relations with Latin America, so sometime in May, I guess it was, 1960, on a Saturday, I came home from my golf game, which I always played with General [Ridgely] Gaither and a couple of others, and Ruthie said, "Sit down," and so I sat down, and she said I got a call from Emma, and he said that the Army had asked him to stay on after the end of his tour. This has only been done once before in my memory, and that's when they tried to keep General Pick out as Chief, when they asked General Wheeler to extend his tour.

I saw what was happening, and on a subsequent trip up to Washington, I asked the Chief how long he was going to stay on. Well, he had no answer to that, he didn't know, as long as the Army wanted him to stay on. I had an idea what was happening. The idea was that they didn't want to have to make a recommendation, but through a little research I discovered that the State Department, unwritten, of course, had indicated that it'd be quite a blow to the prestige of Panama, and create some further dissension, if I were promoted to such a high position. I had no backing for that, Emma never would substantiate it, he would never answer questions as to whether or not that was the purpose of his being asked to stay on.

After I left the Canal Zone I reported in the Chief's office, and I probably knew this ahead of time, to see what I was going to do, if I would wait out this thing. They had no job for me that amounted to anything. I was going to be chairman of four committees: Board of Engineers for Rivers and Harbors, the Beach Erosion Board, some personnel board, and some other board, and that's the only job that the Chief could think up for me to

have. The Army didn't want me because all of my background, except the National War College, since the war, had been on civil works, in relations with civilian entities. So, it was quite obvious that something else had to be done.

Emma did tell me that Mr. [Robert] Moses, of the New York World's Fair, was looking for an executive vice-president, and had approached him to see whether he'd take that job after he retired. Emma already had his arrangements made to go to India or someplace like that. A very important position, which he was damn well competent to hold and carry on, and which I, as an individual, was preventing him from accepting! 'Cause he had to do, he felt he had to do, what the Army wanted him to do, stay on. So, at the same time, I was approached by the World Bank. General [Raymond A.] Wheeler was consultant to the World Bank, and he asked me to come over and talk with him. They had a very important project going on. It was a study in Argentina, having to do with evaluation of their transportation systems, rail, bus, road, and ports. And, the World Bank was going to fund a very extensive study that'd last two or three years. He wanted me to take over leadership of that study. I told him, in negotiations with the World Bank, that I couldn't retire from the Army with just two or three years of future employment. I just didn't feel that that would be enough. If I was going to go with them, I would want a continuing job. You see, salary in the World Bank is tax-exempt, and so, finally, we arrived at sort of a tentative agreement.

They said that they'd keep me on for either five or ten years at a modest retainer after the Argentina thing, but I was assured there'd be other projects coming up. But, at the same time at his invitation, I'd gone up to see Mr. Moses. I visited him twice, and the second time he offered me the job of executive vice-president at a stated salary. I told him I'd have to discuss this with Mrs. Potter, that I was going back to Washington, going to West Virginia to visit her mother, which we did. And, the next day I got a call from Sid Shapiro, who was Mr. Moses' more or less right hand, saying that they'd had a meeting with the board of directors of the World's Fair, and I'd been employed. That's the way Mr. Moses worked. That sort of fixed

things in my mind. I'd been invited to the National Strategic Seminar at Carlisle Barracks. Leslie Groves was up there and Mr. Brucker was up there, and a lot of other people, and I discussed with Mr. Brucker the idea of my retiring. He told me not to do it, to hang on, that somehow or other they'd get this thing fixed up, but please don't retire. But I couldn't see myself taking on the job of chairing four committees. It was obvious that, no matter how anything turned out, the most I would ever get, if I became Chief with a third star and, at that time, another \$100 a month retirement pay. So, I made a decision to retire, and it was done nicely. I refused a parade at Fort Belvoir, which was normal. Mostly, well, I just didn't want to make a lot of troops stand out in the hot sun while I was formally retired. Besides that, they were going to hold a parade anyway for Jerry Galloway. I said I didn't want to go there, so I went up to the Pentagon, and Mr. Brucker retired me, and General Lemnitzer, both of them retired me, and I have wonderful pictures of Mr. Brucker pinning on my Distinguished Service Medal. I think that was on July 30th and the next day, I reported into Mr. Moses and made the World Bank a little disturbed with me.

Q: I imagine so.

You began work for Mr. Moses, then, as executive vice-president of the New York World's Fair in 1960. The first question I want to ask is what are your impressions of Mr. Moses?

A: Well, in my life I've probably had contact with more, but I've only worked for two geniuses, Mr. Moses and Walt Disney. And, both of 'em were a great deal alike; dedicated people, sure of themselves, despised negative ideas. It was fatal to go to them and say, "What you propose won't work," or, "There are too many problems." That sort of thing not only turned them off, but ruined you in their eyes. If it weren't for the fact that I'd worked for Moses and learned my lesson along that line I probably never could've worked for Walt Disney. I wouldn't've lasted long.

On the other hand they didn't want yes men, neither one. A yes man was as good as dead with either one of them, too. They really wanted people to do what

they had thought over and decided. Both of them operated on a committee basis. They had wide differences, of course. But one of the things about Mr. Moses that struck me--and we got into many discussions and talks about matters that didn't have to do with the World's Fair--he planned projects that couldn't even be started before he passed on. He never admitted to the idea that he wasn't going to complete anything that he thought of and wanted to start.

He worked like the dickens on the preliminary aspects of the bridge over Long Island Sound. Arguments started when he even thought about it. It was not going to be done for years and years, and yet he dedicated a lot of time. The other was the cross-island expressway across Manhattan that he'd been working on for years. He never gave up on that. A totally dedicated fellow who'd spent all of his life in public works. His whole life had been spent in some way working for New York State and New York City.

He started out with Al Smith, and the only man I ever heard him express real admiration for, nobody else was the same, was Al Smith! He had good feelings with respect to [Fiorello] La Guardia, but not in the same way as Al Smith. He surrounded himself with people who had learned his way of life and did the things he wanted done as to politics, engineering, instruction. Verrazano bridge was his idea, and he got it done! Oh, many other things besides the World's Fair.

When I joined the Fair he was in charge of the state parks' system. He headed the state power authority; he was in charge of all parks in New York City; he was in charge of federal projects, coordinator for federal projects--or some other title--but, you get the idea. And all those he did with not only resident staff, but his personal staff that was with him at all times.

He was so well respected and I guess famous is the word, because there's hardly anybody who has anything to do with construction of public works who hasn't heard of Bob Moses. When he took on the job of being president of the World's Fair, which really I think he took on because he wanted, after the Fair, to have

Flushing Meadow Park be a greater park than it was before. It was sort of an unoccupied piece of ground. And, during the time that he was with Al Smith up in Albany, they worked out lots of laws that had to do with the Triborough Bridge, the tunnel authority, and other things which he wrote. And he knew the last paragraph and where the fine lines were, and where the commas shouldn't be.

But his followers were in every aspect of the parks of the state. He was the father of a law providing that there be absolutely no commercial signs along the freeways in New York State, and made it stick against argument and pressure on the legislature. You go up the freeways of New York State, and there isn't a billboard anywhere. That's him.

Once, a man of considerable note put a billboard up along one of his freeways along Long Island, on his own personal property. Mr. Moses moved trees in front of it. The fellow moved it. Mr. Moses moved trees in front of it again. He just was not going to be conquered.

On the same token, for a person like myself, and I think this history to date will show you that I had a good chance of ending up my career in the Army pretty sure of myself and confident and having had a lot of authority, all of a sudden finding myself working for a man like Mr. Moses, who I had never met before in my life--it took six months for me to find a way of life with him. And during that six months a couple times things came to a serious head, and it was a question of whether or not I was going to get out. But, I was asked on bended knee by some of his closest people, "Please don't do it," and so I went up to his apartment, and we had a heart-to-heart talk, and I told him just exactly what I thought, and if he wanted me to get out, then damn, I'd get out, but he wouldn't say, so I stayed.

And, we finally became great friends and I always called him Mr. Moses, and he always called me general. But, as soon as the Fair was over, he became Bob, and I became Joe, and we write to each other now and again. Really a great, great man. He had two unfortunate things happen to him in his life. He and FDR became sort of bitter enemies.

He would've been a great Cabinet officer for FDR, but he had no respect for him at all, and neither did FDR for him, and well, they're similar types of personalities. They weren't going to be around each other any more than they could help, and they were never around each other. What caused that dissension I don't know, I may have known at one time, but I don't now.

He was a genius, he had, oh--I talked about summoning people. He was so highly respected that he could summon people. For instance, one day he decided to have David Rockefeller out; he wanted to talk to him about something. The call was put in, and he asked David to come out, and David did come out. He wanted to talk to Jack Kennedy's brother-in-law, [Stephen] Smith. He was summoned, and came. Time after time. I had lunch with these people. Mr. Moses operated differently than Walt, for instance, about lunches.

Mr. Moses had a round table in his office. We had what you might call an employees' dining room, but it was run by the best restaurant organization in New York City. Probably four times a week, myself and other vice-presidents would find ourselves in Mr. Moses' office having lunch. One of the purposes was to practice his speech on us, whatever speech he was going to give. And, it wasn't given to us as a speech, but he walked around that table, and we'd be in our chairs, and we'd just go on like this, and he would pontificate about whatever subject was on his mind, and develop his theory and philosophy. Never asked us for our opinion on the thing, but it would come to us as he went around, and he probably could see our reaction, now and again, somebody might say, "Oh, don't you think you might say it a little differently, this way?" or something like that.

But, also, he would have these people I told you about out to lunch, and we would be there during those lunches unless it was going to be a very private matter. He wanted me to become a part of New York City and New York State. He insisted, and the Fair paid for, my membership in a downtown club, a very prestigious club. He selected the club I was going to belong to, which was the Lotus Club. He wanted me to belong to a golf club out on

the Island, he selected that golf club and got me the membership, and that was the Creek out on Long Island, which cost the Fair \$1,000 a year, and where I played five times in five years, it was just so darn far away!

The Rockefellers on their big family estate were having a to-do one day, and lo and behold he took me up there. I already knew Nelson Rockefeller from the Canal Zone, I forgot to put that in my memoirs, but Nelson visited the Canal Zone twice while I was down there. He wanted to talk to me about relations with Panama and doing things for Panama, and wanted to talk to me privately so he grabbed a bottle of champagne and two glasses full of ice. He drank his champagne in a tumbler-full of ice, and we'd go off in the corner and discuss things. And, when I came up with the Fair, of course, he was governor and he remembered me, but we were never close or intimate or anything like that.

Q: Well, I'm curious of course about how one goes about planning for a World's Fair.

A: Well, again, when I joined it was Flushing Meadow Park, and it was a big open space with nothing on it except some trees and some roads that were left after the '39 Fair, which had been held at this same place. There'd been a lot of groundwork, I don't mean digging the ground, but a lot of planning work done before I got there, but nothing had been firmed up. And, I guess maybe I was of some assistance during that planning work. There is, in Paris, an organization that's existed for a long time called the BIE or BEA, Bureau of Expositions International, or something like that. And, an 80-year-old guy who had formed it, with a secretary, were on the fourth floor of some decrepit building in Paris. They held the shoestrings, and there was an organization and there were bylaws, and there were policies that were pretty well fixed.

And, one of the policies was that a recognized World's Fair could not last more than six months. Our Fair had to last two years to come out financially. And, there were visitations over there to talk to these people, and Mr. Moses, in his wisdom,

decided he wasn't going to bow and scrape to an organization like that, and the hell with them. So, we never received recognition by this international body, which had one bad side effect. Were we recognized as a World's Fair of Class 1, and that's the biggies (there are Class 2s and Class 3s; Class 3 is more or less a commercial fair) every member of the Association would have had to participate. And, there would've been medals given for the best beer and the best this, that and the other, you know, you've seen bottles of liquor that were judged best of their kind at the something or other world's fair.

But, he wouldn't go along with their policies, and so we went ahead, and as a result, we had to implore nations to come to the Fair. Generally, nations don't like to come to Fairs because they're frightfully expensive. Subsequently, I think it was during President Johnson's tenure, we agreed to participate with this organization, so that our Fairs in the United States would be accredited.

And, when I got there they had developed the preliminary master plan for the development of the property. It was approved. Of course, I became a member of the board of directors, also, because of the office, made up of the most prominent New York people, heads of banks, etc. They were the top-drawer citizens, which was essential in order to have the city behind us. It was a considerable education for me. My input into the master plan was not too great except in implementation because Mr. Moses made his own mind up.

Q: Was there special legislation necessary to get the World's Fair off the ground either at the state or local level, that you can recall?

A: I suppose there was. I know the U.S. Congress had to pass legislation to appropriate the money for the federal exhibit.

Q: How about any changes of waivers on building codes and things of that sort?

A: We had to be pretty tight with that. Of course,

the other problem was labor, and both the head of the Building Trades Council and the head of the Electrical Engineers union were members of the board of directors.

Q: But, there were labor problems, were there not?

A: Oh, yes, always. Not serious, because we'd be told ahead of time what we'd have to do to prevent something, and generally we'd go along, even in some cases when it was downright silly.

Q: What kind of labor problems were there?

A: Oh, when you build underground power lines, you have openings into the conduits and have little handholds where you can go down and make connections. During the winter they'd get full of snow and the laborers thought that they were the ones to open them up, and the electricians thought they were the ones to open them up. You know. But nothing like the arguments they had in the '39 Fair, when foreign nations would send over electrical equipment, like motors, and the electricians would demand that they be rewound by American labor!

Q: Were there also problems with bidding?

A: Well, as you know, Bill Whipple was in charge of engineering and construction, and Bill Whipple is a very pragmatic, honest guy with a hell of a lot of brains. He was able to fit into that organization very well. Mr. Moses sometimes would decide what contractor was going to give a certain job, and the dictum would come out that this was the most capable firm and also, the one that would have the least labor problems and understand what we're trying to do, et cetera.

Q: So, in other words, Moses would tell Bill Whipple whom to hire?

A: In some cases. Other times, I think we took bids for elements that didn't make that much difference, for supplies and that sort of thing.

Q: Were most of the buildings finished on time?

A: Almost, but the visual aspects were complete. On

another subject, just shortly after I got there, teams were formed, very prominent New York people, with their wives, five or six people with their wives, to visit foreign countries inviting them to join us. We had an "in" in the State Department because the Under Secretary of State was convinced that the Fair was a good thing, and he told his ambassadors to open the doors. We were able--those teams were able to meet heads of countries. The normal way to approach a problem like that is for the local people in the U.S. to visit the commercial secretary of a legation. Well, you don't get anywhere that way, because he's down the line, and he has to feed up to the ambassador and across ocean and in the meantime the story has changed, and you never get anything done. The only proper way is the way we did it. It cost a lot of money, but it worked in some countries. And we'd have going-away parties as they left on Pan Am with press. The trips were well orchestrated.

Q: What were the reasons for the belated completion dates for the building?

A: Well, the arm-twisting to get people and companies to come in took time, and some of them started pretty late. There was an exhibit, theoretically from Belgium, that actually wasn't Belgium-sponsored, but it started late, and it wasn't all finished by the time we opened. The night before the big parade, which I was going to marshal, behind the Spanish pavilion, the roads were still full of dirt. You couldn't see the street for boxes and trash, and I spent part of that night directing forces to fill trucks to get it cleaned up. We had it all cleaned up by the next morning, but there were still some buildings that had work to do.

Q: Did you ever make recommendations to nations about what kind of displays you would like to see there?

A: No, my area of responsibility was the states. We were so anxious to get them in that we'd tell them the rules and what areas were available, and how much it was going to cost per square foot to rent the land. Generally, it was up to them to put in the exhibit that would serve the purposes of attracting visitors and industry to their particular state.

Q: How about the contacts with the private companies? Did you have anything to do with that?

A: That was mostly Martin Stone. I assisted him in some of them. I used to do most of the groundbreaking ceremonies. Never will forget once I said, "It's a great thing to have Pepsi here," and I was talking at the Seven Up pavilion!

Q: Well, some of those exhibits were spectacular, as I recall.

A: Oh, some of them really were! And, Walt had four there.

Q: Well, why wasn't the World's Fair a financial success?

A: Well, several things happened. The most important thing that happened was on opening day when we heard that the roads were going to be blocked and the Fair picketed, I forget which organizations were going to do it, but obviously for those organizations, the activity would generate an enormous amount of media coverage. We were able to assure that the roads weren't going to be blocked, but when President Johnson came there for the grand opening, there was quite a bit of hassle. I guess it was about the blacks. Civil rights and that sort of thing. As a result, I can give you an example, in Houston, Texas, Braniff had so many hundreds of tickets to the Fair sold, and after all this hassling came out, why it went down to darn near zero in cancellations. Then the hotels oversold, and people came up for reservations and found they didn't have any reservations, and it started out with rather bad newspaper publicity, which lasted a long time. As a result, in planning the second year, we had to be quite stringent with cash expenditures.

In the second year attendance was not good. The first year, though, was beautiful. The second year, the appearance was beautiful, but the crowds never came.

Q: Are there any other comments or observations that you want to make about the World's Fair, about your work there?

A: Of course, it was five years of my life, and it was a rather nice five years. Being a part of a major enterprise, associating with the New York power structure, working with new heroes--all of these were experiences given to few people.

Q: Where did you live while you were working for the World's Fair?

A: Where else but Park Avenue?

Q: Park Avenue? I'm going to ask you a question dealing with a personality who we haven't talked about before. During this time you evidently were corresponding quite a bit with Hanson Baldwin, the military editor of the New York Times. When did you first meet Hanson Baldwin, and what generated this correspondence?

A: Well, problems in Panama. I met him and many other prominent newspaper people, I was going through my diaries last night, and I guess every prominent newspaper in the country was represented. Besides they had local stringers in Panama. Some, like the New York Times, had a local stringer there. But Hanson was an avid reporter, as you darn well know, and I would've hated to have been in the Pentagon with him in his job, because he knew how to bore in, and he was not a believer in what you said, unless it went along with other facts he may have generated or philosophies that he had.

I admired the guy, but at first I was a little chary about being too forthright, and probably that wasn't necessary because he made his own mind up anyhow. And that one article he wrote about the Canal Zone, I think it was a fair article, even when he said I was considered Public Enemy Number One in Panama after the revolution, it was fair. That was so, didn't bother me at all. I respected him, I really did. Though I know some people in the Pentagon may not have because he bored in.

Q: Would you say you were on friendly terms with him?

A: I would say so. He always had access to me when he wanted it. I also got to know, a little bit, Drew Pearson, who did the column that startled Administrations from time to time. I got to know Drew

Pearson, and Drew wanted me, next time I came to Washington, to sit down and have lunch with him. Well, I just got scared stiff about accepting that, and I guess in my acceptance I indicated that I was coming on soft shoes. So he started to write it off, and he said, "Anything you tell me is not going to be published, I'm only here to establish some sort of relationship, see what kind of guy you are," and so on.

Q: When was this?

A: I forget the exact time. But, he never did publish a darn thing about our lunch. A great deal like Baldwin in boring in, but with probably more capability in getting in the dark alleys to find out information. And, I guess Jack Anderson's somewhat the same way. I wish I had all my books in front of me, my diaries, and could talk about all of the people who came to the Canal Zone. It was a focal point, and in looking over my diaries I guess I met damn near everybody who was anybody when they came through. My PR types were very good at seeing that visitors knew that I'd like to see them.

Q: You were executive vice-president of the New York World's Fair until 1965. In that same year, 1965, you joined Walt Disney World, I believe.

A: Walt Disney, yes.

Q: Walt Disney. What's the official name? Walt Disney Productions?

A: Well, Disney Productions is the name of the company.

Q: I'm wondering if you can tell us how you were hired. What contacts allowed you to get the job?

A: Well, my function at the Fair basically had to do with getting states and sometimes industry to put in exhibits at the Fair. During the time that I was very active in this, Walt Disney was retained by several companies, four, in fact, to produce major exhibits at the Fair. Since I was executive vice-president, and since many of the lunches and other affairs were held, I got to know Walt Disney and his staff pretty well during the year-and-a-half these things were under construction.

The exhibits were It's a Small World, which was devised for the Fair, and sponsored by, I believe, Pepsi Cola; the Lincoln exhibit at the state of Illinois, and that's where I really bumped into him; the Ford exhibit, which was a mammoth thing; and General Electric. I was engaged a great deal with the Disney organization in arranging the Illinois exhibit. For many years Walt had had the idea of producing a Hall of Presidents, which was to show all the Presidents of the United States, all of them audio-animatronic figures. The principal figure, and the principal speaker in this presentation, was to be Abraham Lincoln. The total exhibit was pretty well under design, conceptualized, but the state of Illinois felt they didn't have the money to put in the whole Hall of Presidents. So an agreement was reached to just use the figure of Lincoln, which was the principal figure, and the one that moves the most, and makes a very stirring speech. That was worked out, and that exhibit of Illinois did work out, and at the grand opening many prominent figures were there to see Lincoln in action for the first time.

During the course of negotiation for the second year of the Illinois exhibit, I sat in many meetings with Walt while we were negotiating what would go in the exhibit the second year, if there were any changes et cetera. And somehow or other we seemed to get along very well, and in December, I guess, of 1964, it was sort of inkled at me that Walt would like me to join his organization.

My inkling back was very positive. My contract with the Fair lasted until the end of 1965, but the principal part of any activity I might have at the end of the Fair was in the destruction of the Fair, in tearing down the buildings that had to come down, and I was not interested in that in the least. I discussed this with Walt and the staff, went to Mr. Moses, and said that Walt Disney had offered me this remarkable opportunity.

At that same time it was indicated that Walt was in the process of getting very large acreage in Florida, but that was kept secret, and that's what he wanted me for, to assist in the master planning and the development of Walt Disney World. I went to Mr. Moses and told him in confidence that Walt

had made me this offer. Things like that didn't impress Mr. Moses too much, the confidence part, and within two days he utilized his normal way of operation, which was to write me a letter complimenting me on being retained by this prominent man, that it was a great compliment to the Fair, to him and to myself, and then he sent about 15 copies to prominent people in New York, so the secret was out. He said I could go when the Fair closed, but later relented a little bit and let me go the first part of September.

The transition was beautiful, with the normal number of farewell parties at the Fair. Moses gave me a gold medal and other mementos. But, I left the Fair on about the first of September, went back to Grafton, West Virginia, with my wife to settle the estate of her mother, who had died just prior to this, and then drove to Chicago, took the train out to Los Angeles, and joined the organization, I think on September 27, 1965. One very interesting thing about the thoughtfulness of the Disney organization: I went out there for a major meeting in January to discuss all the aspects of the property here in Florida and the plan of development, how things were to be approached.

Q: This is Anaheim?

A: No, no. In Burbank. While I was there, the personnel officer talked to me, said that I would become 60 years old before I would officially join the organization in September. They had an insurance plan that let you take out an insurance policy twice your salary, at a very cheap rate, of course. But, if you were 60 or over, you could only take out \$1,000 worth of insurance. So, at that time they employed me at the minimum wage, starting I think in May, and every two weeks I got a check for \$2.50 an hour or something like that for 40 hours. As a result I was able to get in the insurance plan at that salary, and then when I joined later at the maximum amount, all of which shows what a great company it was to me, and I was always very appreciative of it.

For a year-and-a-half, almost, or at least until Walt died I had an office right across the studio from Walt's. And, my main job was to work with

Walt and an architect who had had to do with the design of Disneyland, by the way, in developing a master plan for the big project in Florida. When we finally got to the seventh preliminary master plot plan, Walt was happy with what he saw. He never had much interest in what the theme part was going to be, because as he said, "We've done that. All that's going to require is modernization, bringing it up to date, and planning it from the start as a total concept," rather than like Disneyland, which had started out with minimum funds and gradually expanded. At about that same time, he said that he wanted me to get on my horse and go out and visit industrial research laboratories, because industry was going to be a major part of what we were going to do in Florida, and he wanted to know what industry was thinking about their future: What were they going to be doing 10, 20 years down the line? In the case of Westinghouse and General Electric, for instance, they were not going to be building the same refrigerator, toaster, irons, air conditioning units, generators and what have you. So I developed a series of visits and during the course of the next six or eight months, I visited about 100 industries in the country, talked with them, and in many cases got into their research laboratories. I would come back from trips, report to Walt by short memos what I saw and what I thought might be interesting. He was so interested in Westinghouse that we got into the Gulfstream [jet], about eight of us, and went to Westinghouse and spent two days going through their laboratories, looked at their people mover system, which is the same one by the way that is going in down here at the Greater Orlando Airport, and saw what they were thinking about their future products, going way out in the future.

We visited many companies this same way. Visiting research laboratories continued after Walt died. In several cases, Roy and the executives of the studio and I would go to important places like the Bell labs, IBM, RCA labs, several others, to see what they were thinking about their particular futures. We talked to educators, we talked even to some historians, we visited practical laboratories like Rockwell International, the GE Research Laboratory just north of Los Angeles. It was a fascinating time. I got to know a great many senior

executives of many of the companies, which was very helpful later on.

In the meantime more detailed planning was going on the Florida project, the intimate planning, of the project, even to the extent of starting to look at the finances. That was not faced up to as a project, because in December of '66 Walt died.

Q: What was Mr. Disney's purpose in sending you out to visit these companies in terms of its practical application to Disney World?

A: Well, the philosophy of the project here is evidenced in the name EPCOT, the Experimental Prototype Community (not city) of Tomorrow. And, the idea was that here the people of the world, because we have a large group of international visitors who come to our projects every year, would see and experience what industry was about to develop, or thinking about developing, to put new products into use, to go through the experimental use of those products, and see how they worked. In other words, keep advancing with American industry, and I'm not just talking about manufacturing, but also education, medical care, hospitals, energy, water, and land. All those things that are a part of human life, what makes America, what makes the world. And, as I said before, his idea was to expose not only our great industries but our great philosophies of life to foreign nations and people in the United States and in some way have a resurgence of American loyalty and also set up a relationship between young people in our country and young people in the foreign countries that would be lasting and might lead to important friendships that could impinge on world affairs in years and years to come.

You say he was a visionary. Yes, he was a visionary, but he was a practical visionary. People to People is a great program in the United States. This is people to people impinging upon one another, living with each other. It's a concept that's still in the company and is one of the reasons that EPCOT is being built at the present time.

After Walt died, the full management of the company descended upon Roy, who I said was eight or nine

years older than Walt. He had to learn what was going on in the creative part of the company because that was not his part of the company when Walt was alive. He had to learn about it, and he did a remarkable job of holding the company together, and melding everybody in one joint effort. The biggest joint effort was this project here in Florida.

Oh, I forgot one other thing I think's important. We kept the purchase of this property quite secret. One lawyer greatly experienced in real estate was given the job of assembling properties here in Florida. Walt, at Disneyland, had been circumscribed by a very small piece of property, the total piece eventually only came to about 300 acres. It was built in orange grove country, but as its popularity increased, all of those hanger-on types of things started to develop in Anaheim, around the theme park. And, eventually, we had a little jewel surrounded by more crass money-grabbing sorts of activities, fortune-tellers and hot dog emporiums and all that sort of thing. He felt that his new project needed a frame that couldn't be denigrated by venture types of operations. So, his charter to Bob Foster, who was the person I mentioned who was to get him a piece of property, about 10,000 acres, in Florida, was that it be buffered from the rest of the world.

Bob came down here, always coming through Kansas City, which had been his home, never arrived from Los Angeles at all; took a different name; dealt with a major legal firm in Miami, which was to be trustee of all the lands that were purchased; had the mail that came from them go to Kansas City. Only that law firm knew that Disney was the one that was doing this.

Well, after Bob had assured us that we had the 10,000 acres, and as you saw yesterday it's well buffered from the rest of the world, he told Walt that there was another 5,000 acres contiguous that was available, and Walt said, "Buy it." And, he came back another time, and said that there was another 8,000 acres somewhere else that was contiguous to the property and just expanded it. This went on until we had over 27,000 acres, each time Walt saying, "Buy it." I'm not sure that Roy

didn't tell him at that time that we had enough property, that we could do a world on it. As a matter of fact, I was able to develop the information and told Walt, who was quite impressed with it, that this piece of property is twice the size of Manhattan Island.

I joined September 27th, and I think October 1st I came here, under a different name, with Bob Foster, and stayed at a hotel called the Cherry Plaza over there on Lake Eola. The next morning we got a helicopter and went out to the property, and I was one of the first two people to put their feet on that 27,000 acres, and was greatly impressed with the quality of the land. Incidentally, the total purchase price of all that land was only \$5 million. Goodness knows what it's worth today because property around us is going for \$30 thousand and \$40 thousand an acre, and more. Some luxury property up in the Bay Hill area is going for \$100 thousand a lot. So we have quite a financial gem on our hands. 'Course its major value is because we developed it in the Disney manner.

One of the Disney studio's continuing projects was to send the Gulfstream around the country; pick up newspaper, radio, and TV people in an area; bring them to the studio; show them the movie production activity and Disneyland for three days at our expense; and they'd have lunch with Walt on the last day. One of those, in late September, included a reporter from the Orlando Sentinel Star. At that time in Orlando, the land purchase activity was well known, but nobody knew who was doing it, they thought it was Ford or other companies. Now and again, somebody said probably Disney was active in it. Anyhow, this little girl reporter asked Walt, she said, "This property is being purchased and there are rumors around that it was Disney," and Walt said, "No comment," which was a very bad thing to say. So, on Sunday morning, Bob Foster and I got up, came downstairs, and the headline was, "We Say It's Disney."

And the secret was out. The governor at that time insisted that if it were Disney, he had to know it because he was governor of the state. So, on Monday or Tuesday there was a big meeting held in Miami for some association that the governor was to speak before. Bob Foster and I and Dietz Morrow,

our legal counsel from California, were there, and the governor announced that Disney was the owner of this land and Disney was going to build a big project.

Subsequently, oh, I guess in January or February, we had a big public preview at the Cherry Plaza Hotel. Walt and Roy were there. Walt made the announcement as to what he was going to do on the property and his major thrust was on the EPCOT premise, the city of tomorrow. So, that caused us really to get to work. There were several "outs" on the property, probably a couple of hundred acres, of five-acre plots, and getting that land at a price comparable to what we paid for the other land, which was about \$185 an acre, was an impossible task, and we finally got up to \$1,000 an acre in certain cases. There're still one or two "outs," but only 15, 20 acres.

As I say, after Walt died we went through a period of reorganization, and my activities still continued to be to go around and see industry. But Roy made his mind up that he was going to go ahead with the project, and the planning went forward on the basis of the theme park first. I'm convinced that if Walt had lived, we would have not only done the theme park, but we would've started the other activities on EPCOT at the same time, and through the monorail exposure people would've seen EPCOT coming out of the ground and gradually becoming a reality.

Roy called me in one day, and he said he thought I should go to Florida. Before that, for about a year, I'd been coming down here once a month because we had already started our water conservation program. This program had a main purpose of doing two things, one, to protect the area from floods, but also to assure the maintenance of high water levels around the marvelous foliage we have on the property. So, we started this project, which now involves about 40 miles of canals and 16 structures. When I moved to Florida, one of my main jobs was to supervise that continuing activity, which was the first job that was ever done on this piece of property. It involved the whole 28,000 acres.

The staff increased rapidly, and the theme park

started under construction. In order to develop the property we had to obtain certain governmental rights. There was a law in Florida at that time called Chapter 298 of the Florida statutes that permitted the formation of what was called a drainage district. The drainage districts basically had done just that, drained property so it could be developed.

What we wanted was much more, of course, but we started out with the Reedy Creek Drainage District. In the meantime we developed a master organization plan, which eventually ended up as a piece of legislation forming the Reedy Creek Improvement District, passed by the legislature of the state. The Reedy Creek Improvement District holds all governmental authority on the property to the exclusion of the exercise of normal county authority on that property. We have our own zoning authority, we have our own building code and building department, we own streets and roads, we can build airports if we want to. It's a comprehensive charter. I organized it, was its first president and general manager at the same time. Since it was a legal authority we had to operate in a similar manner to a city or county. My office was small, but my right hand was Sara King, who stayed with me for seven years. She had had a similar position with the head of the largest bank in Florida and hence knew Florida's power structure. She was a great help to me.

We were able to fund our projects at first by borrowing money from Disney. Eventually we sold \$20 million worth of bonds, which paid for the water reclamation project I described, for the wastewater reclamation plant and other government-type projects.

Q: Did the water reclamation plan involve enlarging or preserving the lake that goes into Disney World?

A: Bay Lake. Bay Lake was the existing lake of about a square mile.

Q: I see.

A: One of the first projects was the reclamation of Bay Lake. Bay Lake's water was heavily colored by

tannic acid, a dark-brown color, which would not be used for swimming because it would turn bleached hair brown and white swimming suits would be grey and that sort of thing. So, in order to make it a pristine and beautiful lake, we surrounded the lake with sand levees, usually back in the woods where they wouldn't be visible--so the woods would be highly visible from the lake--then we drained the lake completely, which was quite a major job, through the canals that we had built. We excavated five million cubic yards of sand out of the now dry lake. As you know, Florida is nothing but a sand-spit. We cleaned up the bottom of the lake and then refilled it with well water. It's kept that way now, and we keep it about a foot-and-a-half higher than the normal ground level so that the flow of water will be out rather than in.

At the same time, we constructed a lagoon of about 200 acres on which is the Polynesian Hotel and around which goes the monorail that you rode on yesterday. Many other important things went on at the same time. The Reedy Creek Improvement District at that time had the job of building the power plant, which we called the energy plant, the water system, the electrical distribution system. All the public utilities on the property were built by the Reedy Creek Improvement District. Later the company bought the energy plant and the water plant from Reedy Creek Improvement District, and they're now owned by the Reedy Creek Utilities Company, which is a subsidiary of Walt Disney World.

It was a fascinating time. In 1968, Roy told me he thought I should come down here and be the front man for the project, and so, Mrs. Potter and I moved down here in March of '68, bought a home, and we've been residents here ever since, and have been a part of the community. The most important part of that job was that I had to get to know everybody in the state, and since I was the only officer of Walt Disney Productions here, I then became the head man in the public mind, and joined organizations so that Disney would be represented in civic organizations. I became a member of the board of Orange Memorial Hospital and the Art Museum, Goodwill, the Chamber of Commerce, and others. I also became a member of the Florida Council of 100, really a unique organization. It's

a prestigious organization of 100 principal businesspeople of Florida. It meets regularly and advises the governor. Members are appointed by the governor after recommendations of the council. In any event it was all very good for me because Florida has, I suppose, several hundred retired major generals, very few of whom are known, but I was able to start living an entirely different life by being a part of the Disney organization, and remained a part of that organization until 1973, when I retired. And, with Admiral [Joseph W.] Fowler, who built Disneyland and the theme park here, we formed a little consulting organization and we've been doing consulting jobs ever since. Fortunately we've earned enough money to keep this office, which is a place away from home when necessary. We've had several consulting jobs and have enjoyed life.

Q: Let me ask you a few more questions about Disney World. Did Mr. Disney always have Florida in mind when he first considered the construction of Disney World? Were there other sites that he thought about?

A: Well, ever since Disneyland was a success he'd been importuned by other states and by foreign nations, to build a other Disneylands. We almost built one in St. Louis. He had a great relationship with Augie Busch. Designs were well under way. It was going to be in a high-rise rather than in a ground-level place, but the project died because if you'd been to Disneyland and inside the theme park here, you notice that no liquor of any kind is sold, and Walt wouldn't agree to sell beer.

Q: Is that when Busch started his own theme parks?

A: I think so, yes. It may have been, but, anyhow, it fell by the wayside. But, very important planning had been done. He had to design rides and attractions for that possibility. Also, Walt, at the time of the World's Fair, had never built great rides like those he put in the World's Fair. As a result of the Busch planning followed by the World's Fair, Disney had four important attractions that were relocated to Disneyland at the end of the Fair. Mr. Lincoln, It's a Small World, and General Electric went to Disneyland. The transportation

system at the Ford pavilion went to Disneyland, and became the basic system for most of the future attractions.

Walt, for two reasons, never felt that he wanted to go somewhere else under somebody else's sponsorship, because, number one, businesswise, it wasn't necessary to share proceeds. Second, management might have to be shared. A number of foreign countries that wanted him--England, Spain, many others--but generally they were all politely told that we didn't have the capacity to spread out. But finally, because he was so perturbed with the surroundings of Disneyland, he decided that the next project would be in the eastern part of the U.S. where he could develop a whole major piece of property. He started to think about where it should be. He decided that it was going to be in the Southeast. He established a goal of 10,000 acres.

Most of our visitors to Disneyland come from west of the Mississippi. There was a whole big untapped market here that involved more people than lived west of the Mississippi. I think 50 percent of the people who come to Disneyland are repeats from California. And, California at that time was not a great tourist center. So, he chartered a study aimed at finding out what incentives states in the Southeast offered to new industries that would come to their area. Wasn't a very thick report but it was probably the most important report, and it was decided that Florida was the place as against Georgia, Alabama, or the Carolinas. Then the place: where was it to be in Florida? Well, there's no sense building a thing of beauty that you want people to see unless you have transportation to it, so it had to be somewhere near the major transportation arteries.

Bob Foster, in his first investigation to find 10,000 acres, went all the way from Fort Lauderdale up to 50 or 60 miles north of here, and had bales of maps that showed 10,000 acres available in about 10 sites. But, finally, the decision was made that we would go with our present purchase. We would put it near these two major transportation arteries, I-4 and the Florida Turnpike. They're the only transportation arteries that lead people into

the center of the state and from the south to here. I-75 comes down and joins with the Florida Turnpike out in the north, and I-4 feeds down the East Coast of the United States into I-95. So the location was to be somewhat in this area and was not to be on the ocean. People have asked why many times, because the ocean is an attraction. We were an attraction. Why put two attractions in the same place? So, it was to be in the interior of the country, and we're about as close to the middle as you can get.

Q: Were there many environmental problems you had to deal with in the development of Disney World?

A: There were none. That was before the days of the big drive for EPA. No environmental protection laws had ever been passed. I don't know how long it would take us to build this thing had we started, let's say, today.

Q: Where did the ideas come from for some of those projects out in Disney World? Did they all come from the Disney organization?

A: Oh, yes.

Q: They all did?

A: Oh, yeah. I told you about WED Enterprises. It's our think tank. It's the place where in producing a movie, there are no inhibitions on what you want to do. Star Wars, for instance. Who, in private industry, would ever think of building things that were in Star Wars? The movie industry is made up of very imaginative, creative people, and that's how WED Enterprises started.

Q: Were there any problems in finding contractors to do the innovative work?

A: Oh, no. We didn't do anything on the property until we had a major union agreement with the unions out of Washington. Our labor contract is with them, and it's a no-strike agreement. We live up to our side, they live up to their side.

Q: Was there any local opposition to the project?

- A: As the area started to increase in size, more population moved here, and more masses of people came and you can imagine there were retirees down here who didn't like their way of life disturbed. There is some feeling along that line, but it's minimal. Without doubt Disney has caused the expansion of central Florida.
- Q: Does Disney World provide much tax revenue for the state of Florida?
- A: We're taxed by the state just like any other industry, and also by the county. Our act, the Improvement District Act, did not take away the taxing authority of the county. We're taxed just like any other industry. I don't know how much we provide to the state treasury from the 4 percent sales tax, but it's a lot of money.
- Q: So, in 1973 you left Disney World and formed Fowler, Potter.
- A: Which is not a partnership. It's an association.
- Q: At that point, where was the Disney World project?
- A: Finished. The theme park opened in '71.
- Q: The development of a theme park before EPCOT and so forth, you said that was mainly Roy Disney's decision to do it that way?
- A: Well, EPCOT was going to cost a lot of money. You get money from earnings if possible, and not borrowing, so the theme park was built to provide a source of earnings for the company, and it's been highly successful in doing that.
- Q: But, there obviously are a lot of plans on the board to build a lot more in Disney World.
- A: There's a master plan for the whole piece of property. Incidentally, in the 28,000 acres that we have, there are 7,500 acres that are untouchable. They're aboriginal swamps where there are trees and flowers and all kinds of natural environment. We will never touch 'em, we protect them, there are no structures in them, the canals we excavated are not visible.

Q: What kind of consultant work do you do now?

A: Mostly business consulting, not engineering so much. I got away from being an engineer really after the war. While I headed engineering organizations, I visualized my main job as administration, which attracts me, and the operation of large organizations. The Canal Zone was such an organization. I always made sure I had top-drawer engineers in an organization. When I was in Alaska I bumped into a young lieutenant up there by the name of Duncan Brown, who impressed me no end as a top, top fellow in the Corps, and when I went to Omaha I had him transferred from wherever he was to Omaha, to the District there. And, when I went to the Canal Zone, I had him transferred as chief engineer of the Canal Zone. In that way I could put all those responsibilities, which were major, on him and know they were being done right, while I devoted my time to the diplomatic part and getting along and finding out how to get along with two kinds of employees. Dunc Brown left the Corps somewhat after I left the Canal Zone. If I'd been further along here, he'd have come here, but he joined the Tudor Organization and then became a victim of multiple sclerosis, eventually died. Brilliant, brilliant man.

Q: Have you kept up contacts with the Corps since you left the military?

A: Well, I always felt that if you tried to go back to people in the Corps for something, you were doing a very wrong thing. And then there's a conflict of interest statute and regulations that are severe. I can never sit down and negotiate a contract with anybody in the Corps for the rest of my life! Or anybody in the Army. I can't sit in on negotiations, I can't ask for consideration of a contract, so I've been very chary of having to do with officers in the Corps or organizations of the Corps except on a very social basis, where no business was involved at all. I don't believe in people throwing their weight around, and I guess, fortunately, I might say that General [Joseph K.] Bratton is the first Chief who I didn't know very well and, of course, any influence I could exert is getting less and less.

Q: I'm just wondering, though, if you have any observations about ways in which the Corps may have changed over the last oh, 50 years now, because you joined the Corps, of course, in 1928, so a lot of things have happened in the Army and within society since then. Do you have any feelings about the major ways in which the Corps has changed since you first joined?

A: Well, there's no greater admirer of the Corps than myself. I came in in the early days, as against where we are today, went through a great many of the political strifes with the Bureau of Reclamation and at times when the Hoover Commission came out with the reports, became a little bit worried that those less than thoughtful things might be implemented. But I got a lot of faith, as I said before, I was standing on a lock wall with Mr. Sherman Adams, and this subject came up, and he said, "Oh, don't worry," he says, "if they did away with the Corps, they'd have to reinvent it."

I think we are one of the important, one of the most important, organizations that exist in the U.S. government, and not only because of the civil things that we do, but I think more important because of our civilian contacts, we're able to mobilize and to do important construction jobs in case of conflict that we couldn't do if we didn't have the relationship with the construction industry that has always existed. I think all you have to do is look at something like the Manhattan project to realize that it was built because we had big-minded people in the Corps who were not fazed by size of project, and who could get civilian enterprise to enter jointly in building and making it work.

I wish the American public would know more about the capability we have. I think the Corps could do anything! Who is doing the major works in Saudi Arabia at the present time? We have a Division out there. We have a Support District in the United States. Who dredged the Suez Canal after the Egyptians decided to open it again? That's not well known, but I just have complete faith that there's no project in this world the Corps couldn't do. And a large part of that stems from our relationships with private industry, the contractors'

organizations, the trust they have in the Corps, and the trust we have in them.

Q: Time and time again throughout the last three days, I've been impressed by the fact that you seem to be a real practitioner of public relations, and in fact you've admitted, either explicitly or implicitly, that many of your jobs had a lot of public relations mixed up with them. And, so my question is, do you really like people all that much?

A: Oh, I love 'em. I think people are the greatest things in the world, and I think I've been able to do the jobs that I've done because of that love of people and the joy in being with them, to be a part of organizations, and peripherally, that sentiment I have, and that feeling I have, has been to the credit of whomever I was working for.

I wouldn't have been able to do those jobs had I not been with prestigious organizations, but I was able to help the organization because of respect for people as people, and that's all across the board, from politicians to industrialists to what have you.

Q: What, do you think, in your background gave you this ability to work with people so well? Anything in particular?

A: Oh, I think it started, really started, in the Kansas City District. Kansas City, as a city, totally respects the Corps of Engineers. They take the District Engineer into their arms, they make him a part of the civic life of the area. I was asked to join the Kansas City Club, which was the only major club in Kansas City. I got to know a great many people there. I was totally dedicated to the engineering aspects of the projects that we had under construction in the Kansas City District, and I made lots of talks about those projects. I soon discovered that you can talk to the annual meeting of the Chamber of Commerce and tell them how great it was to have 30,000 cubic feet of water go down the Missouri River every day. That didn't impress them too much. The fact that navigation could go was important. So, I gradually changed my approach in describing projects to get away from the Engineer vernacular and become understandable

to people who weren't Engineers, who happened to be lawyers or shopkeepers or whatever made up the membership of the organization before which I was speaking. And, once that came to my mind--it took a little while to do it--I became an accepted public speaker, and I guess that started it all. I don't know how many speeches I've made in my life, but when you went through my West Point files you saw there was one thick file of speeches that I've made.

Q: That's right. A person like you who has this ability to identify with people and who obviously likes to be with people often goes into politics. Have you ever thought about going into politics?

A: Ah, I've been importuned, since being in Florida, to run for higher office, but that really doesn't, interest me too much. For several reasons: number one, you've got to have a campaign, and you've got to mouth things that you may not believe in. I think one example of why it doesn't interest me is what happened to Mr. Moses, who once ran for governor of New York. And, he went around the state and said what he was going to do and what had to be done, how he was going to do it, and no matter how unacceptable it might've been, he said, this has to be done, et cetera. He did not reach the primaries.

So, I'm not saying that politicians are not forthright, but they've got to live with the practicalities, and I just never want to face up to something like that. I've accepted a great many civic appointments, for instance, the governor appointed me to the Greater Orlando Aviation Authority, which had been in serious difficulty. And, I think I was appointed to it because of, immodestly, the stature I had in the state, but also a reputation for doing things in the right way and economically. But, I'd rather do that sort of thing than be beholden to people in occupying an elected job. I'd rather be appointed to things than elected to things.

Q: General Potter, whenever anybody looks back on life, he probably looks at some things he wishes he had done a bit differently or perhaps some opportunities he wishes he had taken that he didn't take. I'm wondering, as you look back at your

life, whether there are some things you would've liked to have done differently, whether there are opportunities you didn't take, or whatever? Do you have any comments about things you would've done differently if you could do them over again?

A: That's quite a question, isn't it? As I told you over lunch the other day, I consider that I've been very, very lucky. In being lucky I've been on the go all the time. When I came from, well, even the fact I was suspended a year from the military academy has worked out better than if I'd graduated with my own class, because the timing of events that followed could not have happened if I'd graduated in 1927. I wouldn't have gone to Nicaragua because I would've been in Fort DuPont before that and would've left by then.

I wanted to go to MIT and I was assigned to MIT. There's only one school that I wanted to go to that I used to send people to, but by the time I was capable or free enough to go there, it was too late. I was going somewhere else. I wanted to go to Harvard Business School. I guess that's the only thing I ever wanted to do that I missed, but if you look down through my career you'll find that I was always going from one place to another place on call, happening to be in the right place. I was in Kansas City when the problems started in Alaska, and the Chief said, "Go to Alaska." Well, I didn't have any choice. I'd wanted to go, I'd never been there. When I was up there Pick became Chief, and he said, "Leave Alaska and come down and be Assistant Chief of Civil Works." While I was there the opportunity came to go to the War College, and then the big flood happened on the Missouri River and since I had been in the Missouri River and he knew I knew the Missouri, he said, "You go out to Omaha." And, then they had the problems in the canal and--not too serious, but--Sturgis said, "Go to the Canal Zone!" And then, the happenings there that resulted in the hassle about being Chief caused me to get the job with Mr. Moses and the end result of that was meeting Walt Disney. And, nobody could've been luckier than I in what has happened to him during his life.

Now, I would never have wanted to be in politics. What else is left? If I'd taken that job with the

World Bank, I would've ended up being an engineer-type with a little office in the World Bank reading survey reports and economic feasibility reports and all that sort of thing, which, to me, is a very distasteful life. But, I had to grab at something in those days, because I was going nowhere in the Army after I left the Canal Zone.

So, I don't know, I've never sat down and said, would I like to be this, that, or thus and so. Maybe I would have liked to have been capable of starting my own business. And, one of the main reasons when we left--Fowler and I left Disney--was we wanted to try being in our own business. That resulted in one thing I didn't get in before. I was approached to go to Iran. So I went over to Iran for 16 days to advise people over there on the construction of a major town just north of Bander Abas, where the Shah wanted to build a major oil tanker maintenance facility, the biggest in the world. And, that would require the construction of quite a town. I went over there and saw that the engineers that they had doing the job were not progressing, and I reorganized the engineering effort. The main reason I wanted to go there I'd never been to that part of the world! And, I guess the last chance I'd ever have to get in a country like Iran. Incidentally, I admired what the Shah was doing. He was really turning that country around. It was going to become important. They had lots of oil to fund themselves for several years, important iron deposits, and other minerals in the mountains. He had ambitious goals for his country, and he would've accomplished them except the religious issue got him, and when you interfere with a people's religion you're stepping on quicksand. You cannot interfere with people's religion, or their way of life, which is one of the things our country does too much. We try to change people's lives in foreign countries. The mores of people change only gradually in generations, they are not changed because somebody gave 'em a billion dollars this year for a new road. We should not try to change people to our image or way of life. Countries have their own history and way of life. Their problems are not ours and they resent our trying to move in. It distresses me.

Q: So, you are pretty satisfied with your life, I

guess. Not too many regrets or anything like that?

A: No, we have enough to live on comfortably, and unless things really go to pot we can meet emergencies. I'm lucky to have reached the age of 75 and still be in good health as per my last physical examination.

Q: You mentioned about our government trying to change people's lives in other countries. Do you think the government tries to change people's lives too much in this country, as well?

A: Well, when I was a younger man we were not a welfare state.

Q: Is that the way you would describe it today?

A: Yes, yes. We've had a lawncare fellow here, who when he became the proper age, said he wanted to go on oh, I forget, on food stamps and welfare--I don't think he had any social security, maybe he did. We've had maids we've interviewed who don't want to take the job because they can get more not working. People will work for long enough to qualify as having worked and then quit. I think the program, the idea behind the program, is excellent. The administration is awful.

Q: How would you describe yourself?

A: I think as a business executive.

Q: That's it?

A: I think so, yes. Now, and have been, since the World War. District Engineer, I was a business executive.

Q: But, does that describe a personality as well?

A: How do you describe your personality? Only somebody else can do that. Only somebody else.

Q: Do you have any concluding observations that you'd like to put on the record?

A: This, that I'm awfully glad that this program's under way because my children and grandchildren

have importuned me time after time to write a biography, and I know of other officers who have written their bios for their children, but I've never felt that the career of an Army officer and a business executive and my career would have any public interest whatsoever! I just don't feel that. I've not been that prominent. I didn't invent anything. While I was the governor of the Canal Zone I was not an elected governor of a state. That's one of the beautiful things about being governor down there, you don't have to run for office.

Q: Well, I thank you very much for your time.

A: Thank you.

INDEX

Ackerman, Jerry, 105
Adams, Ernest C., 104
Adams, Sherman, 65, 146, 200
Alaska, 36, 47, 48, 49, 51, 52, 53, 54, 55, 57, 83, 199, 203
Alaska command, 49, 50
Alaska District, 47, 48, 54
Allegheny River, 13
Anaheim, 187, 190
Anchorage, 47, 48
Anderson, Jack, 185
Anderson, Sig, 80, 81, 111
Antwerp, 30, 39, 40
Arey, Will, 154
Argentina, 174
Arias, Arnulfo, 148, 149
Arkansas River, 66
Armored Force, 20
Ascaraga, Luco, 159
Asphalt Institute, 117
Association of General Contractors, 9, 50
Aurand, Henry S., 36
Auranches, 29, 31

Bacon, Ted, 141
Balboa, 162
Balboa Theater, 172
Baldwin, Hanson, 184, 185
Barney, Keith, 103, 112, 113
Barrett, F.E., 12
Baumhauf, Richard, 106
Bay Lake, 193
Beach Erosion Board, 173
"Beast Barracks," 2
Peloit, 1
Bernard, Julia, see Mulligan, Julia
Big Bend Dam, 85, 86
Blaffer, John H., 156
Blue River, 98, 99
Blue Valley ladies, 96
Blue Belles, 43
Board of Engineers for Rivers and Harbors, 173
Board of Pardons, 130
Boykin, Frank, 61
Bradley, Omar N., 27, 28, 32, 37
Braniff, 183
Bratton, Joseph K., 199
Breidenthal, Willard, 43, 106, 107
Brest, 32

Brito, 7
Brooks, Overton, 62, 66
Brown, Duncan, 150, 199
Brucker, Wilbur, 96, 155, 166, 175
Brundsdale, Clarence, 106
Building Trades Council, 181
Pull, Harold R., 58, 74
Bunau-Varilla, Philippe, 161
Bureau of the Budget, 83, 119, 126, 132, 138, 139, 140
Bureau of Expositions International, 179
Bureau of Indian Affairs, 92, 93
Bureau of Public Roads, 118
Bureau of Reclamation, 54, 75, 83, 84, 85, 98, 118, 200
Burford, Freeman, 42
Burma, 54, 55
Burrows, Robert P., 157
Busch, August, 195

Cairo, 11
Cake, Ralph H., 157
Camp Chaffee, 17, 24
Camp Cooke, 17, 18, 19, 20
Camp Pine, see Fort Drum
Cannon, Clarence, 108
Caribbean Command, 125
Carlisle Barracks, 175
Carlson, Frank, 43
Carter, Jimmy, 170
Case, Francis, 110
Casey, Hugh J., 63, 64, 103
Cattleman's Association, 107
Chamber of Commerce treaty, 143
Chartres, 32, 33
Chelsea (Massachusetts), 1
Cherbourg, 23, 31, 32, 36, 38, 40
Cherry Plaza Hotel, 191, 192
Cheyenne (Indians), 102
Chief Joseph Dam, 12, 67
Chorpening, Claude H., 36, 37, 57, 63, 96
Cincinnati, 11
Clarke, Bruce, 16, 17
Clay, Lucius, 35, 36, 37, 171
Cold Regions Laboratory, 52
Colombia, 160, 166, 168, 169, 170
Colon, 130, 134, 137, 140, 162, 165
Columbia University, 132
Com Z, see Communications Zone
Communications Zone, 28, 29, 31, 33, 40
Congress, U.S., 48, 76, 78, 84, 93, 94, 136, 140
Conservative party (of Nicaragua), 7
Contractor's Hill, 167
Cookingham, Perry, 107, 113
Cornell University, 9

Council Bluffs, 101
 Covell, W.E.R., 13
 Cowdery, Ben, 109
 Crawford, Robert W., 27, 30, 37
 Creek, The, 179
 Crooked Creek project, 13
 Crosky, Robert, 100
 Culebra Cut, 138, 139, 141, 143, 167
 Curtis, Carl, 108, 110

D-Day, 28
 Danelian, Danny, 65, 66
 Darby, Harry, 107
 Davies, Howe S., 107
 Davis, Clifford, 61
 Dean, Reggie, 17
 Decatur Bridge, see Mormon Bridge
 de la Guardia, Ernesto, Jr., 147, 148, 149, 154, 164
 Denver, 43, 90
 Devers, Jacob L., 20, 21, 22
 Disney Productions, 12, 185, 186, 187, 190, 191, 192, 194
 195, 197, 198, 204
 Disney, Roy, 188, 189, 190, 192, 194, 198
 Disney, Walt, 71, 175, 183, 185, 186, 187, 188, 189, 190,
 191, 192, 195, 196, 203
 Disneyland, 188, 190, 191, 195, 196
 Dodds, Jack, 13
 Dolan, Pat, 23
 Donovan, William J., 21
 Drake, Neil, 42
 Dulles, Allen, 69

East Bottoms, 99
 Eban, Abba, 69
 Edgerton, Glen E., 157
Edward Luckenbach, 154
 Eisenhower, Dwight D., 8, 22, 23, 26, 28, 33, 43, 97, 122,
 153, 163, 166
 Eisenhower, Milton, 163, 164
 Electrical Engineers union, 181
 1138th Engineer Combat Group, 19
 Elmendorf Air Force Base, 51
 Ely, Bill, 14
 Emsworth Dam, 10
 Engineer School, 11, 14
 EPCOT, see Experimental Prototype Community of Tomorrow
 ETO, see European Theatre of Operations
 European Theatre of Operations, 19, 20, 21, 22, 23, 24, 25, 26,
 27, 28, 29, 30, 31, 32, 33, 34, 38, 39, 40, 41, 42
 Evans, George, 105
 Everett (Massachusetts), 1
 Experimental Prototype Community of Tomorrow, 189, 192, 198

Fairbanks, 48, 52, 53, 54
Fairbanks Air Base, 49
Fay, Spofford, and Thorndike, 48, 53
Feringa, Peter A., 56, 62
Fifth Armored Division, 17
Fifth Corps, 16
Finley, Luke, 3
First Army, 33
First Engineers, 5
Flood of 1936, 10, 13
Flood of 1937, 10, 11
Florida, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195,
196, 197, 198, 202
Florida Council of 100, 194
Florida Turnpike, 196, 197
Flushing Meadow Park, 177, 179
Fort Belvoir, 11, 14, 20, 24, 175
Fort Berthold, 92
Fort Berthold Indians, 92
Fort Dix, 5
Fort Drum, 16, 17
Fort DuPont, 4, 5, 14, 63, 203
Fort Knox, 16, 17
Fort Leavenworth, 44
Fort Leonard Wood, 45
Fort McNair, 58
Fort Myer, 24
Fort Peck Dam, 55, 77, 78, 85, 91, 92, 101, 112
Fort Randall Dam, 55, 80, 84, 85, 91, 94, 95, 105, 112
Fort Richardson, 47, 48, 51
Foss, Joe, 81, 108
Foster, Bob, 190, 191, 196
Fourth Armored Division, 16, 17
Fourth of July Avenue, 162, 163
Fowler, Joseph W., 195, 198, 204
Fowlkes, Benny, 10, 12
Frederick Snare Corporation, 10, 11
Friends of the Earth, 68

Gable, Clark, 171
Gage, Jack, 107
Gaither, Ridgely, 173
Galloway, Gerald, 103, 104, 175
Garrison Dam, 55, 79, 80, 85, 91, 92, 94, 112
Garrison District 90, 91, 94, 112
Gavin's Point Dam, 80, 86, 95, 112, 115
General Accounting Office, 167
Georges Cinq Hotel (Paris), 31
Gilland, Morris W., 41
Glasgow (North Dakota), 90, 91
Glasgow (Scotland), 22
Glen Elder Dam, 84

Goethals, George W., 123, 125, 129, 138, 141
 Goodyn, Bishop, 159
 Gorgas Hospital, 8, 131
 Grafton, 4, 13, 20, 43, 187
 Granada, 6, 7
 Grand Forks Air Force Base, 90-91
 Graytown, 6, 7
 Great Basin, 76
 Greater Kansas City Flood Control Committee, 43
 Greater Orlando Airport, 188
 Greater Orlando Aviation Authority, 202
 Greenland, 64
 Gross, Charlie, 7
 Groves, Leslie R., 7, 60, 175
 Guardia Nacional, 163, 164
 Gurney, Chan, 108

Hammarskjold, Dag, 152
 Harlan County Dam, 45, 46, 110
 Harlan County Reservoir, 45
 Harrington, Julian F., 158
 Harvard Business School, 203
 Hawley, Paul R., 7, 35, 113
 Hayes, Tommy, 104
 Headquarters, European theater, 19
 Herbert, Jack, 3
 Hitchcock, Gilbert, 109
 Hoover Commission, 65, 200
 Hopkins, Harry, 11
 Hotel Tivoli, 150, 153
 House Flood Control Committee, 60
 Hruska, Roman, 108
 Huertematte, Bobby, 152
 Huertematte, Dona Elisa, 165
 Huertematte family, 152

Incendiary oil plant, 90
 Industrial College of the Armed Forces, 58, 74
 International Oceanic Study Commission, 169
 Iran, 204
 Itschner, Emerson (Emma), 64, 86, 87, 118, 120, 121, 172
 173, 174

James River, 110
 Johnson, Arlie Bell, 1
 Johnson, Lyndon B. 180, 183
 Johnson, Wendell, 105, 121
 Jones, H.C., 151

Kansas Basin report, 117
 Kansas City, 44, 45, 46, 47, 55, 63, 75, 77, 82, 98, 104,
 105, 106, 107, 112, 113, 116, 138, 190, 201, 203

Kansas City Club, 201
Kansas City District, 42, 43, 44, 46, 54, 55, 87, 201
Kansas River, 43, 46, 75, 97, 98, 117
Kaw River, 44, 98, 119
Keeler, Don, 10
Keller, Charlie, 9
Kennedy, John F., 157, 178
Kerr, Robert S., 67
Kiewit, Peter, 64, 110, 111
King, Sara, 193
Korean War, 64, 87

La Guardia, Fiorello, 176
Lake City (Missouri), 45
Lake Erie, 13, 14
Lee, John C.H., 25, 26, 27, 28, 33, 35, 36, 40, 41
Le Havre, 30
LeMay, Curtis, 87, 88, 89
Lemnitzer, Lyman, 175
Liege, 40
Life, 96
Lincoln (Nebraska), 100
Lincoln Air Force Base, 88
Lincoln, George A., 104
Lincoln, Lawrence, J., 44, 104
Logistical Support of the Armies, 26
London, 20, 22, 24
Long, Russell B., 170
Long Island, 177, 179
Lord, Royal, 35, 41, 64
Los Angeles, 19
Lotus Club, 178
Louisville, 11
Ludwig, Daniel, 171

Managua, 7, 8
Manhattan (Kansas), 43, 97, 119, 200
Marco Island, 109
Marshall, George C., 21
Massachusetts Institute of Technology, 8, 9, 203
Matthews, Captain, 5
McCarthy, Joseph, 64
McClellan-Kerr Waterway, 66, 67
McCook (Nebraska), 110
McElheny, John, 159
Mead, Margaret, 69
Meany, George, 172
Menasha (Wisconsin), 1
Menocal, 6
Mile 26 Project, 52
Milford Dam, 98, 119
Miller, Hubert, 104

Minot (North Dakota), 90, 91
 Minot Air Force Base, 107
 Minot Daily News, 107
 Miraflores Locks, 140, 155
 Mississippi River, 47, 60, 62, 63, 109, 115, 196
 Missouri Basin, 55, 60, 77, 78, 80, 83, 85, 112, 118
 Missouri Basin Compact, 78
 Missouri Basin Interagency Committee, 78, 111
 Missouri River, 46, 47, 54, 75, 76, 77, 86, 95, 96, 98, 101, 106, 108, 111, 115, 201, 203
 Missouri River Division, 46, 47, 74, 75, 77, 79, 84, 87, 101, 103, 104, 105, 113, 117, 119, 121, 122, 138, 167
 Missouri Valley Association, 109
 Missouri Valley Authority, 78
 MIT, see Massachusetts Institute of Technology
 Mojave (Desert), 18
 Moncada, Jose, 8
 Monmouth, 5
 Montana, 77, 78
 Montgomery, Bernard L., 27, 33, 39, 40
 Montgomery Locks, 10
 Mormon Bridge, 46, 101
 Mormons, 101
 Morris, William H., 17
 Massman, Harry, 43, 107
 Morrow, Dietz, 191
 Moses, Raymond G., 37
 Moses, Robert, 71, 174, 175, 176, 177, 178, 179, 180, 181, 186, 187, 202, 203
 MRD, see Missouri River Division
 Muller, Walter J., 33
 Mulligan, Julia, 7
 Mulligan, Timothy, 7, 103
 Mundt, Karl, 85
My First Year at West Point, 2
My Second Year at West Point, 2

National Guard, 5, 16
 National Strategic Seminar, 175
 National War College, 57, 58, 69, 70, 74, 174, 203
 (Nebraska) Public Power Corporation, 85
 Neff, Colonel, 44
 Neill, Don, 42
 Neville Island, 11
 New Orleans, 62, 63, 130
 New York City 68, 176, 178
 New York Herald Tribune, 156
 New York Power Authority, 74
 New York State 176, 177, 178, 184, 202
New York Times, 184
 Niagara Falls, 71, 72, 73
 Nicaragua, 5, 6, 7, 8, 71, 203

Nicaragua Canal survey, 168
 Nichols, Ken, 8
 Nixon, Richard M., 157, 166
 Noce, Daniel, 20
 North Pacific Division, 68

 Oahe Dam, 55, 86, 91, 92, 94
 Oahe Reservoir, 102
 Office of Strategic Services, 21, 22
 Office of War Information, 21, 22, 23
 Ohio River, 10, 13, 14, 115
 Ohio State University, 14, 15, 16
 Omaha, 59, 82, 87, 96, 100, 101, 104, 109, 110, 111, 114, 115
 116, 141, 158, 199, 203
 Omaha (Beach), 20, 31, 41
 Omaha Country Club, 89
 Omaha District, 94, 104, 105, 114, 199
 Omaha World Herald, 109
 Operation Blue Jay, 64
 Orange Memorial Hospital, 194
 Orlando, 99, 131, 191
 Orlando Sentinel Star, 191
 Oshkosh (Wisconsin), 1
 OSS, see Office of Strategic Services
 Overton, John, 62
 OWI, see Office of War Information

 Palm Springs, 18
 Panama, 123, 127, 130, 131, 134, 140, 142, 143, 144, 145
 148, 149, 151, 152, 153, 155, 159, 160, 161, 162, 165,
 166, 169, 170, 171, 172, 173, 179, 184
 Panama Canal, 6, 7, 64, 71, 104, 123, 124, 126, 129,
 130, 131, 139, 140, 141, 147, 148, 160, 167, 168,
 169, 170, 171
 Panama Canal Company, 122, 126, 139, 144, 167, 169
 Panama Canal Zone, 6, 8, 61, 65, 73, 122, 125, 126,
 127, 128, 129, 130, 134, 136, 137, 143, 144, 145,
 146, 148, 149, 150, 152, 153, 154, 155, 158, 159,
 160, 162, 163, 164, 165, 166, 167, 168, 170, 172,
 173, 179, 184, 185, 199, 203, 204, 206
 Panama City, 130, 134, 143, 153, 160
 Panama Railroad, 134, 135
 Paris, 31, 32, 33, 34, 58, 74, 179
 Park Avenue, 184
 Parker, David S., 129
 Passamaquoddy, 64
Path Between the Seas, The, 123, 148
 Patton, George S., 24, 33, 34
 Pearson, Drew, 184-185
 Pendergast, Thomas, 107, 112, 113
 Pennsylvania Railroad, 135, 136
 People to People, 189

Person, Jack, 120, 121
 Peterson, Howard C., 157
 Peterson, Val, 105
 Pick, Lewis, 36, 37, 54, 55, 56, 57, 58, 59, 60, 64, 71
 74, 75, 80, 84, 111, 119, 120, 121, 173, 203
 Pick-Sloan plan, 54, 74, 75, 77, 84
 Pillsburys, 102
 Pilots Union, 134
 Pioneer Dam, 84
 Pittsburgh Engineer District, 9, 12, 13
 Plank, Edward, 28, 29
 Planning Division, 115
 POL pipeline, 30, 32, 39, 42
 POMSSV, see Preparation for Overseas Movement,
 Short Sea Voyage
 Pool, Harry C., 105
 Portillo, 8
 Potter, Abel, 1
 Potter, George, 1
 Potter, nee, JoAnn, 4, 42, 45, 52, 56, 159
 Potter, Joe (no relation), 4
 Potter, Ruth (Ruthie T.), 4, 13, 17, 42, 52, 56, 58, 59,
 103, 129, 147, 149, 150, 151, 152, 165, 173, 174, 194
 Potter, nee, Susan, 4, 42, 45, 52, 56, 159
 Potter, William Bradford, 1
Potters in America, The, 1
 Preparation for Overseas Movement, Short Sea Voyage, 24
 Psychological warfare battalions, 20, 21, 22
 Public Works Administration, 12
 PWA, see Public Works Administration

 Quartermaster Corps, 18, 19, 25
 Quill, James, 17

 Radio Luxembourg, 22, 23
 Rait, Don D., 12
 Rankin, John, 62
 Rapport, Vic, 42
 Ratay, John, 36
 REA, see Rural Electrification Administration
 Red Willow Dam, 84
 Red Ball Express, 32
 Reed, Charles S., 158
 Reedy Creek Drainage District, 193
 Reedy Creek Improvement District, 12, 151, 193, 194, 198
 Reedy Creek Utilities Company, 194
Register of Graduates, USMA, 38
 Reid, Ogden, 155
 Reims, 33
 "Report on Flood Protection in Kansas River Basin
 Prepared for the Kansas Industrial Development
 Commission," see Veatch report

Rhine (River), 33, 41
Rio Grande River, 6
Rittison, Louis, 116
Riverview State Bank, 106
Robinson, Robby, 120
Rockefeller, David, 178
Rockefeller, Nelson, 179
Pockies, 76, 98, 99
Rocky Mountain Arsenal, 90
Roderick, George H., 155
Rommel, Erwin, 18
Roosevelt, Franklin D., 64, 144, 177, 178
Roosevelt, Theodore, 6, 123, 150, 160
Runnestrand, Paul, 146, 151
Rural Electrification Administration, 55, 83, 84
Russell, Richard, 61

SAC, see Strategic Air Command
St. Charles (bridge), 108
St. Lawrence (Seaway), 57, 65, 66, 71, 73
St. Lo, 29
St. Louis, 113, 195
St. Louis District, 45
St. Louis Post Dispatch, 106
St. Malo, 31, 32
Salt-Wahoo project, 100
San Carlos, 7
Sandino, Augusto, 8
Saturday Evening Post, 23, 158
Saudi Arabia, 200
Scandia (airfield), 46
Schley, Julian L., 156
Schull, Herman W., 73, 158
Scott High School, 1
Scott, Stanley, 48, 50, 58
Seattle, 50, 51, 53
Second Armored Corps, 19
Sedalia Air Force Base, 89
Services of Supply, 26, 27
Seventh Division (USMA) barracks, 4
Seybold, John S., 149
SHAEF, see Supreme Headquarters Allied Expeditionary Force
Shah of Iran, 170, 204
Shaler Circle, 166
Shapiro, Sid, 174
Sherwood, Robert, 22
Sibley, Alden K., 38
Sibley, Cleland C., 31, 36, 37, 38
Sioux (Indians), 92
Sixteenth Engineer Battalion, 16
Sixth Armored Division, 17, 19
Sloan, William G., 54, 75, 84, 108

Smith, Al, 176, 177
 Smith, Dave, 151
 Smith, Gloria, 151
 Smith, Stephen, 178
 Smokey Hill Air Force Base, 89
 Smyser, Craig, 121
 Snake River, 67, 68
 Society of [American] Military Engineers, 105
 Soil Conservation Service, 47, 82, 99, 100, 101
 Somervell, Brehon, 27
 Somoza, Anastasio, 8
 SOS, see Services of Supply
 Soucek, Ed, 105
 Souris project, 99, 118
 Standing Rock Sioux Indians, 102
 "Starlight", 25
 Stevens, John, 123
 Stone, Martin, 183
 Strategic Air Command, 46, 88, 117
 Stratton, James A., 23, 25, 26, 32, 34, 40, 41, 42,
 71, 121, 168, 169
 Strunk, Harry, 110
 Sturgis, Samuel, 71, 87, 102, 120, 121, 122, 150, 203
 Styer, Wilhelm D. "Bull", 9, 12, 13
 Suez Canal, 170, 200
 Sultan, Dan I., 7, 8
 Sunflower Ordnance Depot, 88
 Supreme Headquarters Allied Expeditionary Force, 28, 29, 33
 Sverdrup, Leif J., 63, 120, 140, 158

 Teller, Edward, 168
 Tennessee-Tombigbee, 66
 Tennessee Valley Authority, 68, 127, 128, 167
 Third Army, 34
 Third Locks project, 168
 Toledo, 1, 2
 Transportation Corps, 39
 Triborough Bridge, 177
 Truman, Harry S., 45, 60, 79, 81, 121
 Tucker, Bruce, 61
 Tudor, Ralph, 158
 Tudor Organization, 199
 Tupper, Tristram, 21
 Tuttle Creek Dam, 43, 44, 46, 97, 98, 99, 119
 TVA, see Tennessee Valley Authority
 Twelfth Army Group, 28, 29, 37
 Twenty-fifth Armored Engineer Battalion, 17
 Twenty-fourth Engineers, 16
 Twenty-second Armored Engineer Battalion, 16
 Twining, Nathan F., 49, 50
 Tygart Dam, 10, 11, 12, 86

Union Electric Company, 113
 United States Department of State, 69, 158, 162, 163
 164, 173, 182
 United States Military Academy, 2, 3, 4, 7, 9, 38, 60,
 73, 83, 96, 103, 158, 202, 203
 University of California at Berkeley, 9
 University of Toledo, 2
 University of Iowa, 9
 University of Panama, 127

Utah Beach, 20, 31
 Ute Indian tribe, 92

Vaughan, Harry B., 35
 Veatch, N.T., 116
 Veatch report, 116
 Verrazano-Narrows Bridge, 16
 Veterans' Administration, 113, 114
 Vicksburg, 77
 Vietnam, 16, 41

Wagner, Charles, 10, 12, 67
 Walcheren Island, 39, 40
 Walt Disney World, 12, 76, 151, 152, 185, 189, 194, 197, 198
 War Department, 22, 26
 Warrior River, 66
 Washington, D.C., 20, 123, 126, 160, 162, 185
 Watertown, 17
 Waterways Experiment Station, 112
 Weather Service, 76
 WED Enterprises, 197
 Welland Canal, 65
 West Point, see United States Military Academy
 Wheeler, Raymond A., 56, 60, 71, 173, 174
 Wherry Housing Act, 108
 Wherry, Kenneth S., 108
 Whipple, William, 23, 27, 30, 34, 67, 82, 181
 White Horse, 52
 Williston project, 99, 100, 106
 Wilson Dam, 84
 Winter, Everett, 109
 Wittington, Will, 60, 61
 Wolman, Abel, 116
 World Bank, 174, 175, 204
 World's Fair (1939), 179, 181
 World's Fair (New York), 34, 63, 156, 174, 175, 176,
 177, 178, 179, 180, 183, 184, 185, 186, 187, 195

Yankton, 55, 86, 96, 108
 Yazoo River, 61
 Yellowstone Dam, 77, 84
 Yellowstone River, 75