Shaun Illingworth: This begins an interview with Dr. Andrew H. Eschenfelder in Saratoga, California, on August 20th, 2007, with Shaun Illingworth and Matthew Lawrence. This interview is made possible in part by a grant from the Rutgers Alumni Association. The Rutgers Alumni Association gave us a small grant to help us travel to California to conduct the interview. Thank you very much for having us here today.

Andrew H. Eschenfelder: Glad to have you.

SI: To begin, could you tell us where and when you were born?

AE: I was born on June 13th, 1925. At the time, my family was living in South Orange, New Jersey. I was born in a hospital in Newark, New Jersey, so I usually … give Newark as my birthplace.

SI: Can you tell us a little bit about your parents beginning with your father? What was your father's name?

AE: Andrew Frank, and his father's name was Andrew, also. He grew up in Newark and went to Central High School, and then went to Rutgers and studied civil engineering. He graduated in the Class of 1920 and he worked, I think, for the county, Essex County, and the Passaic Valley something or other, Water Department, for a while, but then he became the borough engineer in Glen Ridge, New Jersey. … In that, he was responsible for everything, streets and roads, shade trees, snow plowing, you know, the water system, everything like that. It's a small town, in-between Montclair and Bloomfield, in Essex County, mostly a bedroom community. Men would always get up in the morning get on the train and go into New York and come home. Yes, as I say, he was in Rutgers. … It was right after World War I. He went in … probably 1918 or '17 when he went in, and I have pictures of him when he was a part of the military in training camps in … New York State, Upper New York State, but he never went overseas or was in combat or anything.

SI: His Rutgers education was interrupted by the war.

AE: No, … I don't think his [education was interrupted]. Maybe this was a summer thing, you know. In my instance, for instance, I don't know whether you want to jump around like this or not. …

SI: Please, jump around.

AE: … I was in my mid-junior year in high school … when Pearl Harbor was bombed and we, of course, anticipated that as soon as we got out of high school, we'd be going into service. So, I joined the New Jersey State Guard. The National Guard had been federalized, you know. It was part of the military, gone off to war, and so, they created a new State Guard. … In our yearbook, you'll see some pictures of us in uniform because, every evening, we would go to the armory and train, be taught how to do things. … We'd go up to the parks and so forth and, sometimes, on maneuvers, and what have you. So, we got some advanced training that way, but I suspect maybe that's what it was with him, that, somehow, he was involved in something that involved
training and what have you, but never was sent to war, so-to-speak, nor did it interrupt his college. He was a track man and a cross-country man. He was a classmate of Paul Robeson's, you know. He always spoke very fondly of him, and did I say he was in civil engineering?

SI: Yes.

AE: Yes, right. …

SI: You said your uncle--his brother--also went?

AE: Yes, and he was the same kind of a municipal engineer in Maplewood, New Jersey, at the time. So, the two were in similar careers.

SI: He was Herbert Eschenfelder.

AE: No, that was Herbert Heilman. … I'm sorry, it was his brother-in-law, the fellow who married my father's sister, Emma, yes, Herbert Heilman.

SI: Do you have any idea how your father was able to come to Rutgers or why he was motivated to go to college? It is somewhat unusual for a man in his generation to go to college.

AE: Yes, I don't really know. I do know that he was a good student. … Incidentally, I should mention this, I guess, he was the youngest of seven children. He had a brother who was the oldest child, and then he was the youngest and he had five sisters in-between. … I'm sure his sisters may have stimulated him some. They nurtured him a lot. … His brother turned out to be a Newark, New Jersey, city detective of some notoriety. There were newspaper things, when he would be involved in some big criminal thing and what have you. … He played in the police band … with the Bamberger's Parade, which became … more like the Macy's Parade. Every Thanksgiving, we'd all be down there and cheering him on and he'd tip his [hat], you know, in the police band. … [My father] was the only one who went to college. His sisters, some of them went to normal school or something, you know, became teachers and what have you. … I'm sure that it was a financial problem. I don't know how he did it. We never talked about that. I mean, when I went, it wasn't all that clear how I was going to be able to go either, because he didn't make a lot of money, but I got a scholarship, and then, of course, I had the GI Bill afterwards. So, that largely paid my way, but he didn't have any of those advantages. He may have had a Rutgers scholarship of some kind. I don't know.

SI: Did he ever tell you any stories about his days at Rutgers that stand out in your memory?

AE: No, except I know he lived in Winants Hall. That was a dorm in those times, and he thought a lot of his classmates. … He was a fervent alumnus of Rutgers and he did participate in a lot of professional societies and was elected president of a lot of them, American Waterworks Association or something, Society of Professional Engineers, or various things like that. …

SI: Was he a member of any veterans' organizations?
AE: No, I don't think so. I think he was an Elk, but no veterans' organizations. … He wasn't really a veteran, I don't think. … I've got these pictures of him in uniform. I know he was in a training camp, but I don't know whether you'd call him a veteran or not.

SI: Did the two of you ever compare notes on the Rutgers engineering program, when he was there and when you were there, whether it was more difficult or how things were different?

AE: No, he was in civil engineering and I enrolled in Rutgers in civil engineering. … I knew I was technically oriented and strong in math. So, I didn't know what I was going to go into, and so, as many boys do, they all sign up for something like their father. … I don't know whether I should mention it. When I came out of high school in June of '43, I immediately had to go to the draft board, but Rutgers had sort of a quarter system by then. I don't know whether that was official or not, but I was enrolled at Rutgers in the summer of '43 and they allowed me to finish that first quarter. While I was there, when I was doing that, I took a physics course and Franklin Miller was a teacher there. Frankly, I don't know if he was honored that much by the department because he believed in teaching. He didn't do research. In so many of these fields, you've got to do research, and get research grants and stuff like that, to be thought of that highly as a professor. Anyway, I did very well in the physics, and he said, "You should switch to physics," but I didn't do it then. … I was fortunate. While I was overseas, I was overseas for three years … in the combination of going over to Europe, after I came back from the Pacific. … There were lulls when we were not involved with military action and we were just building the airstrips and so on, and I took a correspondence course from the University of Wisconsin in physics. … I would send in my lessons and stuff like that and the professor would send back this stuff. … That excited my interest, too, but, back in those days, you know, physics was sort of an academic subject. … With all of the developments during World War II, by the time I came out, the demand for physicists was very high and there was a lot going on. So, it was an interesting field to get into, and so, I got into it just when the whole electronics age was being born, … transistor being invented, and things like that.

SI: I have interviewed a few people who studied physics before and during the war. They often said that they had to relearn the whole subject when they returned to school five to ten years later.

AE: Yes.

SI: That is pretty remarkable.

AE: Yes, it was moving very fast.

SI: To step back, can you tell us a little bit about your mother? What was her name and what was her background?

AE: Her name was Grace Helen Griffith. Her father abandoned the family at some kind of an early age so I only knew her mother. She went to normal school and became a teacher for a while, but after she married my father, which was in 1924, he got out of college in '20, and then I was born in '25, she was a housekeeper and mother. … I don't know if she worked after I was
born, sweet lady. … We had a problem. I don't know whether, well, I guess I can mention it. … I have a sister who is three years younger than I am, the age of my wife, … then, I had a brother who was born in '32. Well, in 1938, he was at the New Jersey Seashore, at Manasquan, with my mother, and I was at Boy Scout camp. … My father had arrived to talk to me, and I couldn't imagine what that was about. … It turned out my brother had drowned down there at the Shore, and that devastated my mother. So, she was in an institution for years and was never really right, and she finally died in 1951 of cancer. My father lived to be eighty-five. … So, I had a lot more life with him than I did with my mother. I remember … sort of an interesting little thing, and that is, there was a time when I somehow had been involved with a game of spin-the-bottle with the girls. You guys don't know what that game is, right?

SI: I have heard of it.

AE: [laughter] … My father thought this was terrible and that, you know, I shouldn't get involved in such stuff. My mother thought, "Oh, that's good. Let him get to know the girls." … You know, you would spin the bottle and whoever it pointed to, you kissed them. That's what spin-the-bottle was. So, it was just sort of interesting, the contrast between their attitudes, you know. … It sticks in my mind about [her]. So, she was a softer person than he was and she was also maybe a little more adventurous. I don't know. He was an engineer and she was different.

SI: Do you remember growing up in South Orange or was it mostly Glen Ridge that you remember?

AE: That's a good question. I remember the house I grew up in South Orange. I remember certain things about it, that it was just very interesting, like the guy who came and brought the coal and how they would back the truck up to the house and send the coal down to the basement, down the chute. Dad would have to go downstairs and he'd have to fire up the furnace all the time and they had an iceman who came and brought the chunks of ice for the refrigerator and the people brought things, milkman and so on, and I remember waiting for the paper every evening, that I could bring that in. … I can remember Fourth of July when we would shoot off fireworks out in the street and had all these fun times with the things they don't allow you to do any more. … I remember the girl … three houses up the street, with whom I used to play a lot, and being bitten three times by her dog. [laughter] … I went back once when we went back for a class reunion in Glen Ridge, and drove over to South Orange and went and saw the house. … The houses had all been sort of reconditioned and there was still a very nice neighborhood. … I remember walking to school and the school I was in, and I remember getting my eyeglasses for the first time when I think I was probably in fourth or fifth grade, and I've been wearing them ever since. That was South Mountain School, I think, in South Orange, but, of course, I remember more about Glen Ridge, but I moved there when I was in sixth grade. So, I was in the last year I think of the … elementary school, Central School, and then three years of junior high and three years of high school. So, I remember that even more.

SI: Were you interested in the sciences in school, particularly high school?

AE: I took a course in chemistry. I don't think we had physics. Mr. Cleveland, I just remembered that was the teacher's name who taught the science. Dr. Benjamin Ward was my
math teacher and you know I can remember all my math from way back all these years, including the calculus of complex variables which I learned at Rutgers. And I've always wondered why is it that I can still remember all this math and I really attribute it to this high school teacher. I have some pictures where I was up in front of the class teaching, you know, he'd get me up to do that, and so on. He was a great inspiration in math, and I think he taught me fundamental reasoning. ... It wasn't remembering formulas or things like that, it was sort of developing a mathematical mind set, so I do remember those things. ... Then, I was a member of the band and I was also a track man and was captain of the track team, so I remember those times.

SI: What instrument did you play?

AE: In the band I played the sousaphone. Do you know what that is, the big tuba that wraps around you and has a big bell up here? It's great fun on the football field when the wind's blowing. [laughter] Actually, I did that because that's what they needed so I learned it. [laughter] ... They didn't have anybody to play that tuba.

SI: Did you only start with music in high school or had you played instruments earlier?

AE: That's a good question. Actually, I can remember going to a Christian camp up in the Adirondacks in New York State when I was twelve and I had a violin with me. Almost all the kids who went to camp, they had to serve on the staff and play in the orchestra. They had a big open air amphitheater and they had service every morning as well as a big thing on Sunday and so they had this big huge orchestra. ... All these kids were there who waited tables and hauled luggage and stuff like that because it was built on a hillside, so everybody had to carry the luggage up to the living places, tents they were in those days. But I had a violin that first year, and then the next year I went I had my sousaphone. ... My Aunt Emma, the one I was telling you about, wife of Uncle Herb, after whom I was named, they were both violinists. ... I think she tried to teach me some violin and loaned me one of her instruments, but it is very interesting, this is another thing I might mention, "hurray" for Rutgers, when I came back, I took a music appreciation course with ... Professor [Howard] McKinney. I mean he turned me on to music just like this math teacher in high school turned me on. I mean my wife is a music major, or was, and I love music I think more than she does, really enthralled by it. ... It's funny, my nephew who now lives out here near us gave me a book for my birthday. I forget the title, but it has to do with music and your mind and the first chapter is all about music, you know, very interesting stuff, how do you know, why does an oboe sound different from a flute or clarinet or what have you ... and things like this, as well as harmony. ... The second part is all about your mind and how your mind differentiates these sounds. Why is it that you can remember, I mean, you guys wouldn't know this but like back in the '40s, we had all the big band music, you know, and all that stuff. I can hear a couple of bars of any one of those things. ... I not only remember that, but the orchestration and everything else, you know, you can just hear the sound of the orchestra and everything in it. So, it's a very interesting book. The point being there's an intimate connection between music and science.

SI: Yes.
AE: … Probably my interest in both of them, those are my two greatest interests I would say, but it's partly natural perhaps because the way my mind is constructed, but also, it's these two inspiring teachers, one in high school and one at Rutgers that I attribute it to.

SI: Okay.

Matthew Lawrence: You said that you played at the football games in high school. Were football games a big social event for the students?

AE: Oh, yes. … We were a small school. There were only seven thousand some odd people in this town and as I said a lot of them were commuters and what have you. So, it was like almost everybody was either on the football team or the band or something, like there were cheerleaders and what have you. Yes and my father, he was the town engineer, he built the scoreboard there and he used to officiate some of the games and what have you. So, it was a time that everybody rallied around and had a good time.

ML: I grew up in Verona.

AE: Oh, did you. Yes, we used to play Verona all the time. Did you really?

ML: Yes, I did.

AE: Well, yours was a similar experience, I guess. Verona is more spread out. Is it about the similar size? I mean Glen Ridge was probably almost as big then as it is now because, you know--there was only so much acreage--and it was all built up.

ML: Yes, there are about sixteen thousand people in Verona now.

AE: Is there any empty space?

ML: No.

AE: [laughter] … I remember going up to Caldwell, places like that, and, you know, there was an airfield up there. That's where Curtiss-Wright was. I mean, it was all open space, you'd have a hard time finding the town of Caldwell.

ML: The airport is still there but everything else is built up around there.

SI: How did the Great Depression affect the areas that you lived in, particularly Glen Ridge?

AE: Well, in particular I do remember—you were asking about my father—that he worked two jobs, you know. In addition to his day job, he was teaching at one of the technical schools at night in order to make enough but, with those employments, we were not desperate. But, I mean we knew that things were tight, you know, and what have you, and it did require that he was away a lot at work.
SI: Did you have to have any part-time jobs to help out?

AE: Well, I worked around the house. I always had jobs but this is really after I moved to Glen Ridge. The first job I had was delivering newspapers. … I can remember cold mornings going up to the room behind the railroad station and we would all get all these newspapers loaded on us and go with our bikes and deliver the newspapers. And Christmas time, you know, they might give us a quarter--it was a big tip--something like that. And then in one summer, I mentioned these two summers when I was at this Christian camp working there, and then the summer after that I went to work on the farm up in the Catskills and this was a dairy farm. … I was either out haying or I was cleaning chicken coops and stuff like that. But anyway, they had a little business of peddling eggs, so after I came back to school that next year, what I did is deliver eggs. They would drive a car down loaded with crates of eggs and then I would take those and deliver them and pick up the money for it. … So, I had an egg business like in that one year.

SI: How did you get involved with this dairy farm?

AE: Well, this woman, she was a widow, and she had two daughters and she lived, they had a house in Glen Ridge, and I think she had a guy that ran the place for her and worked up there and I think they needed some help in the summer and she must have advertised about it somehow, you know, and I thought well that would be a good thing for me to do. I just answered her ad and went up there. … That was a good experience in establishing good relationships with them because I had the egg business next year and then she even taught, she was a piano teacher, and she wanted to teach me piano, and instead I got her to teach my sister. … My sister took piano lessons with her. … She had these two daughters and I had some interesting times with them, including up at the farm. … They would always go out to square dance on Saturday nights, you know, stay out all night. There was another thing, oh, this was when I was in Rutgers. I mean, I had to get some more jobs while I was at Rutgers, one of them was I think the first year, when I was down there that summer, I worked in the freight yard down there in New Brunswick, trucking stuff from trucks into the freight cars … with a hand truck. …

SI: Was that for the military arsenal or a general freight yard?

AE: It's a general freight yard, yes. I don't know, all kinds of stuff, whatever they were making, maybe it's Johnson & Johnson stuff for instance. They'd take it down there and load it in freight cars then ship it wherever. … Then I worked at, during my later years, I think before I got my bachelor's degree, a year at Aberdeen Proving Ground. I wrote that up, you probably read about that. That was during the Korean War and the Chinese tanks were really giving our guys a hard time and this was during the time of the discovery of the shaped charge, I guess that's what some of these projectiles are that they're using over there in Iraq, penetrating these Humvees and everything. They discovered how if you shaped it just right that when the thing went it formed a jet of metal that would just shoot right through all these other metals. So, I went down there. I did a project to measure the elastic constants of these various explosives that they were considering for making that stuff with, … reflecting ultrasound waves from transmitting it through, and the results depended on the elastic constants of the material, and those elastic constants were very influential in how it would perform as a shaped charge. So, that was an interesting kind of thing and we lived down there in Havre de Grace it was called, Maryland, in
somebody's house. They rented us the room, I remember the room, there was a lot of cockroaches, stuff like that. My wife was there and the old guy that lived there, he gave my wife a little bit of a problem while we were there. [laughter] … He was a bit of a lecher, I guess. We had another interesting thing that I remember. Some guy came around I guess peddling sets of books and my wife bought a set of books and we didn't have that much money. We didn't need a set of books. So, she's never bought a set of books since. [laughter] You learn these lessons as you're growing up. I forget what question you asked me now, I've wandered around. …

SI: We were talking a little bit about the Great Depression in Glen Ridge and the various jobs you had. I was curious, since your father was the town engineer and the WPA was very active in the 1930s, did he have any involvement with WPA programs in your town? Do you remember any of that?

AE: I don't.

SI: Do you remember if there were any WPA projects built in your town?

AE: … Glen Ridge is a town like this; it's about four miles long I think and maybe a half a mile wide. There's what they call Toney's Brook that comes down through it. There used to be a mill on that brook there, and I think the WPA had a project there of building up sides, you know, a channel for that brook and so forth. So, he probably had some interaction with them then, but I wasn't aware of it.

SI: You do not remember any New Deal type activities in the area?

AE: No.

ML: Did your father ever talk about his opinion of President Roosevelt?

AE: Yes, I think so. I don't think he liked him. He was a Republican and, you know, people either loved him or hated him. I guess my father thought he was taking the country on the wrong track but he wasn't a rabid politician. My father was a conservative I guess.

SI: Was Glen Ridge mostly Republican or Democrat?

AE: That's a good question, I don't know. They had an interesting government by the way. What did they call it? But it was like, they had people who were, I can't think of the name right now, but it was like a nominating committee who nominated the people to be mayor and this and that and the other thing and then people voted and these people were generally elected. Now, even today, you know, sometimes you can't tell whether people are Republicans or Democrats. … Some of the well-to-do people have been very Democrat, you know what I mean? It doesn't matter, it's just about social … background or financial affluence or something like that. …

SI: Staying with the Great Depression for a second, do you remember if "hobos" would come through town?
AE: Oh, yes, yes I do remember that. I mean there would be guys that came to our back porch and my mother would make them a sandwich and they would offer to do some work or something if you had something to do. There were a lot of people that came around then. … A guy came around to sharpen your knives, he had a truck and he came around with that. There was a lot of them, but there were these people that came through looking for a handout.

SI: Did you ever talk to any of them, or did your parents tell you to stay away from them?

AE: … No, I just didn't have occasion to. "Who was that?" "Oh, that was a man who was looking for a sandwich." … That's about the extent of my involvement with them. [laughter]

SI: Did you notice if people in your neighborhood were losing their homes or if they were suffering from the effects of the Great Depression in any other way?

AE: I did not notice that, no. It seemed to be a pretty stable neighborhood as far as I was concerned. I didn't notice people moving in and out. It seemed like the people who were there when I became aware of anything were still there when I left, which is when I was twelve years old. No, it didn't hit us particularly hard.

SI: Pearl Harbor was attacked with you attending high school. Do you remember that day?

AE: Yes, we always listened to programs like Jack Armstrong and The Shadow and lots of great radio programs. … I remember we were listening to the radio when that was interrupted with an announcement that Pearl Harbor had been bombed. And my father was very active in civil defense--probably would be anyway as the engineer, you know, in the town with disaster plans and things like that and recovery plans--but he was some kind of a warden as well. … I could remember him wearing his armband and that sort of thing.

SI: They would have blackout drills in Glen Ridge?

AE: Yes, they were particularly concerned with that down around the shore, you know, because the submarines out there could see the ships silhouetted against the lights. But I don't remember, the blackouts were probably if we're going to have a raid or something, then we'd have to blackout.

SI: Do you remember any initial fear or panic in your neighborhood after the attack on Pearl Harbor occurred?

AE: No, but when you mention fear and panic, it reminds me of another thing. Have you heard of Orson Welles and the Martians? [laughter] We got caught up in the panic of that. … [Editor's Note: Orson Welles' radio performance of The War of the Worlds on October 30, 1938 created panic among some listeners who thought an actual alien attack was occurring.]

SI: Please tell us about that.
AE: I was at my cousin's house. We would often go there Sunday evenings. I had three girl cousins there and they were somewhat older so some of them would be out and we were there and all of a sudden these two girls came home, they came charging in the house and said, "The Martians are invading New Jersey," and we turned on the radio and we heard the broadcast, and it sounded very real, you know. I mean we were deathly afraid, yes. But we didn't do anything extraordinary like you heard some people did. We just trembled in fear but it was very real for a couple of hours until the thing got sorted out and you found out that it was all a broadcast and a lot of people had panicked and, you know, done some crazy things. … It's amazing.

ML: I believe the landing was supposedly near where you lived.

AE: … This girl's house, by the way, was in South Orange, but it was, I would have thought maybe it was closer to Rutgers or something. … I forget just where the town was.

SI: I think it was supposed to be Grover's Mill, which is about twenty-five minutes south of there.

AE: Of where?

SI: A half hour from South Orange, maybe the Princeton area.

AE: … Yes, that's what I would have thought it was. That's where I thought it was, far enough away that they weren't in our backyard anyway. But, of course, it wouldn't have taken them long to get there … with these green rays they had that were melting everything. [laughter]

SI: Yes, a lot of people have talked about that broadcast and it really shows the power of radio at this time. Do you remember anything else about the initial reaction to the attack on Pearl Harbor and people's reactions to it?

AE: I don't know, it's kind of interesting, I said I was in the middle of my junior year in high school and I don't even think I thought immediately that, "Oh, boy, here I'm going into the service," or anything you know, I just wasn't quite with it at that stage of what the implications were, but we certainly felt like our fleet had been devastated. I don't remember any great reaction. Well, another very interesting thing is, I was delivering newspapers at that time and Saturday, December 6th, 1941, I always got a paper out of this thing and I just happened to throw it and it fell down behind my bed. … I've got it upstairs and I found it later and I've got the other issues. I started saving the newspapers. … I've got the Newark Evening News upstairs for that whole period and it's interesting to look at that Saturday paper and all the stuff that was reported in the paper and all it just said was about the Japanese envoys being there in Washington and they're talking about how they're going to establish peace, you know, settle all these problems and everything. It was some contrast with the subsequent papers which were big black headlines. You might like to look at a couple of those before you leave especially since you're history "wonks." Incidentally, I like history too. I get a magazine which I've got in there that I'm reading too, American History. I also get a magazine called World War II; they're both, fascinating articles in them.
SI: Before Pearl Harbor, had you and your family or friends discussed the wars in Europe and Asia?

AE: Well, we certainly were aware of it and the question about, you know, what was happening to Britain, what had happened to France, the degree to which America should get involved, and Roosevelt's desire to provide some equipment at least, you know, and having a hard time persuading the powers that be that if it wasn't that we were going to be able to avoid it, that we at least should be supporting the people who are fighting this thing. The Japanese I remember, you know, there were terrible things… that had happened in China and what have you, but didn't really anticipate that there would be a war with Japan, I don't think, you know, that that thing was anywhere near that kind of a crisis point. I mean if you look at that newspaper from that Saturday you wouldn't get any glimmer from that either. I mean, it wasn't just that we were isolated or what have you, I think the whole country was, you know, unprepared for that.

SI: Do you remember if there were any isolationists in your area?

AE: Oh, yes, yes, and I remember the German American Bund, too, they're around. There was talk about that and these Germans who were, of course, I'm from a German family myself. As a matter of fact, my father grew up in the town of Vailsberg, which was a section of Newark. … They had some local government too I think, but it was officially part of Newark, and that was heavily German but there wasn't any trace of any of that sort of stuff with them. … I don't think there were any German sympathizers that I knew or that they knew, were involved with. I think my great-grandparents had come over from Germany, but I mean everybody had been here long enough. They were thoroughly Americanized, you know what I mean. They may have spoken some German, but in our family we didn't. I mean, I don't think my father could speak German.

SI: Did you notice how the war and wartime policies started to affect your town and your high school?

AE: Yes, well I do remember, of course, that gasoline was very hard to come by and all the other things that were rationed, but we took that in … stride. As a matter of fact, I heard something, a radio broadcast the other day that said that here we have all these guys in Iraq who were suffering … and here we're not suffering at all, people haven't been asked to give up anything. This guy was saying that the least we could do was cut back on our use of gasoline, you know, those people over there, so much of it is all about oil. … People all pitched in and they made victory gardens, you know. We had a victory garden where we started growing our own stuff and we didn't go very far. The car I suppose my father might have had, I forget whether, it seems to me I can just remember a big "C" on the car. … I would have thought maybe he had some special allowance as engineer because he'd have to get around in his official duties. Now, Jean's father was a farmer, … so both he and her brother were not involved with the war except, and I think the farmers got special allowances too because they had to run their tractors. … He was growing so much of his own stuff, they had pigs. … I know she used to go out and throw the tomatoes to the pigs and so on. They raised corn and tomatoes and beans and things like that. They would throw the leftovers to the pigs and they'd eat the pigs, you know, so they had both meat and vegetables. So, I don't think they suffered too much that way. …
SI: Did you have to wait in line for rationed goods in Glen Ridge?

AE: No, I didn't do any shopping. [laughter] … Maybe my mother had to stand in line, I don't know. …

SI: You were on the track team. Were you not able to travel to meets or anything like that?

AE: No, I don't think so, but we were pretty local, you know, Verona and Caldwell and schools like that which weren't very far away. … I don't even remember going there. I suppose it was sort of, maybe we had a bus, maybe we went in private cars, I don't remember. Maybe they all came to us, I don't know. I just remember getting up in the morning and feeling kind of sick with tension for this race that was coming on and I remember running the thing and how I felt afterwards, you know, being utterly exhausted and things like that.

SI: Was that how you felt every race?

AE: Oh, yes, yes. Well, I was a miler you see. … Have you done any running?

SI: A little bit.

AE: Well, with a mile, you know, first of all, the first quarter mile is pretty fast and for half or three quarters of the thing, you're going full out and you have to dredge up something from somewhere because the intervening ones aren't all that slow and, you know, they really exhausted you, and you're about ready to drop anyway and then all of a sudden you got to find this kick where you're going to run another, … somewhat less than a quarter of a mile as fast as you can. … When it would be over and what have you, I mean, you feel like throwing up and everything else, you know what I mean, it's just exhausting. Well, you know, it's interesting for me to speculate on what that's done for me. I talked about how it hurt my ankles and what have you, but I've always had good strong legs and I haven't had any heart problems, so. Maybe it helped developing my heart and what have you. …

ML: Did you continue running after high school?

AE: As I say, when I came back, I ran at Rutgers also, although there it was more cross-country- -it wasn't a mile. My father was a miler. I got scrap books of his and, you know, with medals he won because he was a miler at Rutgers in those years.

SI: You told a story in your memoir that you sent to us about the atmosphere around the time you graduated from high school but before you went to Rutgers. You mentioned something about a ceremony at the Hotel New Yorker.

AE: Oh, yes.

SI: Could you tell us a little bit more about that time period?
AE: Well, we all knew we'd be going into the service right away of course and I don't know whether that changed how we celebrated our graduation or not. Living there in Glen Ridge, we were close to New York and we had a great graduation and a bunch of us went into the big hotels in New York and enjoyed the big bands. Frank Daley's Meadowbrook was up on the Pompton Turnpike and they would always have the big bands there and we'd go up there. As a matter of fact, I mean this is trivial for your thing but one of these sisters that I mentioned from the farm, who would bring down the eggs to me, she had this car, so I took her to Frank Daley's Meadowbrook, on the Pompton Turnpike, Route 23. Frank Daley's was on sort of a rise and there was a big driveway that went up a hill. So, when I went there, I had to turn across the traffic and get on this incline up here and I got behind some guy, I can't remember whether all of a sudden this guy in front of me rolled back into me or whether I rolled back on the guy behind me, but anyway it smashed her car up a little bit. … That was a traumatic experience, it's not my car and what have you. Funny how you remember things like that. … I had met a girl up at that camp I told you about, she was a person who came there with her family while I was on the staff. I struck a relationship with her. She lived in Morristown. … Incidentally by the way there were some romances in our high school, they got married, and they're still together, you know, but I sort of dated every girl in high school. There was the time when we'd go for a while and then I'd go with this one, I'd go with that one, so I had a lot of different girlfriends. Another thing that was probably in there, did I talk about being a gigolo? [laughter] The dances?

SI: No, I do not think we did.

AE: Anyway, there were these dancing classes that Miss Sawyer had at the dancing school and boys and girls would go there. … So, I could get to dance with these girls then too and it was quite a thing. It was on a Friday afternoon, I think. Well, after a while, after I'd been there a while, she actually paid me to come and dance with the girls. You know, that's what a gigolo is, a paid dance partner. [laughter] … So, I had these relationships with these girls and everything, but then I met this girl and she lived in Morristown, and she was the only one I really cared about that much. I used to go over to East Orange and get on the Delaware and Lackawanna Railroad and go up to Morristown and then come back home. I don't know why I just thought about that.

SI: We were talking about your graduation.

AE: Oh, so I invited her to my graduation. So, she was the one, she came down and she stayed overnight at our house and we went into New York together and came home in the wee hours on the bus, … great time, and then, as I say, during that time we were training at the East Orange Armory. That's where I first got to shoot a "Tommy Gun" and what have you. …

SI: When did you become involved in the State Guard?

AE: The State Guard? I'm not sure, it was all during my senior year anyway. As I say … Pearl Harbor was when I was in the middle of my junior year. I don't think we did that by June. It was probably when we came back. They had already probably taken the National Guard away and formed the State Guard and I guess they were wondering where they were going to get the men from. It was partly to get manpower for this thing and partly to train us to prepare for that. So, I think it was very good training.
ML: What kind of exercises did you do?

AE: In the State Guard?

ML: Yes.

AE: Well, most of it, you know, was like close order drill and stuff like that, and the manual of arms and what have you, but then we did learn to shoot. … They had a range right there in that armory and then they would take us out on maneuvers on weekends. Learning how to coordinate with your squad and your squad leader, and crawl through the brush and all that, dig foxholes. [laughter]

SI: How many days a week would you train?

AE: Well, I can't remember. … The actual maneuvers things were only on weekends, you know. I mean the other things, it would be more like in the evenings, you know, we had school, we still did our athletics and what have you. But, then we would go to the armory. …

ML: Who organized this? Who were you trained by?

AE: Well, it was one of the outstanding men in Glen Ridge who was, as a matter of fact on the town council, and he was an officer in this Guard. So, he was our commanding officer over there. So, I think these were mostly people like my father or younger who had been in the service before and stepped into this role when all the people who were of an age to go off and serve overseas disappeared. … Of course, it was for all the purposes for which you ordinarily had a National Guard, a State Guard. I mean riot control or, you know, keeping the peace or if there was any fighting the Martians when they came through. [laughter]

SI: Were you ever deployed to stand watch on a bridge or anything similar to that?

AE: No.

SI: It was all training?

AE: Yes.

SI: Did you have military discipline and a rank?

AE: Oh, yes. … Well, you know, we were just privates. … We had non-commissioned officers and there were officers.

SI: Did that experience impact your decision to go into the Navy?

AE: That didn't. If you had my high school yearbook, you could see us with our uniforms on and all. We were very much aware of course of what was happening overseas with the Army
and the casualties and all that sort of stuff, and the ground fighting, you know what I mean? Now, what I have read after the war, especially, you know, about some of the naval battles, I'm not sure whether you were better off on the ground than in a ship, you know, when you're really getting it. … Some of those ships went down with all hands. … I think there was a general feeling like, "Gee, if you could get … the Navy it would be 'softer' duty, 'safer' duty," let's put it that way. … As I say, I wore my glasses from the time I was maybe ten years old or younger. So, I never thought there was a chance to be in the Navy but when I walked in the place, and the guy says, "You want to be in the Army or the Navy?" I said, "The Navy." I mean what do I have to lose? [laughter] And then I was really surprised to get in the Navy. Go into this room and there's an officer sitting there and … I don't know if he asked me, "Why do you want to be in the Navy?" [laughter] I can't remember giving that answer but I was surprised when he stamped my papers. He says, "Okay, you're now in the Navy," you know, and stamped them "special assignment." I said, "What is a special assignment?" Anyway, the next thing I know I'm on a train going to Camp Peary in Virginia. … As we're going into the camp, there's all these guys standing around saying, "You'll be sorry, you'll be sorry." … Then I found out I was in the Seabees, and I didn't even know what the Seabees were then. But that's the best thing that could have happened to me, because I was blessed during that whole three years. I mean I have been shot at, and I have shot, but comparatively, it was benign, you know, more construction than anything else. I mean, it was not living under ideal conditions in those islands, but what the heck, a lot better than the Battle of the Bulge or something like that. [laughter] And I even had the chance to do these correspondence courses in my spare time. There wasn't much else to do. And I earned the GI Bill so to speak, which paid for my education.

SI: Before we go further into your Navy career, we just have a few more questions about your first quarter at Rutgers. Were there any special programs set up in your high school for additional physical training or airplane recognition?

AE: I don't know if we had additional physical training. In those days everybody had gym all the time, you know, climbing ropes to the ceiling, and all that sort of stuff. Our high school had a gymnasium that was two stories high and in the second floor you had a track, an indoor track around it. So you could actually run inside this gym and then you climbed the rope way up into the girders, way up at the top, you know. And we did a substantial amount of physical training and I do remember doing the airplane recognition things. I don't know whether that was more in the high school or whether that was part of the State Guard stuff we were in. Well, I think my dad got involved with that too. … They had, you know, something, I don't know what it was called, civil defense, or what it was, but they had residents organized and trained and if there was any alarm or anything they had their posts to go to and they would be looking for airplanes. They would be marshaling first aid help for any casualties that might occur. So, I don't remember anything in particular in the high school, you know, other than our State Guard thing.

SI: You graduated from high school and you knew you were going to be in the service. Why did you decide to start studying at Rutgers and to get some college time before you had to leave for the Navy?

AE: Well, I think, I don't know when it was that I applied to Rutgers and was accepted. But obviously, that always happens … quite a while before your graduation, and you don't know just
exactly what's going to happen. So, I don't know, maybe it was even in the fall of '42 that as I began my senior year that that was all happening. So, you get signed up, you get accepted, you're ready to go. … I also had applied at places, I remember I was accepted at Cornell and a number of other places. I went to Rutgers partly because my father had gone there, partly because I got the state scholarship there. … I just think it's a matter of getting your foot in the door and getting the fastest start you can get so that you got something to come home to, you know what I mean. If you didn't do anything like that, then you came back, you'd have to start from scratch. As it was, I also joined a fraternity there, I'm a Chi Psi, and I lived in Chi Psi Lodge from day one in that summer. So that was a place to come home to, too.

SI: Do you remember applying for or taking the test for the state scholarship and what that process was like?

AE: No. Was there a test? … I don't remember.

SI: During the war it might have changed a little bit. Some people took a test or had to talk to someone about getting it.

AE: … That shows how much I remember about it. … I don't remember anything about that. But that would be no big deal, we're taking tests all the time.

SI: What do you remember of your first days at Rutgers?

AE: I don't know, as I say being in Chi Psi like that, so much of it was involved with the lodge and of course I was a pledge then. … I worked as a waiter in the lodge, and the pledges, you know, there was a certain amount of hazing and stuff like that goes on. So most of that is what I remember. As far as the other stuff, I just remember going to class and studying hard. You know, you mentioned about Jack Clendining, he was my roommate so we were roommates at Chi Psi Lodge. I don't know whether you know where that is, it's 114 College Avenue.

SI: It is on the corner of Bartlett.

AE: Yes, that's right, yes. … It's a three story structure where there's a dining room and there's a living room on the either side of the entrance and the stairs go up and then upstairs, we all had study rooms. You know, the room might be about this size, I don't know, or maybe, some of them were smaller and some of them were narrower, but we'd have desks in there and that's where we studied. Then, you go upstairs further and there was a bathroom in the center and then on either end there were two dorms with cots all around. So, I can remember sitting in these rooms studying and the fraternity activities. There were parties then too. It wasn't far off I think from a normal college life even though there was war and there were guys coming and going.

SI: What was the student population like then? Were there still a decent number of students on campus or were they mostly gone?

AE: … You're raising a very good question. I wasn't that much aware. In other words, you're saying that you might have expected the upper classmen had all been taken away. … I don't
remember that, whether there was some reason, there was some of them had exemptions or whether, you know, just how that worked. It seemed fairly normal to me. We had our upper-classmen, you know, they were supervising us and inducting us.

SI: Were a lot of them engineers also?

AE: Oh, I think there was everything, yes, everything.

ML: You also mentioned that you lived at Chi Psi from day one.

AE: I never lived in the dorm.

ML: Why did you pick Chi Psi, or did they pick you?

AE: Well, in those days, the fraternities would recruit high school kids. … I was particularly friendly with a fellow from DU, and I went there to visit, and be interviewed, and all that sort of thing and then I knew somebody in Chi Psi too and Chi Psi just appealed to me, I guess. I think I could have gone DU just as well. It isn't like that was the only option I had. But, I've always been glad I did. Chi Psi, they have had some trouble in recent years.

SI: I know that their house was converted to graduate housing.

AE: Yes, they were closed down for liquor violations in later years, after I was there, there was a bar in the basement. There had never been anything like that when I was there, and I don't know what happened with the fraternities afterwards, I guess they got a little looser. They may have even had girls stay over, I mean we didn't do that, none of that kind of stuff happened when I was there. When we would have our parties, the girls would take over our rooms and we would go stay in the dorms or … at some other place during that time. Yes, there was a real emphasis there on training young men to be gentlemen and a push for good academics as well. I'm getting some reports now that they've been, … I don't know what you would call it, but they're accepted now in the national fraternity as well, … reinstated and all that sort of thing. … The reports state they were very active this year in community services and things like that as well as athletics, … so I've been proud of them again.

SI: I think they have reestablished themselves in that house.

AE: Yes, oh, yes, oh, they have. Yes, that's right.

SI: For a few years it was graduate students, and now it is back to being a fraternity.

AE: … I've been sort of interested, this is an aside but I'd be interested in hearing about what you guys think about what they're going to do to College Avenue and all that changing, they're making a mall, and what have you. … I guess it's going to be very different there after a while. …

SI: Yes.
ML: There is always construction in New Brunswick.

SI: Yes, everything has been changing non-stop. We can talk more about that after the interview.

AE: I don't think I've been back there, you know, in that time, ... I'm sure I haven't. I can't remember the last time I was back.

SI: Let us ask a few more questions about Rutgers during the war. Did you have to take ROTC?

AE: Yes. You know, talking about Jack Clendining, his father was an Army man, and I think he had moved from town to town, you know, ... the father had been moved around and everything. But he was a pretty big fellow, he was taller than I was. So, he got into ROTC, and his undoing was the fact that when we came back from the service, he went back into ROTC, and I think he did that for the money. ... When the Korean War came on, they called him up, and he went over there and he was only there a couple of days when he was killed. He was married, he married Pepper. He was quite a different guy than I was, but I don't even remember what his major was but it sure wasn't science, but nice guy, I liked him. It's interesting how like that you can just meet somebody in your freshman year. If you had a lineup of guys you'd say, "Okay, now, who's the one I'm mostly to be buddies with?" It's not necessarily that kind of thing and yet it's a relationship that you established that carries on, and a lot of mutual affection and loyalty--of course, that's Rutgers, right? Loyal sons.

SI: You were pledge brothers.

AE: Yes, yes. We were always roommates.

SI: Do you know what he did during the Second World War?

AE: I don't know that I do. I didn't get the impression he'd been overseas. Who was I thinking about, it may have been in there, somebody I knew had spent most of their time up in the Aleutians. If he was overseas it was probably something like that, but I don't think he saw combat during World War II. I don't really know, that's interesting you know. Maybe we just didn't talk about it that much, too busy romancing the girls. ... [laughter]

SI: You both came back to Rutgers around the same time.

AE: Yes. See, I had been overseas so long in the Pacific that I was on Eniwetok when the atomic bomb was dropped and then shortly after that they started getting people home as fast as they could. ... Some of the guys had more points than I had and so they went first but pretty soon, I came home on the Nashville, a big cruiser. I wasn't doing anything there, I was just being hauled home. A big storm, there's a ship that lost power and we had to go tow it in, and that was an interesting experience because they had some ropes all over the decks and only people who had to be out were allowed to get out on that deck because the waves were washing over there and you know the ships they'd be down in the trough, and all you do is see these walls of water
on the side, and then all of a sudden they'd be up on the top, and you'd be looking at, well the ship had lost power, and once in a while, we'd both come up at the top about the same time, then you could see where the ship was, but the rest of the time you didn't. Well, somehow they maneuvered alongside and they shot a line to it and we hauled them back in. But then I came into San Francisco here in Treasure Island, and then had ten days travel leave to the East Coast and a thirty day leave in New Jersey. … Then I had to report to Pier 92 where they had a receiving barracks out there on the pier. … You'd wait for whatever was going to happen, anticipating that I would be there until I was discharged but, you know, also look on the board about reassignments, and I looked and then all of a sudden I see here I am assigned to the SS Europa, heading for Germany. You know, and this is, well I came back from overseas in January 1946, and I was discharged in May. So, you can see how close I was to the discharge. In that time, I took the Europa over to Bremerhaven, did shore patrol duty in Bremen, and so on, and got a Liberty ship back home, and came into Pier 92 and was discharged in that short period of time. … It was kind of a shocker to find myself after all that time in the Pacific heading to Germany. … That was kind of an interesting experience too because I got a look at Bremen and those other places and there wasn't anything but rubble around. I had an interesting experience because my father had a secretary who had relatives there and Bremerhaven is the port for the City of Bremen. Well I took busses and trolley cars and found this home in Bremen where these people lived and took them some candy and cigarettes and so on. It was a funny kind of thing, I can't speak German and I don't think they spoke much English. And I'm riding this trolley car with all these Germans there … and here I am in my Navy uniform and they're looking at me kind of, I think I was crazy, [laughter] but it worked out well because it gave me exposure to that. Now, I don't know why I brought this up, … then I came out in May … and immediately applied to get back into Rutgers and was down to Rutgers in June … for the summer quarter, and Jack had come out in about the same kind of schedule, I guess. Everybody was coming out like that. … It was sort of the first half of '46 that we were all getting out.

SI: I have just a few more questions about Rutgers before we get more into your Navy service.

AE: You have got a long tape there, haven't you?

SI: If you want to take a break at any point it is okay.

AE: No, I'm doing fine.

SI: Was the ASTP on campus at that point, the Army Specialized Training Program?

AE: Yes, I don't know. I knew people were in ASTP and somehow I felt like maybe I missed the boat. I think it was, but it didn't intersect with me very much. …

SI: You did not see people marching around campus in uniform.

AE: I don't remember, it didn't make an impression on me. I think I may have. Do you know for a fact whether they were there then?

SI: Yes.
AE: Yes, they were.

SI: I was curious because they were kicking one fraternity after another out of their houses and putting the ASTP folks in there.

AE: Oh, is that right?

SI: I was wondering if that ever happened to Chi Psi?

AE: No, that didn't happen to Chi Psi.

SI: I was just curious how hectic your day was considering that you were an engineering student and then you had a job in the freight yard. What was a typical day like in that quarter?

AE: … We had to make time for the girls, too. [laughter] … I don't know, probably just like anybody is today. I mean, we had our classes which were odd hours, you know, I mean you might have a class at nine, another one at ten, and then you'd have another one at two o'clock or something or maybe at four, and in-between, you'd be trying do some studying, or you might have an afternoon with no classes, and that's when I'd go down and work in the freight yards. I also worked as a waiter in the fraternity house. … Sometimes, we would study together, Jean and I, I mean I'd go over there and we would sit at a table, … do our studies together.

SI: Were you introduced to your future wife before the war?

AE: No.

SI: That was after the war?

AE: Yes, what happened was, yes, I didn't have any particular girlfriends down there … when we had the first quarter, when I went before I went in the service. When we had a dance or something, I imported a gal from home, … she'd come down, and what have you. But then after the war, we had some fraternity parties that first summer, and I had dates with some of the girls, you know, … NJC in those days, New Jersey College for Women, and some girls from over there but then as I say Jack--Jean was Pepper's roommate. And he says, "You know you really ought to go out with … Pepper's roommate, she's a great girl." Well, Jean, of course, had been home on the farm that summer. So, it wasn't that summer, so it was probably like September or October of …

SI: 1946?

AE: '46, yes, we got going. I think we got engaged New Year's of '47-'48, married in June of '49 when we graduated. I really only needed three years there because with the summer I'd put in, plus the correspondence courses and the fact that we were working during the summer, you know, it was continuous.
SI: You mentioned a little bit about how you got in the Navy earlier, but can you walk us through that process of being drafted and having to go for your physical and actually leaving for training?

AE: Funny, not too much of it makes an impression on me. As I recall, … I remember my father walking me out to Bloomfield Avenue where I was going to catch this trolley car down to Newark to the recruiting station down there, and he had a little talk, heart to heart with me about how I had to keep myself clean for my wife and the future and stuff like that, you know. [laughter] And off I went and I got down there and I don't remember too much about what happened or where we got our gear or anything. I mean I do remember there were times when we were stripped down and, you know, went through there and got all this clothing handed to us and all of a sudden we're in uniform. … Then, I think they put us on a train almost immediately and then I told you about going into, "You'll be sorry," and all that sort of thing, we were in the barracks. … Actually, we had a Marine drill instructor. You see, the Seabees were really coupled to the Marines. I served on just a couple of ships. The one was taking the Europa, … the other, the transports we were on, when we went overseas and that sort of thing and then I would be serving on the gun, generally on the bow. Didn't I say I was anti-aircraft gunner?

SI: You mentioned it on the pre-interview survey but not in the interview.

AE: Yes, that's right. But most of the time, of course, we were with the Marines. I remember these Marine guys that had been in Guadalcanal and places like that and they came back and they were determined to whip us into shape. … So, you know, it was being roused out of bed early in the morning and you'd have to go outside in freezing cold and do a lot of calisthenics and come in and make up your bunk and get … yourself ship shape and having inspections and going here and there and learning how to take your rifle apart and put it back together blindfolded. … I can remember some tear gas drills when we had to go on a place and, you know, they'd set off tear gas so you know what that was like, and they were teaching us to fight with machetes. You had the machete for the jungle, first of all, because so many of those places had jungles to hack at. But they also had these maneuvers, you know, you go across the guy's throat, down along his body down here, then get him down there. [laughter] … I was only there five weeks.

SI: That was boot camp?

AE: Yes, boot camp.

SI: Where was that?

AE: Camp Peary in Williamsburg, Virginia. It later became the CIA center down there. I stopped there once when I was in the area and you can't get close to the place but it was the United States Naval Training Center at Camp Peary, Virginia. They had another one at Endicott in Rhode Island, but this was the main one for the East Coast. I went in as apprentice seaman and after five weeks they'd give you a stripe, you're a seaman first class and sent us home for a ten day leave, go back to the camp, put us on a train. I was, I don't know six or seven days I think coming across the country. It was a very interesting experience because they had these bunks in there, and we spent a lot of time in our bunks. I remember I think we were coming by
Thanksgiving. I had started October 1st, and already we're coming across the country. We stopped at all these Harvey restaurants, I don't know if you guys ever know what that was. But on the major railroads coming across the country, they didn't have dining cars, they stopped the trains and people got off and went into the Harvey restaurant and had a meal, and get back on the train and then the train would take off again. And they had these Harvey girls that did the serving and everything. Well, we wondered how are we going to celebrate Thanksgiving, … but I remember a porter went off and brought us back a roasted chicken, you know, or barbecue chicken, or something like that. … We had a wonderful time eating that in our bunks. But it was a long haul across the country. Came into … Camp Parks up here, which is still there on the road to Livermore out of San Francisco, if you go up 280 or something, then you take that road. It's somewhere where the prison is. Oh, you don't know this area.

SI: No.

AE: You don't know this area, that's right. So, this was sort of like the West Coast receiving area, the … replacement detachments, that's what we were in. They bring you in, they continue your training and marching and all that stuff and training with various things. … They would be repopulating either battalions that came back that had been somewhat decimated or something, they repopulate those and then send them out again or what have you. And that's when I got into the 67th. Then we went down to Port Hueneme down here which is the Seabee base on the West Coast. That's where they have the Seabee museum and battalions that are headquartered there are going off to various places like Iraq and Afghanistan. They're doing a lot of work these days on civil reconstruction and so on, you know, … some of these places where it's been utterly devastated and so on, and they'll rebuild the infrastructure or something. Of course, they'd have all kinds of specialized units too. They have a demolitions company. This guy that I was coupled with, he and I were two gunners, anti-aircraft gunners in the 67th. … He was an underwater guy. So, they have the ones that would go under, you know, look for explosives, or rig explosives to blow up things.

SI: Like a combat diver?

AE: Yes, these kinds of things, but some of the battalions were more port construction battalions. We were aircraft landing field construction specialty particularly. … I don't know how much you know about the Seabees, but the Seabees, they had every trade you could think of in every battalion. So, I mean you had electricians, you had plumbers, you had equipment operators, you had everything, and some of them, like one of the companies particularly, all those big bulldozers and the pans and everything for moving all that coral around, spreading it, and what have you. … It was a wonderful outfit to be a part of and I guess you know from reading my stuff and what have you that the reason they took me into it is because they needed laborers. You know, they had all these trade guys, and they'd get all the ratings and what have you but they didn't have any ordinary seamen to pick and shovel. So, one of my first assignments was in Hawaii when we landed there, in the supply yard where the stuff would come off the ships and then you'd hook the chains on the pallets and lift it up with a derrick and move it over here and store it here and then move all the stuff, loading trucks and then disbursing supplies until one day some guy stuck his head out of the headquarters thing and says, "Does anybody out here know how to type?" I said, "I can type." They say you shouldn't volunteer in
the service, but that was the start of my career in the supply end of the business and, you know, in the Seabees you have a combat job and you have a construction job, and so my construction job was in the supply thing. I got to the point after a while where I was ordering things, you know what I mean, like when I was taking the Europa over to Germany. I was filling out the requisitions for stuff that we had to order and what have you and then we're also in ship stores. … We ran the store where the guys would come buy their soap and their socks and all that stuff and we'd serve them two beers each night. … I forget how I got to that point.

SI: Could you tell us a little bit more about your training?

AE: Well, you asked me … what it was like in boot camp and so forth.

SI: What about your training in California?

AE: … The 67th was immediately earmarked for service in the Pacific and I think even then they expected they were going in to build these big B-29 strips in the Marianas once they had taken them, but we went to Hawaii first to work on the John Rodgers Field and got a lot of experience that way, … actually building airfields and what have you. … We had camps up in the hills above Honolulu and then when they … were ready, after about a month, to send us out, we got all new equipment, so they had to ready the equipment and everything. And then we get on the ship and away we went and I mentioned how the Saipan invasion, they hit there first, but that went slower, it was tougher than they thought it was going to be, so we were on this silly ship, and we parked in Eniwetok harbor for four weeks. Then we finally went, finally got to go, and we arrived off Tinian, and you could see from Saipan, they were bombarding the dickens out of Tinian and the ships were also, and they were cleaning up in Saipan then, and then the invasion of Tinian happened.

SI: Did you see the ships going in for the invasion?

AE: Oh, yes, and we went in with them, although as I said we went in at night. I don't remember how that happened. I just remember it was dark when we were doing it. There must have been a moon because you have to be able to see where they were going but there were trucks there at the beach. I mean we were not in the beach invasion. … The Marines had already moved in, away. We got in the trucks and they drove us, and we went up a road up to this area and made a camp and since I was in headquarters company in a gunnery outfit, they gave us the perimeter guard. So here we were, "Post number one, … post number two." … We knew that there were Japanese around, we didn't want them infiltrating the camp, and every once in a while, gunfire would break out and so forth and I found out the next morning there had been some cows out there moving around or something and these guys were all trigger happy so they sprayed the cows with gunfire. But we didn't have much in a way of contact with Japanese. We had a few guys that were killed by snipers, but … our only combat was as we were building the airstrips, from bombing raids, being strafed, and stuff like that from Japanese who would come in. There was this one occasion which I think I mentioned when we got a black alert when they thought they were going to come and invade with parachutes. I mean you can imagine how the Japanese felt about this. Now, it took I think twelve or thirteen hours for these B-29s to fly to Tokyo and back, so I mean it wasn't like it was on their doorstep but it was at least within
striking distance and they sent these huge raids up there, some of them three-hundred to five-hundred planes from the several islands because they were building these things on Saipan also and also on Guam, which is quite a bit further south. … Japan knew that they were subject to bombing and everything so they didn't want these airstrips to succeed. So, they made several attempts to destroy them and what have you. So, that was interesting business. We had planes that would come down the airstrip and then turn, come in at us, you know, shooting. …

SI: Did you shoot back on the twin antiaircraft gun?

AE: Actually this was a single one. They do have the twins on ships mostly but it was a kind of a gun that had a harness here, you know, you put your own arms into and your trigger was here and you were looking out over the gun sight here and it had two metal plates on either side, they were supposed to give you some protection and I don't know how come I got to be a gunner. … The 67th went to Hueneme and then somewhere along that line they took some of us and I don't know how I got involved with that, to Pacific Beach down around San Diego. And there was a simulator thing there where I don't even remember how it worked but you were like in a gun and there were these planes flying across the screen and you know, they judged. … It would be like tracer fire, you know, could you lead the plane adequately and properly. I guess I scored very well at that. I think that was the basis on which I became a gunner, they figure, "This guy can, he'll be able to shoot down planes," or something. … The other guy, … he was this big rough tough underwater guy and what have you, I figure they'd pick people like that to be the gunners because other guys in our squad were the guys that prepared the ammunition. These things took magazines about this big, they were the shells. …

SI: The shells you are describing are about a foot and a half long.

AE: Yes, actually I've got one of the shells in there on my shelf, I can show you, it's in my den in there, but they're about this long and they're about that big around. … They would load them in that magazine and you had to grease them because when that barrel got hot and everything, the shells sometimes would stick and explode, the gun would explode. So, you grease them so they got--if you put too much grease on them, then you get too much smoke out the end, you couldn't see what you were shooting at anyway. So, these guys knew how to grease them and so on, they loaded those magazines, and then these things would just lock on sort of and the shells would spiral out of it as you were firing away. … So we went down there to the place, I can't remember the name of it.

SI: In the United States?

AE: Yes, it was down by San Diego also where we actually shot these guns at drones. They'd have planes coming in towing this drone and as it was coming in, then you would be actually shooting at actual planes, you know what I mean, and getting practice that way and they'd be checking you out to see whether you could do that. But now, they weren't coming at you I don't think as fast as real combat planes.

SI: You were shooting the planes, not the sleeves behind them?
AE: No, see I said drone, ... I don't think we were shooting at sleeves. It was like some kind of a plane, but I thought maybe it was something a plane was towing, like a simulated plane or something, ... a glider, no it wouldn't be that. I can't remember now. All I can remember ... I think there were actually people flying these planes ... and that they were towing something. All I can remember is we had a realistic kind of target to shoot at but I doubt that it was, they weren't coming quite as fast as those Japanese planes were when they were coming in.

SI: You found the training to be pretty effective.

AE: Yes, yes I did.

SI: I am a little confused. When did you make a switch from being a laborer to being a clerk in the supply section?

AE: Yes, that was that time when I said that guy came up and said, "Anybody out here knows how to type?" Then I went in and they had me typing up reports and what have you, and the next thing, "Well, here's a guy that can do things and seems reasonably bright ... so we'll have him do something else," and then so that's where I was from then on. I didn't hook any more chains after that. [laughter]

SI: Did the change happen in California or in Hawaii?

AE: That was in Hawaii.

SI: You were working on Rodgers Field as a laborer initially.

AE: Yes, I was actually in the supply yard there. In other words, the guys, the construction guys were down working on John Rodgers Field and we had a big supply dump that was in all the sugar cane up in the hills behind and that's where I was working, but you raised a good question. I was already in the headquarters gun crew at that point. I got a little disconnect going now. I'm trying to figure out how, I would have thought, you know, that my assignment to the supply section would have been related to the gunnery and everything, but you see in here for instance, just let me show you this a minute. This will only take a second. Here we are right here already. See, here's a picture of the twenty millimeter anti-aircraft platoon and my picture is there, and back here is the supply section headquarters company, and I'm there, so it's like you had, I had two associations, once again the combat and the construction, you know. I had one job which was, and I don't know if there's any of these other supply section guys who were on the twenty millimeter thing, you know, I haven't really looked at it that much. So, it's kind of interesting, but that's where I have lost the disconnect is how those two things were coupled, how did I ever get to be in the twenty millimeter and also in the supply section. I knew I wound up in supply section from that experience I told you about with the, you know, loading all that stuff and what have you and can you type and work my way in that way. I don't know how I got to be into the gun section. I just do remember going to that place where they were checking out how you could, you know, could you shoot, and that sort of thing.
SI: When you were in Hawaii, would they have gunnery drills while you working in the supply section?

AE: No, I don't remember that.

SI: Did they have the anti-aircraft guns set up in Hawaii?

AE: No, I guess by this time they did not figure that there was a credible threat of any kind. I don't remember any warnings or anything else, you know. Maybe they figured it was past the time when the Japanese were likely to attack Pearl Harbor again or any of that. I don't remember that.

SI: What stands out in your memory about your time in Hawaii? What was a typical day like for you working in the supply section?

AE: Well as I say for a while I was just loading and unloading these things, you know, and then I was doing clerical work at the beginning. … We would get liberty once in a while, you know, and then we'd go in and see the sights but we were not there that long. I mean, I think we were only there a month, not too long, and then we were getting on our ship to head for Tinian.

SI: When you were in Hawaii, was it more like a "9 to 5" job?

AE: Yes, I think it was, I think it was. It was such a benign time it doesn't stand out in my memory that much, you know what I mean? You tend to remember … the traumatic times and things like that.

SI: Were most of the people that you were working with young guys who had just entered the service or did you have interaction with a lot of these craftsmen who were drafted directly into the Seabees?

AE: Yes, well as you see, if you look at any of these pictures you see there's a mix. Some of these guys were, you know, I had both, being in these two sections, especially headquarters, you would … interact with a lot of people from all different branches. … You get to the companies here, you know, these are all the construction guys and they've got their young guys too who were, I'm sure, they were training to do construction work. But being in the headquarters thing, see what we had if we had our twenty millimeter anti-aircraft platoon and here we had a mortar squad, and then we just saw back here the cooks and bakers and so on, but then they had some machine guns, communications, intelligence, here's the thirty caliber machine gun platoon. So all those other people in those other companies, their combat job would be more like infantrymen, you know what I mean. We had the special things.

SI: It sounds like it was a mix of older folks and young men.

AE: Oh, yes, I mean like if I look at the supply, I mean, here's some of these guys, the chief here was Stedham. He was probably in his forties, you know, and some of these other guys were. … They ranged in age all the way up, and I think, you know, I think they only took them thirty-five
was all they would draft. I have to show you my poster in there. But anyway, I think maybe you
could volunteer till you were thirty-seven or something. … I'm not sure it's on that thing in
there. But some of these guys were, they may have even made some exceptions, I don't know.
Some of these guys were beyond the age of which they would have been drafted.

ML: Were these men from all over the country?

AE: Yes.

ML: Was this the first time that you had interacted with people from the South or the Midwest?

AE: Yes, that's right, that's a very good question. You see here they have all the names, here's
Company D, here's this guy is Memphis, Tennessee, the next one, La Fargeville, New York.
Then something Washington, Kansas City, Missouri, Brooklyn, New York, Liberty, Missouri,
Russellville, Arkansas, you know I mean, just all mixed in all over the place.

ML: What were your impressions of people from these different areas of the country?

AE: … Of course, you notice dialects or accents or things like that, and there's such a mixture. I
mean you can get, I mean, right from New Jersey, we would have guys who were very different
from me, you know, and then from all sections of society, and so I didn't notice that much
difference regionally as, you know, for every region, there was the mix of guys like that too,
other than the way they talked. [laughter]

SI: Did you notice the difference between the mindset of the older guys and the younger guys in
your unit?

AE: Well, I think in the Seabees particularly, yes. I mean, these guys were rough and tough
construction men with a considerable amount of experience, you know, and they were there to
build things and what have you. … Some of them weren't all that, what should we say,
interested isn't the right word and so, but all the military type of stuff, and the combat and stuff
like that. I mean they were there to build things. Now, you know the story of the Seabees I
guess. You ever see the movie, John Wayne, *The Fighting Seabees* (1944)? … I mean they'd
been on Wake and Guam and stuff like that building stuff and all of a sudden the Japanese come
around and here they got all these construction guys who wanted to pick up a gun and fight and
what have you and they couldn't do that, they didn't have any training, and they were just sort of
in the way. So, they decided they really need to be training and arming their construction people
and then make it an integral part of the armed forces. So, they started the Seabees.

SI: Did you serve with anybody who had been in earlier campaigns or was everyone a new
Seabee?

AE: I don't think we had any guys in our outfit that had been around before. That's a very
interesting point. Just in our training camps, you know, in the training experiences we had a lot
of veterans who were training us but that's probably what they were using them for around that
time. I'm sure they had some battalions that, you know, there was the movement up from the
Solomons and all that stuff. … We came across like this, through the Marshall Islands and the Marianas. So, the earliest experience of the Seabees were down there around Guadalcanal and places like that, and those outfits probably had a lot of veterans as they moved up and if they had been, if they brought them back, and put replacements in, and send them out for another tour, and then that would be different. But I have a feeling that the 67th was made up more from scratch, maybe even by combining a lot of replacement groups or what have you, but it did not have a previous history. It had not been out before as a battalion and then come back, you know, and we just filled in the ranks or anything like that. It was a new battalion. I liked the guys though, you know, I mean it was, I didn't have any unfortunate experiences with any of the men there.

SI: You would socialize with the men outside of work?

AE: Yes.

SI: Was there a lot of intermingling between the age groups, or did the older guys stick to themselves and the younger guys stick to themselves?

AE: I think no, I think it would mix, but it would be more I think the groupings, you know, I mean the companies are broken down into platoons and platoons into squads and so on. I think squad guys or something would tend to hang together, just like our supply section guys would or I would hang out with the twenty millimeter. I mean some of these guys I've got them circled in there and so on or something and the 67th still has reunions today, every year. … I kept in touch with some of them, you know.

SI: Do you remember the name of the ship that you took from Hawaii to Tinian eventually, but that you were stuck on in Eniwetok?

AE: I think it was the James R. Brooke. I'm not sure but I know it's in here. It was a troop transport.

SI: Were you assigned to the anti-aircraft battery on the ship?

AE: Yes. … Here it is, … there is my gun up there at the front.

SI: You were on the bow gun.

AE: Yes, it was gorgeous coming out. We'd be up there, you know, and at night, as the ship went through the water, it would fluoresce, you know what I mean. …

SI: The ship looks pretty cramped.

AE: Oh, yes. We were packed in.

SI: Did you have a bunk or a hammock?
AE: That's when we had these. …

SI: You had chain bunks.

AE: You know, the four high, you could see that it is a little crowded.

ML: The ship you were on was the General J.R. Brooke.

AE: Yes.

SI: What was going through your mind and what did you talk about with others as you were heading towards the combat zone?

AE: Well, I can just sort of remember sitting there and having my knife out and sharpening it and making sure the gun was clean and all that stuff. I don't even remember what was going through my mind. I can't put myself back into that. I think, you know, when you get swept up in something, I think you just sort of, you don't think of a lot of extraneous stuff. I mean, it's something I got to do right now, I got to get myself as ready as I can to do it. I don't know what's out there, but I'm going to face it whatever it is, that's about what it is, you know what I mean. I don't know whether I told you about the, yes I did tell you about the exciting part of going up and down, and trying to get into the boats off the nets and so on, that was something I really remember.

SI: You did not get off the ship until you got to Tinian. You were on it for a few weeks before you went ashore.

AE: … Yes, that's right we were just on the decks, sleeping on the decks, … trying to keep cool, … because it was hotter than the dickens there. Yes, I got a scar here from smoking a cigarette when I was lying on the deck and then some guy comes along with his big boot … and stepped on it and the cigarette went right on my finger and burned my hand.

SI: Was that an accident?

AE: Oh, yes, it was just an accident. Well, you can see how crowded it was. Is this the picture?

SI: Yes.

AE: It's kind of hard to find your footsteps around there, especially with my arm that just happened to be out like that. …

SI: What was the food and supply situation on your ship like?

AE: Well, I think they, you know, our food wasn't all that great. You might go through a chow line and you get a couple pieces of bread and some kind of canned meat or something to put between it, but I'm sure they brought supply ships up alongside and, you know, would bring on supplies. … They didn't have any place to take us off to. I mean, as I said, this was in Eniwetok
Harbor and then … I told you that when we left Tinian we came back to Eniwetok and we built more facilities there, and Eniwetok, I don't know whether you know about something like these atolls. … Like a rim of a volcano with islands spotted around the rim. You see, now here is our camp right here on Parry, here's Eniwetok and then over there was Enjabi and there was Runit. Now actually some of our guys went over here and they built facilities on these other islands that were in that atoll while we were there.

SI: You were building airfields there?

AE: No, particularly when we came back there we went and built the plushest officers' recreation area in the Pacific. [laughter] That's where I was when the war, when the atomic bomb was dropped. … This sort of shows us the areas and the times when we arrived at a certain place. You see I've got here Eniwetok, we arrived the 26th of June and left the 24th of July, twenty-eight days sitting there.

SI: Before you got to Tinian, were you ever attacked by air or by sea?

AE: No, I remember we had some alerts, but I don't think we were ever attacked, no. They had … some subs around and some planes. … You know about the Indianapolis. Yes, I mean so they were … around even at that late date. They're the ones that brought that atomic bomb to Tinian and then were sunk right after.

SI: During the invasion, did the Japanese send planes against the fleet or was it pretty much all a ground action?

AE: … We had artillery shooting at us too from the shore. We would move in, we were getting ready. … I can remember the shells coming at us and so on and then they'd take the ship and they'd move it around or something. There was some of that.

SI: Was that the first time you saw enemy fire?

AE: Yes.

SI: Did that make the reality of the situation sink in?

AE: Yes, I'm going to tell you what was even more impressive to me was the bombardment of the shore by the Marines who were on Saipan, how they were doing it, and all the ships that were pouring it in there. You realize that it could get pretty ferocious.

SI: There were gun positions on Saipan that were firing on Tinian.

AE: … They gradually moved down, I don't think I got Saipan here, but Saipan, see it's up above here. … It was sort of like this, we landed up here and then they moved south and you know, this was where they were jumping off the cliffs and so on. The same thing, Saipan. … They went south and so they get down here, they lob shells over onto Tinian.
SI: When you came ashore, how far behind the line were you then?

AE: I don't even know.

SI: Was it still pretty close?

AE: Yes, I think it was because, see they'd been coming down this way, and so we came in here, the invasion came in here and it was working its way down here and they were still, you know. Somehow, I don't know how we got from here to there without intersecting them. But we didn't have any problems getting from the beach up to the place.

SI: You came in by the town and went north?

AE: Yes.

SI: Okay.

AE: Or the harbor. Well, see the invasion had actually taken place, I'm trying to remember now. … Yes, I think we got there when they invaded but then we sat on the ship offshore for several days and then went in. So, they had already cleared that area I guess.

SI: Can you tell us what you saw and what you did in those first few days ashore?

AE: Well, like I say I remember we were pitching those tents and then having this perimeter guard around it, and, you know, my memories are mostly stirred by pictures I've taken. I don't know whether you guys are that way but if I've been on a vacation or something, in fact when I was younger, a child, you know, or in my early married life, the things I remember are things I took pictures of. Somehow that made, having looked at those pictures put something in my brain that I can recall but I don't remember it so much from the actual activity. So, like in here when they get in the water like that, you know, I remember, … and the first part I think would have been, they were trying to, some would be trying to build facilities for the camp and some of them would … be up working on that airstrip, cleaning up debris and bulldozing it and trying to make … and then there'd be, we're doing surveying and then they would identify … these potential quarries where they went and, you know, mined all these coral that they put down on it. That's a very interesting thing, that coral it's basically alive. It does wonders when you moisten it and everything else, and roll it good, and it's as good as concrete. I got a tape, a videotape of some guys who went back a few years ago. It is kind of interesting to see these places now. I mean, you can tell there's a strip there but the growth up around it and coming through the cracks and what have you, it's pretty wild. … Some of those strips are still there, it's not all disappeared in the meantime. It's not being used, you know what I mean, but it's just remnants of, but you see the same thing in England if you get pictures of all the air bases in England, all overgrown and what have you.

SI: I would guess that even the schedule of work was a lot different from Hawaii? Was it more like a twenty-four hour operation?
AE: Yes; I don't know if it was that much. I mean, I think most people slept at night, you know, I don't think they had a lot of lights on where they were going work at night because it was still in a place with potential combat and certainly when they sent planes, it was dark. So, I think we had more of a regular workday. Now, our problem was that we'd be doing our work during the day and then at night we had to go out. There used to often be an alert. So we had to be on the gun, and you'd sit out there half the night and then you had to work during the day too while the other guys are sleeping.

SI: At night when you were doing this, would you stay on your gun or did you have to patrol around the area?

AE: Yes, sitting in the gun pit, we'd have a sandbag gun pit. …

SI: How much anti-aircraft protection would you have?

AE: We just had the two guns, there were two guns. Now at the time when they had the black alert with the threat of parachute invasion, then we took the guns and we laid them down that way because we'd be using them against, thinking we'd be using them against people but that never materialized.

SI: How soon after you got there was the first air attack?

AE: I've got that on my list. …

ML: Your notes say the first air attack was November 2, 1944.

AE: Yes, see, and we had gone in there beginning of August, so it was August, September, October, and by then we made significant progress on the air strips. So, I mean they didn't attack until they could see that there was the potential threat to them from what was being accomplished there and then I think what they wanted to do was set back the construction. They weren't attacking us so much as it was trying to destroy those airstrips so they wouldn't be functional and even if they had sent paratroops in, I don't think they could have figured on pushing us off the island. I don't know what they were thinking of. But I forget how it happened but somehow they were intercepted and I think some of their planes were shot down by fighter aircraft and so on too, so that that raid was aborted if it was ever real at all. I mean I don't even know how they knew it was likely, what kind of intelligence they had.

SI: During an air attack, about how many planes would attack? Would it be small force or a large force?

AE: … Not more than a dozen planes. Well, they had to come some distance, we figure they came from the Bonin Islands and they were quite a distance away. … I don't think they're even on any of these maps. [Editor's Note: The Bonin Islands are located over six hundred miles south of the Japanese city of Tokyo.]

SI: Did you have early warning that they were coming?
AE: Sometimes we did. I'll tell you what they did sometimes. They came in to take pictures, and they would come in at night and sometimes the first time we knew they were in the vicinity, there used to be this huge explosion up in the sky and a brilliant flash. These were … flash bombs is what they were to illuminate the whole landscape and then they'd be taking pictures I think. It wasn't so much a flare as it was almost like a flashbulb, you know what I mean. … It didn't hang around, there were some that did that, … like a firework, you know just a big thing and evidently maybe they had the cameras open or something, … whether they were synchronized or what. But it's just like, you know, like you might open your camera for time exposure and then you'd set off a flashbulb and what the camera would record is what was exposed. … Of course things weren't moving that much. I guess the plane was. So sometimes we'd just be surprised by that happening but I think even before that, radar had picked up the fact that planes were approaching and so we would be on an alert and be in the gun pit. But it wasn't, sometimes that's all that happened, we wouldn't have any interaction with the planes and there were sometimes when they actually came down and tried to strafe planes and, you know, destroy planes and stuff like that.

SI: At the time of these attacks, did you have B-29 Superfortress bombers at the base?

AE: Yes.

SI: Were the Japanese going after the planes, also?

AE: Yes.

SI: Where was your gun position? Did you have your guns positioned near the planes to protect them?

AE: … There were these four strips like this and then you know our camp at that time was down near the strips. Our first one was near the second strip here and then as we started building these here, it would move back, then finally up the cliff, but our gun position was right there near our camp. … We could leave our tent and … it wouldn't be much further I think than out at the end of the street there to the gun. And the interesting thing is then our guns would be aimed this way and there were Marines on the other side and the planes came down like that and we wound up shooting, lobbing shells at each other, us and the Marines. Because we would be shooting the planes that way and they'd be shooting out this way and the Marine shells were whistling over our head.

SI: Do you know if you ever shot a plane?

AE: Yes. It crashed right behind, I'm not sure who got it, but it crashed just beyond our camp. It was kind of a wild time, you know, I mean you're just trying to pour the lead out and get it on the target and so forth and then he's moving in so fast and he's gone before you know it. You can't really tell whether you were successful in hitting it or not.

SI: Did you have tracers in your gun?
AE: Yes. ... That's the way we fired, every fifth shell I think or something like that was a tracer. But they had a sight, I forget what it was called. I don't think it was a Norden. ...

SI: Was it a Sperry gyroscope?

AE: Yes, it was some kind of a Sperry, I think, and I think it was, had maybe a gyroscope in it or something, you know what I mean, and so it probably would assess how fast when you're trying to track the plane, but I didn't use that. ...

SI: There was not enough time to use it?

AE: Well, and besides, I didn't have enough faith in its reliability and so on, and it's much easier to shoot if you can watch your tracers and see whether your tracers are intersecting a plane. It's kind of like, well, I was going to say it's like you're shooting skeet or something, you know what I mean, but there you don't see a continuous thing, ... but here you would, you'd see ... the stream going.

SI: You worked with a loader. Was that the underwater demolitions person or was he on the other gun?

AE: No, he was on the other gun.

SI: Did you find that you were well-equipped with ammunition and everything you needed?

AE: Yes. ... I think I mention somewhere in here when that black alert came around we had something like six magazines all loaded and we had, you know, other boxes of ammunition so they can, if we were using the stuff they could be loading others but I forget how much a magazine held. But it was quite a few but not more than maybe thirty or forty rounds, ... shoot that out pretty fast.

SI: Did you keep a rifle or a small arm with you?

AE: Yes. ...

ML: Were the raids only at night or did they attack during the day as well?

AE: That's a good question. I know that we had alerts during the day and I think there were daytime raids. As a matter of fact, when we shot at that plane I think that was in the daylight. I mean we could see that plane, you know what I mean. I don't think it was just in the moon glow or something like that. I think that was a daytime raid, yes. Maybe they wanted to be able to see ... what they're shooting at. [laughter]

SI: When the Japanese would attack, how much damage would they inflict?
AE: … They didn't do much damage, I don't know, I was going to say I would think maybe a lot of the raids were more for intelligence purposes, to track our progress and figure out, … so they'd know what the state of the airstrips was and what kind of a threat they had to prepare for, than having much of hope of; they couldn't stop us.

SI: Do you think any of the attacks were nuisance raids just to keep the men awake at night?

AE: I doubt that because they would come too far. It was too much of an investment on their part. They needed, it had to be pretty important stuff, you know, like intelligence would be worth it. … I even think it might be that some of the raids where they were actually hitting the airstrip and us, you know, and what have you, there may have been planes up there taking pictures. It was more for cover for their photographers or something. I can't believe they really expected to accomplish much in the way of too few planes, you know what I mean, and all that stuff to put a few holes in our airstrip or something. It would take the Seabees an hour to fix that. [laughter]

SI: How quickly were you able to get the airfields operational for B-29s to fly out of there?

AE: … I think this list is the whole "magilla." Yes, let me just read you a little bit. … 3rd of August we were in business. … 2nd of November, the first Japanese air raids. 3rd of November, three Japanese "Betties" shot down. 1st of December, the first B-29s arrived in Tinian. 7th of December was the first major raid. … That was a raid on us, that's right, and two B-29s were lost. So they did manage to knock out two B-29s. 27th of December, parachute invasion threat, 10th of February, the 67th B-29 leads the raid on Tokyo. 1st of March, construction complete, 67th prepared for reassignment, 10th of March three-hundred B-29s to Tokyo, and 20th of May five-hundred B-29 raids per day. … You asked when we were ready to send off planes, well the first planes arrived the 1st of December. So, they were trying to prevent that you see. They were trying to prevent the fact that these planes could get there, and then on the 7th, … which is only six days later, they actually made a raid on the field and caught a couple of these B-29s and destroyed them. … Then there was this talk by later in the month when they were going to actually invade but by the 10th of February they were really sending off raids.

SI: How long would these raids last?

AE: Well, the actual action would only be fifteen minutes or something like that. … Between the time we got the warning and we … head to our guns and wait it out and what have you could be a lot longer than that, but I mean the way the raids were over probably fifteen or twenty minutes I think, that's my recollection. But you never knew whether there was going be another wave, but I don't think there was.

SI: It was just one wave?

AE: I think so, yes.

SI: What about the snipers and ground attacks? How often would that happen and would that happen at night or during the day?
AE: Well, it happened most when guys went where they shouldn't. People, they like to explore, you know, do things like that. There was a sugar mill downtown. One of our guys got it when he was going in one. …

[TAPE PAUSED]

SI: Please continue.

AE: I don't know if there's much more to say. … We didn't lose many guys because there was no frontal assault on our positions or anything like that. It was as they were exploring or something and going where they shouldn't have, … Japs hiding out in various places and they got them.

SI: Were booby traps or anything left behind by the enemy a threat?

AE: Yes, I don't know of anything like that. I'm sure there was, you know, like in those sugar mill and places like that. But I guess they were careful enough not to hit any of that from our outfit I mean. I'm sure there were others that were different.

SI: Were there any casualties from the air raids?

AE: Not in our outfit. I mentioned about the couple of B-29s they got and I imagine over around the airstrip there might have been some. …

SI: What were the living conditions on Tinian like? What was your camp and supply situation like?

AE: Well, like I mentioned we had three camps, each one was progressively better. The first one, I showed you a picture, pup tents and you know very little water and eating K rations, … packages of stuff you had. Then we got to where we had C rations and what have you, which were cans of stuff that you could open up. The second camp, we built a mess hall that went along with the rest of it and we had those cooks and bakers and so forth and these guys could cook up pretty good stuff and they supplied them with good stuff so I think we had good meals by then. Seabees are known for their ingenuity of course. There's a picture in the book here of some guys who organized a mattress factory and things like that you know, … ice cream machines and things like that, so we gradually got, had some of the conveniences and luxuries because the guys were ingenious and figured out how to do something. … Seabees were also pretty well known as … the guys that were always "finagling" stuff from the Marines or from the Navy ships or something around, so they supplied us pretty well, not necessarily what they intentionally sent us, but what these guys were able to scrounge.

SI: Do you remember doing any training with other servicemen?

AE: No, except I had a Luger … from when I was over in Germany I got that from some guy and then I chickened out on the way home. I had heard, you know, that they wouldn't allow the
stuff into the country and I disposed of it. I wished I brought it home but I didn't want to get in trouble.

SI: I have interviewed a number of guys that said they threw their guns overboard because they told them they were going to search their belongings.

AE: Yes, interesting.

SI: After the period of the Japanese raids was over and regular missions were being flown, how did your job change once the airfields were up and running?

AE: Yes, well of course we didn't have much gun activity anymore so it was mostly just the supply business and actually things, you know, we got after a while, … there's a picture in here of the stage that they built and we had this artist, he painted drapes and everything on it, it was pretty luxurious. And we had some USO troops that came around and entertained and we ran our beer garden every night. The guys would come and we'd supply them with two cans of beer a piece, some people managed to get a few more than that I guess. … So, have your time in the movies or the USO shows and I suppose it was the card playing and dice games and what have you, so it was, it got to the point where it was pretty. Now, then there was the talk like we were scheduled to invade this other island, so we were getting stuff ready. … The strips were pretty well, you know, they were really in business, all four of them were mounting these huge raids on Japan, so we didn't have that much to do anymore, and so they were staging the equipment and everything to go to this other invasion. They decided that the cost would be too high that it wasn't worth it, I mean, I guess between Okinawa and Iwo Jima and so on, you know, we had the stepping stones, we had the places. The big thing about Iwo Jima, you know, was that this was a place where bombers that had been over Tokyo and been damaged would set down and not be lost on the long trip back to Tinian. So they had enough of that kind of escape stuff and stepping stones to get to the invasion of Japan itself. So, why take this other island, didn't need it, I guess. So that's when they sent us back to Eniwetok and I went back there on an LST, you know. … I was on the forward gun there too. So, that was a nice sojourn, I forget, I don't know whether I had it here, how long that took or not. … 29 June to 6 July, Tinian to Eniwetok. So, that was about a week that we were on that LST, just a nice little cruise. … The 6th of July then we were in Eniwetok and the 6th of August the atomic bomb was dropped. So, we only had a month where we're building stuff there before we were all of a sudden delighted to hear that the bomb had been dropped and they were saying it was so big that it could end the war, and pretty soon we'd all be going home, … great thing. … It was the 6th of August but it was the 20th of November before my return was confirmed. So, we were still working there and building this stuff and everything, but I didn't know when I was going to be able to go back. We knew that some of the guys from our outfit who had a high number of points had been in longer, they got to go first.

SI: You pointed out on the map that the group that dropped the atomic bomb was a little bit west of where you were. Did they fly out of your fields?

AE: Yes.
SI: Were they there before you left?

AE: Yes, but we didn't know what it was about.

SI: You just knew that there was this other group over there.

AE: Yes.

SI: Did anybody interact with the other group or were they quarantined?

AE: I don't know. As a matter of fact I didn't know anything about it until we were on Eniwetok. …

[TAPE PAUSED]

AE: Where were we?

SI: We were talking about the atomic bomb and their group being nearby but that you did not have any interaction with them.

AE: No, I didn't even know anything about this.

SI: Did the Seabees and the regular B-29 crews interact with one another?

AE: Yes, that's where it was very nice you see they did come over to our battalion area and they would eat with us sometimes. … Then after the war when we've had reunions, some of them would come to the reunions, which is really nice, yes. … They liked the Seabees too, not only because we built the strips for them, but as I say Seabees could scrounge up a lot of good stuff and they'd give them to the B-29 crews, so. [laughter]

SI: Was it difficult when you got to know somebody and they would not come back from a mission?

AE: Oh, I'm sure it was. That didn't happen to us, fortunately. … Our planes remained intact, even though they were the second plane in on the first Tokyo raid.

SI: You only got to know one B-29 crew?

AE: Yes, but it was the one that had our thing on it, it was like, you know, that *Indian Maid*, that was the 67th. …

SI: I do not think that story was told on the record. Could you tell us how that plane got to be named?

AE: I don't know where the name *Indian Maid* came in, but I guess they decided when they brought the plane, first planes in that, here they had these strips, and they honored the Seabees
who had provided them and we were a lead battalion, you know, one of the first there working on that stuff and everything so, they just decided to name it for the 67th. And they put the shield on the plane and all that, and said, "67th Seabees," on it, but it also said Indian Maid which probably I don't know maybe the pilots get to pick the name or something. I don't know where they came up with that.

ML: You mentioned that they had to change the shield and take the medallion off.

AE: Yes, I mentioned that before, they decided that they worried that the plane would come down somewhere where the Japanese would discover the 67th, … so we must be on Tinian and they didn't want anybody to know. So, there's a picture here, they took off the 67th and they put two dominoes up there, one had six dots on it and the other one had seven dots on it, like the Japanese couldn't figure out what that meant. It still said "Seabees."

SI: I just have a few more questions.

AE: I think you were talking about when the atomic bomb was dropped, didn't you?

SI: Yes, what was the general reaction among the men?

AE: Boy, that was just thrilling, we just couldn't believe it. I don't think anybody could believe it, even the people back here in the States, right. That there was something, so revolutionary and powerful that it could end a war like that. But then your whole orientation changed so you started thinking about what it was going to be like to be back home again and what you're going to do after you're home, how soon is my turn going to come.

SI: When did you start taking the correspondence courses? Was it on Tinian or Eniwetok?

AE: … No, it was Tinian. See, so that's kind of interesting. … I don't even remember how I found out about that and got enrolled in it. But I suspect that we had, I mean I know we had a chaplain and we probably had other, like you'd call human resources people today, they were worried about the well-being of the men and had arranged for these USO shows to come and what have you, so I think they must have publicized the fact that there were university correspondence courses that were available. … That was a very interesting thing because I can show you my physics book in there. But I get the book and then they would send you, I get a packet of lessons and exercises to fill out and answers to put in and then send it back there and the professor would mark it and send you back some stuff, maybe even personal comments. So, it really was a big help and it was a nice diversion too, you know, especially for somebody like me who was more interested in doing that than playing cards and tossing dice.

SI: Did anybody else take these courses?

AE: I don't know. I'm sure they did. Whether any of my mates did I don't know but I mean they had a substantial program, you know, throughout the armed forces. …

SI: Did anybody famous perform at the USO shows while you were in the South Pacific?
AE: … Not like Bob Hope or something like that, but we had, I remember we had a famous tennis player who came and we had a traveling play and that guy, the actor was pretty well known and then some of them were musical and what have you. And we had, there were enough guys in the outfit that played instruments too, that they formed a band and so sometimes we just have, you know, big band music.

SI: Did you play with them?

AE: No, I wasn't that good. They didn't need a tuba anyway. [laughter]

SI: Within the Seabees, what was the officer and enlisted men relationship like? Was it very formalized like in other units, or was it more informal?

AE: I don't know. We had very little to do with our company commander. I mean the guy who was in charge of each of our, I mean, the twenty millimeter section and the supply section were chief petty officers. We had a lot of relationship with them, and they interacted with the officers I guess but I don't even remember seeing the officers that much.

SI: Did you get a feel for if the officers lived better than the enlisted men, or had more privileges, or was it pretty democratic where you were?

AE: You know, that's a good question. I mean there was no, I don't remember an officer's country [club] or something like that. There's no doubt on the ships, you know, they do that, the officers have their own mess hall. They probably had their own mess but I don't know whether they had any plusher quarters.

SI: Was there an officers' club on Tinian?

AE: No. I don't know, maybe they even came into the movies with us. Did I say we had movies?

SI: Yes, you mentioned that.

AE: I mentioned the USO shows, I know. So, there were movies that came fairly regularly I guess after things had settled down, you know, when the construction was being finished up and the dangers had passed.

SI: Did you ever have a case where a Japanese soldier would come out of the jungle and give himself up?

AE: No, never saw any of that.

SI: On Eniwetok, you mentioned that you were building officers' quarters and clubs.
AE: Yes, I don't know whether they had a picture of that in here or not but I know there was, yes see they've got, some pictures here of palm trees and all that, that was on the island of Runit, which was across the lagoon from where we were and I never went there. The construction guys would go over there and build those. … I guess it was used pretty extensively afterwards.

SI: Were you at Camp Parry at this time?

AE: Yes.

SI: Did you ever have a problem getting supplies? Did you ever have a shortage of anything?

AE: I don't remember that. You know one thing you got to say about the Seabees, they really supplied them, boy, I mean that's one of the reasons why the Seabees were so popular too, because they had all this good stuff that people would like to have. I was always impressed by the abundance. … You have to be impressed with the supply corps and the logistics situation. I mean, here we had this ship store, you know, it had soap and toothpaste and socks and things like that, and here are these outfits all over the Pacific, and you got ammunition, you got construction supplies, you got heavy equipment and so on, and the job of essentially organizing that whole thing, getting the supplies, and shipping it and getting it distributed, … it's a wonderful thing they were able to do. You would think you would wind up with shortages. I know people like on Guadalcanal they wound up with shortages when the supply ships turned around. [laughter] They didn't get their stuff, but we didn't have anything like that.

SI: Did you see anything that you thought was wasteful particularly at the end of the war? I have heard stories where people would push jeeps into the ocean or leave things out to rust.

AE: Well, I'm sure a lot of that happened at Eniwetok too. But I didn't get exposed to much of that, any of it that I can remember. I don't even remember what happened to my rifle. I suppose we turned it in there at Eniwetok and they crated them up and sent them somewhere. Maybe they dumped them in the lagoon, who knows.

SI: Between the period of leaving Eniwetok and when you went on the Europa, what happened then?

AE: Well, I mentioned that I got on the Nashville, this big cruiser and came back and we had this big storm and we came into Treasure Island and we're processed there and then I got on the train and rode the train across the country. I don't remember arriving at a station, I don't remember arriving at my front door or anything like that. I didn't know Jean yet so I couldn't remember anything about that either. I just remember that, you know, we were home, I had thirty days there, I'm sure we had a lot of family reunions and talking about my experiences and things like that, and then when that was over, I had to report to this Pier 92 in New York City and I was there … 15 January to 28 February at the United States Naval Receiving Station, Pier 92. So, that's like six weeks, and I think then I could even get some excursions home, you know, I mean just a few days off here and there. So, I probably … spent some time in New York City and I don't know, I don't remember doing any work there. So, I don't know how my days were
spent, but then all of a sudden on the 28th of February I found out I was assigned to the supply division of the *Europa*. Did I tell you that was a big luxury liner?

SI: Tell us a little more about it.

AE: That was one of Germany's premier luxury liners and, you know, the *Normandie* had burned in New York harbor [in 1942] and that was a big embarrassment and, wonder why that happened, but I think they didn't want something to happen like that to the *Europa*. They wanted to get that ship back over to Germany so we set sail to Bremerhaven, which is the port for Bremen. And I was working in the supply division, once again we were ordering supplies, you know, distributing supplies and things like that. And they had, it was a gorgeous ship, you know like, has this gorgeous stairway going up and all that, like being on some big cruise ship and then they had in these offices up there where all the ship's officers would be working, … so that's where I worked up there on this trip over. Then when we got to Bremerhaven, I was assigned to shore patrol duty. They had some clubs there for enlisted men and some for officers and they had shore patrol there to make sure these guys didn't get too far out of line. … Incidental service on USN shore patrol from the 10 March to the 28 April, so there we were about six weeks, right. Now that takes me right up to the day when I get on board the Liberty ship finally and headed home. That was the 28th of April and got home the 8th of May. So, that's about ten days trip on the Liberty ship, got in there 8th of May and was out on the 11th. So, they didn't waste much time once they got me back in the country sending me home and, of course, that was a marvelous feeling to know that you're out after, well how long had that been now? … It was three years from when I had graduated from high school and started to Rutgers. On the 1st of June I went back to Rutgers, so I was home for a couple of weeks, and then was back down at Chi Psi, meeting and romancing the girls, … great girls at Rutgers. [laughter]

SI: Do any stories stand out from the shore patrol in Bremerhaven? Were you mostly just dealing with GIs?

AE: Yes. No, it was GIs.

ML: What was the atmosphere like? Was it rowdy?

AE: Yes, it was pretty rowdy. You know, they have got too much beer and stuff like that. It's always the ones that can't handle it, take too much of the gin and you get to notice. I never hit anybody over the head with my nightstick, but we had to corral a bunch of them and put them in the paddy wagon and take them off to the brig.

SI: You only dealt with sailors?

AE: Yes, this was no civilians or anything there.

SI: There were no men from the Army?

AE: Oh, I forget now, I don't remember. There may have been … military police there too, but I suspect this was for Navy and it may have been, it was probably in Bremerhaven, it wasn't in
Bremen, yes, it was Bremerhaven. So, it's where the ships would be and they'd be for the Navy guys, the ships to go in.

SI: Did you ever have to deal with situations of sailors getting into trouble with German civilians?

AE: I didn't. I'm sure that, see what I suspect is they probably had a main cadre of shore patrol that were permanent things and they probably want to augment them with guys like me from ships that happen to be there incidentally. And so they'd have more guys out having a good time, so I was mainly, I was really involved in things like that at the club or where they were partying or what have you. I wasn't roaming the streets in a jeep looking for sailors who were getting in trouble. They probably had their regular shore patrol doing that.

SI: The Europa was there the whole time?

AE: Yes, and we left it there. Yes.

SI: You mentioned that the city was devastated by the war.

AE: It was terrible, yes. I've got some pictures of it too but you've seen them, sort of typical kind of place like Iraq or something except there was all these major sized buildings and there were just piles of rubble on the streets. You could hardly get through the streets with all the piles of rubble around and, you know, we really pulverized them. Places like Cologne and all those besides Berlin and all these major cities, we reduced their major cities practically rubble because they were having bomber raids there like we were doing on Tokyo and then Tokyo, you know most of that was firebombing. There was a thing in there I mentioned that they had a five-hundred plane raid and about the hundredth plane the guys coming in, all they could see was flame already, and they had four-hundred planes behind them bringing more of it. Some people have said of course that we had devastated the place so much that the atomic bombing was unnecessary. But I don't know if that was true, the government as far as we knew was not showing any signs whatsoever of capitulating to the demands for a surrender. And if anybody had had to go in there, there isn't any doubt in my mind that it would have been horrific. It cost the lives of a lot of Japanese people in those two cities but it put a quick stop to probably a worse situation that would have resulted.

SI: When you were at Eniwetok, did you expect that you would have to go to Japan?

AE: Yes, we had our marching order, we knew exactly, I have some information even now and that we've gotten at some of our reunions where we've seen the plans, I think we were in the third wave to go ashore on the southern shore of, I even forget the names of the islands, whether it's Honshu or which one it is. So, we were earmarked to go in there too and we aren't assault troops, you know, but once again the Seabees go in with the Marines and you have to do their port facilities and other things like that. So, that's probably what we would have been doing. I didn't know whether we would have been building airstrips or not. But we didn't have to worry about that.
SI: Before we move on to Rutgers, is there anything you would like to add about your experience during World War II?

AE: Well, I would just like to say that I think that it was a very significant portion of my life and that I was wonderfully blessed through the whole thing for having gotten into the Seabees, for having gone to the places I went, for having been safe, you know, survived it, and none of the stuff that I had to put up with was too gruesome or unpleasant, you know what I mean? I mean, yes, sure, some of our circumstances weren't idyllic but, you know, as Studs Terkel says, "Those were the good years." [laughter] because everybody was so united on a common cause and they didn't have time for a lot of picky stuff, you know, so it was terrific, and the whole country was working around it. I think I mentioned to you earlier, didn't I, this radio broadcast I heard how people, I think … guys over in Iraq are being asked to give so much, … people in this country aren't being asked to give anything. And we darn well ought to be asking the people here to make some sacrifices, like doing with less gas or something like that. Anyway, the people sure were making sacrifices during World War II, this is the people at home. The farmers were working hard growing this stuff, Jean?

Jean Eschenfelder: Yes, right.

AE: Jean probably didn't have all the gas she wanted to go running out on her dates. Did your boys have any trouble getting gas?

JE: No, the one thing that my father had was a gas tank.

AE: Yes, that's right.

JE: And he got a certain amount of allotted fuel, and he sort of selectively shared.

AE: He had a regular gas pump in his backyard, you know, in the parking lot there by the barn and the house and all that, so you just pull your car up and fill her up. But he couldn't, you know, he couldn't splash it around because that was for essential tractor use, but did any of your boyfriends get some free gas?

JE: I'm not too sure. I know my brother did. … He'd go on a date and that sort of thing, too. …

AE: … I was telling them that you were in pretty good shape, since you grew your vegetables and you had your pigs so you had your meat and you had your gas and you had your food, right. You didn't really suffer from a lack of any of those things did you?

JE: Not that I'm aware of.

AE: Well you'd be aware of it, wouldn't you?

JE: … I was saying before that we had Sunday dinners with friends because we had the vegetables, we had chickens, and we had pigs, and so forth. These were things that we grew. …
AE: Well, that's true too, I mean people couldn't necessarily find it, and if they did, they just could only get a certain amount of it because they had the ration coupons, I forgot all about the rationed stuff, you know, for stuff other than gas. Rubber was very scarce.

SI: You came back to Rutgers in June of 1946.

AE: Yes.

SI: We talked about how you became interested in physics as a major. Did you switch over right away or did you stick with engineering for a little bit?

AE: No, I think I switched over right away. Came back in and said, "I'd like to be a physics major," because, you know, so much had happened during the war. ... Physics was really, all the radar stuff, as well as electronics. Of course, you know, I went to work after my Ph.D., I went to work for IBM and in those days everything was vacuum tubes, I mean I was jumping ahead a little bit but the whole process I lived through of the electronics age where everything went from first being discovered and then implemented in what today we would call it a huge size, all the miniaturization that's taken place. ... Recording heads were large, well I was involved with magnetic core memories and I made the first cores in IBM and they were about that big.

SI: About half an inch?

AE: Yes, and then we got them down, we got them down, we got them down, I mean after a while they got to be so tiny you couldn't handle them by hand, of course, and we were dealing with transistors that were that big too. You know, I mean just a can or something, then they had legs and you had to solder them. Now, they're all deposited and you know, I mean they're just little dots, ... to find one you got to look in a microscope to find the thing. [laughter] So, it's been a real trip.

SI: Just after the war, were they able to teach you about any of these things or was it still classified?

AE: Those things hadn't been invented yet.

SI: Did they teach you about computers and radar?

AE: There weren't any computers either then. Radar they would have been able to teach us, yes. Some of my professors had come from the MIT Radiation Laboratory where they worked on that kind of stuff. The stuff physicists were working on at Rutgers when I went there was like nuclear and electromagnetic, paramagnetic resonance stuff and very low temperatures, Bernie Serin was working at very low temperatures. I did my thesis on paramagnetic resonance at temperatures above absolute zero, very low temperatures, yes. So that's the kind of stuff that was going on there. My research was mostly in the realm of materials because this whole electronics age, whether you are talking about the semi-conductor stuff, you know, integrated circuits and all of that, or the discs, magnetic discs and drives, which now are phenomenal too, I mean really good. I mean we used to work with platters this big you know and the whole, I don't know just
you'd have to have banks and banks and banks of them to get … what you can get in one of these little things like this now. But you're producing an electronic effect in the materials and using that and you have to find out how to optimize the properties, the electronic properties of those materials, which is done partly through the composition of the materials that you're using and of course there's a whole infinite range of that sort of thing where you put materials in combinations and this ranges to fabrication techniques from evaporation to plating to various like that. The first discs were done by actually painting on the surface, the pigments were in a suspension that you painted them on these discs and then the actual way the phenomenon works depends so much on the electronic structure of the materials. So that was a fascinating field and one that went on for many, many years investigating these materials and coming to understand what produces the particular phenomena that you're using and how to go about through changes in composition and fabrication techniques and so on to produce better and better performance. I lived through the golden age of solid state physics. And the golden age of IBM from the days when they made their first computers, I was there for the first electronic computers. … They had the old IBM machines where they did all the punch card sorting and things like that and it was all mechanical relays at first that you did for things like that. Then they went to electrical relays, and then they went to vacuum tubes and then it went to transistors and magnetic cores that I had worked on. So, it's been fun to live through those evolutions.

SI: I want to ask you about the GI Bill years at Rutgers. You came back and lived with Chi Psi again. What was it like being a veteran and having to interact with students who were just coming out of high school? Was it strange?

AE: You know, I don't remember anything untoward about that. The freshmen or juniors or sophomores who came in were obviously not veterans, right, they would just be coming from high school. … Well I figure they were just like we were before we, when I went first down there before the war and all that. I think there isn't any doubt … that the veterans were determined and eager and you know very conscientious and whatever, they weren't fooling around. They want to get done, get out, and with their careers and so, and that had influence on the younger guys. I mean, we had our share of parties and stuff like that but I wouldn't say that these guys were party animals, the younger ones. I don't remember ever having any troubles with them other than my treasurer who absconded with our funds. … Did I tell you that story?

SI: No.

AE: When I was president of the fraternity all of a sudden one of our guys turned up missing and we wondered what had happened, if he got on a date and fell off a cliff or something and then all of a sudden, I said, "I wonder if I should get down to the bank." Well, my colleagues were horrified that I would think that this guy had done something wrong. I went down to the bank and he had cleaned us out. He got into gambling and he needed the money to pay off his debts, so that was interesting. It seems like through my career I've always been in a position like that. I was head of the elders in our church when the pastor left his wife and ran off with the Sunday school superintendent. I've been in all kinds of places when people tested my patience, anyway. [laughter]

ML: Did you eventually get the money back?
AE: Yes, because we had the habit of bonding the treasurer so the insurance company covered the money. I heard that they finally found him years later and that there was some restitution but I don't know but the fraternity got its money back from the insurance company.

ML: In your fraternity, did you have a house mother?

AE: Yes, we did. We had a house mother and we had a cook and she was a jolly old "mum" who would scold her boys if she saw them getting out of line but she didn't have any real authority over us, you know, I mean in that sense. She was wonderful to have around, and she kept the place humming. She kept the kitchen going right. We had an older black man who was the chef. He did a good job. And we did the dishes and, you know, waited on the tables and stuff like that. And it was a good serious business, I mean the leadership of the fraternity ran a tight ship, didn't we Jean?

JE: Yes.

SI: How important were the fraternities in that postwar period?

AE: You know that's a good question. How important are they in any period, I don't know, and were they more or less important in that period. For us, of course, it was a godsend because we had congenial guys that we got along with, we had a structure not only that provided us with food and shelter and all that, but also social things and what have you. I don't even know what it was like living in the dorms, you know, and stuff like that. All I know is that life. Jean you lived in a dorm. Do you think that fraternities were really important in those days? … We also selected the people who came into our house. You took whatever. … But, of course, all those NJC girls were such paragons anyway. …

SI: What was the relationship between veteran students and the professors like? Did you find that the veterans were more vocal or willing to speak their minds?

AE: I'm sure they were, yes, less intimidated by the professors and that sort of thing. But you know it's just nothing strikes my consciousness, … it was so natural and everything, I don't even remember anything unusual about it because I was immersed in it, you know what I mean. That's the way I was too but I'm sure that I myself would have had quite a different demeanor when I came back than when I first started there, having had the war experience and what have you.

SI: Do you remember fellow veterans who maybe did not readjust to college life well?

AE: … I don't.

SI: Did anybody talk about the war in that period at Rutgers?

AE: I don't know. We probably did, but I don't think we were, you know, absorbed with it or anything, we were busy studying and having fun, and everything else. … But you hear about
people who didn't talk about the war until you've interviewed them or something. I don't know about that.

ML: As far as your social life was concerned, you mentioned Strickland's Tavern in your notes. Can you tell us a little bit about that and your experiences there?

AE: Let me jump ahead. … I didn't mention this, but years later after I'd been at IBM I had occasion to go to Germany to teach at an institute over there just for a short period of time. … I went to Berlin there in the winter and snow around and I was in a hotel and I can remember walking out down the street in the middle of the street through all the snow to the corner tavern, which is kind of analogous to the British pubs, wonderful warm place where you go in and the neighbors congregate there occasionally and they have their beers and they serve food in there too so I would go there and get my supper. It was just a delightful place and good food and all that sort of thing, well, that's the way Strickland's was in a way. He didn't have a restaurant, but people would just come in at odd times and he'd have some stuff on the bar there. … Hard boiled eggs and stuff like that and there would be dart games and you'd see people, it was just a nice place to go and stop in, and see some people, maybe have a beer. The neighborhood pub, that's what it was like.

ML: Do you know where it was located?

AE: Yes. What we would do, this is my recollection now. Did you say where Chi Psi was, the name of the street?

SI: Bartlett Street.

AE: Bartlett Street, yes. We’d walk down Bartlett Street to … Easton, it's a main street from down at Winants, College Avenue comes this way and there's another one that goes out this way.

SI: College Avenue, Somerset, and then Easton. Easton and College Avenue are kind of parallel.

AE: … They diverge. So it was Easton, I guess, Bartlett would run from College Avenue over to Easton, and I'd say Strickland's was right on the corner, the far corner, was across Easton, that's my recollection. We just walked out, and it's possible we moved a block one way or the other but I thought it was right out there at the end of our street. You don't know if it's there anymore? …

SI: Strickland's is not there. I am trying to think what it would be now.

ML: Could it be the Knight Club?

SI: There is a bar called the Knight Club there, named for the Scarlet Knights. The building might have been knocked down. Most of your friends would go there?
AE: … Yes, see that was in the days too, no bars or anything like that, or no drinking in the fraternity house. So, if you want a beer, that's where you'd go.

ML: You also mentioned that you ran cross country.

AE: Yes, Buccleuch Park.

ML: What time of year did you run?

AE: My impression is it might have been both but I think more likely the fall is what I remember, yes.

ML: How often did you have meets?

AE: … I don't know, six or ten meets I think altogether.

ML: Do you remember who you ran against?

AE: No. I think I still have a newspaper clipping one time when we all came across the line together, all the Rutgers guys holding hands. We'd really swamped the other team. There were some, you know, that were multiple team meets. They weren't just dual meets but some of them were dual meets too. I don't remember who it would have been. Do they do it now, do you know?

ML: Yes, they still have cross country.

AE: They do it there, or they're more out across the river or something?

ML: I am actually not sure where they run.

SI: Were you involved in any social activities outside of the fraternity, like dances or anything like that?

AE: Well, we always went to the Military Ball, and, you know, they had those kinds of dances and the fraternities would each have a big thing, the weekend, and the girls came in and took over the fraternity house so we did that. I don't remember, did we go to dances at NJC?

JE: Yes.

AE: What did they call it?

JE: Well, I think we had proms.

AE: Senior prom, you mean, like that, and the junior prom or something? …

JE: We did not have any nice big gym at that time so we did not have a nice big ballroom.
AE: I was on the Inter-Fraternity Council and when I was in Rutgers, I was … a writer for the Targum, too.

SI: What did you specialize in?

AE: I don't remember.

SI: Were you sports writer?

AE: … No, I can't remember. I guess just interesting events that were happening or something you know covering them and writing them, I think that was kind of early in my Rutgers career. I don't know whether we told you, whether you're ready for this or not, but we got married right after we graduated and moved into University Heights. … I keep saying Quonset hut, wasn't it a Quonset hut?

JE: … No, it was like a barracks.

AE: Yes, but it was about the size of a Quonset hut in the sense that, it was housing that had been built during the war for somebody.

SI: Was it where they housed the prisoners of war at Kilmer?

AE: … No, this was close to the golf course. Upson Lane is where we lived.

JE: Is it still there?

AE: Yes it is. I've seen it on the map I got on the Internet. I think it's still there. Anyway, duplex, side by side.

SI: It seems like it was temporary wartime housing.

AE: It was temporary housing and it was still there many years later [laughter] and it had a living room, a kitchen back here, bathroom, room here, room here, and sort of like a little alcove here where it would say "oil stove" and fortunately the guys that had it before us had run a little tube out to the oil barrel that sat on sawhorses or something out back and that's what kept us warm. It was just a space heater, you know you had to heat the whole place, but we had a nice little time there. We lived there for several years.

JE: I mentioned before that if it snowed and you had the window open, the morning the snow was still there. …

AE: On the floor or on the window sill. … But our neighbors were very nice too, we enjoyed them. So, that was a different kind of life.

SI: That was during graduate school?
AE: Yes, that's when I was going to graduate school and Jean was working in the university library as a reference librarian. And we would come home at noon and have our little lunch at the table in the kitchen listening to Ma Perkins or something like that. … [laughter]

JE: These were radio shows.

AE: Soap operas.

JE: You could miss a few months and you wouldn't be too much of out of it.

AE: … Another store that was there was, I forget the name of the store, do you remember the market? … That was out there too, was that on Easton? I think that was out there too over in that general neighborhood and this place was a place where you could go in, you could run up a tab, and they would also, even deliver I think.

JE: They would deliver but we also could call and order … and they would have it ready. I'd just go in and pick up a box of groceries, and pay them, and go on home.

AE: Nice little community markets, I don't even know whether anybody has those any more. Those were the good old days you see, we've been through the good old days. You people have it tough. [laughter]

SI: So did you go right into a Ph.D. program?

AE: … I went right into the Ph.D. … I wanted to get it done and it was pretty clear that if you're going to have a career in physics, you needed a Ph.D. I mean that wasn't the luxury, that was because it was necessary for research. In those days, I probably took every physics course there was, and you needed it, you know. You didn't know what kind of, what branch of physics you're going to wind up in and everything. You really needed it all. I was in the Barnes and Noble the other day and I bought a SparkChart, you know what that is? … I'll have to show it to you, it's in the other room.

[TAPE PAUSED]

SI: We are looking at the SparkChart for physics which is all of the formulas and theories on one chart.

AE: … Magnetism, optics, mechanics, atomic physics, but, of course, the courses we took were very much in greater depth than that. … You really needed, at that time I think I knew almost everything there was to know about physics. Boy, that's not the way it is today.

SI: You told us about your thesis earlier. Could you tell me again who you studied under?

AE: His name was Richard Weidner but see at first I was taking courses and I did have an Office of Naval Reserve assistantship. … I had a teaching assistantship anyway so I'd be doing
things like maybe grading papers and, you know, helping in the laboratories with the students, things like that. … At the end, I was really spending all my time on my experimental thesis. As I said, about the first summer, I told them we went down to Havre de Grace--that's the way they pronounced it--to the Aberdeen Proving Grounds when I worked on the ultra-sonic elastic properties of the explosives during the Korean War and then later on I was spending all the time on the thesis and interviewing various companies.

SI: What was the attitude among academics towards going into the corporate world? Was there a pro, anti, or neutral feeling about that among academics?

AE: No, I think they were enthusiastic about that. There may have been some suspicion, you know, wondering about whether; well let me back up a little bit. The big places like Bell Labs and GE and IBM, and Sylvania and, you know, all these were building research labs. They planned on doing some pretty basic research. Before it had all been engineering and development work and that sort of thing. So, these people may have, the staff may have wondered whether their young graduates were really going to be able to do basic research, or are they going to be pressed into doing very practical stuff, … just making products and things like that, and I'm sure there was, … but these places were really doing some pretty credible research by about that time and it turned out wonderfully. As a matter of fact, a lot of the big industrial research labs, I think, surpassed the universities in terms of the quality of the research and the abundance of it that they were doing. Bell Labs of course was sort of the premier of that in the early days.

SI: How did you wind up with IBM?

AE: Well, there's an … American Institute of Physics and they had conventions, meetings, you know, they had all kinds of branches. I mean sometimes they have meetings specializing in magnetic materials, sometimes it's interplanetary stuff and what have you, but they run an employment fair also where these companies all come and are interested in talking to potential graduates. So, I interviewed with a number of them and I made visits to GE, and National Carbon in Cleveland, and Sylvania, Bell Labs, and IBM and what have you. I mean some of them are particularly interested in you, and some of them are doing something that strikes your fancy, too, and then some of the people. Well, it came down--with me--between Bell Labs and IBM. Bell Labs was very well-established. The particular fields that they wanted me to go into didn't appeal to me all that much. I might have gone in there and done something and moved on to something else, you know, you can't tell about that, but in IBM, they were really just starting their research enterprise. I was particularly taken with the guy who would be my boss, the department he was building up. He'd already established research in some of the semi-conductor things, you know, that led to integrated circuits and what have you, but it had to do with transistors and things like that. Then how do you make good transistors and he wanted me to start working in magnetism and these magnetic materials. Somebody at MIT had shown that you could store information in these little magnetic cores, and it looked like something you could really use in computers and get away from all these relays, you know, the way they were doing it with these old things, … just what you need is to be able to store zeros and ones. So, they had relays that were either on or off and they got miniature things, and they had electron tubes in circuits that could be on or off and so here you had these little doughnuts like, and they could be
magnetized that way or that way, and one would be zero and one would be a one, and put wires between them and send a current down there, it would switch the magnetism so you could write and read them because of the magnetization switch. Then, that induced an EMF in the wire and you had a signal out. Seemed like the ideal way to go, so I started buying pigments and mixing things up in a ball mill and pressing out these little donuts and firing them in these furnaces. The prospect of doing that just appealed to me. … Then it was interesting because, where we worked was called the De La Pena House, and this is a house on the bank of the Hudson River. This is up in Poughkeepsie, New York. I had my lab in the basement, and I had my office in the second floor in a bedroom, and so it was kind of quaint. We went from there to building a research lab there, and after a while I was the resident manager of that lab. Then we moved down to Yorktown Heights. I came out here to build a new lab here, and made a good career with IBM for a lot of years. Actually, I retired in 1981, would you believe that, that's twenty-six years, I think it is. Can you imagine being retired for twenty-six years? Got my money's worth out of that paycheck, and they're still paying me. [laughter]

SI: Did you do consulting work after you retired?

AE: I tried some, and I decided it's too hard to keep up on all the stuff, you know what I mean? Gee whiz, I don't want to spend my time trying to keep up on all that stuff. So I tried it for one company in particular I'm thinking of. They had a process, a particular product, and so forth. What are you supposed to do, tell them what they're doing wrong, or what they could do better? I didn't figure that was my cup of tea. So, I've written a couple of books … and stuff like that.

SI: Do you want to tell us about your books?

AE: Well, one book. …

[TAPE PAUSED]

AE: One time at IBM, I'd been director of the research lab here. They reassigned me to the East Coast to become assistant director of research back there, and I didn't want to go. My son was in college down at Santa Barbara, and my daughter was a senior in high school here and all that sort of stuff. They'd already talked to the guy who was going to come out here and replace me, and that was a mess to know I'm not going. I didn't know whether they'd let me stay with the company for heaven's sakes, you know, but they did, and so I took on the responsibility of being coordinator for what we call magnetic bubble technology. This was a project which was a new storage medium to replace disks, or to be intermediate with discs between semi-conductors and discs. You wanted a buffer because discs were slow enough and so forth, and cheap, while the semi-conductor stuff was expensive and ultra-fast. So you want something in between that was a moderate cost and moderate speed that could buffer the information between. Anyway, they had this stuff going on in Texas. They had stuff going on back in New York. They had it all over the place, up in Minnesota and what have you. So, I got to be probably the most knowledgeable person in that whole technology because I was coordinating everything, you know. So, then I got to go teach it at Berkeley Graduate School. … Then I was approached by Springer Verlag in Germany to write a textbook on it, which I did, so this is the textbook on it. Then, the Russians wanted it, so they put it out, here's the Russian version of my book. Anybody read Russian?
[laughter] So that was a fun thing to do and I enjoyed that. Then after I retired, I did a certain amount of introspection you know, thinking about what are the things that are important in life and so forth. I did a series of things on what makes a man and that sort of thing. Then I finally developed a line of, what I called, I forget what I first called it, but eventually called it, "Living Intentionally." I started conducting men's groups about that, you know, where we would talk about that as you go through life you have several kinds of events. You have forks, where you have to make a decision, "Am I going to go that way, or am I going to go that way?" "What college am I going to go to?" or "Am I going to marry this girl, I'm not going to marry this girl," you know, and things like that. Then you have dislocations where you're all of a sudden put on a new path, … all of a sudden you're faced with a new situation. You find yourself in a new place. That's why I use the term "dislocation" and things like that. So what I did was talk to these men about maybe some of the forks that they had experienced, and what was important to them during that fork in helping them to decide where to go. For instance like when I was told I should go back East. How did I decide not to go? What were the important things? Well, I had to investigate, you know, what was going to happen with my kids in school, and I went back there, and I talked to them in school. What was their experience with girls who are moving back? Moving like that and just going into their senior in high school and that was not a good report and things like that. So, anyway, my thesis sort of was, you can go through life just like you're on a raft going down the Russian River, here. … Maybe you got a paddle and you're trying to steer to avoid the rapids and stuff like that, or, you know, you can be more intentional about that. You can try and anticipate the kinds of things that are coming up and prepare yourself for that. So, that all got down to point where it got to be a book, so that's another book. … I'm involved more now with that kind of philosophical stuff. See, I got my Ph.D. and it's a Ph.D. in physics. So for many years I was involved with physics. Then after I retired I switched to the philosophy side. I've become a philosopher. Less of a physicist and more of a philosopher, I've got two small groups that meet during the week at night. Couples, and it's a combination of bible study and, you know, living life. So, I've enjoyed that, plus raising our cats. [laughter] Now where are we?

SI: I have a question about working for IBM. It is famous for being a very paternalistic company and wanting everyone to be "part of the family," particularly in the 1950s and 1960s. What do you remember about that?

AE: Absolutely, I met any number of times Thomas Watson, Sr. He was the epitome of that. … He had two sons; one, Tom Watson, Jr.; one, Arthur Watson. … Tom took over the company and he was very dynamic and Arthur, I worked for him for a while too. Arthur Watson, the poor guy, it was all over his head, you know, he couldn't understand the technical stuff, and you had to. They just had to have confidence in you or you were not going to do too well. But in those days, I'll tell you an incident. I was lab director out here and I had a guy go back East to the corporate headquarters. Frank Cary was president at the time. All of a sudden my phone rings and my secretary says, "Frank Cary is on the line." Well, he's the chairman of the board for heaven's sake you know, pick up the phone. He says, "Eschenfelder, what kind of a lab are you running out there anyway? Your man just walked into my office with a pink shirt on." Can you imagine the chairman of the board of a big company like IBM, he's worried about some guy's shirt being pink instead of white? … You ask about whether they had fixed ideas about that, I guess so. But you know it was so wonderful a place, they used to take all the top salesmen into
New York with their wives and put them up at hotels. I mean, Tom Watson invited us down to his place on Antigua. We've got a photo album there of our time down there. Unfortunately, he had a heart attack right before we went down there and he couldn't go, so Frank Cary was our host, but they believed—as you say—in family. You treat your employees like family, and there was a loyalty on the part of the people for the management and the management for the people that doesn't exist anywhere today, including IBM. Very much different these days, but that was not a burden for us, we thrived in it, I would say. I mean, they weren't about to tell us how to do our research for heaven's sakes, things like that. They did have certain notions about what kind of clothes we ought to wear. … Even with us it wasn't that bad because his idea was when people came in, you know to deal with a customer, they want that customer to see this guy is a representative of a real business-like organization, you know what I mean. He doesn't come in here with an open necked shirt or something, or a pink shirt. [laughter] So, it is true, but to me, we'd been through the glory days of IBM, not the oppressive days. … The whole history of the thing is just fantastic what's happened. … Another interesting thing you'd probably be interested in, my career was primarily in research. I had three years when I was assistant director of research back in New York, and they said, "We want you to go up to Fishkill and be the general manager of the components division." So for three years I was the headman of IBM's components division. This is right when you probably maybe not even have heard of this but when the 360 was announced, we were developing and manufacturing the technology of the System 360. The System 360 had small machines and huge machines all the way across the spectrum. The whole company was bent on this technology that was being developed and manufactured by my operation. I'll tell you that was almost the living end of me, because it went like this. I mean everybody was dependent on the technology we were putting out. We had the technology part, then there were people developing the machines and they were waiting, the customers were waiting for the machines, and machine manufacturers were waiting for the developments. Developers were waiting for the circuitry, and I was holding up the deal on the circuit trade. What would happen is, in this tricky stuff you make, you try to push it, and the yield goes down. So, now you're got to create even more manufacturing capacity in order to produce enough because your yield is small. If it backs off a bit, now all of a sudden the yield goes up and now you can make plenty with less stuff, so we were always in this up and down cycle. These guys would be ordering more stuff than we could possibly build, we'd start pushing it out, then all of a sudden the yield would go down. Oh my gosh, then we have to start building more building capacity. You know what I mean, so it was a wild ride, but through all that, it was a good company to work for. I mean, at one time, I had to go down in front of the corporate technical committee. Motorola and Texas Instruments were all making this a different circuitry. We had developed and were making our own internal circuitry, and this guy went on a campaign trying to convince corporate management we shouldn't be doing that. We should be buying our circuitry from these other companies and we should quit this internal stuff. So I get called down on the carpet and for the whole afternoon for instance it was, you know, interrogation and what have you. Tom Watson gave me all kinds of trouble, but the next day I got a note from him up in Fishkill, saying, "Andy, I want to tell you, I admire the way you handled yourself and I couldn't be more convinced that our stuff is in good hands." See, now that's the kind of guy he was. I mean on one hand they could be rough, on the other hand, gracious. When our daughter was born, Jean got a nice hand note from the chairman of the board of IBM Company, you know, congratulating her on our daughter. A lot of humanity, sometimes rough. … I've had a good time of it.
SI: Is there anything else you would like to add for the record?

AE: No, I don't think so, no. There's all kinds of details, and things like that, interesting things that happen along the way, but we've certainly got more than you can digest.

SI: You have also sent us your memoirs.

AE: Yes, but I haven't given you the latest ten years. Now, you got me going. Well, as a matter of fact, yesterday in church the pastor's sermon was, "Finish what you've started," that was his sermon topic. I figure I got to finish what I started. [laughter]

SI: It sounds like you have been very active with your church activities, men's groups, and your writing.

AE: Yes.

SI: Are you putting together another book?

AE: No, I've got a lot of group discussions, you know, on various things. Various topics and what have you, they could go into a book. … As a matter of fact I'm a little worried they could all just disappear. I probably ought to compile them somehow so that other people could use them because I've been running these groups for quite a few years now. Once a week, you know.

SI: You record them?

AE: No, mostly what they are are discussion outlines that will ask questions and you read some stuff … and then we get together and talk about that. … I have a whole set of stuff which basically, I mean this is the culmination of that, went together in the book. … Anyway, you start, when you get this age, you start thinking about your legacy, what's going to persist after you're gone, and I guess there isn't much that does other than your influence on some people. I know that, like I mentioned the math teacher and the boss and the pastors and so many have had a lot of influence on me, so I just have to worry about having some influence on my children and my grandchildren. We have four grandchildren, one was just married last year. … Drew, … he's a … junior. Cindy is a senior in high school now and the other one is a freshman. They appreciate history, my son loves history.

SI: Maybe you can push them towards Rutgers.

AE: I was just reading an interesting article, you know. What they were claiming is like in Iraq, … I can't remember what the reference was to the old days, but the point was really in Iraq we take a people who don't have a tradition and an understanding of the responsibilities and privileges of citizenship, and you give them what you think are free elections, but they aren't free elections at all. What it does, is they vote either their religious, with their religious clan, or their, you know, some other ethnic thing or what have you, and all it does is put the majority in power and legitimizes what they want to do. So there you have the Sunnis, you know, and you have the
Shiites, the Shiites in control and so on. … It leads to chaos and the same thing happened in previous times, and I've lost track all of a sudden which exact example I'm talking about, but the point really is if people would only pay attention to history, they might not necessarily have to make all the same mistakes all over again. They make these mistakes because they haven't got a sufficient awareness of, gee, this has been done before. … It didn't work and here's why it didn't work and we got the same kind of circumstances here. So, it's not going to work here either. I think history is very important. … Those who don't remember the past are bound to repeat the same mistakes. …

[TAPE PAUSED]

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

AE: Well, I hope it was worth your long trip out here.

SI: Oh, absolutely, yes.

AE: Have you been down at San Diego, you say? Is that where you came from?

SI: Yes, we started in San Diego, then we went to Los Angeles, and now this is the first set of interviews we are doing up in the San Francisco Bay area.

AE: Do you have any other interviews scheduled?

SI: Yes, we are doing two tomorrow and then two more after that.

AE: What is the background of these interviewees? Are they all from Rutgers?

SI: They're all from Rutgers, one was in the Korean War as a signal officer. He was a meteorologist during World War II. One was a Navy doctor in South America and another one was an infantryman during the Battle of the Bulge.

JE: … That is varied.

AE: See, that's what I worried about being in the Navy. That was a gruesome thing, that Battle of the Bulge, right.

SI: Well, thank you both very much for having us here.

AE: Well, you're welcome. I feel honored that you would come and talk to me, let me reminisce. I'll think of all the things I should have told you about.

SI: This concludes our interview with Dr. Andrew Eschenfelder in Saratoga, California on August 20, 2007. During the interview, we were joined by Mrs. Jean Eschenfelder. Thank you very much for having us.