

**Nevada Test Site Oral History Project**  
**University of Nevada, Las Vegas**

**Interview with**  
**Marie McMillan**

**February 2, 2004**  
**Las Vegas, Nevada**

Interview Conducted By  
Mary Palevsky

© 2007 by UNLV Libraries

Oral history is a method of collecting historical information through recorded interviews conducted by an interviewer/researcher with an interviewee/narrator who possesses firsthand knowledge of historically significant events. The goal is to create an archive which adds relevant material to the existing historical record. Oral history recordings and transcripts are primary source material and do not represent the final, verified, or complete narrative of the events under discussion. Rather, oral history is a spoken remembrance or dialogue, reflecting the interviewee's memories, points of view and personal opinions about events in response to the interviewer's specific questions. Oral history interviews document each interviewee's personal engagement with the history in question. They are unique records, reflecting the particular meaning the interviewee draws from her/his individual life experience.

Produced by:

***The Nevada Test Site Oral History Project***

Departments of History and Sociology  
University of Nevada, Las Vegas, 89154-5020

Director and Editor

Mary Palevsky

Principal Investigators

Robert Futrell, Dept. of Sociology

Andrew Kirk, Dept. of History

The material in the *Nevada Test Site Oral History Project* archive is based upon work supported by the U.S. Dept. of Energy under award number DEFG52-03NV99203 and the U.S. Dept. of Education under award number P116Z040093.

Any opinions, findings, and conclusions or recommendations expressed in these recordings and transcripts are those of project participants—oral history interviewees and/or oral history interviewers—and do not necessarily reflect the views of the U.S. Department of Energy or the U.S. Department of Education.

## Interview with Marie McMillan

February 4, 2004

Conducted by Mary Palevsky

### Table of Contents

Introduction: Mrs. McMillan recalls her childhood in southern California and her education at the University of California-Berkeley.	1
Mrs. McMillan discusses her marriage to electrical engineer Elijah J. "Duke" Daly. Upon returning from World War II, Mr. Daly took a variety of jobs before going to work with Luis Alvarez at the University of California at Berkeley.	5
Mrs. McMillan narrates a series of personal photographs related to nuclear testing in the Pacific and at the Nevada Test Site, including pictures of Luis Alvarez, Herbert York, Ernest O. Lawrence, and Harold E. Brown.	8
More photographs illustrate Mr. Daly's experiences with electronics experiments at the Livermore laboratory.	11
Mrs. McMillan discusses secrecy concerns related to nuclear testing.	15
Mrs. McMillan narrates a collection of souvenirs from several early nuclear tests in the Pacific and the Nevada Test Site.	16
Mr. Daly moves from Livermore to the Nevada Test Site to work for EG&G.	20
Mrs. McMillan describes her role in controlling sensitive documents as an employee of the University of California Radiation Laboratory.	21
Mr. Daly's involvement in the Pacific testing program takes the family to Hawaii. Mrs. McMillan describes living near Waikiki Beach and shares memories of testing at the Pacific Proving Grounds.	21
Mrs. McMillan worked with sensitive documents at the Livermore laboratory and the Nevada Test Site. She describes secrecy and security concerns, as well as her experiences hosting visiting French scientists at the Nevada Test Site.	27
Conclusion: Mrs. McMillan narrates a series of photographs and mementos from various nuclear tests, including test participation certificates, lists of operations, and other items.	34

## Interview with Marie McMillan

February 4, 2004 in Las Vegas, NV

Conducted by Mary Palevsky

[00:00:00] Begin Track 1, Disk 1.

**Mary Palevsky:** [00:02:16] *Now I know we want to get to lab stories and Livermore stories and NTS [Nevada Test Site] stories, but before we do I'd like to talk a little bit about your past and where you came from and where you were born and if you feel like telling us when you were born, so we get a sense of how you ended up in the position to be involved in this early nuclear history.*

**Marie McMillan:** All right.

*So you were born where?*

Well, it's no secret. I was born in California, actually in Exeter, California, which is in the center of the San Joaquin Valley. It's a little, small town southeast of Fresno, California. Actually it's near another small town called Orange Cove. It used to be a very, very—actually a rich little town where there were lots of orange groves. And my father was in—actually when I was born he managed an ice plant and later on he became a refrigeration engineer. So when refrigeration came in to, you know, the mode, he was a refrigeration engineer, and instead of making ice to put on the trains to ship the fruit and the oranges to the East Coast, it became refrigeration.

And I was born in 1926; it's no secret. When I was very young and my father was a refrigeration engineer, he was involved—because he had come from Missouri—he knew a lot [00:05:00] about cattle and meat, and he put in a meat market in Carmel, California. So actually I grew up in Carmel, California where my father had a meat market and later he added a grocery store and then he later had a meat market and grocery store in Salinas, California.

*Amazing.*

Let's see, what else did you ask me?

*You know, it's so interesting what you said about refrigeration, because it reminds me of that thing from East of Eden where they're refrigerating the lettuce to get it across the country.*

Yes, yes. I can remember when I was a little girl riding from Carmel in my daddy's truck to Salinas and we'd pass the lettuce fields and all of those—the places that you're talking about like the lettuce, *East of Eden*-kind of places.

*Right. It must have been amazing there then, I mean compared to now.*

Yes. And Carmel was a wonderful place to grow up because at that time we had no high school. We had only a grammar school with a big slate roof. And we had the best of I can't think of the name, entertainers, such as I can remember, who was the man...? Yes, they came from all over the world. Actually the violinist, I can't think of his name right now but he was a world-class violinist, and we had people like that.

*Oh, Jascha Heifetz and people like that.*

And that's it! Exactly. That was it, Mary, yes.

*Wow. Because Carmel is so beautiful.*

Oh yes.

*It is very beautiful.*

And we lived very close to the church where Father Junípero Serra is buried.

*Yes. Is it one of the missions?*

Yes, it's one of the missions.

*Oh it's the mission, Our Lady of Carmel, yes.*

Yes, Carmel. That's where Father Junípero Serra is buried. Yes. And I sang there in the children's choir.

*Yes, I've been there.*

Yes. And we lived in a log house, a beautiful two-story log house, and it was really different. My parents had the architect, Carl Bensberg, design and build it.

*Do you have brothers and sisters or—?*

I have two brothers. I'm the oldest in the family and my brother Jim just died a few months ago from cancer.

*I'm sorry.*

And my younger brother Bob lives in Sanger, California.

*Where's Sanger?*

Sanger is right outside of Fresno.

*OK. Yes. So a Californian born and bred?*

That's right.

*Now you mentioned that you were at UC Berkeley originally?*

That's right.

*Did your parents—I mean was education something that they wanted for you or something that you wanted or how did that work?*

No. Well, let me tell you about that. It's always been a concern to me because during the war we moved then up to the San Francisco Bay area. We lived actually between San Leandro and Hayward, and I went to Hayward High School. And my parents talked about education and going to school. They were very good in the fact that they told me I could be anything I wanted to be—that girls could do that, but they were never eager to help me. And you know, as I look

back on it now, Mary, I guess they did the right thing but I can see that it made a big, big difference in my life of what I could've done had they helped me, because they never, ever offered to pay my way any way. So when I went to University of California in Berkeley they would not let me stay up on the campus. I always wanted to live at the International House but they said well, if I wanted to live there I'd have to pay my own way. And so I was never able to find a job at that age that I could pay my own way and live away from home. So actually I can remember how much it cost me my first semester at University of California in Berkeley. It was \$18.75 for one semester.

**[00:10:00]** *And you remember that. That's amazing.*

Yes. I saved the receipt for years. It's probably still around here somewhere.

*For that receipt. So what you're saying—am I understanding you correctly? You're saying if they had been willing to support you, you would've been free maybe to do something more with your education.*

Yes. That's correct. I would've finished, because I only went there actually a year-and-a-half. This was during wartime and they did, they did help me. One thing they did help me do, they paid for my transportation. I rode back and forth with a professor of optometry from Hayward, and he would pick me up each morning and I'd go to Berkeley with him and ride home with him at night. They did pay for that, which I can thank them. But I was always anxious to work. I had always worked, babysat and did.... We lived for a while in Campbell, California before moving to the Bay Area and then I was an apricot cutter, I cut apricots, we called it "cot cutter." Do you know what that is?

*No.*

Well, they pick apricots off the tree, put them in boxes, and take them to the “cot cutter” area, and you cut them in half, take out the pit, put them on a big tray, it’s called a “cot” tray, and then they’re put in not an oven but a big room that’s like a sulfur room so it kills all the bugs and—

*And it dries them.*

And it dries them, yes.

*I love those apricots.*

And do you know, I think I still have my knife that I had, and I had to pay thirty-five cents for it, which was a great amount of money in those days.

*Right. Wow. You know, I’m going to pause this for a second.*

**[00:12:19]** End Track 1, Disk 1.

**[00:00:00]** Begin Track 2, Disk 1.

*OK, we can keep going.*

All right. So actually to get to how I married Daly—

*Now you told me it was Duke Daly.*

Yes.

*But was that his real or his nickname?*

No, that was his nickname. His official name was Elisha Junius Daly. He was born in the capital of California, Sacramento, and his father was a prominent attorney who represented many Chinese people. And his father came from a long line of very educated sons; his father came from a very prominent Daly family of which I believe they had seven or eight boys, and he was the youngest. And he graduated from Stanford University with Herbert Hoover. And so actually the background of how I got into the atomic testing is through—Elisha Junius Daly, “Duke.” His birth certificate was spelled wrong and was spelled Elisha Junior Daly instead of Junius. But all



of his friends always called him Duke and that's what he was always known as in Berkeley and all over.

*Do you think this is the same Daly of Daly City or no, I'm making connections?*

I don't know. I do not know. It seems to me that I would know something about it had it been, but I don't know.

*OK.*

I first met Duke Daly in high school when we were sophomores. He was the new boy coming to school, and he sat in the back of the geometry class, and he'd lived out in the country with his sister, and of course this was during wartime. And he would drive a car to and from school and he offered me a ride, and after I'd known him only a few weeks he told me that I was the girl that he was going to marry. And I thought, oh, I'll never marry this fellow, and you know it ended up that I did.

*Why did you think you'll never marry this fellow, do you remember?*

Oh, I don't know. I wasn't ready to think about marrying anyone at that time.

*Too young.*

I was too young and I just didn't think he was my type. First of all, he was a brilliant man. He was a brilliant boy and actually I didn't see him anymore until when we moved to the Bay Area he came to see me and he had joined the maritime service. He enlisted in the maritime service and studied to become a radio officer and he never, ever finished high school. [The maritime service sent him to Radio Officer's School in New York. It was on Hoffman Island, Stanton Island. He graduated as a lieutenant radio officer. They wore many officer's uniforms. He was very handsome in that uniform!] And actually I have a lot to tell you about that but I think maybe now isn't the time to do it because well—

*It's your choice.*

OK, can you turn this off?

*Sure, oh sure, let me pause it for you.*

**[00:03:35]** End Track 2, Disk 1.

**[00:00:00]** Begin Track 3, Disk 1.

I married him.

*Yes, you married Duke Daly.*

I married Duke Daly and of course he had to go back to sea and when the war was first announced to be over, his ship was the first to bring back a commercial cargo load to the United States, as he was in the Philippines at that time. And they brought home a load of copra for Proctor and Gamble. They used copra as a product from coconuts to make soap, and Proctor and Gamble wanted this product to make soap. At that time, while he was in the Philippines—since he was a radio operator—he sent me the first commercial telegram from World War II that he was coming in to Los Angeles—well, not Los Angeles actually, it was Long Beach, California, San Pedro Bay. So I went down to meet him in Long Beach, California. But this is how we get connected to the University of California. It was very difficult to find jobs at that time, so when he was out of the service he could not find a job. It was very difficult to find a job as a radio operator actually. And so he signed on board ship again to go coast-wise from the coastline of California up north to Oregon and Washington. When he got up there he found that the ship was going around the world, so he did not want to be away from home that long so he got off the ship and came home. The next job that he found was with Pan American World Airways. And they were looking for a radio operator in charge to put in a radio station on Wake Island, which at that time Pan American Airways was the only carrier to go around the world. They needed a radio

station on Wake Island so they would have some connection between San Francisco and Tokyo. I believe they flew into Tokyo, and the Orient.

*Somewhere in the Orient?*

Somewhere in the Orient. So he worked for Pan American Airways. He put in a radio station for them on Wake Island. When he got back from Wake Island, of course things were going from electrical engineering—as I said he was brilliant—things were going to electronics at that time. So he found there was a job opening up on the hill in Berkeley, California at the University of California up on the hill in Berkeley. And that is where he worked, at the electrical engineering department, and that's where he met the scientists that he knew. At one time, I can remember he and Luis Alvarez put together—they were doing—I don't know how to explain it. They were doing some sort of electronics to guide airplanes in, something like we have now, ILS system, instrument landing system that we use. And I can remember driving down there to pick him up. He would go to work at the laboratory up in Berkeley and then he would go down to the Oakland airport with Luis Alvarez and they'd do whatever they were doing, experimenting or doing whatever they were doing, and then I can remember going to pick him up at the airport.

*Amazing.*

Yes, it is. I would like to show you a couple of pictures during the time that he first went to work at [00:05:00] the University of California up on the hill. It's some old picture, I think it was taken about 1947. [I also have another picture taken of the maritime officers taking shipboard training on Santa Catalina Island in Avalon Bay. That island was owned by the Wrigley Gum Co. and loaned to the U.S. Maritime service for training during World War II.]

*Great. Let's do that. I'll pause while you get them and then maybe we'll talk about them.*

[00:05:16] End Track 3, Disk 1.

[00:00:00] Begin Track 4, Disk 1.

[This section of the interview includes identifications of photos from Marie McMillan's collection.]

*So the man who is second from the right, kneeling, is Duke Daly.* [M.McMillan1]

That's correct.

*And this is 1947.*

That's correct.

*Great. OK.*

Now wait, there's another picture here that I want to show you that was taken on the hill in Berkeley, that picture I showed you. [M.Millan2]

*OK, good to know. Let me get out of your way.*

Now this is not only the electrical engineering department but this is a picture of different people. This is Herb York.

*There's Herb York.*

And this is my husband. And this is Ernest O. Lawrence.

*This is a fabulous picture.*

I've forgotten these names. The only ones that I really knew that went out—only a few then went out from this picture—when they started the lab in Livermore.

*Right. We could probably—*

So this is Herb and that's my husband and that's Dr. Lawrence.

*There's Lawrence. And yes, I bet if we copied this and blew it up a little bit, people would—oh look, you've got historic stuff here.*

Oh, do I? My goodness. OK, then after they went out there, this is—

*Now let's just remember—what do you think this year was, of this picture?*

Oh well, it was before Livermore. It was just before Livermore, so it was—I thought Livermore was 1952.

*I think so.*

And you said something about 1951.

*The test site, yes, but Livermore—*

But it might be that they started it and I think my husband went out there in 1952. That's why I remember—.

*Right. I think that that's right. OK, so that's around that era.*

Well no, maybe here. Here I've got this.

*Here's stuff from Enewetak.*

Yes, well that's—

*Oh my goodness, Marie, you've got this Atomic Energy Commission Nevada Proving Grounds, 1953 [badge] of your husband's. Amazing. [M.Millan3a, 3b]*

Where is that one—this one from Enewetak I wanted to show you. I didn't realize it was 1951. I didn't realize they went out there before—[M.Millan4]

*They went out there before the lab was—they did some stuff through Los Alamos before the lab.*

Oh, OK, well here, you've got it, there it is.

*And this is Enewetak.*

This is Enewetak atoll.

*Oh my gosh, and look, you've got a list.*

And there's Herb [York]. [M.McMillan4, 3<sup>rd</sup> row, second from left]

*Right, and Herb talked to me about Hugh Bradner [M.Millan4, 1<sup>st</sup> row, second from left] when I saw him a couple of weeks ago.*

Really?

Yes. And this is my husband [M.Millan4, 2<sup>nd</sup> row far right].

*Yes. And Harold Brown [M.Millan4, 2<sup>nd</sup> row, second from right].*

Oh yes, Harold E. Brown. There were two Harold Browns.

*Oh, OK. All right. See, I didn't know that.*

That's Dan Murphy [M.Millan4, 4<sup>th</sup> row, third from left]. Let's see, I've got Dr. Herb York [M.Millan4, 3<sup>rd</sup> row, second from left]. Yes, I've got, well, all the ones that I knew, well, not all of them but—

*Yes, you've got the names. This is fabulous.*

And aside from working with Luis Alvarez, what I wanted to tell you was he and Ross Aiken got together and they developed a—[pause when someone enters room]

**[00:04:01]** End Track 4, Disk 1.

**[00:00:00]** Begin Track 5, Disk 1.

*OK, so go ahead. So you worked with—*

Aside from working with Luis Alvarez on the instrument landing system, he and Ross Aiken got together and they—my husband was an expert in tubes and they developed a special kind of a tube—at that time television was in its infancy and he developed a kind of a tube that had the [electronic] gun go to the side of the tube instead of the back. Because the tube at that time is like a [light bulb]. If you can imagine a light bulb as a tube, what kept it from getting very, very large was the neck in back of it, so as the tube got larger and larger the neck would go back further and further.

*Right.*

[00:01:12] End Track 5, Disk 1.

[00:00:00] Begin Track 6, Disk 1.

[It] was only three or four or five inches thick, so you could make it as large as you wanted, like we have now. Of course this was in the 1940s.

*So the size wasn't controlled by the fact that it had to go in the back?*

That's correct.

*It could come in the side. How clever.*

Yes, the electrons could go in the side and scan the picture instead of coming from the back. So he and Ross demonstrated that tube—I don't know if they called it a "tube" actually; I don't remember but they showed it—to lots of different companies such as Westinghouse, Sylvania, Zenith, RCA, and all the companies that made electrical—

*Like GE or something like that?*

That's correct. That's exactly right.

*Yes, or Philips, it was probably back in those days too.*

Yes, exactly. Yes. And so they sold that, and of course my husband did all the work. That's what he did up at the laboratory, I guess, as you probably know. And so he changed from electrical engineering. I guess they did electronics then. But don't forget, he did all of these experimental things and he only had a high school degree actually along with his radio engineering training.

*Amazing.*

And actually when he went to Livermore he took a test at San Jose State College. And they would only accept him—you know—he had to take all these battery of tests. And when he took

the battery of tests he went way past the required tests wanted. The said that he “rang the gong.” So actually, he ended up—he really never had a degree—but he did all of these exotic things.

*Well, I think that that’s interesting and I think that he certainly is among very few people that did that, but that was also an era where there was so much new stuff going on that if you were an experimenter and you were brilliant like your husband was, you just did it and no one was saying to you, “Where’s your Ph.D.?”*

Yes, exactly.

*Amazing.*

Exactly. So he was actually in charge of all of these electronic things that they did. Of course Herb [York] was in charge of the laboratory. And he was in charge of all the things that they did because he knew all about radio and, you know, that. That’s how he—

Oh, this is Ross Aiken [M.Millan4, 1<sup>st</sup> row, fourth from right].

*OK, that’s Ross Aiken.*

I think this is Hugh Bradner. And this is Walter Gibbins [M.Millan4, 3<sup>rd</sup> row, far left]. And I don’t—

*Well, when we organize this we can do a nice little labeling thing.*

Probably.

*Yes, you’ve got it all there. Looks like two versions of it [this list identifying persons in photograph M.McMillan4].*

Yes.

*I bet Herb [York] would be interested in seeing these pictures.*

Well, I was wondering if they showed you any pictures like this.

No.



They didn't have any. I think there were very few of these pictures actually.

*Yes. Maybe we can get him a copy.*

Yes, he probably would like that. I was wondering and then if he said anything about my husband because they were, you know—

*[Mary Palevsky had met Marie McMillan at UNLV shortly before interviewing Herbert F. York in La Jolla in January, 2004. Before turning on the recorder, she had told Marie McMillan about telling Herb and Sybil York that she had met Marie McMillan]*

*No, just that he remembered them and they [the Yorks] remembered you and they just couldn't believe that we'd run into each other like we did.*

I don't see how they could remember me because I did nothing at that time.

*They did though. Sybil did.*

Well, that's because we were in Livermore and everybody in Livermore knew everybody else.

This picture [showing M.Millan2].

*Yes.*

You asked when—this picture was probably '50 or '51.

*Probably, yes.*

See, at that time I didn't know to put—

*To put the dates on the newspaper. I'm the same. I have things that I didn't know to do that.*

I've learned since.

*This is probably very unusual to have this old pass from—this is '53. This is really great that you have that.*

And of course these are—[newspaper articles].

These now, at that time I lived in San Leandro and when I knew there was going to be a test I would get up on the balcony and I could see the test from California when they [were detonated].

*You could.*

Yes.

**[00:05:00]** *Wow. And so there wasn't an issue of secrecy. You would know that there was going to be a test?*

Oh yes. Yes, there was an issue of secrecy, but I didn't tell anybody that I knew. When my husband would travel there, I knew they were going to do something. And he would say, well, why don't you get up early, you know, in the morning. And I would go out there and see it. And then I cut out all the things in the paper, as you can see.

*Wow.*

**[00:05:22]** *This is all falling apart [newspaper clippings in scrap book]. Look at this.*

*This is amazing. There's Duane Sewell.*

Yes.

*I'm going to go to Livermore in May. I hope he'll talk to me.*

Yes. So anyway, let's see, those three pictures I knew you would like.

*Yes, I'm very happy to see them.*

But I have lots of others, pictures and things from way back, say '55. I could see, you know, things like this.

*And what newspaper is this?*

Probably the *Oakland Tribune*.

*See, this is fabulous, Marie, because we have a lot of stuff from Nevada but we would like this.*

Yes. This is from Oakland. Look, “The biggest shot to be fired in the present Nevada atomic test was [inaudible word of quote due to newspaper rattling] in San Francisco. This picture taken from the top of an apartment building at Clay and Jones.”

[00:06:33] End Track 6, Disk 1.

[00:00:00] Begin Track 7, Disk 1.

*OK, so this is a certificate from Operation Teapot. [M.McMillan5]*

Yes. Alvin Graves. I find this unusual. Alvin Graves was a scientific advisor in Operation Teapot. And when my husband finally—actually he was on all of these operations from the first. I think he and Herb [York] were in the same number of operations because I’ve got the—for Operation Redwing I have the VIP book. And it’s the key personnel for Task Group 7.1 [M.McMillan6]. And actually EG&G always wanted him to go to work for them, you see. That’s how he knew all these people out at the test site, and he traveled a lot because he would go back and forth from Livermore to the Nevada Test Site, back to Livermore, and then to the Pacific—Eniwetok and Bikini atolls, then back to Livermore. And then he knew Herb Grier and Barney O’Keefe and Doc [Harold] Edgerton, then he would make trips. He would have to go to, where was it? Not Brookhaven, where EG&G’s office was, in Boston. It was in Boston. He would go to Massachusetts. And they wanted him to come to work for them, so after a while he decided to go to work for Edgerton, Germeshausen, and Grier.

*I didn’t know that.*

And that’s when we moved to Las Vegas.

*That’s how you got here. OK, we’ve got to how you got to Las Vegas. Amazing. So they wooed him and—*

They wooed him and he was—I was just talking on the phone to my son Jack. I used to have a card of his from Edgerton, Germeshausen, and Grier. I cannot find it, but Jack, my son, says that he had one because he said he asked for one because at school they were always asking what his father did and he would say well, he couldn't say. He would only put down what's on the card: "Senior Scientific Executive." Here, I was looking at here—

*So your son knew that he couldn't say.*

Oh yes, no one could ever say anything when they worked out there. And actually some other place, in the back of this book or some other place, they have—look.

*Look at this. [M.McMillan7] United Airlines Passenger List, January 26, 1956].*

"DC-7 goes from—." Well, there were only three passengers on board. I thought that was strange.

*That's amazing. Look at all the crew and then the three of them. And this is for getting out to one of the islands, I guess?*

No, it's from San Francisco to Hawaii. And then they had, I think, military aircraft to go out to Enewetak and Bikini.

*OK. OK.*

That's one thing that I still would like to do. I want to go to Enewetak and Bikini atolls. I understand you can go there now. I would love to go there.

*That would be an interesting thing to do. And here's another one from the airlines. Amazing.*

*[M.Millan8].*

Yes, they used to give those to you. Well, so there are a lot of memorable things in here.

*Absolutely. And this is very interesting.*

I thought you would like to see this. Look at this. This has—well, here, I have it on here—

*So this still says “UC Radiation Lab—UCRL.”*

Yes, well that’s how they—

*That’s how it started?*

That’s what it was in that time.

*That’s right.*

Well no, it used to be—well yes, it was UCRL at first and then it was [pause] it was LRL, which was Lawrence Radiation Laboratory, and then it was LLNL, Lawrence Livermore National Laboratory. So all the laboratories, I think at that time, put “National” in front of them, such as Sandia National Laboratory and Los Alamos Scientific National Laboratory.

*Yes. I think they went from their—they codified it a little bit. Look at this.*

Well, they gave these out to the key personnel so you’d know who to—

*But this is a little organizational chart, it looks like.*

Yes.

*This is very interesting.*

Yes, this is Joint Task Force Seven.

*Yes. Very interesting.*

[Looking through papers] Hickam Air Force Base [Hawaii] and all the people there. And then this is what I was looking at actually, see, he’s got here “nickname Duke, August 1947,” and that’s when that picture was taken up there on the hill. [M.McMillan6a]

**[00:05:00]** *Yes, in August ’47. OK.*

Yes. And the University of California, well, he took classes there, I guess. He was a “commercial radio operator, operator in charge, Pan American Airways radio station, Wake Island.”

*There it is, yes.*

And he'd been on four operations.

*And in this context, "operations" means tests, bomb tests, do you think, or—?*

Operations for, I guess, he's the advisory group with the University of California Radiation Laboratory, electrical engineering. And here, Herb's [York] the last one [M.Millan6b]. They were always together. That's why I thought they would remember him.

*They did. They did.*

See, and they were on the same number of operations, four.

*Right, four. OK, so that must have been the number that they did. "Director, University of California Radiation Laboratory" was what it was called then. And the date of this is 1955.*

*Interesting. All right, this is a fabulous document.*

[Looking at photo] Oh, there's Herb Grier. I just saw him. That's Forrest Fairbrother

[M.Millan6c]. Oh, well see, I know those people. Look. That's Walt Gibbins [M.Millan6d].

*I love that they put their nicknames on it so you know what to call them.*

Oh, I love to go through these!

*This is amazing.*

Well, these are all people that—

*That's [00:06:43]. Let's find Grier. There [M.Millan6e].*

See, "number of operations, ten" because see, they did all the timing and firing from—

*In the Pacific, yes.*

No, no, no, not just in the Pacific. No, that's counting things like Trinity and all that. They did—

*Grier was out at Trinity?*

I don't know if he was at Trinity. I'd have to think back.

*We can look that up.*

But way back then, yes, that's before the University of California came in, and before the laboratories. So it was before Hiroshima and Nagasaki, I think. See, it was before.

*I didn't know that. That's interesting. That will be something interesting for us to look up. I have a little book that someone from EG&G put together. Have you seen it?*

No.

*I'll get you a copy.*

That would be nice.

*The author is Peter Zavattaro*

**[00:07:58]** End Track 7, Disk 1.

**[00:00:00]** Begin Track 8, Disk 1.

*Let's go back to our timeline. So just that he went to work for EG&G.*

Oh, well, actually out at the laboratory in Livermore, we were rather a close group out there. It really wasn't very large at that time, and at that time it was still called electrical engineering department. And I can remember the head of that department, Duke's boss, his name was James Kilpatrick and—have you heard that name?

*I have heard that name.*

Yes, and I think afterwards he went to Stanford University, to run the—it's like a cyclotron only round and so I think that he—they built a new linear accelerator and it was out over at Stanford University and I think—yes.

*They did indeed. And he was involved with that.*

Yes. And then I think about that time that Kilpatrick went to Stanford is when my husband thought it was a good time to go with EG&G, and so we moved to Las Vegas. But actually at

that time I was working for the University of California Radiation Laboratory myself, in Livermore.

*Yes, I'd like to hear about that. What did you do?*

Well, you're going to have to give me some time to think about that. I first started out handling their repositories for all the secret documents, and I worked on that for I think a year or so. And then I went with—to a couple of the groups and the one that I liked most of all actually was Louis Wouters's [pause]. I can't say exactly, I guess I probably could now but not knowing what—

*Oh, you mean the secrecy thing?*

The secrecy thing. I can't—I'm not—

*Oh fine, don't even worry about it.*

And then I worked with Ervin Woodward and the L-6 Division. I'd have to think back. I was with several groups there at the laboratory.

*Could I back up a little bit? You said the first job was with documents. So sort of the human context: Your husband's working there. Has your son been born yet or no?*

Well, this is my first life. Yes, when I was married to Duke Daly, when we were married, we had two children, a boy and a girl. Our son, Jack Daly, was born in 1947 when Duke worked up on the hill in Berkeley. And actually yes, they went to school in Livermore.

*Great. That's what I'm trying to get a sense of.*

They went to school in Livermore and on one of the operations, before I started working for the laboratory, we went to Hawaii and we were going to stay in Hawaii for one school semester, which we did. We stayed right near Waikiki Beach. My husband was traveling so much, going back and forth. He says well, he could stop and see us on his way between Enewetak and Bikini;



he'd stop in Hawaii on his way to the lab and back and forth we would see him. As it so happened, it was so demanding at that time that he couldn't leave. So all the people that worked for him, they went back and forth and they would stop and see us, but we saw him only once during six months. But we saw the people from the lab. They would stop and say hello to us and see how we were doing. And when we left—I showed you the little Japanese doll—we made friends with some people, they were Hawaiians who worked at Enewetak and Bikini. I don't know what they did. They were some sort of, probably construction workers. I'm not sure. But the person I was very friendly with was Haru Yoshioka, and the man who worked out there, evidently worked for my husband, his name was Goro Yoshioka. And we became quite friendly with them.

*Wow. Hawaii must've also been another one of those places that was quite beautiful and different there than it is now.*

Oh, at that time it was amazing. Actually it was difficult to find a place to stay, and we stayed [00:05:00] right across the street from Waikiki Beach. In looking for a place to stay we found a nice, a beautiful apartment. There were six apartments there, beautiful, owned by a Japanese man. And when we first arrived my husband was on his way to Enewetak and Bikini, but he helped us find a place to stay, and when this Japanese man found that he was at the University of California Radiation Laboratory he immediately found this wonderful little apartment for us. He also reduced the rent so we could afford it because he knew that people at the laboratories, you know, were always known to not make lots and lots of money. You probably know.

*My father worked at Brookhaven [National Laboratory]. You didn't get rich being a scientist in those days.*

That's correct. That's correct. And so we had a lovely time there, really, and the children went to an elementary school at one end of Waikiki Beach and we lived at the other end. Every morning they would go—I would put them on the trolley. At that time there was a trolley; it went up and down Waikiki Beach. They would get on the trolley and go to school. After school was over, I would walk up the beach, bring their swimsuits, they would change at school into their swimsuits, and we would take an hour or two playing along the beach coming back to our apartment.

*How fabulous.*

And we had so little money that that's all we could afford to do was play on the beach, and we had a great time.

*Now what year about would this have been? Or the other piece of that question is, how old were your children at that time?*

They were about—I'd have to think back to make sure, but I think it was about 1957. I think it was Operation Redwing [1956]. I'm not positive.

*OK. We can look that up.*

And they were about nine and ten—eight and ten.

*And what are their names?*

Michelle and John. We call them Shelley and Jack.

*And Michelle is the older?*

Yes. She was like her father. The teachers knew that she was very unusual. From the time she started going to the library when she was about the third or fourth grade, she read every book in the Livermore library. So they wanted to test her and they found that she was way up in the

genius class, so I guess she took after her father. She was in an automobile accident in New Haven, Connecticut when she was twenty-four years old, she was killed, so—

*I'm so sorry, Marie.*

So she would've done lots of things, I guess, like her dad. I was just a mom, you know. But I enjoyed working—you asked about the laboratory.

*Right, and I like that we got this story about Hawaii because I think people, you know, especially young people don't know what it used to be like on Waikiki Beach, so I like those kinds of details.*

Oh, at that time there were real—we lived next door to real Hawaiians. who are—the one real Hawaiian that we knew, he and his wife were both great big dark people, and we went to the museums to see King Kamehameha's board—

*His surfboard?*

His surfboard. It's about ten or twelve feet tall and I couldn't even lift it, it was so heavy. They were wonderful neighbors. Wonderful, wonderful neighbors. I have some pictures of that, and some of the fellows that stopped by to see us coming from the Pacific test site. We called it at that time PPG. It was for Pacific Proving Grounds.

*Oh, great. PPG. Great.*

Pacific Proving Grounds [is] what it was.

*So it was after that—oh, but you had a thought. Go ahead.*

I had a thought. My thought was at that time I remember on Waikiki Beach they were digging the coral out for something, and it was where Henry Kaiser built the big tall hotel. It is a [00:10:00] famous big hotel now that has the first swimming where they took out the coral from the—

*Wow. For the swimming pool.*

Yes, from the ocean.

*Again that's something we can look up.*

And also one time Jack found when they were swimming in the ocean, he found a bowl that's [pause] it's like a *molcajet* in Spanish. It's where they ground corn or something.

*Right, yes, I know what you mean.*

And he found it in the ocean, way down in the ocean, and I have it here, so you'd probably like to see that.

*I would like to see it. I would like to see it.*

We had some good times there. The other thing I wanted to tell you about, Gerry Johnson and Mary Kay Johnson lived close to us in Livermore. Their children were about the same age as our children. So Mary Kay and I were going to spend our school semester in Hawaii. I do not recall at this time what happened, but at the last minute Mary Kay and her children couldn't come and so that's why we were there in Hawaii by ourselves. And I think the same thing happened to Gerry Johnson. He didn't get back and forth often either and so—

*I have a little side thing to tell you about Gerry Johnson. When I met these people at Livermore now that are working on histories, you had mentioned Gerry to me and of course Herb and Gerry were good friends, so they sent me a 1985 interview with Gerry about Livermore, and I will copy it for you.*

Oh, that would be great! I just thought of something else too. One of their little boondoggles that Gerry and my husband went on when they were out there. I don't know if this is supposed to be [part of the oral history]—

*Please tell me.*

They got a little airplane and they had to get some JATO bottles. Do you know what JATO bottles are?

*No.*

That's for Jet Assisted Take-Off. And they went over to the island of Ponape to see these ruins because Ponape was another island out there; it's in Micronesia. And they went to see these old ruins at Ponape, and they took these wonderful, marvelous thirty-five-millimeter slides that are terrific.

*Oh wow. Yes.*

Only a few years ago when I was working for my archaeology degree here at UNLV I thought that I wanted to do something special with these because no one had ever done anything on the island of Ponape. The professor that I was working with tried to discourage me, I think because he wanted someone else to do the first writings on Ponape, so I didn't do that [laughter]. He actually encouraged me to—he wanted me to do something on women and aviation and women pilots and I've never done anything on aviation. I still would like to go to Ponape. I still would like to do some research on Ponape.

*Yes. But you have these slides.*

Yes. I'd have to look for them. I haven't seen them in fifteen years, probably.

*Well, you know, something to think about because it's a side story in a sense but it's interesting the ways in which the people that were out doing the tests were involved with the islands.*

Exactly. Exactly.

*Herb talked to me a little bit about going with, I think it was Duane Sewell, that he took a day trip to, I'm not remembering the island, and found—*

Perhaps it was Ponape.

*I don't think it was, or else I would—it could be. Well, I'll tell you what they found, then you'll be able to tell me. This wasn't ancient stuff. They found the old trenches that the Japanese had been in five years earlier and all sorts of Japanese artifacts from the war that were just, you know, left there.*

It could've been Wake Island. My husband, yes, had things—when he put in the radio station on Wake Island for Pan American World Airways he found that also.

*He did.*

Yes, yes.

**[00:15:00]** *Interesting. And he brought stuff back or—?*

No, there was nothing there.

*I guess Herb said that Duane found some carved wood in Japanese and instructed me to ask Sewell if he still has it, so that's a side story.*

I do have some things from Ponape.

*Great. Great.*

And some I gave away.

*Yes. It's interesting.*

I can show you when we get through here some things from Ponape.

*Great. But we went in a roundabout way and, see, I like roundabout because I think interesting stories happen that way. But I think where we started this thread was that you had begun to work on documents up at Livermore and I was curious to know, without getting into secrets, just sort of what was that procedure? They had documents related to the tests that needed to be filed or organized or—?*

Yes. No, no, not filed. Actually we did the secrecy documentation on them and you see it was a coordination between LASL, Los Alamos Scientific Laboratory and University of California Radiation Lab—Livermore Radi—LRL and LASL. At that time, that's what we called them, LASL, Los Alamos Scientific Laboratory and LRL, Lawrence Radiation Laboratory when I worked there. And actually to send these documents, they all had to be documented and accounted for. Only certain people could see them. There were lists of people who had access to the secret documents. Only certain people could see them. Everyone couldn't see them.

*Right. Now how did that work—let's back up a little more then, just for historical purposes, did you have to go through a clearance process?*

Oh yes.

*What did that involve? Was that when you went to work, they said—?*

Oh yes, when I went to work, yes, I went through a heavy clearance. I had a, I've forgotten now what they're called, it's not called a top priority, it's called a—

*Well, there are some of them—Q was considered a very high clearance.*

I had a Q-clearance but there were certain types of Q-clearances also and several types of secret clearances.

*Oh, see, I didn't know that.*

I don't recall what mine is but along that subject, getting back to—you might find this interesting. When I came to Las Vegas, I went to work for Holmes and Narver. At that time Holmes and Narver Company was the prime contractor of the NTS, the Nevada Test Site we called it at that time.

*So you went from having worked at—*

The radiation laboratory. Here in Las Vegas I went to work for Holmes and Narver. I was an administrative assistant to Pat Ryan who was the head of Holmes and Narver. They called him the, I forgot his title, it was the—

*We can look that up. These are things we don't—we don't sweat that stuff.*

His name was Pat Ryan,

*Right, I've heard of him.*

Pat Ryan had been in charge of projects all over the world. At that time Holmes and Narver was the largest contractor all over the world for big projects.

*And explain to me, I know something of what they did because there's a video of David Narver, the son of the original Narver, talking about some of the things they did, over at the Atomic Testing Museum. But the sense I get is that we're talking about them building actual structures?*

Yes, they did all kinds of—they were architect-engineers.

*Thank you.*

That was their official title, architect-engineers. They also put in big projects like in Saudi Arabia, in the oil fields they did big sewer facilities and buildings and—

*Installations so that the scientists could do their experiments or the tests could be done and—*

Yes. Yes. Also out at the test site Holmes and Narver, we had big, I believe we had six or eight

**[00:20:00]** groups of--what do you call the men who look through the things?

*Surveyors.*

Surveyors. We had big groups of surveyors, and that's how actually, I'll tell you later on, how I got to meet my husband Dr. McMillan, because I would send these surveyors out at the test site to the only dentist in Las Vegas who would stay open to accommodate test site workers.

*And that was your husband.*



And that was Dr. James McMillan.

But getting back to the secrecy, the Q-clearances, I'll tell you how secret it was. [Pause] Let's see, I'm trying to think of how I can tell you. After I moved to Las Vegas with my husband Duke Daly, who went to work for Edgerton, Germeshausen, and Grier—

*And this again was—*

This was 1959.

*Nineteen fifty-nine. Great.*

Nineteen fifty-nine. About in 1959 or 1960 Edgerton, Germeshausen, and Grier, they were doing other things besides at the test site. They were making [pause] secret devices. I guess cameras aren't so secret, but things that you did testing with for atomic tests, because they were known to do the timing and firing out here at the test site. They were selling these items to other countries. One was the French Atomic Energy Commission, which was the *Commission de l'Energie Atomique*. It just so happened at that time I spoke French pretty well. I had taken French all during high school and of course at University of California Radiation Laboratory while I was there. The French Atomic Energy Commission sent these engineers from France to Las Vegas to look at the equipment to buy. The only people who could talk to them were people who had secret clearances. It just so happened that I had a special clearance [It was so secret that I cannot tell you what it was called!] because I worked out at the test site and I also had worked for the University of California Radiation Laboratory. So my husband worked for Edgerton, Germeshausen, and Grier, [and he also had a super-duper secret clearance] and when these French scientists came over here to Las Vegas, there were only two people who were cleared to escort them around, and I was one and my husband was the other.

*That is so interesting.*

Well, there's lots more to this story. I don't think it's short.

*OK, great, you've got my attention.*

My daughter Michelle, the one who was so bright, she went to school actually at this time in Switzerland. She went to a finishing school in Switzerland at Lake Neuchatel and she spoke several languages; like my son now speaks several languages but he doesn't speak French. Well, so that accounts for how I got to meet them [the French scientists]. They couldn't speak any English and I guess my French was fair at that time. Now it's nothing, you know. However, we took them out on Lake Mead, and I have some pictures of when we took them out to some shows and things here in Las Vegas.

*Excellent. We'll look at those.*

So I thought you'd find that interesting, about the Q-clearance.

*It's really interesting.*

What I wanted to tell you about that Q-clearances is this. A few years later, after I was married to Dr. McMillan, the dentist who stayed open for people at the test site, especially the surveyors, he went to Paris to the *Faculté de Médecine de Paris l'Hopital Lariboisière* to do implants, implant dentistry. He was the first dentist in the state of Nevada to do implant dentistry and surgery. He was also the first black dentist in the state of Nevada. However, he went to Paris to do this, [00:25:00] and I met him there. He was there from the 14<sup>th</sup> to the 19<sup>th</sup> of November, 1966, at the hospital. They were doing operations for implants. He operated under the doctors—Professeur M. Aubry and Docteur R. Cherchere. I have a license from the *Hopital Lariboisière* in Paris.

One of the engineers for the French AEC that I knew, was in charge of a project, his name was Pierre Busquet. And Pierre Busquet had gotten to be a good friend of mine so I

thought, well, I'm going to Paris, I'm going to call and tell Pierre Busquet that we're coming, so I could see him again and introduce him to my new husband, Dr. McMillan.

Well, let me backtrack. When my daughter went to school in Switzerland she was, knowing how the economics are and how poor scientists are usually, Michelle had to go alone over to the school. I arranged everything from here but she had to travel by herself because at that time it was quite expensive to fly back and forth. So she had to go at the beginning of the year and then come home at the end of the year. In between Jack went to the English School of Paris, and so Jack was in Paris. Well, they would spend their holidays together. However, the first time that she went I, wrote Pierre Busquet. I don't remember if I telephoned him or wrote him. At any rate, I think I wrote him that Michelle was coming on the plane by herself from Los Angeles to Paris and then from Paris to Geneva, if he would be so kind if he would meet her at the airport in Paris and help her transfer to another airline. So I guess I did hear from him and he said yes, he would do that. But what I found afterwards, that the French were conducting these big atomic tests. They did them in Africa, you know, in Morocco, and he went from Morocco back to Paris to meet her and put her on the plane. Isn't that a story?

*Oh my gosh. That is a story.*

So, now getting back to when my husband Dr. McMillan went to Paris, I got a hold of Pierre Busquet and I said, we'd like to meet with you. So we met in Paris and he and a couple of the other scientists that had been here in Las Vegas took us out to dinner and I think we went to a show, and at that end of the evening that we did that he told me, Marie, how is it you contacted me?

And I said, Well, just because I knew you and we were good friends.

He said, Did you not know that you weren't supposed to contact me anymore? I understand that you no longer have a special Q-clearance.

And I said, No, I didn't know, Pierre.

And he said, Well, it was so nice knowing you. You showed us such a good time in Las Vegas and we tried to show you a good time here, but you must not ever contact us again because it's not allowed.

*I'm saying for the tape that my mouth is open in amazement.*

Then there was another thing, though, that I got from him. We got an invitation to his daughter's wedding, and she married a son of, who was the tall president, the French president?

*De Gaulle?*

Yes, Charles De Gaulle. No, it was his son married the daughter of Charles de Gaulle, and we got a wedding invitation, but we couldn't go so I didn't get to do that, but that would have been a fun thing. So that's the story about—I had no idea about the special Q-clearances. I had no idea that I was not supposed to contact him, however, at that time, I contacted the AEC office, Atomic Energy Commission it was called at that time, and I asked them why. They said, we have nothing in our files about it. We don't know what you're talking about. And so nothing was ever.... And never did I ever have a badge or a piece of paper or anything that my husband and I were the only people to escort the French scientists around. Nothing, I do not have one thing. I couldn't even find out about anything about it.

*Now, I have a couple of questions about this.*

**[00:30:00]** So that's always intrigued me.

*It's very interesting.*

And my husband, Dr. McMillan, he couldn't believe—

He says, Marie, I thought you knew these people well.

I said, Well, I did.

He says, Why is it that...?

You know, he couldn't believe this was happening.

*Well, what's interesting about is the way that culture of secrecy developed, but what's fascinating to me as you tell the story is that you know these people, you know them well, and then you're not supposed to know them anymore. That's just so interesting.*

Right. Right. I have some books here that Pierre Busquet, every time he would come he would bring me a book. The are books of art in French: "Picasso" and "Cezanne."

*It's like having a marriage annulled or something, and the kids don't exist, you know, it's like that didn't happen.*

Yes. Exactly. Exactly.

*Is Busquet Q-U—B-O-U—or you spell it for me.*

I have his card somewhere. Let's see, I think it's—Busquet, yes.

*And the other thing is, do you think when you called the AEC about it, that they were—my impression when you said that was that they were putting you off. Was that your impression or is it—do you think they really didn't know when you called and asked them about it?*

I think probably they really didn't know. I didn't call the person who was running the AEC. I don't believe anybody that they would put me in telephone contact with would be someone who would have the authority to—didn't have a high enough authority to tell me.

*Interesting. So this was after—we've jumped ahead a little bit, and that's OK because it's interesting and important.*

**[00:31:54]** End Track 8, Disk 1.

**[00:00:00]** Begin Track 9, Disk 1.

[Going through more photographs and documents]

Oh, I'm showing you the—Oh, this is the—this is [a] radio telegraph operator's license of—

*Oh great. The United States of America FCC.*

That's his [Duke Daly's] radio license [M.McMillan9].

*And this is dated '49. Wow. Nineteen forty-four. It was issued in '44 and he renewed it in '49.*

Yes, you had to renew it, I think.

*Oh yes, I would love to be able to scan this into your book.*

Oh well, this I think I have the original, unless I've sent it to Jack. I could've sent it to Jack. I don't know.

*Great.*

I'm going to show you—I haven't put together my scrapbook. I have two wonderful scrapbooks of Dr. McMillan but I have nothing of—this one that I showed you of Daly, these things, but I also have some—probably I have five or six of things that I have done at the test site. [looking through papers]

*Oh my gosh, look at this.*

At that time I went—my name is Elizabeth Marie. Well, it's supposed to be Marie Elizabeth but they got it mixed up but anyway [M.Millan10].

*This is a certificate of participation in Operation Plumbbob, 1957, and this has a great map on it. We would love to scan these things [M.McMillan11].*

I think I have several more. They're not in order.

*That's OK.*

This is mostly flying. [going through papers] This is—Well, when I was doing a lot of flying I went with the National Aeronautic Association to the meetings, the *Fédération Aéronautique Internationale*, have meetings in a different country in the world and I was going with them to represent the United States to the different countries. General Clifton F. von Kann was the head

of the National Aeronautic Association at that time. General von Kann and his wife Kitti lived in Washington, D.C. His wife was an artist and I commissioned her to paint the picture of Dr. McMillan for his school , James B. McMillan Elementary School of Clark County. And she had seen this and she asked me, she said since I commissioned her to paint the portrait of Dr. McMillan for the McMillan School, other than this other one by Roy Purcell, she painted one of me and sent it to me and it was on this magazine cover [painting on wall of McMillan home].

*It's beautiful. Yes, it's beautiful.*

Well, I guess I'll have to get these things in order to show you. I have some other—

*Some other things from the lab.*

Yes.

*Yes. From the test site.*

Yes, they're certificates. They're participation certificates. [M.McMillan12, 13]

*Oh, here's one. But this is great and you have more of these.*

Yes, I have several of them. Also [pause] I don't know if I showed this to you or not. At the time I had a hard time getting this.

*Oh, look at this. "List of Operations." [M.McMillan14]*

I put that together but it's all that I knew at the time. See, this was NPG, we called it, and PPG.

*Nevada Proving Ground and Pacific Proving Ground. Carlsbad near San Diego. NTS. PPG.*

*You know what they have actually done now, and I'll get you this too. The DOE has put it together, a list of all the tests [DOE/NV—209-Rev 15 December 2000].*

Oh my goodness, wouldn't that be nice?

*And I'm compiling a packet for you and I will put that on my list of things to give you.*

That would be wonderful.

These are ones [certificates for tests] that Duke participated in. Now there may have been others that I don't know about. There probably are.

*Right, but this is important for the story you're telling about yourself and Duke Daly and that piece of the history that you were participating in, so yes, this is terrific. And then I'll just give that so you can see how it fits in with the whole big story.*

[00:05:00] Oh, thank you.

*So I'm going to stop this how—*

[00:05:07] End Track 9, Disk 1.

[00:00:00] Begin Track 1, Disk 2.

[00:00:00] Begin Track 2, Disk 2.

*OK, so now we're looking at some more old pictures. Oh, look at this. What a sweet face.*

This is an EG&G picture.

*Nineteen forty-four. And that's a more corporate—that's a 1950s corporate man right there.*

*Nineteen sixty-two. I was close. Not '50s. These are fabulous. Oh, and OK. These are the things from the tests you were talking about. Look at these.*

Oh, Daly. I thought that—

*OK, these are his [certificates].*

Yes, I thought they were mine.

I don't know where mine are. Maybe mine are gone.

*I bet they're here. Yes, these are really interesting.*

You've seen these.

*I have not.*



Oh, you haven't? Oh, '57. I don't know the earliest ones. Some of them probably he gave to his sister or somebody because he would—

*There's Gerald Johnson, deputy test director. And this is Operation Hardtack, Phase II. Look at these pictures, these cartoons. Yes, these are really, really interesting to me [M.McMillan12].*

These are pictures of when he went to school. This was on the island out of Long Beach, what's that, Wrigley Chewing Gum family owned it? That's where they trained them.

*Santa Catalina Island. Avalon Bay.*

Yes, that's where they trained the maritime service—

*During the war.*

Well, that's what that is, they're training. That's a training photo—they were training [M.McMillan15].

*They were training?*

Yes.

*Fire swim. Oh my gosh. So they'd blow something up and then they'd have to survive it?*

I don't know. I don't know any—these are things that—

*These are pictures from the war.*

When they were training.

*Oh, look at this.*

Now that's in New York. That's where the—[M.McMillan16].

*Because I notice that his FCC license, the first location, is New York.*

Oh, was it?

*Yes. Oh, look at this. Is this your notes?*

Oh yes. my notes.

*[Reading]* “Edward Teller, father of the H-bomb.” “Herbert York.” *From Buttonwillow.* “Sybil is from Buttonwillow.” *You wrote that down.* [M.McMillan17]

Oh, this is old.

*Yes, we'll have to figure out what date this is.*

Yes, “pinch theory,” “tennis shoes.”

I was sitting at the airport one time in San Francisco and I was just sitting there waiting and looking and I saw these tennis shoes go by and I said I only know one person who wears tennis shoes with suits. It's Hugh Bradner. And looked up. And it was him.

*“Pinch theory”?*

Yes, that's what he worked on. It's one of the things.

*Amazing.* “Robert Jastrow.” “Gerry Johnson.” “Mary Kay, La Jolla.”

He's the one that I was trying to think of for that program, the rockets to go to the moon, you know.

*So you just sat down one day and wrote these names down?*

Oh, it was years ago. I mean if it's with this stuff it was at least twenty years ago. [laughter] Yes, I wanted to remember. I was forgetting people.

*Names. Yes. Yes.*

“Herb and Dotty Grier, La Jolla.”

*And this is—*

What is this?

*Yes, this is '45. This is a certificate of graduation for the radio electrician* [M.McMillan18].

For the radio electrician. Oh.

*Right. So this right before the end of the war. January 1945. I mean the year the war ended. This is wonderful stuff.*

See, this is given by the, what does that say, “U.S.A., Hoffman Island, Staten Island, New York.”

*It’s the “Maritime Service Radio Training School.”* [M.McMillan19]

Yes, it had the USMS, that United States Maritime Service, that’s what—

*OK, USMS.*

Yes.

*Now this is all interesting stuff.*

**[00:05:00]** I thought perhaps if you take another few minutes you’d like to see a book that I had put together about [Dr.] McMillan, but you don’t have time.

*Sure. Sure. Let’s do it.*

**[00:05:11]** End Track 2, Disk 2.

[End of interview]





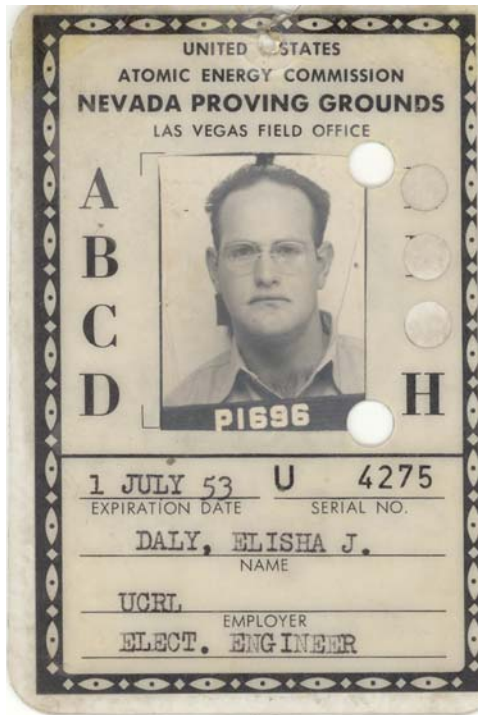


M.McMillan 1





M.McMillan 2



M.McMillan 3a



McMillan 3





M.McMillan 4



TASK GROUP 7.1 KEY PERSONNEL

DALY, Elisha J.      Nickname: "Duke"

DATE OF EMPLOYMENT: August 1947

SCHOOLS: University of California

EXPERIENCE: Commercial Radio  
Operator; Operator in  
Charge, P.A.A. Radio  
Station, Wake Island



Number of  
Operations: 4

Present Position:

Advisory Group,  
UCRL Electrical  
Engineering

UCRL

**TASK GROUP 7.1 KEY PERSONNEL**

YORK, Herbert F.

DATE OF EMPLOYMENT: 1943

DEGREES: Ph. D., Physics

SCHOOL: University of California



Number of  
Operations: 4

Present Position:

Director,  
University of  
California  
Radiation  
Laboratory

UCRL



**TASK GROUP 7.1 KEY PERSONNEL**

**FAIRBROTHER, Forrest**

**DATE OF EMPLOYMENT: June 1949**

**DEGREES: M. S., Electrical  
Engineering  
B. S., Electrical  
Engineering**

**SCHOOL: University of California**

**EXPERIENCE: Experimental physics,  
experimental hydro-  
dynamics**



**Number of  
Operations: 2**

**Present Position:**

**Commander,  
Task Unit 11**

**UCRL**

TASK GROUP 7.1 KEY PERSONNEL

GIBBINS, Walter D. Nickname: "Gibby"

DATE OF EMPLOYMENT: November 1942

SCHOOL: University of California

EXPERIENCE: Manhattan District,  
Oak Ridge



Number of  
Operations: 4

Present Position:

Deputy for UCRL

UCRL

TASK GROUP 7.1 KEY PERSONNEL

GRIER, Herbert E. Nickname: "Herb"

DATE OF EMPLOYMENT: August 1944

DEGREES: B. S., Electrical Engineering  
M. S., Electrical Engineering

SCHOOL: Massachusetts Institute of Technology

EXPERIENCE: Consulting engineer,  
R&D; Executive Vice  
President, EG&G



Number of  
Operations: 10

Present Position:

Commander,  
Task Unit 5

EG&G

*Passenger List* FOR THE 19,488th  
CROSSING BETWEEN  
THE MAINLAND AND HAWAII ABOARD THE "Waipahu"

**DC-7 Hawaiian Mainliner**

ON JANUARY 26, 1956

**UNITED AIR LINES**

**Edward Kwock**  
**Allan Hyne**  
**E. J. Daly**

**CAPTAIN** R. P. Craine  
**FIRST OFFICER** L. Muzinich  
**FLIGHT ENGINEER** D. H. Ellis  
**NAVIGATOR** A. B. Stribley  
**STEWARDESSES** Mary Greene  
Betty Avila  
**STEWARDS** Albert Choy

UPS 1028 REV. 12-54 PRINTED IN U.S.A.



*Passenger List* FOR THE 19,417th

CROSSING BETWEEN

THE MAINLAND AND HAWAII ABOARD THE "Hana Maui"

**DC-7 Hawaiian Mainliner**

ON January 13, 1956



**CAPTAIN** P. E. Roeder  
**FIRST OFFICER** R. O. Moller  
**FLIGHT ENGINEER** J. A. Heisel  
**NAVIGATOR** B. J. McGovern  
**STEWARDESSES** Rose Marie Hominda  
 Dorothy Espeland  
**STEWARDS** Clement Keliikipi

M. S. van Burkleo  
 Mrs. David Howe  
 Samuel D. Matlick  
 Mrs. Marion Ladewig  
 E. J. Daly  
 Allan Hyne  
 H. B. Jordan  
 John K. Murphy  
 Mrs. Grace Johnstone  
 Clarence E. Chick  
 Mrs. Marjorie Chick  
 Robert R. Watson  
 Mrs. Gayle Watson  
 Simplicio T. Tampon, Sr.  
 Mrs. Tranquillina Tampon  
 Simplicio T. Tampon, Jr.  
 Sergio T. Tampon  
 Barbara F. Dillon  
 Kenneth P. Dillon  
 Rev. Charles A. Grier  
 Mrs. Frances G. Grier  
 J. G. Langford  
 John Chudacoff

# The United States of America

NUMBER  
T-2-3410

## FEDERAL COMMUNICATIONS COMMISSION

### RADIO TELEGRAPH OPERATOR LICENSE

SECOND CLASS  
(Class)

This certifies that ELISHA JUNIOR DALY

is a licensed radio operator authorized to operate any licensed radio station of the class specified by the regulations of the Federal Communications Commission, governing the issuance of radio operator licenses.

This license is granted under the authority of the Communications Act of 1934, and the terms and conditions thereof and of all legislative acts, executive orders, and treaties to which the United States is signatory, and all rules and regulations of the Federal Communications Commission, which are binding upon radio operators, are made a part hereof as though specifically set out in full herein.

Neither this license nor the rights granted hereunder shall be assigned or otherwise transferred to any other person.

This license was issued at New York, N. Y. on December 27th, 1944 and will expire at three o'clock P. M. Eastern Standard Time two years from the date of issuance.

#### Special Endorsement:

The holder of this license has obtained at least six months' service as a qualified operator in a shipboard station of the United States, May 6, 1949



*F. V. Sloan*  
F. V. Sloan  
Engineer in Charge  
San Francisco, Calif.  
Federal Communications Commission

*Elisha Junior Daly*  
Elisha Junior Daly  
(Licensee)

*J. H. P. [Signature]*  
(Secretary)

NOT VALID UNTIL SIGNED



State of California

County of Santa Clara

# MARRIAGE CERTIFICATE

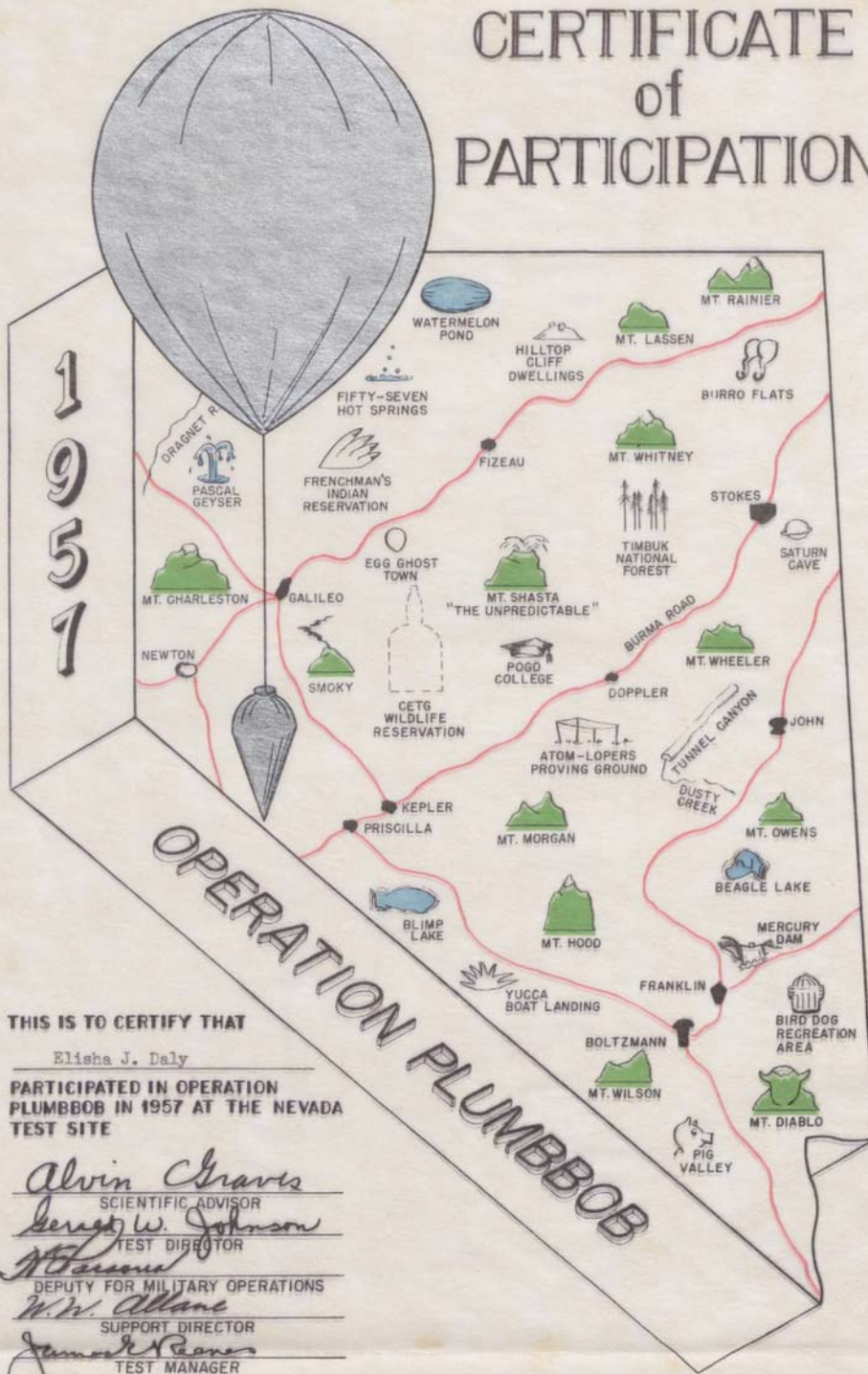
I Herely Certify that on the 19<sup>th</sup> day of July 1945, at  
San Jose, in the County of San Jose, State of California,  
 under authority of a license issued by the County Clerk of said County, I, the undersigned, as  
 a Repect Minister and Elizabeth Marie Stever joined in marriage,  
Clara J. Daly and Elizabeth Marie Stever  
 in the presence of Paul J. Shan, a resident of Longwell County of  
Santa Clara, State of California, and alice Ann Conroy  
 a resident of San Jose, County of Santa Clara, State of California,  
 who witnessed the ceremony.

I Herely Certify that the foregoing is copy of the  
 original certificate of marriage of the parties the wim named.

Licenses Issued by ALBERT T. NEWLIN  
 County Clerk  
 By Ed. G. G. G. Deputy

Rev. Carmel T. Santa  
 Signature of person solemnizing marriage  
Repect Ministry  
 Official position of person or denomination of priest or  
 minister performing ceremony.

# CERTIFICATE of PARTICIPATION



THIS IS TO CERTIFY THAT

Elisha J. Daly

PARTICIPATED IN OPERATION  
PLUMBBOB IN 1957 AT THE NEVADA  
TEST SITE

Alvin Charis  
SCIENTIFIC ADVISOR

Sergey W. Johnson  
TEST DIRECTOR

W.W. Allane  
DEPUTY FOR MILITARY OPERATIONS

James H. Barnes  
SUPPORT DIRECTOR

James H. Barnes  
TEST MANAGER





1956

# Greetings

Know Ye:  
We the Undersigned do hereby certify that

**EMISHA V. DAILY**  
Participated in

## OPERATION REDWING

## ENIWETOK

PACIFIC PROving GROUNDS  
BIKINI

*Robert Stewart*  
Rear Admiral, U.S. Navy  
Commander

*Wm. Beebe*  
Rear Admiral, U.S. Navy  
Chief of Staff

*Wm. Beebe*  
Scientific Director

*John C. Mastromarino*  
Major General, USAF  
Deputy for Air

*John C. Mastromarino*  
Major General, USAF  
Deputy for Army

*John C. Mastromarino*  
Rear Admiral, U.S. Navy  
Deputy for Navy





LIST OF OPERATIONS

NEVADA PROVING GROUND

Upshot Knothole 1953  
Teapot 1954-55  
Sirus - Canceled  
Saga 1957  
Plumbbob 1957  
Rover - Canceled  
Hardtack Phase II 1958

PACIFIC PROVING GROUND

Ivy 1952  
Castle 1954  
Dixie 1955 - Canceled  
Redwing 1956  
Hardtack I 1957-58

CARLSBAD

Pre-Gnome 1959

NEAR SAN DIEGO

Wigwam 1955 by the Navy

LIST OF OPERATIONS BEFORE THIS LABORATORY WAS ESTABLISHED

NTS

Trinity 1945  
Hiroshima 1945  
Nagasaki 1945  
Buster 1951  
Jangle 1951  
Tumbler 1952  
Snapper 1952

PPG

Crossroads 1946  
Sandstone 1948  
Greenhouse 1951



M.McMillan 15



M.McMillan 16



Edward Teller, Father of "H" Bomb

Herbert York, Theoretical Physicist Wife  
Synth from Button Island,  
Head of OPR at Lawrence  
LRH of Pres. Scientific Advisor,  
Chancellor at La Jolla

Harold Brown, Secy of Defense

Hugh Bradner, Tennis Shoes

Stirling Colgate, Pynch theory

Robert Jastrow, Astro-physicist  
Prof. at Dartmouth Univ.,  
Head of Goddard Space Center,  
Advisor to NASA.

Jerry Johnson, Physicist,  
Programs Projects  
Manhattan, La Jolla

Herbert & Dottie Grier, La Jolla

Sir: I hereby accept the appointment as Radio Electrician  
in the U. S. MARITIME SERVICE  
dated 12 January, 1945 with rank as such from Slc  
and transmitted by Comits. ltr. TRG 6-3-6/1846  
dated 11 September, 1944.

Respectfully,

Elisha J. Daly

To Commandant U. S. MARITIME SERVICE

## OATH OF OFFICE

(2616, 1757, R.S., and act of May 13, 1884)

Having been appointed Radio Electrician

I, Elisha J. Daly do solemnly swear (or affirm) that I will support and defend the Constitution of the United States against all enemies foreign and domestic; that I will bear true faith and allegiance to the same; that I take this obligation freely, without any mental reservation or purpose of evasion; and that I will well and faithfully discharge the duties of the office on which I am about to enter. So help me God.

Elisha J. DalySubscribed and sworn to before me this 12th day of January, 1945S. C. FRASER, Comdr., USMS

PLACE OF BIRTH	STATE OR TERRITORY OF WHICH A CITIZEN	DATE OF BIRTH
<u>Sacramento, Cal.</u>		<u>15 January, 1927</u>

NOTE: The above oath should be executed before one of the following officials: The commanding officer on a Naval Vessel; any commissioned or warrant officer of the Navy designated by the commandant to administer oaths for the conduct of the service; a United States Commissioner; a judge of a court of records; a clerk or deputy clerk of a court of record; a notary public; a justice of the peace.

THIS OFFICER IS CONSIDERED QUALIFIED FOR APPOINTMENT

S. C. FRASER, Comdr., USMS

# United States Maritime Service

## Certificate of Graduation

THIS IS TO CERTIFY THAT

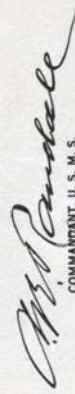
Radio Electrician Elisha J. Daly, 4407-05614, USMS

has satisfactorily completed the course of instruction in Radio  
Operation and Maintenance at the United States Maritime  
Service Radio Training Station, Hoffman Island, Staten Island, New York

Given under our hand and seal this eleventh  
day of January nineteen hundred and forty five



SUPERINTENDENT.



COMMANDANT, U. S. M. S.



ASSISTANT COMMANDANT, U. S. M. S.