Oral History Project
Interview of Mike and Sally Butler
October 6, 2022
Interviewer: Taylour Whelan

(music)

TAYLOUR WHELAN: (music) This is an oral history interview conducted on October 6, 2022, by the [U.S.] Department of Energy Office of Legacy Management in conjunction with the Rocky Flats Retiree Tour that occurred yesterday, October 5, 2022. My name is Taylour Whelan, T-A-Y-L-O-U-R W-H-E-L-A-N, and I will be conducting this interview. To start, could you both please tell me your full name and spell it for me?

MIKE BUTLER: My name is David Michael "Mike" Butler. Uh — I came to Rocky Flats in 1975. I graduated from the University of Colorado in 1974 and was — uh — recruited by Rockwell on the West Coast. When I found out Rockwell took over operations at Rocky, then I started working at Rocky.

SALLY BUTLER: [00:01:00] My name is Sally Butler, spelled S-A-L-L-Y B-U-T-L-E-R.

TW: Mike, if you wanna go into a little more detail about how you got started at Rocky?

MB: Uh — I was working in — uh — well, Seal Beach, California, with Rockwell, and I heard that they'd taken over operations at — uh — the — uh — Rocky Flats Nuclear Weapons Plant, which I didn't know anything about, other than the fact it was in Golden, Colorado. Uh — when my year was up, after one-year tenure, they paid for my move from Boulder to, uh — California. I said, "You know, sign me up with Rockwell in Golden." So I did, and I left there in 1995.

TW: What year did you say you started at the plant? Just to —

MB: I started working at Rocky Flats in [00:02:00] September of 1975. My employee number was 509493.

TW: And what was your position at the plant?

MB: I was a product and quality engineer in buildings 707, 460, 444, 881. But most of my time, I spent — uh — in the modules, assembling pits, watching the manufacturing operations, foundry, machine shop, assembly operations in 707.

TW: Could you go into a little bit more detail about your responsibilities and duties you had in both of those positions?

MB: Yes. Well, actually, wanna step back one. Clearances took a long time back in 1975. My clearance took 75 days, which was a long time for then, and it was done by the FBI. Today, clearances take upwards of a year [00:03:00] or maybe more. Uh — during that time, I was uncleared, unclean, so to speak, all the operations that were done by my group, product engineering, were classified, so I couldn't even be in the building. So they sent me to the maintenance shop, and — uh — I took on responsibility as a gofer engineer for manufacturing of the safe, secure trailers. And I guess the boss was impressed with me, Walt Coven, and he said, "You know, there's something else you can do. I've got to — uh — armor-plate trucks." So the trucks that carried the — uh, uh — or attached to the safe, secure trailers needed to be armor-plated. So I took three or four technicians. We went down to building 881, and we tore a white Freightliner, cab-over engine truck apart, armor-plated it up, [00:04:00] and used that as our prototype. And, uh — it was a great one. Uh — Sandy had bought off on it, said, "Hey, go for it," and we built — uh — 20 safe, secure tractors for the — uh — transport of nuclear weapons. That was my first job, and, after that, I became interested in doing — um — the pits. So I got a job as the product engineer for the W76, which is the — uh — warhead that — uh — Los Alamos, [New Mexico], designed, and I took over in the late, latter part of 1975, early '76 — uh — during the qualification run. So the engineer that preceded me had built development units, process-proven units, and now the final series of units we built were called qualification units. So if those [00:05:00] were good, they could meet our scheduled delivery and go into the weapons stockpile. So, I didn't know what a pit was until just a few days before taking the job. Uh — once we assembled the pits, then they went in for destructive evaluation, which they failed. And I called my boss up and I said, "Hey, boss, these things are failing a certain destructive evaluation," and he — uh — said, "Well, that happens sometimes. Do another one." So we did three or four more, which was a bunch. Uh — that would be three or four hundred thousand dollars' worth of pits. And I said, "Boss, these all failed," and he said, "I'll be right down there." So we failed the qualification lot in — uh — December of 1975, I believe, and we had to find out what the problem was. We had to fix the problem. [00:06:00] And build a whole bunch more units. And we did that in three months, which is unprecedented. Uh — we did a heck of a job. Uh — we had to wrangle up scientists, engineers. It was a seven-day-a-week thing. We had meetings in a war room daily, and we met our first scheduled delivery, and we were rewarded — uh, you know — the gold star, no money back in those days. But we were rewarded the gold star for meeting our scheduled delivery on the 76. Then I went into the W78. We made — uh — several thousand units, can't say the exact number, both the 76 and 78. Uh — and after four or five years of being a product engineer, six years, I said, "You know, I really would like to be on the floor and solve routine problems." So, I became a quality engineer, and they were on the floor, all the time, every day, and [00:07:00] — uh — worked in building 707. And also monitored — uh — production processes in building 881 and building 44. And I did that until — uh — the cessation of — uh — pit manufacturing in the fall, was it the fall of 1990?

SB: Mm-hmm, 'cause I came in the summer.

MB: No, they quit manufacturing pits in December of 1990. During the inventory, we were getting ready to restart operations — uh — pardon me, let me go back one. We had annual inventories for plutonium in building 707. And the big one, well, pardon me, we had routine inventories, but the big one was the annual one in December, and they actually shut the whole building down. And — uh — we'd like to start it back up, asked DOE for — uh — [00:08:00] approval to open it back up, and we were not allowed. So our activities ceased in December of 1990. And then I transferred into — uh — a team to resume activities, and we called it 'resumption,' and there were 300 people of — uh — both scientists, engineers, and a lot of support staff to get operations regenerated back in — uh — building 707. So we did all the procedures and training, etc., to show DOE that we could do it. Uh — unfortunately, that project didn't fail, but it was pushed aside and they said, "We're not gonna restart building 707." So then I started — uh — working on — uh — limited-life components and had a job in building 460 as a product engineer for components associated with the B61 — uh — nuclear weapon.

TW: [00:09:00] Sally, you started in 1990. Could you talk about what brought you to Rocky Flats?

SB: Sure. So I started in 1990. I actually had heard about Rocky Flats in the early '80s and was told it would be a great opportunity, and I lived maybe five miles from the plant, and I said I would never, ever work there. And then in 1990, I got laid off and I — um — got a job with Stone & Webster Engineering. And they hired me to do — um — some admin work. And they said, "And we're gonna send you to Rocky Flats." (laughs) Great. (laughs) So I got to Rocky Flats in 1990 during resumption, and I met a team of people that were so passionate about their work and wanting to resume. And it was easy for me to think at the time it was never gonna resume, having come from the outside, and know how businesses [00:10:00] worked in that way. What they were asking them to do just didn't make sense to me. They would have them run a procedure and then they would round robin it via, we used to have brown envelopes for mail, and so then it would go to this guy, and then he would go through and redline it, and then it would go to the third guy or gal and she would redline it. And by the time it made it back to the original author, he'd say "Well, this doesn't make sense at all." And he'd redo it again. So it just seemed very — um — cumbersome to me. But it was so fun to work with people who were so passionate and really wanted to see that happen.

TW: And what was your position at Rocky Flats?

SB: So when I went to Rocky Flats, I was admin support for out resumption group. And I was there until, I think I was there for maybe six or eight months, and we had — um — another thing about the Flats that was unique: We had a PA system, and so they would make announcements and everybody could hear it on the whole plant [00:11:00] site. And so they made this announcement one day, "All subcontractors, Stone & Webster, you're to vacate the premises immediately." So we had, like, 15 minutes to gather up our things and leave. And so then I was off-site, and at that point — um — I went out to — um — with Stone & Webster to the Denver

International Airport as they were building that, with the thought I wanted to get back to Rocky Flats. And so I applied late — um — in 1990 and was hired August of, I guess August. Maybe it was, when did I start with Rocky?

MB: Oh, I thought it was late 1992 or 3. Ninety-two-ish.

SB: I was there five years. Oh, because I count my Stone & Webster.

MB: Yeah.

SB: So I guess I was, in '91, maybe I went back. And then I was in emergency operations center. I worked on — um — doing, helping with test drills, you know, for incidents. And then I — um — [00:12:00] I was admin at that time, but I really wanted to cross over, and so I crossed over into waste operations and worked in the trailers. And all the trailers had alpha letters, and every letter stood for something. So initially I was in J trailer, which was "jail." Then I went to H, which was "hell." And then from there, I went to 776 and — um — worked with a group — um — to write job safety analysis — um — for packaging low-level waste.

TW: And how did you two meet?

SB: Go ahead.

MB: (laughs) Well, it's a short story, but, uh — I wasn't your boss, was I?

SB: No.

MB: No. Good.

SB: No, I did not.

MB: That's a good thing. (laughter) She was not my boss. We met during resumption in 1990. I was a divorcee, along with Sally. You were a divorcee too. And I saw this cute — uh — [00:13:00] brunette that — uh — I took a liking to her. And we talked and chatted, off-work. (laughter) Not, well, we did a little bit of chatting at work. You know how that goes. I was a wolf at Rocky, you know. Or so she thought. Uh — so we started dating while she was still working at Rocky. Then they sent her off-site, and — uh — she worked at DIA for a while, and we continued dating. And — uh — ultimately — uh — we went through a series of layoffs. You came on in '92. There was a layoff in '93, and — uh — I volunteered, we actually both did that. We both volunteered for the layoff in

SB: Ninety-five.

MB: in May of ’95 because we, I had secured a job at Los Alamos, and I went down to Los Alamos, and Sally followed me with a proviso: “There’d better be a ring on my finger (laughter) [00:14:00] if I follow you.” So we married in 1995.

SB: So, I will just add to that story. So, I worked outside Mike’s office. And — um — at the time, to get on-site at Rocky Flats, there were two gates. There was an east gate and a west gate. And I knew nothing about the east gate. So I would drive miles out of my way to go to the west gate. And so Mike told me one day, “Why are you coming in the west gate? There’s an east gate.” I was like, “I didn’t know anything about it.” And he said, “Well, follow me, and I’ll show it to you.” So I’m like, “Okay.” So, I’m following him, go through the east gate, turn. I’m like, “Oh, this does make more sense,” and then keep following him. Pretty soon, he’s almost at my house, and I’m thinking, “This guy’s a stalker.” (laughter)

MB: A what?

SB: A stalker.

MB: Oh.

SB: I mean, I dropped back, remember? I dropped back so —

MB: Yes, you did.

SB: many miles. But we lived, like, [00:15:00] less than a mile from each other. We just didn’t even know it at the time. But we, and everybody at the Flats kind of knew those sort of stories about each other. Like, it was just a very — um — homey place, I think, that people took care of each other.

MB: A stalker.

SB: I did.

MB: Goodness.

TW: Could you talk a little bit more about the family atmosphere at Rocky?

MB: Yes, we could, or we can. Um — it was a paternalistic organization, and that meant that — uh — you know, your father was your boss, and they treated you like family. Um — there was — uh — jokes of the day. There were many, many potlucks and many parties that were held on sight. Uh — we were treated very well. Our benefits were fantastic. We just, it was a happy

workplace. Uh — I enjoyed working there and [00:16:00] enjoyed the — uh — the familial-like — uh — activities that we did, both on-site and off-site. We were friends with folks off-site. Most of my hunting buddies were from Rocky Flats.

SB: And it was a closed facility, and so if you worked in the trailers, there was a lunchroom up by the trailers, so everybody from the trailers generally ate lunch 'cause you didn't have time to get off-site, go get something and come back. So you kind of got to know everybody in the trailers, and then if you worked, I worked, when I worked in 76, I'd go through packs too, and there was a lunchroom in 750, so everybody ate lunch in 750. So you just got, you started seeing the same people. I mean, like, the lunch ladies were so lovely. Like, when I would go and I would order, like, a half a sandwich and macaroni salad, and this woman would be like, "Oh dear, that's just not enough. Let me put an extra pickle or something on." (laughs) I mean, they were just all so kind. We — uh — gosh, we joked. I worked with a girl who [00:17:00] married, Jenny Fretnick, and she married Fred Fraikor's son, so her name was gonna be Jenny Fretnick Fraikor, and we were eating lunch, and she's telling me about her honeymoon. And he had booked this cruise, and she was so excited to go on this cruise, and then I said, "Oh my gosh, you know, that cruise, you know, you're gonna go by the Bermuda Triangle. You know about that, right?" And she was like, "No." I was like, "Oh, the Bermuda Triangle, like, things disappear." And then there was, like, a group of, like, managers that were Navy guys, and she was like, "That's not true, is it?" And the guys were like, "Oh yeah. It is." (laughs) Then she didn't wanna go on the honeymoon. I got in a lot of trouble for that. But we just sort of teased each other and we all knew little stories. I don't know. It was just a really cool place. We walked to the credit union together, remember?

MB: Mm-hmm. Well, I worked with her fiancé.

SB: Right.

MB: And he wanted to know who that nosy gal was that worked in the trailers with his fiancée.

SB: (laughs) [00:18:00] So we just had fun.

MB: Close family.

SB: Yeah, a lot of nicknames. Yeah.

MB: So where'd they go on their honeymoon?

SB: They went on the cruise. (laughter)

MB: Okay.

TW: I'm very curious, how was the food at Rocky Flats?

SB: Delicious. It was delicious and affordable.

MB: It was. And, most of my time at Rocky, (coughing) I spent in the 750 cafeteria for lunch. And — uh — the ladies were allowed to make their — uh — own recipes up, so there were some family recipes that were being served to, you know, literally hundreds of people. And we enjoyed that. And they brought in — uh — fresh-made sandwiches, like at a deli. This is back in the '70s. That was quite a deal.

SB: Yeah.

MB: You could have half a sandwich with a little bowl of soup.

SB: With different kinds of bread and all kinds of meats and cheeses and lettuce and toppings, and it was really good.

TW: [00:19:00] Were you guys part of any social organizations at Rocky Flats?

MB: Social organizations? Uh.

SB: NMA.

MB: Oh yeah. National Management Association. I was president of that for a couple of years and — uh — member for many, many, many years. And that was an off-site organization that — uh — promoted — uh, um — training and education in management and supervisory skills. So Rocky, one of the things that happened — uh — and you've interviewed many people that started as laborers and — uh — janitors. I had a boss for 10 years that started out as a janitor. And while he was working there, he worked up through the ranks. He became janitor 1, janitor 2, then he became a simple machine operator. And once he was in manufacturing, he started rubbing shoulders with other [00:20:00] technical people. He was impressed by the people that he was around, especially the engineers. He went on to get his degree and became an engineering manager at — uh — Rocky Flats. And that story goes on and on. Many of the men rose to positions of — uh — building managers or building superintendents, and they all had their own little [inaudible]. It's a very, very — uh — responsible people, and they knew the job. They'd been there. They knew every crack in the floor. They knew every machine and all the people that ran them. It was a good place, good family.

SB: Another thing they did at the Flats that, I was part of NMA as well, but then another thing I took advantage of is they brought — um — Front Range Community College on-site. So after work, you could go take classes. And then they built a program with the University of Denver that

once you, it was in waste operations and environmental type things, but then you would [00:21:00] get your bachelors from DU. So, and it was, I think, free, other than our books. It was nice.

MB: Mm-hmm.

SB: You didn't do that, but your ex-girlfriends did.

MB: (laughter) Oh, goodness. Thanks.

TW: Mike, could you talk a little bit more about the organizational structure of Rockwell and what you liked about how they ran it?

MB: The organization structure of Rockwell was — uh — you had command very close to the operations. So my boss reported to a boss who reported to the top dog, the — uh — the manager of the plant, the plant manager. And, very short — uh — organizational structure. The big guy knew what was happening, and he only had 12 disciples, that's what we called them, the 12 directors. So one room, one small conference room, could hold all the directors. Uh — subsequently, I've worked at other [00:22:00] places where, you know, the site doesn't even get together, all the managers. If you put them all in one room, it would be huge. (laughs) I like the fact that — uh — we were production-oriented and if there were problems or rewards to be given, it was, the top dogs knew it right away, and they would apply themselves or apply resources to help you out to achieve the common goal. And that common goal was making those production rates and — uh — and safely. Do it safely. And we did it. We were one of the best, if not the best — uh — production plants in the nuclear weapons complex.

TW: And that ties into my next question. Uh — you said you were a quality engineer. And so how did that — um — play into the quality of products that were produced at Rocky Flats?

MB: [00:23:00] When we inspected product materials at Rocky, we knew exactly what it was. We had metrology labs for chemistry. We had — uh — calibration labs all traceable to national standards. And when we said this was, "How long is it? Or how wide is it? Or how much iron is in it?" We knew exactly, traceable to national standards. I examined other products from other places — um — and that kind of extreme quality was just not available at several places. Our products were great, and we could prove it. And — uh — we had a high — uh — achievement of our quality goals and success, and we designed our — uh — products around what we could produce and produce consistently. So our quality engineers [00:24:00] monitored those processes on a routine basis, so if that process started to get off to one side, then we knew what knobs to turn, or the managers and the technicians would tweak that back over. We made solid products consistently for years and years.

TW: This is for both of you. Um — can you describe how an ordinary day would go for you while working at the plant?

SB: I'll go first; I'll be fast.

MB: Oh, will you?

SB: So for me, once I moved into the zone, we would, you would — um — to go through the packs, you'd have to take off your jewelry, your shoes, because it's like — uh — going through airport security. Um — and the guards would always give you a hard time, but then you got to know them too. And then it was just that's how it was. And so I would go through there. I would — um — walk through that area [00:25:00] to building 776. I went up two flights of stairs to my office, and we would either work on procedures or go into the back of the building and work on job safety analysis with my team or — um — watch them pack low-level waste to make sure they were doing it correctly. Um — break for lunch, go to 750 cafeteria, and go back, and then go back and finish. And then it seems like to me, you can correct me if I'm wrong, but quitting time was at pretty much the same for everybody.

MB: Right.

SB: So you had to go back through the packs at night was kind of like rush hour. Um — but I had a pretty simple job in the sense that it was routine — um — in what we did, so there wasn't a lot of variety. You. (laughs)

MB: Well, there were traffic jams. Our start time was 7:30, so there was a traffic jam at seven o'clock, but we were all nice to each other. You know, if there was a four-way stop, then you let this guy turn —

SB: Oh, that's right.

MB: and you let this guy turn. It was very nice — [00:26:00] uh — getting into work. Long walks, though. Once you parked, you had a long walk to your office. And a typical day started with a cup of coffee for me and reviewing — uh — product — uh — notifications of nonconformance. Um — now I can't remember what we called them now — uh. Anyway, I would look at reports from the previous shift's — uh — inspection and say, "This product was out. Can we use it in a real thing if it has a quote-unquote 'deviation'?" And — uh — then if something was very serious, I would walk down on the floor and review products on the floor, get with the — uh — technicians and supervisors that manufactured that product, if it was nonconforming, and say, "Hey, how can we make this better? We don't want to — uh — screw anything up or screw more things up." Uh — after consulting on the floor, then [00:27:00] I'd come back to my office and do the quote-unquote "regular engineering duties" for a while, break for lunch in the 750 cafeteria, or the 44

cafeteria, 881 cafeteria. I had the — uh — the luxury of being able to go to most of the manufacturing buildings on a routine basis, so I could sample food, and 750 was the best cafeteria.

SB: Didn't our badges have access points, right?

MB: Oh yeah. So. How was it? If your number appeared on your badge, one through 10 or so, you could go into that area.

SB: Right.

MB: So each number designated a specific area you had access. So as a product engineer, I had access to all the areas. And there was another little notation too. It was a special access, remember?

SB: Mike had camera access, so he could take pictures. And he could classify documents. So, you could not just, in a typical work setting [00:28:00] if you wanted to take a piece of paper home, you would just take it home, but — um — at Rocky Flats, it had to be classified. So, before you could get through the guard shack to go in or out, if you had something you wanted to take in other than a lunch — um — it had to be reviewed by a derivative classifier and be marked as unclassified or —

MB: And if it was classified, it had to be packaged in a certain way to get it, you could hand-walk. Hand-walk? Does that sound right?

SB: Yeah.

MB: (laughs) You could — uh — walk through the — uh — guard shacks and carry classified documents from one point to the other if they were properly — uh.

SB: Packaged.

MB: Packaged. There was an inner package and an outer package. So what about that little thing? I can't.

SB: And then on our, when we were working on computers, we'd have that designation too.

MB: The designation of —

SB: UCNE, unclassified, or classified, so people wouldn't just walk in. So your designation, [00:29:00] when I first met Mike, so I was comfortable there because everyone had a Q

clearance, so, like, you knew pretty much you were gonna get a nice guy. Mike might pass. It was so nice, you could leave your purse out and people wouldn't steal anything. It was just that kind of feeling. So, Mike —

MB: But don't leave your Coke. (laughter) Someone would steal your Coke.

SB: So I met Mike and he had this, his badge, and it had CA, camera, C-A-M-E-R-A, and I said, "What is that?" And he was like, "What?" And I was like, "What is a 'ca-MER-a'?"

MB: (laughter) That's an Italian camera.

SB: (laughs) So that's always been a big joke.

MB: So now I'm gonna have a real prize here.

SB: So everybody, like, everybody knew I said that, though, so when we'd go places, they'd be like, "What is a ca-MER-a?" (laughter) You know. We had fun and we, yeah, we just had fun.

MB: Well, your badge had —

SB: We worked hard.

MB: your badge had all the numbers punched out, so you only could go into one [00:30:00] spot, right? And mine had it all, had all the numbers on it, and you asked, "What's going on?"

SB: Here, yeah, 'cause I only, well, at the time when I did that, I didn't even have any punches 'cause I was in the um — trailers.

MB: You were, oh, you were uncleared. (gasps) Ooh.

SB: Yeah.

MB: Yeah. (laughs)

TW: What did your family and friends think you did for a living, since there was a secrecy around working at Rocky Flats?

MB: Most of the folks in Arvada, Westminster, Boulder, well, let's leave Boulder out, Longmont, (laughter) Wheat Ridge, [Colorado], knew what Rocky Flats was and knew if you worked there, it was a, probably a classified thing, so "don't ask too many questions." Um — I did have a friend that said —

uh — had queries from his neighbor. "What do you do? You know, what is it? Well, exactly. Is it green, black?" And he says, "Well, [00:31:00] have you ever heard of flying saucers?" He said, "Yeah." "We make the cups." So put him down. (laughter) Another boss I had — uh — I guess I could use his name: Ed McNamara. So Ed was an interesting individual, very knowledgeable about pits and the manufacturing of pits. And he was an ex-submariner from World War II and kind of salty. And — uh — he had a neighbor that he didn't quite get along with, but — uh — he was okay. You know, he didn't — uh — fight him, if you will, physically. And he also knew what his neighbor did, and his neighbor was a gardener, so he had — uh — a bumper crop of beets, so he was eating a lot of beets. And the wives talked. The wives were friends, so the neighbor's wife told his wife, Ed's wife, that — uh — "My husband's urine [00:32:00] has turned pink." 'Okay, yeah. Well, that's eating too many beets.' So he was talking to his neighbor in the yard a few days later, Ed was, just the two men alone. And — uh — the guy was giving him, you know, jazzing him about — uh — working at Rocky Flats and plutonium contamination yadda-yadda, and he says, "Yeah." He says, "Well, what happens when you do get contaminated and it goes into your system?" And he looked at him and says, "Oh, your urine turns pink." So, you've heard that story, haven't you?

SB: I haven't heard that story.

MB: (laughs) Okay.

SB: Um — so I was, came late. I think my family was fine. They supported me. I think I had friends who were worried because if you didn't, I didn't grow up on the west side, so it was always like, "Ooh, Rocky Flats glows green at night," and even still you'll go places and you say, "I worked at Rocky Flats," which [00:33:00] we speak of proudly, but people will go, still, people will say, "Oh, do you glow at night, or do you glow green at night?" And I think that's just from not knowing really what happened, and — um — I always felt like when I worked at the Flats, when they built the plant, the headlines in the paper in Denver were, I think 1954? Is that when it was? It was like, "Federal Government to Build Facilities," and it was, like, touted like the best thing that could happen for Denver. And then, in the end, it was, like, it's, everybody was like, "Not in my backyard." 'Cause I went to a lot of meetings — um — on my own that were, I was just interested to hear why people wanted it to close. And just some of the things I heard was so amazing to me. Um — and it was just shocking to me that a city could change that much and not support at one time what they thought was one of the best things that could happen to it.

TW: We've heard of the pride [00:34:00] in your work, and that was very evident yesterday during the tour. Can you talk about the source of the pride people have had from working at Rocky Flats?

MB: Go ahead.

SB: Well, for me, I think just going on-site and immediately just connecting with so many people, and it's so familial. Like, you want to do a good job. And I was brought up to if you're gonna do it, do it right the first time. Don't redo it. And I felt like I worked with everybody who had the same dad as me. I mean, we just all wanted the work to be done right. And if it took a little extra time to do it right that was fine, 'cause we were gonna do it right the first time and not have to go back and redo it. And I felt like everybody I worked with was like that. And if you had a problem, they were there to help you — um — to make sure that you got it right. And so — um — I think that's where the pride came for me: is we just really cared about the mission and the product, and we [00:35:00] all had a role to play, some more important than others, but it didn't matter. We all had a role to play to make sure that happened.

MB: I think that's a good thing, what you just said, the roles that we had to play. Uh — we all had specific roles and if those were performed properly, right, within the rules, you made your process — uh — your process made a good part, and that part became a subassembly, which became a final assembly, and ultimately shipped out the back door. Uh — we took pride in that, here's, and we did a lot of — uh — let's see, let me drop back one here. The pride was in the fact that you were a part of defending our country too. That was in, that part became a part that went into a nuclear weapon as part of a stockpile, and we — uh — I think the term was diamond-stamped, when it [00:36:00] had the, got, when it got the diamond stamp from the Department of Energy, you knew it was good. And everybody performed their jobs — uh — in a way that — uh — gave us all pride in our work. And we respected that. Uh — we had toolmakers and machinists and welders and foundry workers that — uh — made very good products. And your work was recognized whether you were union or — uh — a craftsman or an engineer or a scientist. We all enjoyed it: the pride in our work.

SB: And we replicated it. 'Cause we, I remember when I first came, I was, it would just be, like, the hymnal. "We're gonna do page 176," because we knew what to do. And I know when we left Rocky Flats and went to another nuclear weapons site, it wasn't quite like that.

MB: No, it wasn't. (laughter) Everybody had [00:37:00] a different sheet of music.

SB: (laughs) So.

TW: Rocky Flats experience is unique.

SB: It was.

MB: It was unique. And very rewarding, our experiences at Rocky Flats. You're interviewing us as a couple. Have you interviewed — uh — couples before?

TW: No.

MB: Oh, you haven't?

TW: No, and this is great. You guys are doing great.

MB: (laughter) Okay.

TW: Uh — what was the plan if there was a nuclear strike at the site? Was that something that you guys had planned for or you were aware of?

MB: A strike in employment? Or a strike as in —

TW: No, a nuclear —

MB: we were hit?

TW: strike, like, you were hit, yeah. Was that something that was covered or —

SB: Did?

MB: We had a lot of contingencies for several accident scenarios. Uh —

SB: I don't remember that one.

MB: a nuclear strike was — eh — I don't recall.

SB: I mean, we had one if a plane crashed in. We had a fire. We had spills, obviously, if something happened like that, or [00:38:00] there was a big contamination. But I don't really remember.

MB: Contamination incidents. Uh — we had a lot of drills in contamination incidents and fires and terrorists kinds of things, and, but a nuclear one? Uh — that was over my head.

SB: And protestors. Um —

MB: And protestors.

SB: Tell them about the nun. Have you heard the nun story?

MB: The nuns got into, uh — got past the first guard shack. Well, let me drop back. Uh — we had a lot of protestors at Rocky Flats, protesting nuclear weapons and — uh — two local nuns drove a car past a guard shack by showing, what, a pack of cigarettes?

SB: Salems. Because our badges, if you were Q clear, were blue, and they had a pack of Salems, I think, they're kind of that green.

MB: That's a green? Anyway, they got through, and they managed to post some — uh — messages on — uh — on a security fence to a more secure area. [00:39:00] So it's your story. What are you gonna —

SB: No, I just, I thought it was interesting the nuns made it through. Like, I mean, all the other protesters I was aware of were all outside the fence. But these ladies actually made it in before they were escorted off-site.

MB: Yeah.

SB: And after that you had to stop and they touched your badge. (laughter) No more window waves.

MB: Change in process; make the process better. But there were other protests at Rocky Flats. And — uh — you know, once a year, there'd be something out at the, usually the west gate, that's closer to Boulder. That's (laughter) — uh — but we had, what was it? Daniel Ellsberg, or something like that? Came and had a protest on the frontage road from the west side of the plant, and — uh — there were several thousand protestors there. Some of those were arrested. In about 1992 or three, I think, [00:40:00] there was, when we were trying to restart plutonium operations at the Flats, there were protests against that. And they housed those protestors, if you recall.

SB: I do, that's right.

MB: Right next to building 130, they made a jail for them out of chain-link fence, and we got to go look at the inmates before they — uh — bused them into Boulder or Golden for — uh — arraignment.

TW: How have your lives been influenced by Rocky Flats?

MB: Oh my goodness. It's a very good question. Uh — it — uh — changed my life totally. Uh — I met my wife there. We've been married for how many years, Sally?

SB: Phew. Twenty?

MB: Twenty-seven.

SB: Yep.

MB: Okay.

SB: Together for 32.

MB: Thirty-two?

SB: Whatever. Go on with your — I — I'll have — go ahead.

MB: Uh — my children — uh — pardon me. I lived downwind from [00:41:00] Rocky Flats. Uh — I was not afraid. It's a safe environment. I was 100 percent — uh — guaranteed by my friends and family at Rocky that we had safe operations. Uh — I stayed on. I, matter of fact, I've only had one real professional job my whole life, and that's as a product engineer, project manager kind of engineer for nuclear weapons products, pits, and — uh — I didn't change for 40 years. I changed jobs and changed titles and companies, but that's what I did for my entire career. And I got that — uh — passion from working at Rocky Flats around some of the best — uh — and most talented technicians, scientists, and engineers. And I love 'em and still do.

SB: Rocky Flats changed [00:42:00] my life immensely. I think it helped me come into my own. And it — uh — obviously I met my husband there, which has been a great partnership, but it also gave me — uh — I got my Q clearance, and that gave me, I think, more confidence to — um — explore different options. And it just shaped me. And — um — yeah, and the people I've met are still in my lives, unless they've passed on. So — um — all the people that we saw socially 32 years ago when we met, we still see. And — um — yes, it was, it's, I think my life would've been totally different, and not in a, not as — um — nice a life as I have now.

MB: Which brings up something I wanted to say, and it's about secrecy. Uh — prior to my coming to Rocky Flats in 1975 [00:43:00] — uh — the plant was operated by Dow Chemical, and under Dow, and the — uh — Atomic Energy Commission, man, there was a big security lid placed on any information coming out of Rocky Flats. And the '69 fire was not announced to the public — uh — right away, and details of that were — uh — not forthcoming from either the government or from Dow, and it may have led to Dow's demise — uh — by not being forthcoming or interactive with the public. Uh — Rockwell came in, and they were more active with — uh — communications with the public, newspapers, and the, you know, media. And it — uh — to the chagrin of many of my — uh — mentors at Rocky Flats, having gone through the super-secret phase, and it seemed like [00:44:00] the thing to do for me. Uh — Rockwell operated the plant from 1975 to 1990. And although they were more open with the public, they probably should've

been even more open, especially in areas associated with contamination and — uh — harmful things to the environment. There were a lot of things going on, a lot of — uh — gossip and rumors and — uh — like, some of the things that can go on on Facebook today, some of the bad things, bullying, not bullying, but — uh — disinformation. And perhaps Rockwell should've taken a more progressive approach to subduing that disinformation. Um — prior to this interview, last night I looked at YouTube and saw a newsreel, a one-hour news special, on — uh — the [00:45:00] things that were allegedly happening at Rocky Flats, and it was pure poppycock. It was a safe environment. You knew the guys who were ensuring your safety. You knew who they were, you knew their families, and if that guy said, "We're okay here on contamination," you could take that to the bank. We were honest and trustworthy. However, the public's opinion changed and — uh — it was pretty attacking. And that may have led to the demise of the pit manufacturing mission at — uh — Rocky Flats in 1990.

TW: How did it feel yesterday to be back at the site?

MB: Oh, it was wonderful. Wonderful. Uh — we haven't set foot on that site since — uh —

SB: Ninety.

MB: Nineteen-ninety-five, 27 years, and we could recognize with the help of — uh — our [00:46:00] docents and — uh — the trees, there were, they're still remaining — uh — where we worked, and there were a lot of discussions about the buildings, especially from — uh — Ken Frieberg. He built most of them, yeah, (laughs) in his tenure there. Uh — there was one area where I didn't recognize, and that was the 371, and that'd been relandscaped. But it was nice, and it — uh — brought back a lot of good, fond memories of that place.

SB: I thought it was bittersweet. I do think it brought up a lot of memories at, and great memories. Um — but it was also sad to me because, gosh, although Rocky Flats changed my life in fantastic ways, it also changed my life because I left where I grew up, and it would've been awesome to have just stayed and done my full career at Rocky Flats. And so, for me, in that sense, it was bittersweet. But it was awesome to be back on-site.

MB: [00:47:00] And the Department of Energy could've done a better job of — uh — ensuring that the longevity of this very valuable resource, the technical — uh — knowledge that we had at Rocky Flats, and I was just speaking with someone right before this interview about what happened when sites closed. I happened to work with a young man from — uh — Pinellas, and they made — uh — neutron generators, I believe. And, he said that when they closed Pinellas Plant, Sandia [National Laboratories] took over the mission, Sandia in Albuquerque, [New Mexico], and they invited — uh — hundreds of employees to come help them out with that mission. And when they came to Sandia, they were given their time and grade, so they brought

all their — uh — years of services into their retirement plan at Sandia. Sally and I went to Los Alamos [00:48:00] and — uh — the only thing that it got me, the only —

SB: Vacation.

MB: The only benefit that I got from my 20 years at Rocky Flats — uh — was — uh — vacation. So I lost 20 years of service and I could've retired from — uh — Los Alamos with 35-plus years at a, you know, a very nice comfortable pension. And that didn't happen, so there was a difference. Pinellas, you know, they granted the service. Los Alamos did not. So if there was a recommendation I could make to — uh — DOE: you know, if you're closing these sites, take that very valuable — uh — resource that — uh — that knowledge and make sure it gets to the site that go, that maintains information.

SB: Consistency. At least consistency. Every site was treated different.

MB: [00:49:00] Every site was treated a little bit differently.

TW: Uh — before we close out, do you guys have any memorable moments or any last thoughts you'd like to share?

MB: Well, yes. Uh — I did 20 years at Rocky Flats as a product engineer, quality engineer, and then I went to Los Alamos: Los Alamos National Laboratory. While I was at Rocky Flats, the products that we made were — uh — designed by either Livermore or — uh — Los Alamos; Livermore, Sandia, and Los Alamos. And we had representatives from those design agencies, we called them, that would come in and look at our products for quality — uh — work with us when we were — uh — developing new products for them and — uh — ensuring that — uh — everything was [00:50:00] "good to go," a diamond-stampable product. In the case of Los Alamos, we saw one person as that design authority or design agent, and that was the engineer from weapons engineering in Los Alamos. In the case of Livermore — uh — there was a team that would come in, usually — uh — represented by the engineer. But when he brought the physicist, the physicist ruled the show. So the physicist that designed the weapon, along with his — uh — mechanical engineer, production engineer, and — uh — experts in different fees — uh — fields, chemistry, or metallurgy, depending. So they had — uh — teams that would come into Rocky Flats and help us with — uh — developing product and ensuring that the products that we were producing on a regular basis — uh — going into the stockpile were okay. Uh — when I went [00:51:00] to Los Alamos, I found out why the — uh — they were only represented by the engineer. It's — uh — (sighs) Los Alamos is the place that the atomic bomb was invented, and they did a heck of a job. Today, it's — uh — they can make pits and — uh — refine plutonium, but it's in a research-oriented mode. Uh — the engineer wouldn't let the scientist come because they're kinda — uh — they're not on the same team like the Livermore people were. And it's difficult to connect all the chemists and the metallurgists and the machinists and the welders

altogether to make — uh — a good — uh — production product at Los Alamos. [00:52:00] And to quote a former director of the lab, Norris Bradbury, he said, "Los Alamos is 20 separate companies connected by a common janitorial service." And I talked, spoke about organization. The organizational structure is for research at Los Alamos. It's not for production. So getting all those 20 organizations, together, in one room, (laughs) to make — uh — production pits is a challenge. And I was the design agent for the W88 pit, the type 126 pit, at Los Alamos. And it was one of the most difficult jobs I've ever had assuring that — uh — we produced quality product that could be destined for the stockpile. I rejected many — uh — substandard products that were candidates [00:53:00] for that stockpile, and it was tough on me. It was very tough on me. At Rocky Flats, (snaps) no problem. We'll fix that.

SB: Tough on you in the sense that —

MB: I got pushback from management to change my mind. So. That's a difference. That's why I said the organizational structure is, in a production environment, fantastic at Rocky Flats. And, Los Alamos just wasn't designed to do that. It's difficult.

TW: So it was quite a transition going from Rocky Flats to Los Alamos?

MB: Yes.

SB: Quite.

MB: Uh — yes, it was. Big town to small town. Yeah.

SB: And the other thing that I thought of while you were saying all that is when I first came on-site, it was resumption was the mission, and people I met, and they were [00:54:00] engineers, production engineers, design agency guys. They were working 70-hour weeks, sometimes 80, you guys?

MB: Right, 70-hour week was our standard, and — uh — I never made it to 100-hour week.

SB: But Brown did.

MB: But my best friend, Curtis Michael, Mike Brown was working 100-hour weeks. That's the passion. You think about it. Think about what a 100-hour week is like. You know, that's more than 16 hours a day.

SB: I mean, that's just how devoted they were and how much they cared, and — um — I've been on other sites, not as many as you, but I'm telling you, 7:30 start, 3:30 out, you know?

MB: Yeah.

SB: Um — so it, I've never seen that type of passion [00:55:00] in a workforce in a government structure in my life.

MB: We were. And that's, so Sally was from the outside, and I was from the inside during resumption in 1990, and that was one of the comments that we received from many of our — uh — off-site peers is when they came into Rocky and they saw the rank-and-file engineers working passionately to get this place going again: 60, 70, 80 hours a week. Uncompensated. I did — uh — what was it, 35 hundred hours on my timecard in 1990 of which you're compensated for. What is the standard?

SB: Fifteen.

MB: Twenty-two hundred hours or something.

TW: Do you think it was the culture at Rocky Flats that brought on that dedication or the focus on production?

MB: It was the culture. And that culture of — uh — [00:56:00] getting it done, and getting it done on time, within specification, and being proud of that. It went all of the way through. It was — uh — surprising for your friends that you brought, you know, who you came with from Stone & Webster Engineering.

SB: Right, right. Um — just you don't see that kind of passion, really, in — um — sometimes you find it, but it's rare. And it just was permeated. I mean, the, if you, it didn't matter what you did. If you had to stay, I mean, they stayed. They, it was like family, I guess.

MB: Rocky Flats was a gem and I don't think — uh — the DOE realized what they were getting rid of, and it's unfortunate. You know, missions were transferred to other locations. Uh — the management at those locations, "Oh yeah, we can do that. We can do whatever Rocky did." Well, it cost millions of dollars [00:57:00] to do that, and some of them still can't.

SB: I mean, even, like, on the tour yesterday, one of the gentlemen brought up more than once, and I remember thinking that at the time, when a lot of people were leaving in 1995, they just let people go. They didn't think about knowledge transfer. They didn't ask people, "Hey, could you stay and mentor?" Um — and the gentleman yesterday said, "All those documents were just put in drums and then dumped in Idaho," I believe he said, and them falling apart and waterlogged, and I think that was a real shame for lessons learned in life.

MB: I'll put in a tick for — uh — document control, document management. Rocky Flats had an outstanding document management system. We could tell you the parts in — uh —inspection, the — uh — record of assembly — uh — [00:58:00] what the inspections were, what the chemists were for every part in that assembly. And we could find it for things that we'd manufactured five, 10, 15, 20 years before. We knew all the supporting documentation for the processes. We had the drawings all up to speed. We knew where we could get old prints for revision A if we were at revision Z. We had an outstanding records management document control system at — uh — Rocky Flats, and believe me, we don't have that same kind of control at other facilities.

TW: Any final thoughts?

MB: I've been kind of tough on the DOE today — uh — in certain respects. But in other respects — uh — you know, it's a tough mission. The entire nuclear weapon mission, they've got — uh — they've got a tough job to do. [00:59:00] And — um — although I didn't like the closure of Rocky, that's what the boys decided uptown. Um — there's been a good crew that came in since 1990 to help in — uh — taking the place apart and monitoring what's there today. And y'all have done a great job in doing that, so.

SB: Yeah.

MB: Unfortunately. (laughter) Okay.

TW: Thank you so much, Mike and Sally, for sharing your story with us today, and thank you for both your work at Rocky Flats. And if you don't have anything else you'd like to share, then I'll conclude our interview.

MB: Okay.

SB: Thank you very much.

MB: Well, thank you.

END OF AUDIO FILE