

RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY

NEW BRUNSWICK

AN INTERVIEW WITH WILLIAM LEWIS

FOR THE

RUTGERS ORAL HISTORY ARCHIVES

WORLD WAR II * KOREAN WAR * VIETNAM WAR * COLD WAR

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Shaun Illingworth: This begins an interview with Lieutenant Colonel William Lewis, US Air Force (Retired), in Melbourne, Florida, on July 24, 2009. Colonel Lewis, thank you very much for having me here today, and Mrs. Lewis, thank you. To begin, could you tell me when and where you were born?

William Lewis: I was born in Atlantic City, April 15, 1920.

SI: What were your parents' names?

WL: My father's name was Leroy and my mother's name was Mabel.

SI: On your father's side of the family, do you know of any kind of immigration history or how the family came to settle in that area?

WL: Yes, I do, more on my father's side than my mother's, but my father's grandfather, who was named Louis Lewis, he came over on a sailing ship in, oh, the late 1890s to Philadelphia. ... He was a great gymnast, a physical culture type of person, and he joined, he came over from Germany, became associated with the *Turnverein* in Philadelphia and later became a physical culture professor at Girard College. ... So, my father has a German background. Now, my mother's family, I don't have too much on that, how they got to Atlantic City.

SI: Your grandfather, Louis Lewis, was a professor in the college.

WL: Yes, ... that was my father's grandfather, my great-grand[father]. My father's grandfather, he had four boys, and one of whom was my father's father.

SI: Okay.

WL: My grandfather, who is deceased. My father is also deceased. So, eventually, they became established in Atlantic City and formed a coal company, called the William Lewis Company, and which went for quite a number of years, up until 1930 or so. ... It was lost in the Crash and ... the Depression. [Editor's Note: Colonel Lewis is referring to the Stock Market Crash of October 1929 which initiated the Great Depression.]

SI: Do you know how your parents met?

WL: They met because they lived on the same street in Atlantic City, and so, that's how they met. See, I'm not sure I can remember exactly the name of that street right now, but they grew up as neighborhood kids and they met that way.

SI: Your father went into the family business.

WL: Yes, he did. He associated with his father and he had a brother who also was associated in the business, ... but, as I say, that went down in the Depression, in the Crash of '29-'30.

SI: Did you have any brothers and sisters?

WL: Yes, I had two sisters. Elizabeth, Betty, was one; she's deceased. She was older than me, born in 1918, and then, I have a sister, June, who is still with us and she was born in 1926 and she lives in Linwood, New Jersey.

SI: Just before you were born, World War I happened. Did your parents ever discuss that period, what it was like for them?

WL: Not too much about that. ... My father didn't go in because he had a family, but they didn't tell too much about that period, except, you know, there's rationing and that sort of thing. So, that's all I remember of what my father had said about that, and my mother.

SI: With a German background, did any "Old World" traditions live on in your family? Did they keep anything up in food or language?

WL: Yes, oh, definitely. They made sauerkraut and they liked to drink beer and they taught me that and, to this day, I still like a beer, now and then. So, they had German traditions that followed through in the family. That's what I remember most about my parents for the German side of that.

SI: Did they belong to any kind of German community organizations or German-American groups?

WL: Not particularly, that I know, except for my great-grandfather who came over, you know, around 1900 on the sailing ship and became established in Philadelphia with the German *Turnverein*, and so on, but I don't think my father was particularly involved in any German organizations, *per se*.

SI: You were born in Atlantic City. How long did the family live in Atlantic City before they moved out to Margate?

WL: Five years, and we moved down in 1925 to Margate, when I was five years old. [Editor's Note: Margate is a small beach community adjacent to Atlantic City, New Jersey.]

SI: Do you have any memories of when you lived in Atlantic City?

WL: Yes, I do remember that. I remember, my sister, Betty, she had scarlet fever, and then, ... she was separated from me in a bedroom and we used to pass notes under the sill of the door, ... but I never got scarlet fever. That's something I definitely remember and that's pretty much it, as far as, you know, my living in Atlantic City.

SI: Did they have to quarantine the entire house?

WL: I don't recall. ... I don't know about that. I know that I was quarantined away from my sister and, as I say, we communicated, but I never did get scarlet fever myself, and she recovered.

SI: When you moved to Margate, what was the community like that you moved into?

WL: Well, it was just sort of building up residentially and it was a nice place and they had a school system. It was just a great place to move to and to grow up in, and I always liked Margate very much. ... Of course, I loved the beach and I spent a lot of time on the beach growing up, and still love to go to the beach and take a swim, now and then.

SI: Did it have a fairly sizable year-round community, or was it one of those communities that swelled in the summer?

WL: No, it wasn't that kind of a community. It was pretty much year-round, although some people would rent their houses to Philadelphians and others in the summer to make a few dollars. ... Of course, people came down from Atlantic City to the beaches, and so, there was more activity then, but ... it was pretty much a year-round community.

SI: The Stock Market Crash occurred and the Depression started when you were about nine or ten.

WL: Yes, exactly.

SI: It obviously had a big impact on your family business.

WL: Oh, yes, definitely.

SI: Was your father out of work at all or did he go right into another job?

WL: Well, he was able to get employed by McAllister Fuel Company. They're another coal company there, and he got a job as manager with them, because he had a lot of experience running ... his father's business, the William Lewis Company. So, he may have been out for awhile, but not really too long. ... I remember hard times, ... but he was a good provider. We always ate well and, you know, we survived it okay, ... particularly when he got the job with McAllister. As I say, I don't know whether there was a period when he didn't have a job. There's probably some period of time, but not a lot. That's my impression.

SI: Do you remember some of the ways that it did impact your family? Do remember if you cut back on or reused things?

WL: No, not too much. ... You know, I had to cut back on some things, toys and things, but we always had some toys at Christmas and, as I say, my father was a good provider, a good organizer, and he got us through without too much problem. That's my impression.

SI: Was the neighborhood you grew up in diverse, in terms of people from different ethnic or religious backgrounds?

WL: No, not really. I mean, it was a white neighborhood and pretty much Christians. Later on, a lot of Jewish people moved into Margate, but not [then]. At that time, it was pretty much white, Anglo-Saxon, Protestant, maybe some Catholic, you know, that sort of a society.

SI: Was it more of a working-class neighborhood or a middle-class neighborhood?

WL: It was pretty much middle-class where I lived. Now, in what we called "the Lower End," down further to the south, there was ... less imposing housing and there were some lower income people there, but that was the one section that we referred to as the Lower End, ... but, generally, it was, you know, a middle-class kind of a town. I would say, overall, you could say that.

SI: You mentioned that you enjoyed going to the beach and that you grew up on the beach. Were there other activities that you were involved in as a child?

WL: Well, we used to play football on the beach and we had a baseball team, local baseball teams, and I remember taking part in those activities, but the main thing was going to the beach, really, but I can't recall [much else]. ... You know, through school, I did some basketball and that sort of thing. ... I was in the Cub Scouts and the Boy Scouts.

SI: Okay.

WL: You know, and [I] took part in those activities. I said Cub Scouts; did they have Cub Scouts then? I'm not sure about that. [Editor's Note: The Cub Scouting movement began in the late 1920s and early 1930s.] I know, definitely, I was a Boy Scout, you know.

SI: Did they have Sea Scouts? [Editor's Note: Sea Scouts is an all-boys organization within the Scouting movement that emphasizes water-based outdoor activities, such as kayaking, canoeing, sailing and rowing, and also teaches boys skills such as navigating and seamanship.]

WL: I think they did, yes, but I wasn't involved in that. I do remember Sea Scouts, you know, being talked about.

SI: How far did you go with the Boy Scouts?

WL: I became a First Class Boy Scout. That's as far as I went in Boy Scouts.

SI: Did you do a lot of camping and those types of activities?

WL: Yes, I went to [camp]. They had the camp down in southern New Jersey called Camp Edge, near Alloway, and I went there over several summers to a Scout camp ... and really enjoyed that. That was really great.

SI: Did you go to school in Margate?

WL: Yes.

SI: What did you think of the schools and your education in Margate?

WL: Oh, it was very, very good, a very good education. I started in kindergarten, ... it was a school down around Union Avenue in Margate, and then, went there for a year or so. ... Then, they built a school at Granville Avenue, and then, I went there and went on through to the eighth grade and graduated. I had a good education, good teachers. I remember fondly some of the teachers and, really, it was just fine. I really enjoyed it and took part in school activities, and so on.

SI: Was there a particular subject that you gravitated towards or enjoyed?

WL: Well, I tended to lean toward math and physical sciences. ... We certainly had other things, but generally toward math.

SI: Many people I interview who come from the southern part of New Jersey have said that they tended to associate with Philadelphia quite a bit.

WL: Yes.

SI: Did you go into Philadelphia often with your family?

WL: Well, yes, we would take trips there to shop, Wanamaker's and Strawbridge and Clothier. [Editor's Note: Wanamaker's was the first department store opened in Philadelphia. Strawbridge and Clothier was another popular department store.] By the way, Clothier, he was president of Rutgers years ago. [laughter] That was his family. [Editor's Note: Dr. Robert C. Clothier was the fourteenth President of Rutgers University, serving from 1932 to 1951. The Philadelphia-based department store chain Strawbridge & Clothier (defunct as of 2006) was founded by Justus C. Strawbridge and Isaac H. Clothier, Dr. Clothier's uncle.] We would go there to shop and that was mainly it. ...

[TAPE PAUSED]

WL: So, yes, Philadelphia was definitely a place that we did go to and liked Philadelphia.

SI: Up until 1933 was the era of Prohibition. Does anything stand out in your memory regarding Prohibition in that area while you were growing up? [Editor's Note: From 1920 to 1933, the Eighteenth Amendment to the Constitution made the manufacturing, sale and transportation of alcohol for consumption illegal, a period known as Prohibition.]

WL: Yes, my folks talked about going to speakeasies, [underground drinking establishments], in Atlantic City and the Roaring Twenties and that sort of thing. So, that's what I remember about it. Of course, it was the Depression time through the early '30s, and, in fact, it continued on up to World War II, I guess a follow-on recession, but I remember them talking about speakeasies and going there, like everybody. That's why Prohibition failed, of course, [laughter] because they had speakeasies and they saw that the government was losing money, anyway.

SI: Did you know if your neighbors were making alcohol in their basements? Were you aware of that activity in your neighborhood?

WL: Yes, my father did brew his beer, brew beer. I remember big brown and white crocks, and he would brew beer. ... I remember one incident that he told me about, I don't remember it personally, but he said he got too much yeast in and he heard, in the middle of the night, "Pop-pop," and the tops had blown off the bottles. ... I don't know whether that was illegal or not or whether that was what was done. ... I heard about bathtub gin, but he never did that, as far as I know, never made bathtub gin, but I'd heard about it. [Editor's Note: "Bathtub gin," a term first used during the Prohibition era, refers to any liquor or alcohol made under amateur conditions.] So, anyway, ... God rest his memory on that; [laughter] I don't think there's anything to worry about there.

SI: My great-grandparents made their own beer and liquor.

WL: Yes.

SI: I think everyone was doing it, to some extent.

WL: Yes.

SI: How involved was your family with the church?

WL: Very much involved. My father was one of the founders of the Margate Community Church and on the board, and so, I grew up going to that church, to what we called Christian Endeavor, a youth group, and we would go every Sunday. ... So, he was very much involved. He was not an overly religious man, but he was involved in the church activities. [Editor's Note: The Christian Endeavor group works with local churches and faith communities to establish and sponsor youth-led groups.]

SI: Which denomination is that?

WL: Well, it was a community church. We were ... Protestants, but it was more of a community church. I think my mother started out as Baptist, probably my father, too. I'm not sure about that, but it was just, as I say, a community church, and it was not a particular [sect], Protestant or Episcopalian or Baptist or Methodist. I don't remember anything specific about that.

SI: It seems that your family was able to get through the Depression okay, but could you see the impact of the Depression on the rest of Margate or Atlantic City?

WL: Yes, I could tell some kids [had it tough]; you know, we talked about problems with not having this or not having that. So, it's sort of a general impression that everybody was in the same boat. So, that's all I can say about that, really.

SI: Do you remember ever experiencing or hearing about transients or hobos coming through town looking for work or looking for meals?

WL: Not too much about that. We had a character we called "Peg Leg," who was, to us kids, ... a scary character, although he probably never hurt anyone, but "Peg Leg" had a beard and it was said that he lived out near the bay, in the wilds of Margate, in those days. Now, it's prime property, of course. ... If you saw him, you ran, and, you know, everybody feared "Peg Leg," but, as I say, that was the one character I do remember. ... As I say, never heard of him hurting anybody, but, you know, as kids, we feared him.

SI: Were your parents involved in any other community activities besides the church?

WL: Well, my father was Republican. Both parents were brought up "rock-ribbed" Republicans, as I was, and Dad was very active in Republican politics. He became a commissioner in Margate City, Commissioner of Public Works, for quite a number of years. Then, later, he became City Treasurer, and this is getting up into the '60s, so, he was involved in politics quite a bit. Of course, Republicans ran the whole place, that is, Atlantic County, back ... in the '20s, '30s and pushing into the '40s.

SI: You mentioned before we started recording that this was the era of Nucky Johnson. [Editor's Note: Republican Enoch Lewis "Nucky" Johnson was an Atlantic City, New Jersey, political boss from 1911 through 1941 known for his corrupt practices and connections to prominent gangsters.]

WL: Yes, yes, right.

SI: Like Frank Hague, up north, he controlled the whole area and its politics. [Editor's Note: Democrat Frank Hague served as Mayor of Jersey City from 1917 to 1947.]

WL: Yes, exactly, yes. Nucky was the Atlantic County boss and quite a power.

SI: Do you know if your father ever had any direct dealings with him?

WL: I don't know if he had direct [dealings]. He knew him, of course. Nucky was very popular with the black community in Atlantic City. They called it the "North Side," and he was noted for giving turkeys at Thanksgiving and providing food and clothes at Christmastime and he was a hero to those people. So, he was a kind of a guy who did some good, but, overall, he was

making money for himself, you know, but, let's face it, he had some redeeming qualities in a way.

SI: Were your father's political positions in addition to his work with the coal company?

WL: Yes, yes, ... right. ... It really didn't have any direct connection with the coal company. It's just, you know, community activities and politics.

SI: How did your family feel about Franklin Roosevelt and the New Deal?

WL: I don't remember their saying too much about him, because they were strict Republicans, and so, I don't remember anything about that, that they said, only that they were strict Republicans.

SI: Did you see any of the New Deal programs being active in your area, such as the WPA construction sites or CCC camps? [Editor's Note: The Works Progress Administration (WPA) was the largest New Deal Agency and well known for its construction of roads and public buildings, as well as social programs.]

WL: No, I don't. One thing I do recall is the CCC, the Civilian Conservation Corps. That was established in Mays Landing, [in Atlantic County], and I knew about that. ... My sister had a boyfriend who was in that and told me some things about it, but that's the one thing that I remember. I think that was during the Roosevelt Administration. That's the only thing I remember about the so-called New Deal activities. [Editor's Note: The Civilian Conservation Corps (CCC) gave young, unemployed men jobs in conservation and natural resource development projects.]

SI: You mentioned that your schooling was very good and you gravitated toward mathematics and the sciences. Did you feel that either your teachers or your parents were always preparing you for or pushing you towards going to college?

WL: Well, ... of course, and I went to Margate grade school, and then, to high school, and it was always planned for me to go to college. ... I don't remember teachers mentioning it particularly, you know, that you should go to college, and so forth, but, ... certainly, when I got into high school, it was planned that I would go to college.

SI: Had any other members of your family gone to college before you?

WL: No, they didn't. My sisters did not go to college; I don't think June went to college or Betty.

SI: Did anybody in your father's generation go to college, or any family member on your mother's side?

WL: ... No, I don't remember that, except for my father's uncles. I know one of them was a doctor ... and he lived up in Boston, as I remember. ... I think [my] sisters, Betty and June, they may have gone to commercial schools to learn typing and steno [shorthand] work and that sort of thing, but not, ... you know, an actual college.

SI: When you were growing up, were there very defined roles for women, either in your family or in society as a whole?

WL: Well, I guess that they tended toward nursing and steno work and secretary work and that sort of thing. That was my impression.

SI: How did you first become interested in or hear about Rutgers?

WL: Well, I knew it was the State University and, when I got into high school, ... I certainly anticipated going there because it was a state university and the cost was, you know, attractive for state residents. So, that was about it. ... I had heard of Rutgers and knew about it, but I learned a lot more when I went there, you know. [Editor's Note: Although Rutgers University was New Jersey's land-grant institution, it was not named the State University of New Jersey until 1945 and 1956.]

SI: I want to ask, since you became so involved with tracking hurricanes in your time in the Air Force, do you remember any hurricanes from growing up in the Margate-Atlantic City area? I know they were affected by quite a few.

WL: Oh, yes. Well, I remember, in August, you would get these storms coming by, strong winds, and, you know, we'd go down and watch the raging surf and everything. I remember several of those occasions. ... They might have been hurricanes off shore or tropical storms. In other words, they didn't hit, but the one that I do remember hitting, and I wasn't there, really, was the hurricane of 1944, September of 1944. [Editor's Note: The Great Atlantic Hurricane struck the Mid-Atlantic in the middle of September 1944.] I was in India at that time then, but I got a lot of information when I came back from my father about it, and my future wife, Connie, lived through that. She lived in Ventnor and the hurricane of '44, it wiped out the Margate boardwalk, which was never replaced. ... My father said he left work and his car stalled out north of where he lived and he had to wade home in almost chest-high water to get home. He said the water came up to the sill and kind of spilled into the house a little bit, and they lived right across the street from the beach, but they didn't suffer serious damage to the house. ... That's what I remember from what I was told about it, and it did a lot of damage in Atlantic City and wiped out a couple of piers, and so forth, you know.

SI: Did you have any part-time jobs or summer jobs during high school, or earlier, perhaps related to the summer tourist trade?

WL: Yes, well, ... I can remember, when I went to Rutgers, I worked at Woolworth's on the boardwalk, ... serving frozen custards ... on the cafeteria line. I remember doing that, you know, working for the Woolworth Company.

SI: Was that the boardwalk in Atlantic City or Margate?

WL: Atlantic City. Yes, they didn't have any commercial activities on the Margate boardwalk. It was just a boardwalk. It was great. It certainly really is a shame that it was wiped out.

SI: In the 1930s, how aware were you of what was happening in the world, with Hitler and Mussolini taking power? Did you follow those events in the news?

WL: Not too much until I got to Rutgers in 1938. So, I was aware of what was going on. I'm just trying to think, ... when I was in high school, whether I [knew]. ... Yes, I knew what was going on, but, when I got to Rutgers, then, I really was following things a lot more closely, and, of course, particularly as we were supporting Britain, you know, with destroyers and other things ... and as we moved toward war. [Editor's Note: Colonel Lewis is referring to the Destroyers for Bases Agreement, struck between the US and United Kingdom in September 1940, and the aid extended to the Allies after the passage of the Lend-Lease legislation in March 1941.] So, I followed it quite closely and, you know, German advances and all that, that sort of thing.

SI: Before you came up to New Brunswick, had you really traveled much outside of the Atlantic City and Philadelphia area?

WL: No, not really. I can't think of any trips. Oh, I think there was a couple trips to New York, just for sightseeing, and that's about as far as I remember going before going to Rutgers. I'm trying to think [of] anything to the south, but, no, I don't remember that, but I definitely remember going to New York a couple times through the '30s.

SI: When you first came on campus, did you live on campus or did you live off campus?

WL: No, I lived on campus, in the Quad, and I think the Quad's still there.

SI: Yes.

WL: Yes, but I lived in the Quad, and then, I lived in Ford Hall, later, and I did live off campus a couple of times. ... I think I lived in Winants for awhile there, too, but just sort of mostly the dormitories. [Editor's Note: Winants Hall and Ford Hall were the first and second dormitories, respectively, built on what is now the Rutgers College Avenue Campus.]

SI: What were your first few days and weeks like at Rutgers?

WL: Well, it was exciting, you know, going there, and the world was sort of my oyster--it was a new activity. ... I felt good about going to college and [was] very enthused about it and made new friends and everything. So, ... [I] just felt good about it.

SI: Was there any kind of freshman initiation or hazing?

WL: I don't remember too much. I think we wore dinks. ... We were told, or, you know, encouraged, in fact, ordered, almost, to wear dinks. That's the one thing I remember, but there was no physical hazing, in my recollection. [Editor's Note: Dinks were small black hats that first-year students wore to make them recognizable as freshmen.]

SI: Did you decide that you wanted to major in chemistry right away? If not, how did that come about?

WL: Oh, yes, definitely. I was very good in chemistry in high school, and math, and I definitely went for chemistry. I loved chemistry.

SI: What did you think you wanted to do in chemistry? Were there any occupations that interested you?

WL: I didn't know, really. I didn't think too far ahead on that, really. I just felt, I guess, something would happen after I graduated, possibly graduate school or work in the industry or something like that. ...

[TAPE PAUSED]

WL: Let's continue.

SI: Do any of your professors stand out in your memory, either in chemistry or any subject?

WL: Oh, yes. I remember, in chemistry, there was a Professor [Delmer L.] Cottle. He was organic chemistry and I loved organic chemistry, and then, there was [William] Rieman. I think he had to do with, oh, I forget now the branch of chemistry that he taught, and then, there was a [Henry L.] Van Mater. ... He taught general chemistry, the first one that we encountered, and then, Dean [William T.] Read, who was the dean of the school. I remember him very well, and he was kind of a dynamic kind of a guy. We called him "The Blizzer," because he was really ... great to listen to and he would have some activities in the industry he would tell us about. ... Then, I remember Professor [Harold S.] Grant, ... who taught mathematics, and I always liked him. He was very good. I'm just trying to think of physics. I liked physics, and I just can't think of a professor there. Of course, I ... mostly, you know, knew the chemistry professors. I think there was a Van Meter, too, a Van Mater and a Van Meter. [Editor's Note: Colonel Lewis may be thinking of Professor Peter A. van der Meulen of the Rutgers School of Chemistry, instead of Van Meter.] Anyway, that may be slightly inaccurate there, I'm not sure, but definitely Cottle and Dean Read, Rieman and Professor Grant, you know, in mathematics.

SI: How demanding was the chemistry major? Did you have to take a lot of labs? Did it take up a lot of your time?

WL: Oh, yes, definitely, a lot of lab work. I mean, it was a tough curriculum, and with mathematics and physics. You know, we used to kind of scoff at the ones that ... were taking business administration. We had this heavy load in science and physics, chemistry, mathematics,

and we thought the other guys, you know, they had geography and politics, things like that. ... They were getting the education that they wanted, and I'm sure it was good, but it was just the idea that, as science majors, we kind of looked down on them. So, anyway, [laughter] that was an impression.

SI: Did you have to work at all while you were at Rutgers? You mentioned working in the summers, but did you have to work while you were on campus?

WL: ... No, I didn't have to do that. I didn't work on campus.

SI: Did you get involved in any kind of clubs or sports activities?

WL: No, I didn't get into that, for some reason. I don't know why. I always remember playing football on the beach when I grew up in Margate in the '30s, but, somehow, I didn't follow through. ... I had played baseball and was pretty good at both of those, but, somehow, ... I don't know why, but I wasn't motivated to follow through in high school, nor at Rutgers, in, you know, athletic activities. I just didn't do it.

SI: Did you attend the events as a spectator?

WL: Oh, yes, definitely, went to all the football games and was a great supporter of the team, and the famous game against Princeton in 1938, when we beat Princeton 20-18, that was a monumental achievement. ... I might say, there was a lot of celebration after that. [laughter]

SI: Were you ever interested in joining a fraternity?

WL: Oh, I didn't. I was thinking about it, ... and I did go to some fraternity meetings, but I just [did not]. I came close to joining, I think, Lambda Chi Alpha, I think, but, no, I didn't. I guess I wasn't a joiner, really.

SI: Did you see if there was a real split on campus between the people who were in fraternities and the people who were not?

WL: Well, to some extent, but not a major extent, really. You know, I had friends that were in fraternities, and so, I ... wasn't struck by a major difference there.

SI: Did you start developing a particular interest in an area of chemistry, something you wanted to specialize in?

WL: Well, I liked organic chemistry best, because there was so much intricacy there, with different compounds and modifications and everything in it. ... I was very interested in organic chemistry. ...

SI: Do you remember anything about the way your professors taught or the subject matter they were teaching that was particularly innovative or new, that struck you as innovative?

WL: No, they were all very good, to my observation, and it was just good teaching.

SI: Looking back, you worked in chemistry, particularly industrial chemistry, for a little while, before you went back into the Air Force.

WL: Yes.

SI: Did you find that there was anything particularly useful, or something that they did not teach you that you wish they had?

WL: No, not really. I was well-equipped to do what I was doing with Sharp and Dohme, [a pharmaceutical company], that was outside of Philadelphia, in Glenolden. ... No, you know, I felt I was well-prepared for that job from, you know, my studies at Rutgers.

SI: Did you ever have the opportunity to take any electives that were outside of the sciences?

WL: I probably did, but I can't remember now. ... I don't know. Of course, I took German, the language, but that might have been a requirement. ... There was English composition, and those things that were required, you know, to get a degree. I don't remember taking any electives, *per se*, really.

SI: Were you in the ROTC? I know it was mandatory.

WL: Yes, yes. ... I guess I was in it for the couple of years, but I didn't continue with ROTC.

SI: Does anything stand out about your time in the ROTC?

WL: No, no. It was just military training and it was good, you know.

SI: Was there a reason why you did not opt to continue on to the advanced course?

WL: No, I don't know, I guess I just decided not to. ... So, anyway, no, ... I didn't have any particular reason for not doing it or doing it.

SI: It is always interesting to me to talk to people who were there in the 1930s and 1940s because there were so many traditions and practices that just went away right after World War II, both because of the size and social changes. One is chapel, that you would have to go to chapel both for announcements and services.

WL: Yes.

SI: Do you remember anything that stands out about chapel in your memory?

WL: Only that many of us didn't want to go when we had to go. You had to go a certain number of times and we were kind of annoyed at that, having to go, but we went, and then, that was that, so, maybe reluctantly, sometimes.

SI: Do you remember any of the speakers who came to speak at chapel or other convocations?

WL: No. There's a man named Demarest and he spoke with kind of a lisp and we called him "Whistling Demarest."

SI: "Whistling Willie?"

WL: "Whistling Willie," that's it, yes, that's what we called him. ... I do remember him, but I don't remember any others in particular. [Editor's Note: The Reverend Dr. William H. S. Demarest was the first alumnus to become President of Rutgers College (1906-1924). He continued to be very active within the University while serving as President of the New Brunswick Theological Seminary.]

SI: Did you have a particular group of friends that you hung around with? Were they either chemistry majors or people from your dorm?

WL: Oh, yes. Well, there was Bill Berglund; he was a close friend. There was Morton Epstein, Al Sherman, they were [from] Atlantic City, and Bill Quinn, he was around, and then, I met others there, but I mostly hung around with them. Another was Danny Watt, also from Atlantic City, who went [to Rutgers]. I think he was in chemistry, I'm not sure, but he only lasted about a year. ... He grew up with me in Margate. Berglund, he started in chemistry, then, he phased into bacteriology, but he did get a degree, was there four years, but left early and went in the Marines. ... Oh, there were others that I met and knew, but mostly I palled around with Berglund, Epstein, Al Sherman and the guys from Atlantic City.

SI: Did you get the sense that people from South Jersey were in the minority on campus?

WL: No, I didn't have any particular sense about that, but I think we were. There were some people from up around Northern Jersey, Central Jersey, who commuted, rather than lived at Rutgers. There were those, but I think, definitely, we were in the minority, although I didn't think too much about it.

SI: You mentioned that you started to become more aware of the news coming out of Europe and Asia when you were at Rutgers.

WL: Yes.

SI: Could you elaborate on that? Did you just follow the news more or were people talking about it more? Were there debates, particularly after the war broke out, over whether we should get involved in the war or help England more?

WL: Well, you got more and more interested and saw the trend toward us getting into the conflict, all the German advances. I don't know, Berglund and I and some others, we kind of were fascinated by the *blitzkrieg* and how successful it was and everything, but, ... certainly after Pearl Harbor, we were really onboard to support the country and do our part. ... As I say, we were fascinated by just the efficiency of the Germans and what they were doing, ... but, then, we certainly became very sympathetic to Britain, ... certainly after Pearl Harbor. [Editor's Note: The *blitzkrieg*, a combined arms fighting tactic based on speed and surprise, was first used by the Germans in their September 1939 invasion of Poland, which initiated World War II.]

SI: Were politics or world events in general talked about on campus a lot? Did people talk about issues such as the peace movement and isolationism?

WL: Well, just to some extent. You know, there were discussions of Hitler and Mussolini, dictators. So, there was some and, ... always, there were some philosophers. I meant to mention, or I forgot to mention, Bill Symons. He was from the Atlantic City area, but he was not in chemistry, he was in philosophy or something. ... I remember being with him and some of his friends and they would talk about philosophers, German philosophers and others, and they were way, way, way beyond me, but I was fascinated by some of the things that they talked about. ... I thought, "Gee, I should ... have read some of these," Kant, you know, and Nietzsche and that sort of thing, but that was about it along those lines. [Editor's Note: Nineteenth Century German philosopher Friedrich Nietzsche wrote texts on morality, religion, science and contemporary culture. German Enlightenment philosopher Immanuel Kant was well-known for his theory of knowledge.]

SI: Were you at Rutgers when the attack on Pearl Harbor happened?

WL: Yes, yes, definitely.

SI: What do you remember about that day?

WL: Well, ... just that, you know, that really put us into the war and it was a shocking thing. You know, ... of course, the surprise attack, ... as we know, [was] unexpected, with Japanese envoys actually in Washington at that time and it was just a shocking thing. [Editor's Note: Japanese and US diplomats had been meeting for intermittent peace talks in Washington, DC, up until the attack on Pearl Harbor on December 7th.] We knew that ... the game was up, as far as what we were going to do. We were going to go in. That was that.

SI: What were the sentiments like on campus? Was there any initial shock or panic? Were there a lot of people who were ready to go and enlist?

WL: Yes, well, definitely supportive. Oh, definitely, yes, we were all ready to go, really, and a hundred percent behind the war effort, which ... [was] just getting started then.

SI: Since you were in your final semester at Rutgers, were you focused on just graduating or were you looking at options as to what you would do in the war?

WL: I wanted to get in the Army Air Forces, and I interviewed at Rutgers, but I made a mistake by saying that I had hay fever in my youth, which was no big deal, but they were real fussy in those days. ... I wanted to get into the flying part of it and they said, "No dice." So, I was rejected at that time, at Rutgers. So, then, when I graduated, I took a position with ... a company that was going to train me and others, some [were] also from Rutgers, a few chemists, ... to operate explosive plants, and I understood it would be a plant in Kankakee, Illinois. ... We were sent to the University of Buffalo ... for some training along those lines, and so, I was in that group. I know another one was Joe Horvath. He went there, and there were a couple others from Rutgers, I just can't remember their names right now, and others from different schools, not a great, large group of students. ...

SI: Did the Rutgers faculty play any role in getting you all those jobs?

WL: I don't recall that. I think there were some jobs that were available. You found out through some source, and I forget how I found out about this job where I would go to the University of Buffalo for a couple of months, and then, go on to this plant. I don't remember how I found out about that, but whether it came through the Rutgers professors or not, I don't know. ... Anyway, I didn't complete it, obviously, because I said, "Oh, I've really got to get into the war." So, I went down to the recruiting station and I made another try to get in the Army Air Forces. ... Of course, I didn't mention hay fever at all this time and I was accepted, and that was in June of 1942. That's not off the record, particularly, you know, this hay fever thing; I don't think it's any big deal, but, anyway, this is done every day, people that say they were nineteen when they were actually sixteen, or something like that, to get in. Anyway, that was June of '42, and so, I went back to Margate and waited to be called to the program, [the] Aviation Cadet program, and I was called in December of 1942. ... In the interim, I did various jobs in Atlantic City, and one of which led to meeting my future wife, Connie. I worked on the Steel Pier, running the Music Hall sound system. That's how I met you [to his wife, Constance], on the Steel Pier, and she had some connection with the Steel Pier and we met there. ... Then, there's more history later on about us, you know. So, anyway, then, I was called in December of '42, went to San Antonio Aviation Cadet Center and started training as an Aviation Cadet.

SI: In that interim, when you were a civilian waiting to be called up, did you ever feel any kind of discrimination against you? Were people wondering why you were not in the service?

WL: ... No, I didn't, but, later, I found out they called those people who weren't in uniform "feather merchants." That was a name. I don't know whether you ever heard that or not.

SI: No, I never heard that.

WL: We called them "feather merchants," but, no, I had ... observed none of that, you know, when I was waiting to be called. ... Then, later on, when I was in uniform, we talked about those who weren't in uniform and they were referred to as "feather merchants," although they had some legitimate reason for not being in uniform, many of them, you know. ... Anyway, that's how we referred to them.

SI: When you were called up, where did you first report to?

WL: To the San Antonio Aviation Cadet Center, where they screened the cadets to become navigators, bombardiers or pilots, and I guess, because of my background in science and everything, I was chosen to be a navigator. So, I proceeded on to navigation training.

SI: Were you happy with being a navigator? Had you wanted to be a pilot?

WL: Well, everybody wanted to be a pilot, I guess, really, and so, [it was] sort of a disappointment in a way, but I was satisfied to proceed with navigation.

SI: Before World War II, had you had any interest in aviation at all as a child?

WL: Not a great deal, really, not an awful [lot], you know. ... I wasn't in Civilian Pilot Training or anything like that. [Editor's Note: Beginning in 1939, the Civilian Pilot Training Program offered college students the opportunity to complete a pilot training course, in anticipation of possible wartime aviation needs.] So, I didn't have any particular interest. ... I was just motivated by the war and wanting to get in, get in uniform and do something.

SI: What attracted you to the Army Air Forces initially?

WL: I don't know. I just chose [it]; rather than the Navy, I just chose the Army, and that's all I thought about, didn't consider any other service. I just chose the Army Air Force and proceeded that way.

SI: In San Antonio, you were classified as a navigator.

WL: Yes.

SI: Were you sent to Hondo then?

WL: No, actually, I was sent to Ellington Field for, what [do] you call it? preflight training, and they had [the] pre-flight navigators, bombardiers and pilots, different groups there. ... That was in the Spring of '43, and then, I was sent to Hondo Army Airfield for actual navigation training, where you actually flew as a navigator [for] training. ... Then, it might have been early '43 that I went to Ellington, but I know it was, like, three or four months at Hondo and I graduated in August of 1943 ... and got navigator wings and was commissioned a second lieutenant.

SI: Did you take well to the navigation training?

WL: Yes, yes. I liked it very much and, you know, I passed and became a navigator. ... The one thing that I always remember, sort of an aside, we saw the officers' club there and that it was forbidden for us to go in there, of course, as cadets, but, once we put on the gold bars of a second

lieutenant, we headed for the officers' club. We just thought it was a great thing that we could go to the officers' club. So, that's the sort of thing that I remember.

SI: While you were flying these training missions, were there any accidents or any problems with navigating, getting lost?

WL: No, not really, only getting sick. Some initial flights, I did get airsick, several times, but, you know. ... Well, there was some not doing things correctly, and so forth, ... as part of training, but we just flew in routes in South Texas and various places, and so, that was it, ... just learning, first, dead reckoning, and then, later, celestial navigation.

SI: Once you were commissioned, where were you assigned next?

WL: I was assigned to Biggs Army Airfield near El Paso, Texas, and assigned to a B-24 bomber crew as a navigator, and then, we went through some training there ... as a crew. ... That was in late '43, and then, toward December of '43, we were transferred to Topeka Army Airfield, to actually pick up our own B-24 in preparation for going overseas. ... I remember being there over Christmas, in Topeka and Kansas City and those environs. Then, we left in January '44 to proceed to overseas.

SI: Did you ever get a chance to come home on leave before you went overseas?

WL: Yes. Let me think. The leave was between going from El Paso, Biggs Field, to Topeka Army Airfield, when I got home. ... That was a leave before going overseas. You knew you were going to go overseas. You knew you were going to Topeka, get an airplane and go overseas. So, that was the pre-going overseas leave, between Biggs Field and Topeka.

SI: What was it like coming back in uniform, and then, knowing that you would have to go out to a combat unit? You seemed sure you were going to do that.

WL: Yes, definitely.

SI: How did you feel at that point?

WL: Well, ready to go, really ready to do it, you know, just looking forward to the excitement of doing that and being part of the war effort. I mean, I don't want to get too ... emotional about it, but it was just [that] we were young and we wanted to get in. ... We're looking for the excitement of combat flying and that sort of thing, you know, serious about it.

SI: Can you tell me a little bit about your crew?

WL: Yes, ... the pilot was a former Army officer and his name was Tom Ready and he was the crew commander. He was a first lieutenant. Oh, boy, he was above us, and he actually wasn't a great pilot, really, but we had a co-pilot who was a flight officer. They had flight officers in those days, and, later, they commissioned them all, Larry Muldoon. ... He was a really good

pilot, and so, he kept Ready kind of honest, [laughter] in procedures. The bombardier was Bob Murphy. He was from Chicago. He was a little bit older than [us], not that much older, two or three years older than me and most others, and then, we had an engineer, radio operator and gunners. Let's see, I remember a gunner named Winkler, also Carnes. ... If I took a little time, I could name some of those people, but [I] got along well with the crew. ... We all got along very well and I really enjoyed meeting and serving with these people.

SI: How did the officers and the enlisted men relate? Was there a clear line between the two or were you all pretty much on equal terms?

WL: Well, there was a line, you know, as far as where you were billeted and ate, but there was friendship there. ... The military structure was still there, but it wasn't offensive or anything or, you know, bothersome. ... You realized you were an officer and they were enlisted and there were certain distances that were kept at certain times, but there was friendship there. ...

[TAPE PAUSED]

SI: Take me through the steps of going from Topeka over to India.

WL: Yes, we flew from Topeka down to Morrison Field, West Palm Beach, and we were there a couple of days, getting some equipment. ... One thing I remember about that. They had some trouble with crews going through there and hitting the officers' club ... and overdoing it. So, what they did with us was to take our AGO [Adjutant General's Office] cards (our IDs). The commander confiscated them. So, if you didn't have your AGO, you couldn't get a drink at the bar. So, they kept us under control. Anyway, then, we went from West Palm Beach heading for Waller Field, Trinidad, but, on the way, there was sort of a dramatic event. We were instructed, ... after we were out one hour, that we could open our orders. We didn't know where we were going ... when we left. So, after the one hour out, Pilot Ready opened them and announced that we were going to India, to the Seventh Bomb Group. So, for all we knew, we ... might have been going to Europe by way of the southern route or something, you know. Anyway, ... for some reason, we stopped at St. Lucia. I do recall, the pilot was a little worried about gas consumption, for some reason. I guess it was a longer flight to Trinidad than was thought by the engineer. So, we landed ... in St. Lucia, got some gas, and I remember getting some tropical drinks, non-alcoholic, of course, and some English money. St. Lucia was an English possession at that time. Soon, we proceeded to Trinidad, and then, from Trinidad, we went to Belem, Brazil, and that was just south of the Equator. I remember, when we crossed the Equator, I announced that to the crew, "We're crossing that line," you know, which is an invisible line, and I said, "We're now in the Southern Hemisphere." Then, from Belem, we went to Natal. It was on the coast of Brazil, and we spent the night there, as at the other places, and I remember, at Natal, everybody bought boots. They called them "Natal boots" and everybody that went through Natal got these boots, and so, everyone, after Natal, was walking around in Natal boots. So, that's just an aside. Then, from Natal, we went down to Ascension Island, down in the South Atlantic. Ascension, what a terrible place; we got there in time for lunch and we had fish, and then, ... for dinner, guess what? we had fish and, for breakfast, we had fish. ... Then, we took off and headed for the African Coast. Now, Ascension, when you took off, the end of the

runway was nothing. It was just the end of the runway and, you could see, it was rocks, you know, down to the sea. So, you'd better get off before then. I always remember that. So, we went to, of all places, where Barack, President Obama, has been recently, Accra, on the Gold Coast. [Editor's Note: President Barack Obama visited Accra from July 10 to July 11, 2009.] We went there and spent some time there, a night or two, and then, went to Kano, which is in interior Africa. I think that's in Nigeria, and we spent a night there, and then, we headed for Khartoum, but we didn't make Khartoum. We had engine trouble and we landed at a place called El Fasher, and it was, at that time, Anglo-Egyptian Sudan. ... We spent, oh, two or three weeks there, as I remember, waiting for an engine to be flown in from the United States. So, that ... kind of interrupted our trip over to India. One thing about El Fasher, by the way, is that, today, it's in Darfur. That's where, you know, they had the terrible things going on there, with insurgents and whatnot. [Editor's Note: Since 2003, the Darfur region of Sudan has been the site of a civil war that has displaced millions and led to hundreds of thousands of civilian deaths.] I remember, Luise Rainer, the Viennese actress, who was, you know, acting out of Hollywood, was there on a ... USO tour (at El Fasher) and gave a show there. We went to it, and I remember going to the dressing room afterwards to see Luise, and some others, not [just her], a couple other people there. ... When you started overseas, you had what they call a "short snorter." You took a dollar bill and you had three people in various locations ... sign it, and then, you gave each one of them a dollar. So, I needed one more signature. I asked Luise to sign it and she did, but she wouldn't take the dollar. You would tack on currency from any place you visited, on to your short snorter. So, anyway, we did get our engine and we went on to Khartoum, spent some time there. ... I don't know how much time you want me to take on this, but, anyway, then, we went to a place called Steamer Point, which is on the southern tip of the Arabian Peninsula [in Aden], and spent a night or two there, and then, we proceeded to a place called Masirah Island, [Oman], which is further on to the north, and we spent a night there. It's someplace off the Arabian Peninsula, not off, but part of it, near the coast. From there, we went to Karachi, India, spent a couple nights there, and then flew down to Bangalore in Southern India, beautiful place, at higher ground. ... It was always cooler there than other places in India, and ... then, we dropped our plane off there. They did some modification ... to the B-24 there. So, we never, as far as we know, saw that plane again. I can't be sure of that, but I don't think so. Then, they flew us up to our base in India, which was about a hundred miles northwest of Calcutta, a place called Pandaveswar. That was the headquarters of the Seventh Bomb Group.

SI: One thing that strikes me when I interview navigators who went to either Europe or Africa or the CBI along the same basic route that you went is, they spent all this time training in Texas and the Southwest, where there are very clear skies and many visual markers on the ground that can help you. Then, all of a sudden, you are flying over vast bodies of water. Did you find it to be a new challenge or difficult?

WL: Oh, yes. Well, that's when you use celestial, you know, when you're flying over water. So, I used that to get from Natal to Ascension and Ascension to Accra on the Gold Coast. Yes, that's what you used, depended on celestial navigation, and we were trained in that. So, [we] managed to get there. ...

SI: Was it difficult?

WL: No, not particularly. There's always a worry about hitting an island, you know, but it was just [that] we were trained to use celestial and that's what we did, you know, the sun and the stars. I think we flew in the daytime, so, it was mostly sun shots, you know, to determine your course.

SI: When you first arrived at Pandaveswar, what was the state of the base? Was it a developed base? I have seen some pictures online. It does not seem like there was a lot there.

WL: It was pretty well developed. It had been there for awhile, a year or more, and it was pretty well developed, you know, with good quarters and everything. So, it seemed to be functioning well.

SI: Do you know if you were replacing a crew that had been shot down or were they just augmenting the force there?

WL: Just augmenting as far as [I know]. It could have been crews that had done their time and were going back, and it could have been a replacement. I think it was more of a replacement, extra crew, I think that's what we were. They had four squadrons and ... they weren't building another squadron or anything. It was just a replacement crew, I would say.

SI: Which squadron did you join?

WL: It was the 493rd. There were four, the 493rd, 492nd, the Ninth and I think the 436th. They had four squadrons and ... I think we had the Ninth and the 493rd were at Pandaveswar and the other two were at another base nearby.

SI: How long did you have to get acclimated before you flew your first combat mission?

WL: Not too long. I remember, it was a night mission and it happened to be a full moon, too, and so, it was helpful, you know, for observing ... rivers and main ground features, but just a bombing mission. I'm not sure, might have been an airfield. I can't remember what we were bombing that first mission, but it's probably an airfield.

SI: Do you remember roughly where it was or what country?

WL: Well, oh, that was in Burma, Central Burma, yes, yes, definitely. I should remember the name of that town, but I just can't think of it right now.

SI: For your first combat mission, what was going through your head and how did you prepare for it?

WL: Well, it was just, you know, exciting, that we weren't shot at. It was a night mission and we weren't shot at, but we possibly could have been, you know. So, it went pretty smoothly, really.

SI: I am familiar a little bit with how squadrons operated in the Pacific and in Europe. They flew in formation in Europe, they did not always fly in formation in the Pacific. How did your squadrons fly? Were they in formation or some other arrangement?

WL: In daytime, we were in formation. At night, we flew alone, but there were daytime missions where we'd fly in formation, you know, at four or five planes, you know, as a unit. ... I remember, one time, I was the [lead navigator]. Then, they'd have a lead plane, would be leading the group, the squadron planes. I remember, one time, I was a lead navigator and, boy, I'll tell you, that puts pressure on you. I remember, you know, "Geez, am I going to do it right?" all these planes, you know. I looked back once and I saw these planes behind and I didn't look again; I just concentrated on navigation. ... We managed okay on that mission, but that's what it was; daytime was formation and nighttime was single.

SI: Again, from talking to other navigators, I am thinking particularly of the ones who served in England, they trained them in the Southwest, where everything was clear and sunny. When they got to England, the different weather systems really affected their job. Do you remember having to relearn things or incorporate what was actually happening in the field into your work?

WL: No. The weather was a factor in the Summer of 1944, when the monsoon [began]. Generally, the weather was okay, I mean, you know, you could see, visual bombing. Well, I'll get into something later on about an assist for bombing, but, anyway, in the Summer of 1944, the monsoon had taken over. So, that wiped us out for bombing, because you couldn't see, and so, what we did [was] put extra tanks in the B-24 and we flew gas up to the 14th Air Force in China, flew to various places in China, over "the Hump" [the Himalayas], you know, and they'd go up pretty high. That's the famous Hump. We flew over that, and the B-24 ... was made to fly high, so, twenty thousand feet or so, and then, we would go to various bases and drop off gas, saving enough for us to get back to India. We were [at] a little different base at that time; we moved to a base near Dacca in the Summer of '44, in flying those missions, ... but no bombing during the Summer of '44.

SI: What was the mission quota that you had to fulfill before you could rotate home?

WL: Fifty missions, ... and I did complete fifty missions, I think four hundred hours of combat flying. We had long missions, because the B-24 was a long-range bomber. So, we had some really long missions, you know, like eleven, twelve hours.

SI: Were the fuel flying missions included in your missions or were they in addition to them?

WL: You know, I don't remember that. ... It was still combat flying. We're flying over enemy territory. The Japanese had kept the Burma Road and there's always a chance of enemy action. I think ... they counted. I think they did count. You know, I never knew, I don't know for sure, but I think those hours and missions did count, because I know one of the bases we went to, it was a place called Nanning, in down toward, well, in Southern China, and we delivered gas there one time. The Japanese were coming in and they got the planes out and the Japanese did take

over that base. ... So, we supplied gas to some bases that were taken over, but, then, ... the Chinese got them back, later on. ... In the Summer of '44, there was a Japanese offensive in China where they recovered some land that they had lost to the Chinese. [Editor's Note: From April to December 1944, Japanese forces in China executed Operation Ichi-Go, a major offensive in Southern China that pushed back the effective range of the 14th Air Force.]

SI: You flew your first mission in; was it January of 1944?

WL: Probably getting into February, because [of] that time we had the time in El Fasher, you know, where we had to wait for the engine, then, get down to Bangalore, and then, we'd get to our base, get organized, get, you know, signed in and briefed, and so forth. ... I think it was in February, I would say, that first mission, of '44.

SI: Once you started flying combat missions, how frequently would you fly a mission?

WL: Oh, I would think every week or so. You know, I don't remember exactly the frequency. Every week or two weeks, you'd be on a mission.

SI: First, could you take me through what you typically did on a mission, what you would have to prepare, where you would sit in the plane, what you would actually do?

WL: Well, I was just the navigator and took data to keep track of the position of the airplane, and that was basically it, really, you know. ... Of course, we ... would go up high and we had oxygen masks on, flak jackets, they were bulky things, and we had helmets, you know, like doughboy helmets. ... You know, we were pretty well-equipped for "ack-ack," which we ran into, you know, flak.

SI: How cold would it get on these high-altitude missions?

WL: Pretty cold. We had heavy jackets, pants, gloves, and it got pretty cold, very. You noticed it. I don't know, probably down to zero range, or I'd have to, you know, think about that, but definitely cold.

SI: Were the suits heated?

WL: There was some heat, we did have some heat, but ... it wasn't always effective, you know, but, yes, there was heat in the airplane.

SI: One thing that strikes me about the Air Force is that mechanical failures and other factors could be as dangerous as being in combat. Do you remember anything like that, engines failing or navigational systems going out?

WL: No, not really. We were fortunate. The only engine failure was the one, you know, on the way to India, that we had to stop in Africa. No, I don't remember we ever had engine trouble. The B-24 had good engines. They had Pratt [and] Whitney engines, which were well thought of.

They were much more reliable, ... as I understood it, than the Wright engines on the B-17. So, ... we had good engines and we didn't have much engine problems.

SI: Do you remember when you first came under attack on these missions? Do you remember the first time you were under flak attack or fighter attack?

WL: Yes. Well, I remember one night mission, we had made a run not far from Rangoon at an airfield and we were up around twenty thousand or so, ... but made our bombing run. ... I remember, we got caught in the lights, the Japanese caught us in their searchlights, and then, there would be, you know, "ack-ack" fire at us, but the most scary thing was that ... I was not in the very nose; well, yes, okay, yes, I was right behind the nose, right where the bombardier sat, but I could see out, and there's also an astrodome where you take celestial shots. I saw tracers go right over the airplane and it was a night fighter that had picked us up, because we were in the lights, and so, the pilot was twisting and turning, trying to get out of the lights, and then, the night fighter would make another pass, another stream of tracers. ... So, finally, the pilot put the B-24 on its nose and made a horrendous dive and I was just sort of [pinned]. You couldn't move. I was just pinned to my seat, and ... then, he pulled the plane out, maybe at ten thousand or lower, but he got us out of the lights and the airplane held together. So, that was one of the dramatic things I remember, was being under fire there by this night fighter and the anti-aircraft guns and being lit up like a Christmas tree, you know. So, when you get caught in the lights, I mean, it's just a blinding light. It's really a startling thing, but we had a good pilot there. He lives in this area here. He wasn't our regular pilot, Irv Kuchnast is his name, and we would get together now and then, talk about that. ... He was very good and he's the guy that saved us, really.

SI: Would you often fly with your own crew or were the crews kind of broken up after awhile?

WL: Mostly with our own crew, although, no, I flew with a lot of different pilots, for some reason. I don't know, it depended on who was available. Maybe sickness might have been a factor or something, somebody was grounded for a little while or something, but I flew with some different pilots, it seemed, and I don't know, it seemed that our crew, basically, was together, but with different pilots. That's what I recall.

SI: Do you remember times when your plane would come back and you would find holes in it, or any time that you actually knew that you were hit by a piece of flak?

WL: No, fortunately not. I don't think we were ever hit by flak or by fighters, and I remember one mission, we went down to Port Blair in the Andaman Islands with another squadron and my job, as a navigator, was to call out fighter passes. I would stick my head up in the astrodome and I would call out, you know, "Coming in at twelve o'clock high," that just comes to mind because of the movie [*Twelve O'Clock High* (1949)], but whatever, you know, "Coming in low at two o'clock," or something. I would call out fighter passes, and I remember, at the Andaman Islands, we were attacked by Japanese Oscar fighters [Nakajima Ki-43s]. ... There were some passes, but, finally, the fighters isolated one plane in another squadron, and then, they left us and jumped on this plane and they did shoot the plane down. We saw a plane [that] was actually shot down

and [went] into the ocean. So, I did see that, but we escaped without being hit by the fighters.

SI: Do you have any idea, roughly, how often your unit took casualties, lost planes or had men injured in the planes?

WL: Yes, well, it turned out that one of our gunners was assigned to another plane when I first went to Pandaveswar in India, ... a guy named Warren Winkler, and he was on a flight and they were shot up and he was hit by ground fire. I don't know, it must have been a lower level mission and the ground fire damaged the airplane and very severely injured one of Winkler's legs. So, he bled profusely and there's nothing they could do for him and he died. They actually had to ditch in the Bay of Bengal, ... but a flying boat was able to get there before the Japanese could get at the plane and picked these people up and brought them back, but Winkler didn't make it. ... I always remember him fondly. He was a very outgoing person and, you know, always had a smile on his face. So, I remember him as being killed, you know, on that mission. Then, there was another mission that I wasn't on, ... and maybe I wouldn't ... be here if I were, but it was a mission down to Mandalay. ... We had most of the planes, I think it was a half a dozen planes, but three of them from our squadron went there and they ran into furious fighter attack. ... One plane was shot down from our squadron and two others collided in all this, you know, because of being under attack. Three planes went down from our squadron. Now, that was a tremendous loss, really, and I knew those people. It's a funny thing, but, when that plane was shot down at Port Blair, I didn't know those people. ... I felt, "That's awful," but, when the people from your own squadron are shot down, then, you really ... feel that, you know. ... It hit you real hard. There was one pilot who was Don Nutter. ... He didn't go on that mission with his crew because he was grounded, because of some respiratory problem. He was a very dynamic guy, ... but his crew went and was lost, and Nutter gave a tremendous [admonition] regarding visits to Asansol. ... Asansol was the nearby town we would go to, bigger, much bigger, than Pandaveswar. In fact, we didn't go to Pandaveswar, weren't allowed, but Asansol was more civilization, movies and stuff, cafes, and he said, "Somebody must have been talking too much," and you had to be careful about that, you know, ... anyway, but he gave us a "Be really careful" talk. That man, Don Nutter, later became the Governor of Montana, ... but he wasn't governor very long when he was in a National Guard plane which was caught in bad weather and crashed and he was killed. Nutter was killed, but I remember him as a kind of a guy you're not surprised he became Governor, you know, one of those persons that really impresses you. [Editor's Note: Republican Donald G. Nutter was elected Governor of Montana in 1960. He was killed in a plane crash during a blizzard in January 1962.] So, anyway, that was the worst of it that I remember, that the three planes lost was a real disaster for us.

SI: Do you remember any cases of airmen who refused to go back up or needed to be reassigned due to not being able to handle the stress?

WL: No, I don't remember any of that, really, in our squadron.

SI: India was somewhat at the end of the US logistical supply chain in World War II. Did you feel like you were well supplied, that, when you lost planes, you would get replacement planes or that you had enough parts to keep the planes going?

WL: Yes, I didn't see any problem that way. I didn't observe any. ... There's no scuttlebutt about such things. ... We got the supplies that we needed.

SI: What was life like on the base at Pandaveswar?

WL: Well, it was a nice base. We had fairly decent quarters and we were in one area, enlisted men [in] another area, and one thing, we were assigned bearers. That was the British system, that the officers were assigned bearers. ... You would holler, "Bearer," when you wanted something and he would come and help you put on your boots or go pick up your laundry. ... I always felt it was kind of discrimination, really, against the Indians and I kind of felt that, but we accepted it. ... You know, you paid him a certain amount of money. ... We weren't tough on them or anything. You know, we just [figured] it was the system, and so, he was just a servant for us. ...

[TAPE PAUSED]

SI: We were just talking about the bearers you had at the base. Was there a British military presence at that base?

WL: No, no. ... The British were around, but they weren't at our base. Actually, when we moved to this base near Dacca, we did visit an Army headquarters in the area. I remember going with, who else? Don Nutter. [laughter] He got some of us together and we went in, talked to the commander of the British unit, you know, just to touch base with him, but there was no British at our base at all.

SI: Aside from the bearers, did you have much interaction with the native population?

WL: No, not really too much, hardly anything, other than the bearers, though, sometimes, we would go out in the jeep, out and just sort of on a lark, ... but, when the natives nearby saw the jeep lights, they would scatter, you know. They didn't [stay]. ... We startled them. So, we didn't interact with them and we weren't trying to interact, really. It was just a kind of a lark, to just go out ... at night and just, you know, probe around a little bit. So, it was mainly the bearers that we dealt with.

SI: Did you ever get a chance to go on leave while you were overseas? Did they have any rest periods, like a week off from combat?

WL: Yes, well, I went down to Calcutta on a leave one time and spent a few days there, sort of an R&R kind of a thing, but didn't go anywhere else. So, that was it, just a week's leave or something, you know.

SI: What was your general impression of India? Had you had any idea of what India might be like beforehand? What did you think of what you saw there?

WL: ... My impression was that the Indians ... had fine features ... and dark, very dark, similar to African natives, you know. They had sort of those fine [features], and the Anglo-Indian girls were very beautiful. They were light skinned, but, you know, not white by any means, but they were beautiful girls. I always remember that, and, you know, because it was still the British Raj and the British had been there for years, you know, ... there had been interactions, which there would be, between Indian women and British soldiers, and this Anglo-Indian, that we called them, caste, you know, was produced by those connections. ...

SI: Did you see a lot of the poverty and that sort of thing?

WL: No, I didn't observe too much of that. Now, another thing, I might mention that we were invited to join British clubs and, ... as officers, we ... became temporary members of the clubs. So, we could go there, ... but the Indians, they weren't welcome. So, that was more discrimination, you know, against them, that they couldn't be members of these clubs. So, we would go there and I remember one incident, that we got a little bit rowdy in one of the clubs. ... There was sort of knocking a little furniture around and everything. So, the British commander said, "All right, you Yanks," he said, "settle down." He said, "You've harassed the women, you've drunk all the liquor, you've just about wrecked the place," that wasn't quite true, you know, so, he said, "Now, cut it out." He used some other language we won't get into, but I always remember that. ... He really chewed us out, and so, we just, you know, left. [laughter] That was just an incident that, you know, that happens, people get a little bit too much partying, and so, it's just an interesting sidelight.

SI: When you were flying missions, did you have anything that you might describe as a superstition? Did you keep any charms or would you have to do things a certain way?

WL: No, I didn't. I didn't have any superstitions that way, really. I just didn't think about anything but trying to do the job, you know. ...

[TAPE PAUSED]

SI: Does anything else stand out about your time flying your fifty missions, anything you would like to discuss? You mentioned some very vivid missions. Are there any other missions that you would like to discuss?

WL: No. ... Well, there was an accident at our base. Our pilot, Tom Ready, was killed in an accident. ... They were just training, and he and another pilot. I mentioned that Ready wasn't the best pilot, you know, that you could find, ... he was flying with another pilot who was not the greatest pilot, either. This is what, you know, ... was said, and they were coming in for a landing and, ... I don't know, there was a fight over the controls. "Should we go around or not?" and so forth, and they crashed and both the pilots were killed. So, Tom Ready, our pilot, was killed in that accident, and I remember, I think there was a bombardier onboard. He survived okay and I remember hearing about him, a man named Benshimol, and an engineer also was onboard, but I think that the pilots were the only ones that were killed. I'm not sure, but I know that Benshimol was there to get some flying time.

SI: During your time overseas, how was your morale in general?

WL: Well, it was very good, really. You know, everybody was, you know, glad to be there, ... you know, and there was very little griping about missions there. I think we just went ahead and did the job and, ... you know, we had our fun on the side, partying, and so forth. ... There wasn't any dissatisfaction, really.

SI: There was never a sense of, "I am not going to make fifty missions; something is going to happen to me," that you recall.

WL: No, no, not that I recall. Nobody thought that way, that I know of, you know.

SI: What did you think of the higher officers, like the commander of the squadron and the bomb group, that you had interaction with?

WL: They were okay, really. They were all good officers and I don't have any real complaint about them. So, you know, they were good leaders, and so on.

SI: Could you tell me how you came home from India and what you did after that?

WL: Well, yes, I came back through Casablanca. Actually, we were flown to Karachi, a place called Malir Cantonment. It was a vast area there which was set up for the British Eighth Army, had Rommel taken Cairo. ... So, they had all kinds of units there, I guess, coming in, going out, and we went there, and then, we were flown out in a C-46. I know we went to Abadan, Iran, which is just the southern part of, well, on the Persian Gulf, and then, we went to Cairo, I think. I can't remember the geography exactly, but we did wind up in Cairo and we spent some time there. ... I went to the Pyramids and saw the Sphinx, went in a Pyramid, and so, it was a very nice sightseeing stop, and then, we went on to the west. I don't know, we stopped somewhere else, maybe it might have been Benghazi, I'm not sure, but we did wind up in Casablanca. I'm not sure about Benghazi, but I think it was Abadan, Iran, and then, Cairo, and then, it might have been Benghazi another stop, and then, Casablanca. We were there, oh, a couple of weeks in Casablanca, waiting to either be flown out or go by ship. ... It turned out that I was in a group that was put on a ship, and then, set sail for New York.

SI: How did you feel about coming home? What was that like?

WL: Well, I was anxious to get back and see family and friends. We had one incident on the way back. There was, apparently, a scare of a submarine attack and there was a lot of zigzagging and everything. ... We were not actually attacked by the submarine, but, apparently, a sub was sighted. ... We, you know, got through that okay, and then, docked in New York, took, oh, a week, ten days, I think, to get across. It wasn't a very fast vessel.

SI: Were you given a leave or were you given your next assignment right away?

WL: No, I was given a leave. I went, you could be assigned [to], they had redistribution stations, one of which was in Atlantic City, and the Army took over all the hotels there, another in Miami. ... I was given leave, too, and, believe it or not, since I was going home on leave, I was thinking, "Gee, I hope I get to go to Miami," you know. It's just that, you know, a thought, but it turned out, and it's just as well, I was assigned to the Redistribution Station Number One, I think, in Atlantic City. So, I was on leave, and then, I was at the facility in Atlantic City, given a room in the Ritz Hotel, and that's where, ... after the Summer of '42, when Connie and I first met on the Steel Pier, ... we renewed our friendship. [To his wife] I called you up, you know, and we started dating there and I took you to the Ritz Hotel, to dinner and everything. You know, it was a big deal. So, anyway, that kept the romance alive, but it faltered a little bit later on, after I left, but, anyway, I was there, it might have been close to a month, with leave and ... being at the redistribution center. ... Then, I was transferred down to Ellington Field, near Houston, Texas, for refresher navigation training. [laughter] I'm not sure why, but, anyway, I guess they didn't know what to do with us for awhile, and then, I started training as a B-29 cruise control instructor. We were going to go to Clovis Air Force Base, no, Clovis Army Airfield, not Air Force Base at that time, and instruct B-29 engineers in how to manage the fuel consumption on a B-29. So, I did that, and with a refresher training in navigation, and then, the school, ... that would have been, oh, getting toward the Summer of '45. ... Then, you know, also in the summer, [I] transferred to Clovis Army Airfield and was going to be an instructor, but, somehow, they didn't have enough students. ... I wasn't used as an instructor, so, we kind of [were] spinning [our] wheels there, waiting for classes to develop, and then, of course, the war was over. The war ended, you know, with the atomic bombing of Japan. What was the name of the [target city]? Well, Nagasaki was the second and ...

SI: Hiroshima. [Editor's Note: Hiroshima was the target of the first atomic raid on August 6, 1945. Nagasaki was attacked on August 9, 1945.]

WL: Yes, Hiroshima was the first, yes, and that ended the war, and so, then, I was discharged in October of 1945.

SI: What do you remember about V-J Day, when the news of the surrender came through?

WL: Oh, a lot of celebration, major celebration there, that the war was over. Everybody wanted to get out right away, you know. Finally, I did, was put in the Reserves and sent home in October, somewhere, let's say mid-October of 1945. One thing I remember about Clovis, they had German prisoners of war working there, you know, cleaning quarters. ... I remember some of them around the BOQ [bachelor officers' quarters] area. ... At Clovis, there was a big celebration on V-J Day and I did some flying in a B-29 just to get flying [time]. We had to get flying time to keep up our ratings, keep up our flight pay. That was the main thing, I think, and I did fly in the B-29 several times and that was interesting, really. ... There were B-29s in India before we got there, before I got there, but I never saw any, and then, of course, they moved them out to the Marianas, you know, to Saipan, Tinian, and so forth. They used to fly missions from India into Japan. ... You know, they would stage in China, but, as I say, I never saw a B-29 in India when I was there. [Editor's Note: As part of Operation: MATTERHORN, B-29 bomber groups struck targets in Japan from bases in China, with logistical support from bases in

India, from June 1944 to January 1945.]

SI: Did the B-29 have more navigational aids in it?

WL: Well, you know, actually, I didn't fly as a navigator. I just flew on training missions on that. So, I don't know if it had that much more than we had. You know, it had an astrodome there. I don't think there was a major difference, you know, in the navigation equipment; probably had more room for the navigator than a B-24 or a B-17 did. ...

SI: When you were in India, did they have any electronic aids, like LORAN or anything like that?

WL: No, absolutely not, but I did mention, something that I said I was going to talk about, that they had a what they called Azon bombing aid. Now, it was a way to adjust the azimuth of a bomb, not the rate of it. ... That sort of came later, but we were the first squadron in the Army Air Forces that used this system, and we had missions down [in Burma] that we would bomb the Burma-Siam Railroad, you know that, of *The Bridge on the River Kwai* fame. [Editor's Note: The first Azon bombing mission was flown on December 27, 1944, by B-24s from the 493rd Bomb Squadron against the railway bridge at Pinyinana, Burma. The 1957 film *The Bridge on the River Kwai* presented a fictionalized account of the construction of similar bridges on the Burma Railway by Allied prisoners used as slave labor.] ... The bombardier, he would release the bomb and it, as best calculations [indicated], ... would hit the target, but, if it got off to the right or the left, he could bring it back with this Azon system. There was radio control of that bomb by this Azon bombing system, and the bombardier could move it back on track, but he couldn't affect the rate of it. So, if he had missed the target too long or too short, that's too bad, couldn't do that, couldn't help that, but that's the only aid that I can think of. No, LORAN, that came later, and we didn't have any of that.

SI: After you were separated and placed in the Reserves, did you immediately start looking for another job or did you take some time off?

WL: Well, I took some time off, really, and not too much, but, then, I went to work for Sharp and Dohme, a pharmaceutical company. Bill Berglund also worked for them, as a bacteriologist. I worked for them as a chemist and, let's see, it was Fall of '45 [that I was released from active duty], I think it was probably early '46 that I went to work for Sharp and Dohme. I worked for a few months there. I don't know, ... I loved chemistry, but I was not too happy working in a lab eight hours a day, and so, I don't know. ... I stayed there, but, in November of 1946, I was listening to the Army-Notre Dame game, the famous nothing-nothing tie, and Red Barber was calling that game. ... At halftime, he said, "The Army Air Forces is looking for former flying officers to train as meteorologists and, if you had a Reserve commission and you've had flying experience," and I guess it mentioned some other requirements, I'm not sure, then, the Air Force wanted to bring you back. So, I applied for that. ... I was accepted and recalled and went to MIT in February of '47. We were married by that time, and drove up to Cambridge, Mass., and I was in the class with some other officers, pilots, bombardiers, navigators who were gotten together to train as meteorologists, and that's when I started, restarted, my military career. So,

that was the end of my career as a chemist. ... So, I got where I wanted to go.

SI: After you finished training at MIT, where were you assigned?

WL: Then, ... this would have been in October of 1947, I was assigned to a weather reconnaissance squadron out, oh, between Sacramento and San Francisco. It was a place called Fairfield, to an airbase there, an Army airfield, [Fairfield-Suisun Army Air Base, now Travis Air Force Base]. ... I was trained as a weather observer in B-29s. I spent a period there, two or three months, training, several months, I guess it was, really, on into '48, and became a weather observer, and then, later, I was sent to Bermuda.

SI: I just want to clarify; when you were on these flights, were you only operating as a weather observer or a navigator/weather observer?

WL: I was basically a weather observer, but I was able to log navigation time also when I flew, you know, talk to the navigator. You know, positioning was important, and where you take a weather obv, you want to know where it is. ... So, I sort of had close connection with the navigator, but I was not navigating. ...

SI: How long were you at Fairfield before you were transferred to Bermuda?

WL: Well, let's see, I must have gotten there in October of 1947, and then, I was transferred to Bermuda, I don't know, it was like March of '48, probably. ... Let's say March. Connie didn't come down with me. She came down later. I went first to get quarters and all that sort of thing. So, I'd say around March of 1948, and I was assigned to [the] 373rd Weather Reconnaissance Squadron ... for hurricane reconnaissance, and then, in winter, the non-hurricane season, we would just fly patterns between Bermuda and the States, taking weather data. ... I was sitting in the nose of the B-29, and [would] take these observations, visual and instruments.

SI: These flights were called "hurricane hunters?" Did you call yourselves "hurricane hunters?"

WL: Yes, we were called the "hurricane hunters," yes.

SI: What was involved in a flight like that? What would you have to look for or keep in mind when you were tracking hurricanes?

WL: ... We headed toward the hurricane, and then, we would come down to about fifteen hundred feet and we would get in near the center, but we wouldn't go into the center. We would be close to the center, and then, we would do a technique called boxing. We would fly a leg like this, a straight line. ... At the point where I would observe a minimum drift, ... the wind was right on our tail, I would mark that position and tell the navigator, and then, they would turn, and say you were going on a west leg, turn on a south leg and you did the same thing, got the minimum drift and, also, the minimum pressure, which pretty much coincided, and then, you do, say, an east leg and did the same, and then, you come [on] a north leg. ... So, you have these four points, and then, ... the navigator would establish where they were to the best of his

calculations, and then, you have four vectors coming in. ... They wouldn't hit at a point, you know, but they would hit at a small area, say a little, small box, and the center of that would be the center of the hurricane. ... So, then, that information would be radioed back to the hurricane forecast center in Miami [the Weather Bureau's Miami office, which was designated the National Hurricane Center in 1967], and, of course, ... wind measurements, also, would be sent back. You would also observe the state of the sea. You could get a pretty good idea of how strong the winds were by how much the sea was whirled up and, usually, it was just a complete white. You know, it was foam and, by the way, it was a very oppressive atmosphere at this low level. You would be bouncing all over the place; I mean, not tremendous up and down, but more like this, you know.

SI: Side to side.

WL: And it was hot and humid, yes, very hot and humid. It was a very oppressive atmosphere and you wound up sweating like mad. Then, we would also then go to the southern part of the storm and we would go up to ten thousand feet and would navigate our way in with radar, pick our way around thunderstorms, ... [through] what they called the trailing quadrant. If a hurricane is going to the west, then, the trailing quadrant would be in the southwest, and that was the weakest quadrant. The right front was the strongest part of the hurricane, relative to the way it's going. So, we would go into the weak quadrant and pick our way in, getting a few bumps. It wasn't terribly bad to get in, and then, we'd circle back down to, you know, a thousand feet or so and observe. The wind wasn't absolutely calm in the eye. ... There were winds of ten, fifteen knots or so, and we would observe that, and then, we would kind of edge toward the eye and try to estimate how strong the winds were around the eye, and then, we'd work our way up. ... I would take pressure and temperature and humidity observations on the way up and the way down, to get some idea of the structure of the storm in the center. ... By the way, when you're in there, it's called the "stadium effect." It's this wall of clouds all around, you know, and you're in a pretty clear area and that's why they call it a stadium. It's like you're sitting in the middle of a stadium and you've got all these seats around, you know, the central area. So, anyway, it was kind of dramatic to get into the storms.

SI: You said it was physically oppressive. Was it stressful? Did you ever think you might not make it?

WL: Well, there was always [danger], yes. ... You know, you were always worried about this turbulence and bouncing of the plane, and so forth, and you're always apprehensive about it, but they say that, down that low, down drafts kind of spread out, you know, when they hit. You weren't far above the ocean, so, it kind of spread them out. ... You weren't pushed way down. They were dampened out, ... but it was just turbulence, bouncing all the way around, which was really oppressive, you know, and you were apprehensive about getting out of there.

SI: How long did you fly these missions out of Bermuda?

WL: I went there in 1948, as I say, in the Spring, and left in February of 1951; better part of three years, about three years.

SI: Where was your next assignment?

WL: Well, then, I was transferred to Westover Air Force Base, to the base weather station. I went there as a forecaster in the base weather station, and then, I applied to go back to MIT. ... I did go back to MIT, I think, in September of 1951. ... I was there for a year in a Master's level program, got a Master's degree in meteorology from MIT. ...

SI: Could you give me an overview of the rest of your career in the Air Force?

WL: Yes. Well, from MIT, in the Fall of '52, I was sent to the Air Force Weather Central at Andrews Air Force Base near Washington. ... I was a forecaster there, preparing long-range forecasts for twenty-four, forty-eight, seventy-two [hours out], for awhile, and then, they formed a new unit called the Joint Numerical Weather Prediction Unit, where they were going to use computers for forecasting. ... Let's see, this was '52, I think in '53, ... let's see, no, it might have been February of '54. I was sent up to the Cambridge Research Center in Boston ... for a couple months. ... I was selected to go into the Joint Numerical Weather Prediction Unit and was sent up to Boston ... for two months' training in the mathematics of computer forecasting, which was all upper air patterns, at that time. ... Then, I came back, perhaps in the Spring of '54, and was assigned to the Joint Numerical Weather Prediction [Unit] in Suitland, Maryland, not far from Andrews, and where I ... prepared data ... to put into the computer, to make these forecasts of upper air patterns. So, ... they had a mathematics section and they had an analysis section. I was in the analysis section, where I would prepare data ... for the forecast, and to sort of get an idea of how good they were, from my knowledge of having forecasted weather patterns in the past. So, I was there until, I think it was July of 1957, when I was sent to Morocco, but I spent about three years with the Joint Numerical Weather Prediction Unit and it was very fascinating work, you know, producing these upper air forecasts by computer.

SI: Did they have other sources besides the planes now, such as high-altitude weather balloons, that you would get data from?

WL: ... Yes, they got [data] by what were called radiosondes, [which] were sent up by balloon and they took temperature, humidity and pressure measurements. Then, there were aircraft reports that were brought in and, of course, ground weather stations reports, although we didn't forecast ground weather patterns for [awhile]. It took awhile to get to do that by computer, but, yes, the data came in and it was punched up on cards, and then, fed into the computer. ... This is one thing we did, monitor the data, make sure that it was basically okay, ... look for major errors, typos and reports that ... didn't fit in with other reports, you know, try to screen the data to a certain extent. ... So, I did that for about three years.

SI: What did you do in Morocco?

LW: I was assigned as the chief forecaster of a forecast center in a place called Sidi Slimane [Air Force Base]. It was inland about, oh, I don't know, fifty miles from the coast, a place they used to call Port Lyautey. Now, they call it Kenitra. ... I was originally supposed to go to Spain,

but I went to Morocco because the Spanish facility was not ready for us. ... I did get there, but ... I first went to Morocco, July '57, and was the ... chief forecaster of this forecast center, and we had B-47s coming over that were on the alert there. They [would] come over for, oh, a couple, three weeks at a time and be on the alert. This is during the Cold War. ...

SI: Were these B-47 SAC [Strategic Air Command] bombers or were they weather observers?

LW: Oh, no, they were SAC bombers. They were on [alert]. This is during the Cold War and they had these bases ... and they were always ready to go, should push come to shove with the Russians, you know. ... So, we made forecasts for the B-47s. That was the main thing we were doing there, making forecasts for the B-47s. There was a second base ... down near Marrakech and a third one at Zaragoza, which is, you know, Northern Spain. All three bases had B-47s.

SI: How long were you in Morocco and Spain all together?

WL: Well, Connie came over in January of ... '58, and then, we drove to Torrejon Air Base, near Madrid. Actually, we lived in Madrid, and ... that was in, as I say, January, it may have been February, of [1958]. ... Yes, January of '58, that's when we went to Spain and I was chief forecaster there at the forecast center, although, ... for awhile, I was commander of the forecast center. When we moved up there, ... I was a major then, but a lieutenant colonel from the States was programmed to come over, which he did do a couple months after we moved up there to take over as commander. ... I was there about, well, until May of 1960, and then, transferred to Offutt Air Force Base, to technical services there. I was going to be a consultant, where I would go around [to] different weather stations and help them with their procedures. I was there [from] 1960 to '64 in that capacity. ... An interesting assignment [was] one when I went to Vandenberg Air Force Base on the West Coast a couple of times and actually saw missiles go up, you know. ... We would go into the safe area, and then, once it got up and was not going to blow up, we would come up, come out and we could see it, you know, receding. So, it was kind of exciting. So, I just basically went around different bases and helped them with their weather procedures.

SI: Did the Cuban Missile Crisis have an impact on what you were doing?

WL: Yes, oh, yes, definitely. We were given areas to go to and were put on the alert, really, during the Cuban Missile Crisis. ... Of course, it didn't boil over, so, we didn't have to leave, but ... we were supposed to go to a certain area and away from Offutt Air Force Base, because they're afraid that that would be a prime target.

SI: Is Offutt in Nebraska?

WL: Yes, it's near Omaha, Nebraska, very close. ... We didn't have to follow our escape plan, as you know, but it was planned.

SI: You were in this assignment at Offutt until 1964.

WL: Yes, until the Spring of '64, and then, lo and behold, a request came through for a weather officer to be assigned to the Federal Aviation Administration in Atlantic City, that is, to a base right outside Atlantic City, an FAA Experimental Center. ... Of course, I applied for that, which would take me right back home, you know, and I did get that assignment. So, I left Offutt and [I] was assigned to the FAA. This is in the Spring of 1964 and [I] was assigned to the FAA as a weather consultant and a research meteorologist. ... I was given that assignment, in uniform, for three years, doing research on fog and thunderstorms. ... Then, the Air Force extended my tour. It was a three-year assignment and they extended me one year and said, "We're not going to extend you beyond that." ... Actually, the FAA had twenty officers from different services, from the Coast Guard, Marines, Navy and Army, as well as the Air Force. ... There was another meteorologist there from the Air Force when I was there, but the FAA decided to phase out all the military slots. So, the Air Force said, ... "We're not going to extend you. So, you can [decide what to do]. So, we'll transfer you out or you can retire." Well, I decided to retire, because the FAA was converting my slot to a civilian slot, and so, I took a chance that I would get that slot. I bid on it, and did have the inside track, and had every reason to expect that I would get that assignment. So, I retired on 1 September of 1968, and I did get the slot with the FAA. ... I guess I probably started in 1969, I would say in January of '69, as a research meteorologist for the FAA, doing pretty much what I'd done in uniform, you know, working on fog and turbulence studies. One, we advanced to having an aircraft fly into thunderstorms, instrumented, and then, I would take radar data, Doppler radar data, on the ground. ... The idea was to compare the Doppler radar data with the instrumentation results from the aircraft and try to see if you could compare turbulence on the instruments and what the aircraft actually observed. ... That did work out and the results were fed into the radar system we have today. Anyway, I was with the FAA for fifteen years as a research meteorologist, and then, I retired in, oh, about January of 1984, ... '69 to '84. So, I was with the FAA as a research meteorologist for fifteen years. So, it didn't cost the Air Force a nickel to transfer me, because I stayed right in my house. So, that's one place I saved them money, but I was glad to do it, of course.

SI: It was right in the vicinity.

WL: Yes, that's the idea, sure.

SI: Is there anything else you would like to say about your time with the FAA? Were there any projects that you worked on or research that you did that you would like to talk about?

WL: Well, ... I've sort of covered that I did fog. We had a tower there where we took fog data and I analyzed that. I had been trained as an electronic ... computer systems analyst at Offutt, so, I could program the IBM computers. ... I programmed data to analyze fog data, and published a couple of small papers along that line, and then, this turbulence project, you know, having an airplane fly into storms and take data, I did some programming of data there. So, they were the main things, really, and I would go to some meteorology meetings ... of the American Meteorological Society and I gave a couple of papers on radar. I think, I'm not sure, I did one on fog, but I know I gave a couple papers on my radar studies at some of these conferences. So, that was pretty much it, mainly radar, but some fog studies [also].

SI: Would you like to say anything about your family? Did you have children?

WL: Yes, I will. Oh, I want to say one thing about the military. When I was at Sidi Slimane, B-47s on alert would practice take-offs. They would go to full power, but they wouldn't take off, and they had bombs onboard, atomic bombs. One time, one of the plane's outriggers, holding one of the wings, collapsed and the wing hit the runway and caught fire and there was a fire in that airplane, with a bomb onboard. So, we were ordered to evacuate and we went on toward Port Lyautey, toward the coast, on that evacuation, because they weren't sure what would happen to that bomb. A person who worked with those bombs told me, he said, "It melted and some of the uranium just, you know, pooled on the runway," but he said, "It really wasn't that strong [of a] chance of it, you know, blowing up," but it was a dramatic incident. ... We were not allowed to report that in any mail for some time thereafter. So, anyway, now, about the family, I mentioned meeting Connie in the Summer of 1942, and then, I went in the service and we didn't correspond at all. There's another lady in the act, [to his wife], you remember Berenice, that I had sort of a relationship with. ... So, when I came back in 1945, I called Connie up and we dated. [I] also dated this other lady, ... you know, two of them, but, then, I left, as I said, ... somewhere toward the Summer of 1945, and then, went down to Ellington Field, and sort of lost track of Connie, lost track of her during this time. ... Then, when I came back and got out of the Army Air Forces in October of 1945, I called her up, but couldn't seem to get in contact with her. Somehow, ... you were working in Philadelphia, Connie, I think, and so, I don't know, ... I called a couple of times and I just couldn't seem to get in contact with you. So, I was not; maybe I wasn't giving up, but I was, you know, sort of [thinking], "Well, okay, I don't know," but, then, a funny thing [happened]. ... We were in one of the favorite watering holes that we went to after the war and I was with Berenice, who was also a girlfriend of Bill Berglund's, who he mentioned in his deposition, [interview with the Rutgers Oral History Archives]. Anyway, I saw Connie at the end of the bar with a lady friend of hers and I was so startled to see her that I said, "Oh, I know that girl and I want to say hello to her." I left Berenice, which was rude, and went over, said, "I've been trying to contact you," and she said, "Well, I've been out of town." I said, "Well, okay, I'll call you." I didn't spend much time [with her], you know, but I said, "By the way, you still have those green eyes." Why would I say that, you know, if I were not interested? [laughter] So, anyway, I went back and Berenice was not too happy, but she, I think, understood that Connie was an old friend. So, anyway, that got us back together again and we married in May of 1946. [laughter] Then, Susan was born, our daughter, in Bermuda on Flag Day of 1949. Then, in 1951, our first boy was born, Peter. He was born in Atlantic City in August of 1951, August 30th. ... Then, after I went to MIT, she brought him up to Boston a little later, on the train, later in 1951. ... Then, when I was stationed at Andrews [Air Force Base in Maryland], Paul was born in 1954, our second son, at Walter Reed Army Hospital. He was born ... [on] October 25th, and that was around the time that Hurricane Hazel was threatening Washington and there was a question [of] whether he would be born right when Hurricane Hazel hit, but it didn't. It was very strong. We had a hundred-mile-an-hour winds, about October 15, 1954, but Paul held off and was born in Walter Reed ... on October 25th of 1954. So, that kind of brings us up-to-date. Do you have anything else on the family? Yes, I want to mention that Paul was a student at Rutgers, graduating in 1976 with a degree in environmental science. He also played varsity football during that time.

SI: No, unless you want to add something. I just have a couple more questions on your time in World War II. When you were serving in World War II, how did you feel about the Japanese?

WL: ... Well, I definitely didn't like them, to put it bluntly, really, because of their brutality and everything, I particularly didn't like them. Of course, I was against the Germans, too, because they were our enemy, ... but I wasn't as mad at them, shall we say, although if I'd have been transferred to the Eighth Air Force or the 15th Air Force in Europe, I certainly would have fought against them. ... It's funny, ... it's silly, but I could never buy a Japanese car. I just wouldn't do it. I mean, I bought Japanese cameras and electronics, that, you know, you almost had to buy, but I have no animosity whatsoever today. You know, that [faded away], but, for awhile, because I'd fought against them and I know that they shot down our planes and everything, I still had a certain animosity, but ... that disappeared. I don't have anything like that today. I have no discrimination against them and, of course, I wasn't happy with the Germans when we learned about the Holocaust, but I don't have any animosity toward them. ... They understood that and they atoned as much as they could for it. So, anyway, that's my view on that.

SI: Did you have any lasting effects after World War II, such as nightmares, that sort of thing?

WL: No, not really. No, I can't say that I did.

SI: Most of the missions you described were attacking railways and bombing oil refineries, those kind of targets. Did you ever do any tactical attacks, direct support of troops on the ground?

WL: No, no. We weren't involved with that at all, as far as bombing installations where there were troop concentrations. To my knowledge, ... we weren't involved in that at all. We just bombed the railroads and bridges in Burma and Siam, sometimes at a very low level. ... Also, I remember going down at night to a place south of Mandalay called Mergui, where we went in to mine a harbor there at low level. ... That was kind of dicey, since we were warned to watch out for cables that the Japanese may have strung across, but I don't remember actually seeing Japanese soldiers on the ground.

SI: Did your unit ever do any anti-shipping raids at sea?

WL: No. There were [some]. ... I never attacked a naval target or a ship, but it seemed to me that there had been ... some attacks against navy ships, but I don't remember. Maybe it was before I got to India or whatnot. It was talked about, but never, to my knowledge, when I was there, did we attack ships. It was all ground targets, really.

SI: Was fuel consumption ever an issue on your missions? Did you ever run out of fuel or have to land elsewhere?

WL: No, no, we had pretty good track of fuel. The engineers were good and well trained and they kept track of fuel. So, no, there was never any great worry. As I said, we flew gas to China

and kept enough to get back. So, that's good fuel management, you know, and we wanted to offload as much gas to [Lieutenant General Claire Lee] Chennault's Air Force as we could. So, it was just calculated very closely, so, ... fuel management was very good.

SI: Is there anything else you would like to add for the record?

WL: No, I can't think of anything right now. So, I guess that's it for now then.

SI: All right. When you look at the transcript in the future, you can insert anything else that you wish. We also have the interview your grandson did with you in 1998.

WL: ... Oh, that's right. Yes, that's what I did as a school project [for him]. I remember that interview. Yes, ... I guess we covered some of the stuff that I talked about there. ...

SI: Thank you both very much. I really appreciate your time. I have been looking forward to this interview for quite awhile.

WL: Well, thank you. ...

SI: Thank you, too, ma'am.

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Reviewed by Brian Shemesh 11/10/10
Reviewed by Sylvia Pokrzywa 11/10/10
Reviewed by Matthew Zarzecki 12/1/10
Reviewed by Shaun Illingworth 12/13/10
Reviewed by William Lewis 4/28/11