

Molly Graham: [00:00] This is an oral history interview with Commander Pamela Chelgren-Koterba on April 5, 2023, for the NOAA Heritage oral history project. The interviewer is Molly Graham. It's a remote interview with Commander Chelgren-Koterba in Bellingham, Washington, and I'm in Scarborough, Maine. You were just telling a story off the record. Now that we're recording, I'll let you continue.

Pamela Chelgren-Koterba: [00:23] Okay, so to repeat – you mentioned that I got some sort of award in high school. It occurred to me afterward that there was a program that I attended between my junior and senior years in high school at Western Washington University in Bellingham, and it was advertised there at school as something you applied for. That's maybe why it showed up as an award. There was one other girl and myself that were selected from my high school to attend that. My recollection was there were three courses that were offered, and you could pick two of the three. I picked anthropology and computer programming. You could elect to have those applied to your college credits or not. I used the opportunity to get my first experience of college life and didn't elect to have it applied to my college credits. We had one female TA [teaching assistant] and one male TA that were trying to ride herd over us during non-class hours, which I feel really sorry for them because we were all a little bit rambunctious. But that's probably what that award was referring to. As I mentioned earlier, my family moved between my junior and senior year, so they dropped me off in Bellingham, and then they went down to California. That was that, and then I joined them in California. It probably contributed to, when attending that last year of high school, my senior year in California, feeling not particularly bound to that high school, kind of independent. Anyway, I just thought I'd bring that up because it occurred to me what that award you were referring to might have been.

MG: [02:49] Was that the first time you were on your own without your parents?

PCK: [02:54] Well, the other circumstance – remember, I was saying that my folks would have us join in the church's youth groups, and they would sponsor things like camping trips, and I think I mentioned the ski bus, and so on. The camping trips, yeah, that was independent of my parents, but generally, a sibling was along. So I wasn't by-myself-by myself. As far as by myself and clearly by myself, because my family wasn't local anymore – oh, and there was this other – I think I may have mentioned this, but one other thing that my folks did. My maternal grandparents offered up coming out to their place in Santa Cruz for the better part of a summer when we were ten years old. Again, although I was separated from my family, they were my grandparents, so I wasn't separated from family-family. I did spend my summer when I was ten years old out with my grandparents in Santa Cruz.

MG: [04:18] I also meant to ask if you worked during your summers in high school and college.

PCK: [04:24] Yeah. It was pretty blue-collar work in high school. There was a berry farm on – what was that island? – Bainbridge Island, I think, that a first generation Japanese family owned. There was a little water taxi that would take us over from a dock there in Bremerton onto Bainbridge, and we would spend the day picking berries. It wasn't the most serious activity for the teenagers because we were all kids who had been sent by their parents to have us do something. They would pay you by the number of little baskets that you picked. We were not really – I mean, we kind of worked at it a little bit. But the real pickers were the ones that were

producing. It was pretty clear that the teenagers were – this was just something that our parents sent us over to do. On the other hand, in my senior year in high school, I did work over at the mess hall on base. That was an interesting experience. I was warned ahead of time [to] just be cold and brusque with any sailors that walked up and wanted to have a conversation. I was seventeen years old, for goodness sake. I was intimidated at first when they did that, but then I got pretty good at it. I also spent part of my senior year – now, I didn't get paid for this – being a math tutor at school. I needed to have something to occupy myself. I didn't need all that many credits to be able to graduate. My counselor suggested tutoring, and I actually liked that experience. Those were the things I did in high school. The real jobs during the summer didn't take place until my college time.

MG: [07:11] Can you tell me about those positions?

PCK: [07:14] Well, the first one – for some reason, I think my aunt had a relationship with the bank, but I worked at Barclays Bank, which is owned by a company that's owned by a British company, as the bank bookkeeper. You couldn't tell the complete truth in those job interviews because they were like, “Are you just really coming for the summer? Or are you going to be with us?” And I would say, “Well, I'll be working part-time during the college year,” and then I didn't. So, I was at Barclays between my freshman and sophomore year. I was at a bank in San Jose between my sophomore and junior years. My sister was going to San Jose State, and we roomed together. I had the same kind of job interview question. Actually, I was a teller there. And then, between my junior and senior years – did I mention working at US Berkeley's Space Science Center?

MG: [08:22] No. Is that what you did your senior year?

PCK: [08:24] Between my junior and senior year and then part-time in my senior year. They had an advertisement for a summer position. When I was scheduled for my interview, I missed the shuttle bus. On the Berkeley campus, it's down on the regular elevation for the community, but the Science Center was up on Grizzly Peak. I had a three-speed bicycle. When I missed the shuttle bus, I rode that thing up – pedaled up to the top of the hill. I missed my interview. When I came in, the guy said, “Well, I'm sorry, you missed your interview, and we've already selected somebody.” He looks over at the bike I rode, and he says, “You rode that up?” [laughter] I said, “I missed the shuttle.” He says, “Well, look, the next opening that's available, we'll let you know.” Because he was just so amazed that I attempted to pedal up Grizzly Peak on a three-speed bicycle. The elevation was approximately seven hundred feet. Later in the year, they said, “Hey, a position has come available.” Although I was in my senior year, I was graduating, but then I felt like, “Well, he's looked out for me. I ought to take this.” That's why I was working part-time at the Space Science Lab up on Grizzly Peak. So if you see any of those pictures from the NOAA official file where I'm at a mag tape – that one – what I was doing was checking the quality of those tapes. That was what my part-time job was. So did a lot of loading and unloading of magnetic tapes. I think that was the old satellite sensor – the sensors. Now I forgot the name of that whole system. But it was a system from the '60s, the first one of any note that had ongoing collection of satellite information from space for the United States. For some reason, I can't remember the name of it.

MG: [11:01] Was it the Orbiting Geophysical Observatory?

PCK: [11:06] Yeah, but there was a common name for it. There was a common name for it. Right off the top of my head, I can't remember the name of it. But anyway, that was why you see those pictures of me with those mag tapes. Again, the guy was just so amazed that I actually pedaled up Grizzly Peak on a three-speed bicycle. [laughter]

MG: [11:32] Can you tell me more about the work you were doing there? What were you mapping? What was the data you were collecting related to?

PCK: [11:39] Okay. NOAA has a lot of satellites they put up; that's part of the NESDIS [National Environmental Satellite, Data, and Information Service] office, and they collect both satellite-derived information about meteorology, some oceanography sensors, and other such things. The name of the satellite program was something-"stat," but I can't remember the actual – there was a common name. The resolution on that information was from the '60s, so it was really very broad, non-discrete geophysical, like you said, data. But my only role was to check those tapes to make sure that they were in good shape, the data was good, [and] there wasn't anything corrupted. It ran some sort of what they call a checksum. It's a term in data collection where you include something in the data that allows you to know whether or not you've lost any bits.

MG: [13:10] Yes, I remember checksums from library school.

PCK: [13:13] Oh, well, there you go. There you go. Same, same.

MG: [13:17] You were also involved in the sailing club. Was that during your senior year as well?

PCK: [13:22] Well, junior and senior year. Actually, that was what I had as the outside or extracurricular activity at Berkeley that I was really most engaged with. My classes, I was just taking because I needed to take [them] to graduate. I think I mentioned earlier I started out in the engineering department, I think electrical. By the end of my sophomore year, I realized that electrical engineering, for the most part, if I was doing – there's the practical side, which I didn't have a background in, and then a theoretical side, which you might have to have a love of partial differential equations for. I got through ordinary differential equations. I thought those were great. But once I got to partials, I was like, "I don't want to do this anymore." So, I took the Strong Vocational Interest test, and what it showed was that my interests aligned better with the life sciences than the physical sciences. I looked around amongst the various degrees and the different colleges at the university, and I knew, first of all, that I wasn't the greatest with rote memorization. If you're in the life sciences, you really do have to have a good memory for very detailed information. I really didn't want to leave the College of Engineering, so I figured, okay, bioengineering, that sounds like a good compromise. Did I know what it was? No, I didn't know what it was. I was essentially taking the classes that I needed to take to be able to satisfy that. My counselor, when I got to my senior year, said, "Look, you actually need to engage in something. Why don't you go for an independent study? We got this one professor here that's doing work on temperature regulation of amphibians." [laughter] I said, "Okay, I'm up for it."

My job as his assistant was – he had Bufo Boreas toads. They were in these little bins, and they were in temperature-controlled areas. He put a lamp in some and no lamp in the others, and they were canted a little bit, so there was water in there. It was to show whether or not the toads had an interest in regulating their temperatures depending on the temperature profile in their little bins. If you put them in with no lamp, they'd stay in the water. If you put them in with a lamp – and they all got the same food, by the way. I put the worms of some nature in there with them. But if they had no lamp, they were staying down in the cold water, and they would not eat as much. If you put a lamp in there, they ate more, and they'd hang out right around the lamp. As a matter of fact, you had to be careful about positioning the lamp because they would climb on them, which is not a good thing when the lamp would – the lamp was on a cycle – daytime, nighttime. And when it turned on, they would stay on it and burn themselves. When he published, he was incredibly generous; he included my name in his paper. I only discovered this a number of years later because a coworker said I had a Wikipedia page. I said, "Say what? A Wikipedia page?" Down at the bottom, it references my – it has my name on that professor's paper that he published. I was like, "Well, that was awfully generous." My role was taking care of the bins, watching their behavior, and so on. That was an unpaid job, but getting credit on a paper, for goodness sake, when I'm still attending college. But the work-work was checking for checksums, like I say, on those tapes up at the Space Science Lab. It was my practice every day to catch the shuttle up, put my bike on the bike rack on it, and then I would bicycle down with my three-speed. I wore those brakes out. Those were my work experiences.

MG: [18:42] I have in my notes that you enrolled in two naval science courses to learn navigation. This was partly inspired by your interest in sailing.

PCK: [18:50] Right, right. Yeah. When I was in the sailing club, they pointed out these things called nautical charts. I was like, "Whoa, that's cool." So I did take both – first, coastal navigation with them and then celestial. I actually received college credits for taking navigation before I even applied to NOAA. I was the only woman in the class. One of the other pictures shows me in that class with the officer in the front and all of us college students. There was one other non-ROTC [Reserve Officers' Training Corps] person in there. A guy and myself were the only two non-ROTC people. Everybody else was Navy-ROTC.

MG: [19:53] These were the Vietnam years. You attended Berkeley from '68 to '72. How did that impact you? The campus? How were the ROTC students treated?

PCK: [20:08] We didn't talk about that in class. Actually, you're going to have to remind me if we already talked about this. My junior and senior years, I was rooming in an apartment with – well, particularly in my junior year with Asian Americans. The talk was about racial stuff a little bit.

MG: [20:34] Yep, we talked about that.

PCK: [20:36] Honestly, I don't even remember. Even though on campus there were anti-war demonstrations, I wasn't engaged in that. My brother was over there. I certainly wasn't against the participants because many were drafted. As a matter of fact, the actual draft, where they did the lottery, was near the end of my first year. I hung out with a couple of my male classmates as

we were in the dormitory, watching the television in the common area. They called out – because I think they started with – because it was by birthdate. I think they started with 365 and then progressed up. At the beginning, it was like, “Yay.” So I observed that. But my brother didn't wait for that. He knew he was kind of at risk even before the lottery. He elected to join, thinking that he could select a useful field to specialize in. It didn't work out that way. He wasn't in the infantry, but he got pressured into doing something that he didn't want to do. Recruiters can be that way. [laughter]

MG: [22:32] Towards the end of your senior year, how were you thinking about your next steps? What connected you to the NOAA Corps recruiter? How did that work?

PCK: [22:43] Remember, my bioengineering was a default to have me still in the College of Engineering. I should have looked at what my potential jobs were afterward. But back in those years, the early '70s, there wasn't even a formal environmental degree or anything like that. Most of my interviews were with pharmaceutical companies. I was like, “Well.” It was not a wise major for me to have for the specific engineering job that I would get. There were other Services that had interviews on campus. But at the time, if you joined as a woman, you were in what we used to call a woman's auxiliary service. We had the WAVES [Women Appointed (later Accepted) for Volunteer Emergency Services], the WACs [Women's Army Corps], all that. I didn't have any interest in doing that. When the NOAA recruiter showed up on campus – I think I mentioned this already. No, I may not have. He spent the first part of his – Bob Smart was his name. He spent the first part of the interview talking about what NOAA does and what officers generally do. And that after going through the officer training class that everybody goes through, you would almost certainly go out to sea on one of the ships, either a hydrographic survey ship or an oceanographic research ship, or a fisheries ship or something. Then, you would rotate ashore into assignments that were in offices that aligned with what your background was, if possible. He'd go on and on about the benefits, the pay, all that. My first question to him was – because all I knew were these other Services that had the women's auxiliary arms. I said, “Well, my first question is, am I going to be able to go to sea?” Again, this is during the Vietnam time, and a lot of the people joining – the guys joining – were joining to take care of their selective service requirements. He says, “That's not the way that most people phrase that question – ‘be able to go get to go to sea’ – so you certainly will.” [laughter] And then the other thing you said was, “Also, by the way, if you do get selected, I do need to let you know that you'll be the first woman joining, and there will almost certainly be some sort of publicity associated with that.” I said, “Is there any way I can get out of that?” He said, “No.” [laughter] “Oh, okay.”

MG: [26:23] I want to understand this better. Was it a policy decision that was made previous to this moment in your life? Or did you express your willingness, and they had to make a few phone calls to see if they could allow women in?

PCK: [26:34] No, they were actively searching. The head of the NOAA Corps/ NOAA Operations offices was Harley Nygren. And a year before, he had let the senior staff know and let the recruiters know that he, upon looking at what the needs of NOAA were and what the working environment was with NOAA, there was no reason that a woman – you'll see him say that in that “Women and NOAA Corps” [video]. There was no reason why women couldn't be

in the NOAA Corps. They actually had one woman that would have been selected, but when she was told she would be the first, she went, "Uh-uh." [laughter] The only difference between her and me, as far as I know, was I went, "Oh, okay."

MG: [27:43] If they were actively recruiting women, why not select two women?

PCK: [27:49] There were very few women that were willing to go into the field at the time, particularly if they were going to be put through this little publicity routine. That woman's issue was she really didn't want to be some sort of publicity puppet for however long. I don't know. She must have had other prospects. I'm not sure. Yeah.

MG: [28:26] I have so many questions. I take it the ESSA [Environmental Science Services Administration] Corps was not open to women.

PCK: [28:33] Correct. It was Harley's policy change that he made. According to him in that other interview – because I think I kind of heard that, but it's the first time I officially heard that – it was his policy change. He instituted the active search a year before I was selected. That was what I heard. But any more details on it – unfortunately, Harley just passed away, I think, a year or two ago.

MG: [29:10] Was Bob Smart looking to actively recruit you, or was he on the Berkeley campus trying to find women who were qualified?

PCK: [29:17] Number two. Well, no, not just women. He was recruiting for the NOAA Corps. It was open to all. You know how it goes in the placement centers. The various people coming to do their job interviews they're recruiting from all the companies and government agencies. They work through the placement office and set up interviews. The ones that were suitable for the College of Engineering put copies up in the College of Engineering offices. I saw that advertisement and went, "Wahoo." [laughter]

MG: [29:59] What do you think Harley Nygren was responding to that influenced his decision to open the Corps to women?

PCK: [30:06] I really couldn't tell you. I mean, the best you'll be able to get background on that is that video. Was it a ten-minute video or whatever? Watch that video.

MG: [30:21] How immediate was your yes? Did you have to think about this or sleep on it?

PCK: [30:26] Oh, yeah, no. Because the other thing that Bob Smart said [was], "Well now, you know this is an unusual lifestyle, and I want you to be prepared for it." I said, "Hey, I'm a Navy dependent. I knew all about the moves. I know about isolation. I know about being one of the very few women around because my whole college life, all my classes – the physical science classes [have] very few women. So I'm familiar with that." I didn't realize how much it would be a multiplying factor when you actually work and live in a remote environment. But I had a sense of it already. I already knew what life was like moving every couple of years. That was my whole time growing up.

MG: [31:25] Bob had warned you about the publicity that would be involved in this. What did the publicity look like?

PCK: [31:32] Now, you could look at the NOAA files to see that. [laughter] My real commissioning – because they couldn't pay for my flight to come back to DC until I was actually on board – happened. The naval officer that did the navigation class actually did my real commissioning. [laughter] I was a commissioned officer once he gave me the oath. There's an oath of office that you take. I packed up and moved to Washington, DC. They did the ceremonial commissioning with Peter G. Peterson, the Secretary of Commerce, and my dad. I was supposed to be in service dress whites. My dad said, “Oh, I haven't fit into my service dress whites in over a decade. I'm going to show up in service dress khakis.” That's why you see me in service dress whites, my dad in service dress khakis, and Peter G. Peterson in those official NOAA photographs. When I took the flight back, I was showing up at the NOAA offices. They assigned this civilian woman to me to take care of getting me ready for the ceremony and all that because all this happened a couple of weeks before my actual officer training class. Given [that] I was the first woman in, [the] first thing we had to do is figure out what my uniforms were going to be. [laughter] As a default, the service dress uniforms were going to be the Navy service dress uniforms. The Navy, the Coast Guard, and NOAA all used the same Navy service dress uniforms. There are working uniforms, but this civilian lady took me down to a woman's uniform shop in Petersburg, Virginia. We went down there, and they gave me a check I could put in a checking account to pay for my service dress uniforms. We went down there – it was Miles' Women's Uniforms – and bought those uniforms. That's why I was wearing a uniform at my ceremonial commissioning. And then I put together just kind of informal working uniforms – the tropical uniforms and the working uniforms. That didn't last very long. That lasted less than a year, and the commission personnel said, “We're just going to use the Navy's.” So, the effort I had had attempting to do that kind of fell flat. Admiral Nygren was willing to let me play with it a little bit, but the money came out of my own pocket. They gave me a uniform allowance, but it didn't cover it. I ended up ultimately getting the Navy's uniforms. Why were we talking about this?

MG: [35:29] Because of your commissioning.

PCK: [35:31] Right. Yeah.

MG: [35:35] I'm so interested in this. It looks like they put the NOAA insignia on your Navy uniform.

PCK: [35:43] Oh, yeah. See, uniforms work that way. Depending on not only what branch of the service you're in but, in some cases, what specialty you're in, in that service, you might have different devices, and so on. You'll still have the same rank insignia, but some of the devices are going to be different. And definitely any of the service ribbons would be different, and so on, and the cap devices are different. That's just kind of known, and so you just need to make sure you got it right – even the buttons are different. Can you believe that? The buttons are different on the service dress uniforms, depending on the service you're in. I'm like, “Oh my gosh. Anyway.” You have to bring that stuff with you. But when you learn about all this, you know it.

A lot of times, you go to the Navy base – in those years, you go to the Navy base, and you pick out the uniforms in their uniform store. But you have already purchased from our commissioned personnel supply center all the other things that you need to put on, and then if you're handy with a needle, which I'm not, you would remove the one and put the other on. I made use of seamstresses wherever I lived.

MG: [37:14] Was your uniform different when you were out to sea and onboard ship?

PCK: [37:19] The maritime services then mostly just used khakis. There's short short-sleeved khakis, long-sleeved khakis, khaki long pants, and khaki shorts. Also, you can have service dress khakis, or you can have tropical khakis, or you can even – when you're really working, running around in survey launches, and up on the beach, the seaweed-infested and bird poop-infested areas, we would even use khakis from Sears and Roebuck or whatever – just khakis – because you go through these darn things, carrying batteries up to replace the batteries that were powering your navigation transmitters. Invariably, no matter what you did, ultimately, you'd ruin whatever you were wearing. A lot of Sears and so on khakis were gone through. But you only wore those when you were out to sea or out on a field assignment. In those years, a girlfriend of mine that came in a year and a half after me was trying to get some of our navigation transmitters up on a Navy base, and the guy wouldn't talk to her. He says, "You're impersonating a naval officer," because khakis were not an authorized uniform for women in the Navy at the time. They still had WAVES. That was kind of disappointing. I didn't run into being stonewalled because of that, but we had instances of that.

MG: [39:23] So you wore your khakis onboard the ship.

PCK: [39:26] Yeah. You'd be wearing your tropical khakis when the ship got underway from the Marine Center. But when you were standing watch every day, you were just wearing your working khakis.

MG: [39:43] This all must have happened very quickly – graduation, commissioning, and training. What was that summer like for you?

PCK: [39:53] Well, like I said, it was – I don't know – between two weeks and a month. No, I think it was two or three weeks; I was there in DC doing all that ceremonial stuff, discussing policy stuff, and then I showed up at Kings Point. That's the US Maritime Academy, where we did our training classes at that time. Now they're on the Coast Guard Academy grounds. There's a nine-week wonder program. All services have that kind of setup, right? You see pictures of me with the sixteen guys, and I was in the Navy's women's ashore uniform. The guys were in khakis, and I was wearing the women's light blue polyester – ew – skirt and blouse. That was my equivalent tropical uniform because that's what the Navy had. Going to class every day. Although they did let me wear khakis for the boat work, I wasn't forced to wear that terrible light blue uniform for anything that was waterside. But for the classroom stuff, I needed to wear that light, light blue uniform. Back in those years, the polyester didn't breathe, and it was July in New York. It was not comfortable. We started classes, and I was the only woman in the class. Most of the guys really didn't care one way or the other. There were one or two guys that were like, "Nobody warned me that we're going to have a woman in this class." I was like, "Well,

thanks for that.” I had grown up in a family with guys in it, and I knew that if you let them run roughshod over you, it would never stop. I was probably a little bit more reactionary than I should have been. [laughter] But again, most of the guys were a little bit taken aback if I reacted strongly. But if I'm pulling in a mooring line on a boat, and you want to grab it away from me – “No, no. No, no.” I probably should not have reacted quite as strongly as I did during my training class, but I felt it was important. I did really well with the classroom stuff. Then we got underway on the ship to experience watch-standing, and my training class officer and his assistant – because I'd gone through celestial navigation, he had me teach that part of it, [laughter] which maybe wasn't, again, the smartest thing. “What is this woman with special treatment anyway?” I was not well-loved in my training class. Then we got our assignments. My assignment was to the *Oceanographer*, and there was one other individual in my class that went with me. But between the officer training class and the assignment, they had another six weeks at the Atlantic Marine Center going through a hydrographic surveying class. That was in Norfolk. This survey class training officer did make quips from time to time about the appropriateness of women on NOAA assignments – particularly, “Oh, they can put them on a Class I, but no way they'd be able to serve on a Class III smaller ship.” Then, I worked for him four years later on a Class III ship. I said, “So, Dave, about that comment you made in class.” He says, “Yeah, yeah, yeah.” [laughter] Anyway. So, nine weeks at the officer training class, six weeks in the hydrographic survey, and then I got assigned to *Oceanographer*. I showed up there; it was the late fall. It was all about going from one training environment to another college's training, so dormitory-style life. That was same-same. The other interesting thing at Kings Point is they had a sailing club, but their sailing club had donated vessels in it that were – oh my gosh, these vessels. We would come across these cadets. One of the cadets mentioned their sailing club, and I went, “Oh, my gosh, I'd love to attend your training sessions.” I did attend a training session, and they gave lectures on the strategy for positioning your vessel with a better chance of being out in front. I don't know. Do you have any kind of sailing background at all?

MG: [46:22] No, I wish I did.

PCK: [46:26] Well, amongst sailors, it's known – competitive sailors – that you can pretty much win – in the old style of vessels, not the ones nowadays. For the old style, you can pretty much win the race at either the starting line, how you approach the starting line, and then at what they call the leeward mark. They had strategies for how to do that. I listened very closely to that. And then, on one of the training sessions, not a competitive race, I was invited aboard one of the larger ones. I think it was a forty-foot sailboat that they used in their races. I just absolutely loved that, so much so that I kept all that stuff in mind because this is all recreational stuff for us. NOAA doesn't sail. When I was done with that survey class, I went over to the Navy base's Morale Rec [Morale, Welfare, and Recreation] Center, their marina, and asked if I could rent one of their boats. It was the late fall. It was really snotty out, and they were considering canceling the race because it was so snotty. But I'd sailed in San Francisco Bay, and the summers were defined by the fog rolling-in in the afternoons and it being a small craft warning when it did that. I love the high winds. It was really crappy out, and they had one boat left. They said, “Well, we can't rent you a boat; they're all reserved for our race.” I said, “Well, what does it take to be involved in the race?” “Well, to join our club, you need to pass this written test, and then we'll see your skills out on the water. For today, we got one crew member that hasn't been assigned to a boat yet” – the one that wasn't selected – “we can let you skipper that boat with this currently

unassigned crew.” I said, “Okay.” The rest of the competitors were hanging out at the clubhouse. I said to that crewman, “Well, let's go out and practice. I want to get familiar with the course and so on.” I knew what my strategy was at the starting line. Given the winds, the next likelihood as far as losing the race was to round the leeward mark because, at the leeward mark, we were going to jibe; the sail was going to go extremely from one side of the vessel to the other as we rounded around. When you do that, if you don't have your act together, you and your crew will capsize, for sure. I went out there, and I went along the downwind leg there to the leeward mark, and we jibed and went up, and we jibed and went up, and we jibed and went up. Then, the other boats start coming out, and I go and get in amongst them. I followed that strategy for getting off at the starting line in a competitive manner. There was only one other boat and us that were out. Everybody else was kind of not trying to be as aggressive because the winds were so high for the little boats that we had. But there was one other guy, and we were tacking back and forth and around the windward mark, and down we went to the leeward mark. My crew and I jibed at that leeward mark, did a great job, and came just screaming back toward the finish line. And the other boat capsized. They were completely out of the running. Nobody was anywhere close. They were only going to do one race because it was so windy out. We come back up and take the boat out of the water, and I come back into the clubhouse. I said, “So, where's that test?” [laughter] They went, “Yeah, yeah. Here's your card.” But it was because I love to sail. I love to sail. I love to do things that are adventurous. Life has beaten that out of me in the fifty years since then. But I loved to do adventurous things. So, we had this six-week training class and then assignment to the ship. I get back out on the West Coast there in Seattle, and I show up at the Marine Center. The gates are open; it's working hours. I bring in just my suitcase and such and board the ship. They assigned me a room. I'm introduced to the skipper. He gives me what his policies are and so on. Then I go down to the wardroom. The very first evening, I go out with a couple of the other junior officers. Most of the time, the junior officers stay on the ship because they don't have any money, except for the married officers. The more senior officers have housing ashore. So there's a bunch of other single junior officers on the ship. We were going to go out bar hopping. That's the kind of thing junior officers do. We went out bar hopping in the immediate vicinity. When it's time to go back to get aboard the ship, the security guard won't let me in. He says, “There's no women on the property after working hours.” I went, “Uh, that's where my bed is. I'm assigned to the *Oceanographer*. What do you want me to do?” [laughter] The Marine Center had not told the security guards about me. But they took pity on me and let me go back aboard the ship. “What do you want me to do? That's where my bed is.”

MG: [53:18] I have the impression there were so many things they didn't consider. Captain John Callahan was telling me about even bathroom accommodations. They hadn't thought, “Oh, we might need two different bathrooms.”

PCK: [53:28] On the larger vessels, in officers' quarters, you had your own bathroom but generally had a roommate. I did not have a roommate. On the medium-sized vessels, you shared a bathroom. Well, you don't need to have different bathrooms because you have doors from either side. You just locked the other door. I dispute it as a general statement for larger ships and even medium-sized ships. It was easily accommodatable double on the Class I's and the Class II's. Yes, on the Class III's, you needed to think about it. But honestly, when I went – my second sea tour was on a ship, so the officers all had the same bathroom, but the toilets

themselves had stalls. In fact, for toilet usage, you didn't have to worry about it. The showers – every couple of days, you get a shower, but nobody's going to yank the curtain open on the shower. So I got to dispute what Mr. Callahan said about that. We didn't have any special accommodations.

Frank Koterba: [54:52] Survey launches.

PCK: [54:53] Oh, okay. I'll tell that. Shame on you, Frank. On my second sea tour, on the *Fairweather*, we got these new Jensen aluminum survey launches that they still use. They're like thirty, thirty-two-foot aluminum launches. When we were surveying in Alaska on the *Fairweather*, we got visited by the admiral who was the head of the NOAA fleet operations. He pulled Joanne, my roommate, and myself aside, saying, “Well, we know that you guys need to be accommodated for the survey launches. We need to get porta-potties on these boats. How quickly do we need to get that done?” I went, “Porta-potties?” I said, “If you're going to spend money on the launches, I want a stereo system. I can hold it all day, and Joanne just hangs it over the side.” They didn't want to hear that. I said, “No, really, I don't want a porta-potty. I want a stereo system.” Well, they didn't take my comment seriously, and they got us porta-potties. But you really couldn't use those for anything of a solid nature because then somebody would have to take care of it. On more than one occasion, it ended up being an issue for particular ships. As far as I know, they really only used those for liquid needs and don't use it for solid needs. But no, I wanted to stereo instead.

MG: [56:59] While we're on this topic, in her interview, Maureen Kenney tells a funny story about how there weren't separate bathrooms on the ships. It took a long time for folks to decide to let women in where you could be sitting next to a man in a stall. She said you would come in sometimes when your captain was doing his business and try to talk business with him.

PCK: [57:20] Well, actually, I got a complaint from one of my junior officers. My second sea tour on the Pierce – spelled Pierce, but it's pronounced “purse” – I was the ops [operations] officer, and it's called a field ops officer [FOO]. Generally, when a junior officer addresses you, they address you as FOO. Like you said, it was in the bathroom. I saw the shoes next to mine in the other stall, and I knew who it was. I tried to talk business with him, and he went, “FOO!” [laughter] I went, “Okay, okay.” It was both up and down. There's certain behaviors you do need to adopt. Leave people alone in the bathroom.

MG: [58:26] Tell that to my five-year-old.

PCK: [58:29] Yeah, yeah.

MG: [58:33] I want to rewind a little bit and ask why this was an appealing career path for you. You knew there were going to be challenges in terms of being the first woman, the publicity, and the flak you were getting from the men you served with. So, why was this something you wanted to pursue?

PCK: [58:58] First, I'll make a point, and then I'll answer the question. Again, I would say, a good percentage, let's say, seventy, eighty percent of the guys didn't care. Ten percent actually

liked the fact that it was a humanizing influence to have women around. Another ten really didn't want me there, didn't think I should be there. What was my motivator? I wanted to do something technical. I loved adventure. I gave about that much thought [thumb and first finger just barely apart] actually, to the Air Force. I wasn't going to be a pilot. I figured I'd be [in] computers. That was a little bit beyond the pale for me because, again, I would have been in their women's auxiliary. I forget what it was at the time. That was the reason. And actually, I have a tale about that. So, on the *Fairweather*, I had made JG [junior grade] when – I had a split tour for my first sea tour because there were more women came in a year after me, and they needed to have a roommate. [laughter] I got transferred to the *Fairweather*. I'm sitting in the wardroom on the *Fairweather*, and a more junior officer, an ensign, comes in, who was a recent graduate of one of the maritime academies, and then he joined NOAA. I had been doing the research – I didn't even realize how much of an issue it was going to be for some of the guys on the ships and what kind of impact that might have on me. I was reading peer-reviewed studies on women's behaviors and how that does or doesn't line up with what the culture says women are. I'd been doing a lot of reading about real studies. I'm sitting in the wardroom during a break, and this more junior officer comes in, and he says, “Well, women really don't belong at sea.” I said, “Oh, why is that?” He gives me one example of a stereotype of women. Women are this, women are that, women are this, women are that. I said, “Well, interestingly enough, a study from so and so during this time said this is what it is.” I keep repeating the various studies and what they showed versus what the mythology about women was. Then ultimately, I just said, “Look, Dave” – another Dave – “I'm a JG; you're an ensign. The people deciding policy are admirals. I don't give a frig what you think.” I didn't use “frig.” Anyway, that really was my attitude. Another interesting thing on the *Fairweather*. The ship store has funds for being able to supply you toothpaste and things like that. You just buy it from the ship store. But one of the things they were using the ship store fund for was to get us a subscription to a magazine. What was the magazine? Just take a wild guess.

MG: [1:03:07] *Playboy*.

PCK: [1:03:08] Exactly. I looked at that, and I went, “Ugh,” like that. So the ship store officer, another JO [junior officer], says to me, “Well, what would you get?” Again, remember, it was 1973 at the time. I said, “*Ms. Magazine*.” [laughter] He was a good sport about it. He said, “Well, okay.” He put in for a subscription of *Ms. Magazine*. I thought I'd educate these guys. That particular edition that came out that showed up on the ship – the very first edition – was a silver embossed cover of a penis. I was so ashamed. I was like, “Oh my God, what did I do?” On the note of Pam being a take-no-prisoners kind, one of the other things we had to do on our survey sheets was to put the nice lettering – you used this lettering stylus. Do you remember the name of that lettering stylus that you used a ruler for and you selected –? Leroy Lettering Guide.

FK: [inaudible]

PCK: [1:04:29] I was practicing using that because I was ultimately going to need to letter things. What was I practicing? I was practicing little things I was going to make into little business cards. What I was doing was – “You have just insulted a member of” – what was the name of the women's organization back then?

MG: [1:05:08] NOW [National Organization for Women]?

OCK: [1:05:09] Now. “You have just insulted a member of NOW. Within five days, your penis will turn black and fall off.” The guys that walked by, they’d go [gasps]. I was using that to practice my style. I was kind of rambunctious.

MG: [1:05:29] I think that's great. With regard to the magazines, fair is fair. If they can have *Playboy*, you can have this edition of *Ms. Magazine*.

PCK: [1:05:36] But I really didn't need that, honestly. I really didn't need that. But the thing with the stylus, I decided maybe I should be a little bit less out there, but that was my style at the time. I did kind of have a reputation. When they came aboard when Joanne – before we got underway, they brought, yet again – because this happened at the training class, it happened at the survey class, it happened on the *Oceanographer*, and then it happened on the *Fairweather* – another member from the NOAA press office came aboard to do a little update on women in NOAA. Joanne and I are standing in the bridge. There's a quartermaster standing over at the side. The photographer wants to take pictures of Joanne and [me] as if we were piloting the ship. I'm standing next to the engine controls, and they're direct controls, but everything's dead; everything's off. I turned to the quartermaster. I said, “Well, this isn't going to fuck anything up if I ...?” [laughter] I actually had to promise my XO, executive officer, that I would watch my language when I got transferred ashore because he said people are not going to – the one thing about graduating from Berkeley is you learn how to swear comfortably. That was not a good thing. I had to adopt a what-kind-of-a-language-would-I-be-using-around-my-grandparents kind of attitude to clean it up because if I was nervous in a setting, it wasn't a problem. But when I got comfortable, sometimes, I would be inappropriate with my language. I just needed to remember, no matter how comfortable I got [to] just imagine one of these people being my grandmother. It was a learning session for me.

MG: [1:08:01] Before I ask you about your first assignment, I want to go back to when you were sworn in, and you invited your father to hold the Bible. What was that experience like for him? Did he give you any advice?

PCK: [1:08:14] I think I did mention some of that earlier. But actually, he didn't initially – it wasn't him prompting; it was the secretary, or not the secretary – the NOAA publicity people wanted my dad there because he was a Navy captain. They asked him – or they had me ask him, and he said, “Sure, sure.” He gave me advice about not having romantic relationships. We talked about that in the last session. But I don't recall him giving me any other advice other than I think he mentioned that – so when he went to sea – he graduated from the Naval Academy in the engineering field. On board ships, he was the engineering duty officer or the chief engineer, but he also occasionally got rotated through standing bridge watches. In his opinion, one of the most boring things in life was to stand a bridge watch. Well, I love bridge watches, actually, and I can remember on that first sea assignment hanging out in the bridge wing and watching the dolphins or porpoises moving in through the bridge wake and flying fish coming out of the water and landing up – I mean, we're talking twenty feet up onto the deck. When we'd go through bioluminescence if you flushed the head – the toilet – when you were going through – because that was just direct seawater, right? If you turned all the lights out and flushed the toilet, you

could see the bioluminescence. But also, up on the bridge wing, you could see it from the bow wave. And the toilet flushed in a particular circulation in the northern hemisphere and in the opposite direction in the southern hemisphere because of Coriolis. I don't know if that's too technical. Anyway, we did celestial navigation, going up to the Flying Bridge to do the evening stars. [I] didn't like doing the morning stars. But doing the evening stars, I thought that was great. So what else was there? Oh, so, no advice. A different opinion. Again, remember my dad was – they sent him to MIT [Massachusetts Institute of Technology] to get his master's in aeronautical engineering for the purpose of missile deployments. He was very professional. It was really clear to me that he was very professional. But I had a different career. For me, it was, yeah, do the technical stuff, but really, the enjoyment a lot of times came from the adventure of it all.

MG: [1:11:34] Backing up a little bit, it seemed like there were lots of efforts afoot in Congress and in the milieu that year to integrate the Uniformed Services. There was a bill introduced to the House that year that any military service should be open to both men and women. The Coast Guard was looking at its policies, too. Were you aware of this in the background? Were you in touch with other women who were joining those services?

PCK: [1:12:00] I was definitely not in touch with those women. I've talked to them since I retired from NOAA. Oh, and I did come across a woman when I was on my Coast Pilot assignment, which was my first NOAA assignment ashore. She was in Florida. She was one of the first female commissioned officers in the Coast Guard. But I only found out about her experience when I ran into her after I retired-retired. I didn't have enough close contact with any other women in the other services. All I knew at the time when I joined and during all of my first sea assignment was that the only women on the services vessels were in the medical department on the ships – the nurses and med techs – and that was it. There were no other women on remote assignments or ship assignments except in the medical departments. Again, they were in those adjunct services. I didn't know any of that. And really, it wasn't for two years that any of that actually happened. It was obvious that some of the services really were fighting it. Harley didn't let him fight it [laughter] in NOAA.

MG: [1:13:48] Women scientists were previously aboard ships. Is that right?

PCK: [1:13:53] Yes. The stateroom that I had on my first ship was expected to be [for] the women scientists. Although the chief scientist would be up in officer quarters, a lot of the junior people coming aboard for those scientific projects were down in crew quarters. There were absolutely no women in the crew quarters during those years, but there was sometimes the obligatory woman or two who would be – because they were part of the scientific party – up in that stateroom. They were with the scientific party. I mean, it's different being part of the crew.

MG: [1:14:44] Can you say more about that? What's the difference? What's the dynamic?

PCK: [1:14:49] Well, see, you got to break it out by the project area in NOAA. If you're talking about the hydrographic survey, the ship's officers are responsible for the survey. With oceanography and fisheries, the ship is responsible for the platform, and the people on board. The scientists on board lead program people on board are responsible for the projects. In a lot of

cases, the ship's officers, other than the ops officer, don't have very close ties to the actual project itself. They're there for positioning the ship – operating the ship. You'd see them in the wardroom for meals. My last sea assignment, I was the ops officer. I had very close ties with the scientific party. But in the other ship assignments, you didn't have a lot to do with the scientific party. Again, you'd socialize in the wardroom during meals and such. But the ops officer had the most direct relationship – and the skipper.

MG: [1:16:26] Before we talk about your assignments, I wanted to ask – who was the second woman who joined the NOAA Corps?

PCK: [1:16:40] There were two women that came in a year after. Joanne Gulley and Francesca Cava. Francesca was a little bit more politically astute than I was. [laughter]

MG: [1:17:18] What do you mean by that?

PCK: [1:17:21] Her shore assignment – yeah, I think it was her first shore assignment. She was in the Office of the Chief Scientist. She made a point of – it's the smart thing to do – having close ties with the higher-ups in NOAA. She had very definite opinions of the way things should go. I would say that most of the other women that were junior officers [had] more of a working level NOAA kind of attitude. Right after her first sea assignment, she was much more closely tied to the higher-ups.

MG: [1:18:20] How did you prepare for your first assignment on the *Oceanographer*?

PCK: [1:18:25] Prepare for?

MG: [1:18:27] Yes. What did you do to get ready for it? Or did you not prepare?

PCK: [1:18:39] [laughter] Well, it's kind of like a lot of things in life; they just fall on you at the time. We had the officer training class as our introduction. So we were trained in the things we're going to need to know as far as supporting the bridge watch and navigating, knowing what the rules were for officers, and the behaviors for officers. For some people, learning to salute and things like that. I grew up on Navy bases. So the minute that bugle sounded for morning colors, I was trained to stop and look toward wherever the flag was for the morning colors. I was trained for – when you go into maritime services, not the Army or Marine Corps, when you walk indoors, you take your cover off, and when you walk back out, you put it on. It's just automatic. It's just on-off, on-off. And saluting. All of that was ingrained in us during that nine-week officer training program, and we got to practice it when we were at the hydro survey class. And then you'd do it when you were on ships. When you walk on a ship, you salute the flag. It's on the stern when you're tied up, and then you take your cover off. We didn't ask permission to come aboard that; that's a Navy and Coast Guard practice.

MG: [1:20:41] The *Oceanographer's* homeport was on the West Coast. Is that right?

PCK: [1:20:44] Seattle. Most of the West Coast ships were based out of the Pacific Marine Center on Lake Union. At the time, the only other home ports were for some of the Fisheries

ships. I know things have spread out a little bit since then. But originally, the *Fairweather*, *Rainier*, *Oceanographer*, and *Discoverer* – and what Class III? We had the *Davidson*. We had a couple of Fisheries vessels. The *Miller Freeman* was the big one. And a couple of small ones. They were all tied up in Lake Union. The East Coast equivalent was the Atlantic Marine Center in Norfolk.

MG: [1:21:27] Tell me a little bit about the *Oceanographer*. I think you said it was eighty-two people, one woman, which was you. It was a geophysical cruise.

PCK: [1:21:35] When I was aboard, we were doing marine geophysics on the cruise when we got underway. Then, our NOAA program offices were reminded that geophysics belongs to USGS [United States Geological Survey]. NOAA stopped that. The cruises later in the year were oceanographic and meteorological. One of the things you'd do on bridge watch was every – was it three hours? I think it was. You'd write down the meteorological information. You were doing the temperatures, including the wet bulb/dry bulb. We were describing the clouds. There's three different levels of clouds, and so there was the lowest level stratus. Then we were also doing expendable bathythermographs underway. I think that was every six hours. There was a little XPT launcher on the stern. We would joke about – you'd go, and it's just this little, itty bitty little – it looks like a toy torpedo, and you put it in the little launcher and then hit the release. We'd say, "Torpedo loose." Obviously, not. Anyway, [those were] things that we were introduced to in officer training class. The watch standing – because we had our one underway experience on the *Kings Pointer*, going from Kings Point up to the Cape Cod Canal and then back. I got to do evening stars on the ship. You don't do that normally when you're within sight of land, but the training officer wanted me to demonstrate it. That was all practice. Really, I don't think I had any preparing for it. I was on this slope of being launched into that life the minute I actually showed up at Kings Point. It's all in preparation for that.

MG: [1:24:24] Was this the cruise where you would have weekly lunches with the skipper?

PCK: [1:24:27] Yes.

MG: [1:24:30] What was the purpose of that?

PCK: [1:24:35] Again, if you refer to what Evelyn [Fields] was saying on the NOAA video, you know, there was direction from Harley to make sure that this worked out. My initial skipper, Herbert Lippold, wanted to make sure that everything was working out. We were still tied up. It was the winter. I got called up to the captain's cabin. When you're on a ship, the way that communication happens a lot of times is with the PA system. I got called into the captain's cabin. I was like, "Oh my goodness, what'd I do now?" He says, "My wife is the president of the local Wives Club. And I go, "Uh, will it be service dress blues, sir?" [laughter] They wanted to meet me. Actually, they wanted to inspect me, to be more honest, because they were concerned.

MG: [1:25:49] Yes, I wondered about that.

PCK: [1:25:51] They were concerned.

MG: [1:25:54] I think Maureen Kenny said that was a worry for some of the men, that their wives and girlfriends back home would be worried.

PCK: [1:26:02] And some of the wives and girlfriends were worried. I adopted my normal, brusque attitude. In my early years, there was a lot of brusque attitude. When I was sitting there, they were not trying to be friendly, the ones that were speaking up. I did get to know a number of wives, NOAA wives, after that, and some became close friends. But during that first initial break-in period, they weren't speaking up. [laughter] The ones that were concerned were speaking up. But that changed over time. I'm afraid I was rather brusque with them. But then, in my mind, they were not exactly being friendly. I suppose I matured after that. But again, I have to say, for the most part, those attitudes did change on the wives' behalf. "Yes, sir. Yes, sir."

MG: [1:27:24] You said two more women joined the following year. But I thought I read that within three years of your commission, eighteen women joined the Corps.

PCK: [1:27:33] Well, that was what was really amazing. The exact year after I joined, there were Francesca and Joanne, and the next class had six women in it, including Evelyn. That kind of broke everything wide open as far as – because, to be honest, there was a point at which one of the XO's was asking me about – what was the reason why? He said, "I sensed that you seem to be overly concerned about your position." I said, "Well, if I mess up, it's going to affect other women." He says, "Well, that's not true." I thought to myself, "You're not clued in." [laughter] But he was the only officer that ever made a point like that. I mean, Lippold was recognizing that it was something to be monitored. Honestly, after Lippold left – because it was a change of command during my time on board – those lunches stopped. To be honest, I think after that initial project cruise, I was already worked into the ship's operating crew. I didn't have any regularly scheduled meetings after that.

MG: [1:29:30] What was NOAA doing in terms of recruitment, outreach, and opportunities for women to increase their number of commissioned women so quickly?

PCK: [1:29:40] Well, that would actually be an Evelyn question. My second assignment after sea duty – my first ashore assignment – was Coast Pilot Inspector. I spent a lot of my time out on the road, updating Coast Pilots, whereas Evelyn got assigned to the Hydrographic Survey Division Office, where they set the schedule. NOAA Commissioned Personnel office used her for doing all of those kinds of outreach activities for women. She would be a much better one to ask about that. I was clueless about what they were doing. I never really knew. Evelyn knew what was going on. Oh, one of the things she did, I remember – and she did this during her hydrographic survey division assignment time period, which was – I don't know, mid-1970's. Maybe even after that. I'm not completely sure. She traveled to both marine centers and met with the women because, during my first sea assignment, there were no women in the crew. They got women in the crew as I was leaving my sea assignment. But Evelyn came out and met with us every winter during the winter in-port. I thought that was great to just convene and see how things were going. That was definitely one thing that I do know about that they were doing to make sure that things were workable for women in the NOAA Corps. But I have no idea

about women in the crew. But women in the NOAA Corps, as far as getting more and how things were going and all that – if you do get a chance to talk to Evelyn, that would be a question to ask her.

MG: [1:31:51] Okay. Can you say what you were doing with the Coast Pilot and where you were based?

PCK: [1:31:57] Okay. That was my first shore assignment. The first sea assignment was the geophysical cruise, and then the oceanographic project cruise. Then I was on the *Fairweather*, and we surveyed, first, off Cape Flattery. We were out there surveying in Washington waters because it was too early to go up to Alaska because it was very inclement and cold temperatures at that time. But while we were out there off Cape Flattery, [laughter] the Navy was sending out their hydrofoils to do heavy weather testing. It was also not the best time to be off Cape Flattery. When you do your survey, in those years, of course, you were doing correctors for different things. One of the things we were correcting for was the sea swell. You could see it on the fathogram. It was three fathoms, eighteen feet. We were correcting for that. I helped with the shoreside support, driving around on forest service roads to get our navigation system transmitters up – that was pretty exciting – and do some inshore work for some of the obstructions and hazards inside Neah Bay. And then we went up to Alaska, and we surveyed – the first place was around Augustine Island at the southern end of the Cook Inlet. Augustine Island is a volcano. [laughter] It was quiet when we were there. Unfortunately, I found out, when I was driving on that Coast Pilot assignment – a little news thing came up over the radio that Augustine Island had blown. We were always worried when we put our stuff out on the beach – the tide stations and the navigation systems transmitters – that we would lose them to the volcano because every summer, the University of Alaska geophysics people were predicting that it was going to blow. But we got all that work done, and then we hear that there were tectonic shifts of over ten fathoms in some areas, and my only reaction was, “Damn, all that work.” [laughter] But I loved the work on that ship. I helped with putting up the transmitters, resupplying the batteries, going in, checking the tie gauge, and doing the surveys themselves. One of the other JOs, Andy, was my – what they call – OIC, officer-in-charge of the survey launch, the *Bertram*. These *Bertrams* were fiberglass boats, and they had a Rover diesel engine with a sterndrive. Who puts a Rover diesel engine in a stern drive inboard/outboard boat? Anyway, that's what we had in their infinite wisdom. We were doing survey lines; it's like mowing the lawn, back and forth and back and forth. You come in as close as you dare, and then you break the line. In the last portion, we'd survey until it got to five fathoms, and Andy would dash around up to the bow of the boat, hold on to the bow line, and he'd call it to the coxswain driving the boat. The coxswain would break the line and then back down hard, back down hard, back down hard. Well, don't you think eventually that the stern drive assembly would break free? They eventually put a steel cable between the sterndrive itself and the transom of the boat. So when the sterndrive popped off, [laughter] there'd be a way to fix the whole situation. Of course, at that point, the water's rushing in. We were out doing a survey this one day, and he's looking in the engine room compartment, and then he comes over to the mic on the radio, and he calls the ship. He says, “NOAA Ship *Fairweather*, this is FA3. We're coming back.” And you never come back in the middle of the day unless there's a problem. So the quartermaster says, “FA3, why are you coming back?” Andy's reply was, “Because we're sinking.” [laughter] The captain's cabin was immediately below the pilothouse. We had a kind of tentative, not very

confident captain. He comes screaming up to the pilothouse. He says, “You're not sinking. You're not sinking.” This is an open frequency, right? Andy says, “Well, that may be, sir, but the draft is increasing, and the freeboard is decreasing.” [laughter] You understand, right? Okay. Then we surveyed up around Harriet Point and Kalgin Island. I was given the job of being the field edit officer. Your shoreline for your survey comes from the photogrammetry folks. They give you a shoreline manuscript that has some of the rocks and obstructions on it, but you're supposed to fill in with rest. It was my job to go out there and make sure we had the visual aids put up. We made these little banners and twists then mounted them on photo-identifiable rocks. Then we come back with sextants and took horizontal sextant fixes to position them. Nowadays, they just use WAAS GPs or differential GPS. In those years, we had sextant fixes. The time to collect the information on all those submerged rocks was on a minus tide because that's when they're mostly visible. In Cook Inlet, once you get up to Kalgin Island, you can't see any submerged rocks. There's zero visibility. You're out there on a minus tide in a Boston Whaler or an aluminum skiff or Zodiac, whatever, and you're zipping along, trying to get as many rocks while it's a minus tide as you can. What do you think is going to happen when you're zipping around at that speed on a minus tide? You will locate some of these things with the outdrive, the bottom of the prop, and so on. The engineer stopped giving us shear pins. They wouldn't even give us a shear pin. They'd just give us 16-Penny nails because it was the same diameter, and you'd clip them off on either end and slip them in so that when you once again hit another rock, you would just raise the drive and replace the shear pin. We were doing that field edit, zipping from place to place. The guy that was with me in the little thirteen-foot whaler – we had hit a couple of rocks already. He dropped me off. The tide was rising. Cook Inlet has really significant tides. He dropped me off on the rock. I'd grabbed my *Sounding* volume and my sextant, and I took my fix. Will Parker. He dropped me off on the rock. I was taking my fix. I hear the boat slowly moving away because the tide is rising. [imitates engine sputtering] Oh, he's not having any luck. So, I've acquired the angles that I needed to, I turn around, and he's headed away. I'm going, “Will, Will.” The rock was awash when I climbed aboard. He goes, “Oh.” He gets the oars out, and he starts rowing back. Then, every once in a while, he'd looked around, and he'd row faster. And then he'd row faster. The water is rising. We'd normally wear what we called Ketchikan tennis shoes, sixteen-inch rubber boots. I'm standing there, and the water's coming up. It tops over the top of the sixteen-inch boots. I'm wearing a float coat, so I'll be fine, but it's rising, rising, rising. But he did get back to me before I actually floated off the rock. That was so funny. I'll never forget that. “Will, Will.” [laughter] We tied up in Anchorage. That's the top of the Cook Inlet. Better than twenty-foot tides there, twenty-four-foot, twenty-eight-foot extreme tides. When you left the ship, the gangway ashore was to a certain deck, and it was an entirely different gangway when you came back. Because I can remember that, at the highest tide, it went straight from the boat deck and across. Then you went to the next deck, and the next deck, and the next deck, and finally, it was down to the flying bridge deck. It kept your deck department busy. You had a robust deck department that had to stay aboard just to handle moving the gangway from position to position. In Alaska, during the summer, it only got dark for – well, it didn't get really dark-dark; it just got dusk for like three hours. So, we're on shore leave. You go out to the bars, and the sun was up. You'd go and have drinks and enjoy yourself and leave the bars at like three, four o'clock in the morning, and the sun is up. [laughter] Some of the guys had trouble falling asleep. They had portholes that shone through, but I didn't have any problem with that. I loved that survey work that we did. I thought that was the greatest fun.

MG: [1:44:08] Yeah, it sounds exciting.

PCK: [1:44:11] Well, see, it really did live up to my dreams of what it was that I wanted to do in adult life. I thought it was absolutely the best. They gave me responsibility. Remember, I was on the *Oceanographer*; it being a ship where the project is run by the scientists, all you were there for was for the platform. Whereas on the *Fairweather*, you were part of the project. The ops officer did the planning, but they would take input, and if you were responsible for a certain aspect of it, normally, they wouldn't merely issue it to you; you'd have a conversation about it. You work out what they call Plans of the Day [POD], and the ops officer created and posted that. Part of that, you would play a role in, as far as what was happening with your aspect of the job. Every morning, you'd get up, go out, and you'd have your survey equipment. Well, the installed electronic equipment was onboard the survey launch. But you'd have your stuff with you, and you'd grab a boxed lunch for the crew. One year, they shorted us in our budget for food, and the people that were left aboard, the ops officer and those folks, sat down to regular lunch. We had boxed lunches. This one day, Andy – again, Andy – comes running back to the ship and runs into the wardroom during lunch. He [said], “XO, XO, these lunches are completely unacceptable.” I mean, it was outrageous; they came back to the ship for lunch. But what he showed was – he threw down this one sandwich that we were expected to eat. At that particular time, again, it was because they shorted the budget to the steward's department. But there we have two pieces of white bread. What do we have between the two pieces of white bread? Another piece of white bread. The XO says, “Okay, that's it.” [laughter] They took care of that problem. Because you really needed to have decent food when you were out. Anyway, we finished that project, and we went down to California. We were surveying from Huntington Beach down to Dana Point. Maybe it was Newport Beach to Dana Point. We started at Dana Point. I was given one of the survey launches. That was the one where, during that time, the *Rainier* was in the same general location. She had that issue with that Lieutenant Commander not wanting to talk to her. Anyway, I got to have – one time, doing shore support on Catalina Island. It was wonderful doing shore support there. Otherwise, I had one of the survey launches. When we came in and worked our way up to Huntington Beach, we were going into anchor off of Venice. I was the OOD [officer of the deck], and the deck crew was preparing the anchor to be deployed. In Alaska, I'd had two occasions when, during my anchoring, we had hooked something on the bottom with our port anchor. The second time, it was a big six-foot-wide boulder. When we're coming into anchor, and they're preparing the anchor, it's the port anchor. I come around and out to the bridge wing, and I go, “Boatswain, boatswain, not the port anchor. Starboard. Starboard.” He's laughing and laughing and laughing, but given how superstitious a ship's crew can be, while he's laughing, he's going over to the starboard anchor to use that one instead. Even though he knew it was a superstition, he complied with my request. [laughter]

MG: [1:49:45] When would this have been that you were on Catalina Island and in Newport Beach?

PCK: [1:49:50] See, that would have been in late '74. I'm pretty sure. Yeah, yeah. That whole life experience on board that vessel, plus just working with everybody – I mean actually doing stuff – when you're that versus just responsible in a junior capacity for the operation of the vessel, you really feel like you're getting stuff done. You know that the work is for updating

nautical charts, which is pretty important. Given you're not even involved in the project, the science projects, if you have an interest in that field, then it's interesting. If you don't have an interest in that field, you're there for support, and that's it. Yeah.

MG: [1:50:58] Was your next assignment a land assignment?

PCK: [1:51:01] The next assignment was a shore-based field assignment. I did my work prep in the office, and then I would spend three, four months traveling. The Coast Pilot is kind of a textual accompaniment to the chart. It tells you about some significant landmarks. It tells you about the general routes that are used; it tells you about all the various facilities available ashore, primarily aimed at commercial vessels, really. They don't do a lot of information for recreational. It's mostly aimed at the commercial guys, the government offices, and any unusual tide or current situations – all that information. My job was to prepare the books, slice them up, and put them in a larger binder column by column so I had room to write on the side. Then make notes of the various offices that I would be visiting. I would be traveling, and the people that I'd always-always visit were the various port authorities, the various harbor pilots, if there were any Coast Guard bases there. Generally, I wasn't visiting very many of the other offices because that information came in through official channels, Corps of Engineers survey offices, but not the other aspects.

MG: [1:53:06] I want to check in to see if you need to take a break. We've been going for about two hours now, Pam.

PCK: [1:53:12] I'm fine. I'm fine. You call it when you need to –

MG: [1:53:16] Let's talk for another fifteen or twenty minutes. We'll probably need one more session to finish out your career and cover any other follow-up questions if you're open to that.

PCK: [1:53:24] Yeah. Oh, sure. Anyway, I would always visit the Coast Guard stations and other Coast Guard offices, including their district offices. Occasionally, I'd stop at Navy bases, but the port authorities and then the offices for whoever was responsible for all the commercial wharves. So just doing a lot of visiting. I did Coast Pilot IV, which went from Cape Henry, which is the waterside entry on the south side, to Chesapeake Bay. I wasn't doing Norfolk itself. I was starting at Cape Henry and going down to Key West. I covered that in my first Coast Pilot inspection trip. Then, in the second year, I did Coast Pilot VIII, which is Southeast Alaska. The third year, I started the Coast Pilot VI. I started with Albany, [laughter] went up the canals, and then on the St. Lawrence Seaway, made it to Cleveland. Between my first and second season with the field work, I was kind of bored in the office. Captain Holder was my second-line boss, and he got me aboard the NOAA Ship *Whiting* to the Virgin Islands to do survey work over the winter. That's where I came across the survey training officer. He was an ops officer. He had said, "Can't put women on Class IIIs." I ended up being his processing officer on that survey. I did a little bit of shore support as well for him. He had another junior officer assigned to that role, and that junior officer really didn't like the processing part. I was like, "Hey, I'm fine with that." He didn't actually apologize for his earlier comment during the survey class, but he was like, "Yeah, yeah." I loved that work down in the Virgin Islands. Back in those years, navigating when you got outside of land was via LORAN-A [long-range navigation], which was

much worse than LORAN-C. My skipper had me do a celestial fix. The first night, I really didn't have it dialed in, so they awarded me with a carpenter's pencil to demonstrate by lack of precision. But the second night, it pinwheeled, and that was pretty great. But the skipper, given the earlier evening's fixes, when there was a difference between where the LORAN-A had us coming in versus my fix, he went based on the LORAN-A. But with LORAN-A, there was too much of a risk of what they call skywave fixes. That's what happened. He was thirty-five miles off. I said, "See? You should have trusted me." [laughter] Once we identified the islands, we corrected our course and were fine. Anyway, that was fun. I had those three assignments, and I really enjoyed that. Again, it was technical information. The adventure part of it was being on travel. Back in those years, we didn't have credit cards in general use; you certainly didn't have them as a government credit card. Because I think the only credit cards we had were the cards, like with American Express – those kinds. I got these books of – what did we call those? – traveler's checks. That's right. That's when my signature went to heck because I had to sign a hundred of those, as well as for the Alaska trip, I had a government travel request, which is just a piece of cardboard. It looks like a government check, and you're writing it out. On the Alaska trip, I used that for paying for the trips on the Alaska ferries and any trips that I needed out and about on other modes of travel. I took the Alaska ferry, [which] started from Seattle, transited up the Inside Passage, and then I rode the ferries from place to place. But when I was in Ketchikan, I needed to get over to Craig and Klawock. They had a new pulp mill dock over there. I got a ride on one of the smaller little air services. As we're flying over there –there's a saying in Alaska: there's old pilots and bold pilots, but no old bold pilots. When I went to get my seaplane ride, I rode a little ferry over to the island off of Ketchikan where the airport was, and the airport was closed because of limited visibility with fog, but that didn't hold them back because the plane was amphibious. They just kind of motored the amphibious plane over to a ramp down onto the Revillagigedo Channel, and took off from there. Well, I had all my materials with me. I'm the only other passenger on board. We come over, and we're flying up this inlet. I know what's at the end of the inlet. He's staying low enough to see, and I know what's at the end of the inlet as it closes in. So, we get to the end, and he goes up and down! [laughter] That was pretty exciting. I got my work done, and I came back to that little flights office. They had a little float there. I'm saying, "Okay, I'm here. Is the three o'clock flight going?" Because I'm looking around, and they're saying it's too foggy. They finally said it was too foggy. I went, "What about the four o'clock flight?" Now, this you probably don't want to put in the information. [Recording paused. Travel logistics concerns discussed.] But that was what life was like in remote Alaska at the time. It was like, "Are you kidding me?" On my Coast Pilot trip for the Great Lakes, literally I started in Albany and went up the canals. I can remember in upstate New York, going through a part where I was going from one town to the next to get to communities along the St. Lawrence. We saw the ship going through, and there's nothing more impressive than seeing what they call a salty, an ocean-going ship. All you have is farm fields around you. This ship is going across the canal. That was really, really impressive.

MG: [2:01:44] For the Coast Pilot, were you working in teams? Who was overseeing this work?

PCK: [2:01:48] No. An inspector goes out. I had business cards made up. I go to these official offices and say – I had to be prepped in advance for the stuff that would pertain to that office. I'd say, "This is what we say about you." With the harbor pilots, it was more about the entrance to the whatever. I'd be covering a lot more information with them. When I was starting on the very

first project, the East Atlantic Coast Pilot, I got to the entrance to – I think it was Morehead City. I was riding the harbor pilot's little transit boat that they use. We were coming alongside a Navy ship entering the harbor. I was in civilian clothes. That's how we were doing our trips. They didn't want me in uniform; they wanted me in civilian clothes. The pilot is coming up, and the mate at the side of the ship that's going to bring the pilot up to the pilothouse says, "Who are you?" I was starting to grab a hold of the Jacob's Ladder. I said, "Well, I'm a Coast Pilot inspector with ...." And I thought [to] myself, "Do I say NOAA, or do I say Coast and Geodetic?" And just to be safe, I said, "I'm the Coast Pilot inspector with the Coast and Geodetic Survey." He went, "Oh, okay." I wasn't going to chance it. I climbed up. In each of the ports, I would ride in with the harbor pilots on one of the vessels just to get my sense that I agreed with how it was written up, which is why the Alaska ferry – I was up in the pilothouse for the whole trip. I didn't appreciate my office not briefing me on – well, not my office but the Marine Chart Division overall – with a circumstance. When I walked aboard one of the Alaska ferry ships in Seattle to get an overall briefing on some of the general information about the ferry system before I went, it turned out that it was the ship and the skipper that had been the skipper at the time of the ship when that ferry grounded in a particular passage in southeast Alaska, and the Coast Guard was going after him for his license. So, I come on board as a NOAA employee. He's maintaining that it was an uncharted rock that he hit. He was going through that passage in a passage that in the Coast Pilot said that you needed to be there within twenty minutes of slack water. He was an hour and ten minutes after, and it was a dark and stormy night. The guy was not known for his sobriety. What they figured out later was he hit the north wall. The place that he took the rock in the hull meant that he hit the north wall. But he asserted that it was this particular detached rock – an additional rock, in addition to the chartered rock on the south side, at the west end of the south side. He's ripping me a new one, and I'm like, "Well, sir, it certainly sounds like a problem." I wasn't going to say anything else, but all I could do – I mean, I wasn't able to have a successful interview with him at all, except to keep backpedaling and not saying anything other than, "Yeah, seems like that's a really bad situation." I wasn't going to get myself in trouble. But that was a useless interview.

MG: [2:06:18] Yeah, that sounds tricky.

PCK: [2:06:20] Yeah, yeah. Well, NOAA is the only charting agency in the world that holds it legally responsible for its products. The other nations do not. As long as you have complied with the IHO [International Hydrographic Organization] standards for how surveys must be conducted and how you produce your charts, if you miss something, you miss something. As long as you've got the right survey line spacing and your positioning is adequately accurate, you're good. He was going against NOAA for what he considered to be uncharted rock, which wasn't the case. The Coast Guard was coming after him for his license. So that's Coast Pilot sea stories, if you will.

MG: [2:07:18] Would you go back to the Coast Pilot between sea assignments?

PCK: [2:07:23] Oh, no. So that was one junior officer billet. I did those three – well, two and a half Coast Pilots because the west half of Great Lakes was done by somebody else. But no, after my second sea assignment, I went to the Pacific Marine Center as the pre-processing evaluator. There was a pre-processing review. As surveys came off the ship before they went into actual

cartographic review and application at the Pacific Hydro office, it would go through a review step that I would do.

MG: [2:08:18] Where were you doing that out of?

PCK: [2:08:19] Seattle. That was after my second sea assignment. My second sea assignment was on that NOAA Ship Peirce as the ops officer. We did the Delaware Bay entrance, so New Jersey waters, and then we went and did a chart adequacy survey in Miami. Then we did a very short assessment survey off of Massachusetts, and we also did the Great Lakes. When we started the Great Lakes, we started at St. Ignace, which is on the south side of the Sault Ste. Marie and Straits of Mackinac. Essentially, we started at the Straits of Mackinac and went down the first year, halfway to Alpena, and then the second year, through the rest of that and Alpena, so Great Lakes surveying. We had the accompanying transits, which I absolutely loved. Going through the St. Lawrence Seaway, when you get to the Welland Canal, there are these flight locks, doubled, in parallel. There's a downbound set on the southside and an upbound set on the northside into the lower lock, and that lock wall closes, and you go up forty-eight. Then you go into the middle lock, that closes, you go up forty-eight feet. Then you go into the last lock, and you go up forty-eight feet. I can remember in the downbound leg of that – and it's so violent that a lot of times, the engine room staff are standing by the seawater intake and got their eyes glued because you can get these huge bubbles, and you lose your seawater intake. The deck crew are very much occupied in maintaining the lines as you're coming up and going down. But I can remember this one passage downbound. When we were leaving the lowest lock in the Welland Canal, a large laker comes in, and there's water falling over the top wall, ninety-six feet above us. You're saying, "I believe in engineering, I believe in engineering." [laughter] I got a picture of that, but it got lost. But that was so impressive to see that water falling over ninety-six feet above you. I really loved surveying up there as well. Did a lot of diving on wrecks. NOAA took over the Great Lakes Charts from the Corps of Engineers. NOAA's position about obstructions was to chart every wreck that could interfere not merely with surface movement but with anchoring. We were locating a lot of wrecks that the Corps of Engineers had not. We would check with locals to make sure that we got all wrecks in the local area. I can remember diving on this one salty that was off the coast between Mackinac and Alpena. One end of it was in 120 feet, and the deeper end [was] over two hundred feet. We only had time for a bounce dive on that. But that was the deepest I ever dove.

MG: [2:12:42] Were you dive certified?

PCK: [2:12:46] Oh, yeah. Yeah. I wanted to do diving in on my first ship. I went through their officer – or not officer – the NOAA Diving program. In those years, we just had wetsuits in the initial training. We did most of our training either in the classroom or in the pool at the Navy base. But we did our checkout dive off Alki Point. We made a point of doing it off the east side of Alki Point because there was a sewer outfall there, and it was warmer water. I think about that now and realize that that was probably not the best choice. It must have been an industrial outfall. It was probably not a wise decision. I used my diving background for survey work on both coasts and the Great Lakes. Sometimes, the ships needed us to do hull inspections. If you did it in Lake Union, at the end of the business day, you went and definitely had a strong drink to get the taste out of your mouth back in those years. But tide gauge maintenance. Those were the

dives that we did later on in my career. And we were doing circle searches on my Survey Party assignment. I'm afraid that all that diving, including the diving up in Lake Huron, I wasn't as rigorous with my ear clearing as I should have been, and I did do some damage to my ears, both because of diesel engine exposure as well as the diving. I have tinnitus, and I've got ongoing sinus infections that I take care of. It's something I have to do. I did love it at the time. But it's one of those things where you end up – a body well used, as they might say.

MG: [2:15:16] It sounds like it's taken a little bit of a toll.

PCK: [2:15:19] A little bit, but manageable. Manageable.

MG: [2:15:23] You told a story in a recent panel about doing a proficiency dive in – was it Japan?

PCK: [2:15:28] No, Guam. There might have been other very less enjoyable proficiency dives I did. But when I was aboard the *Discoverer*, that was my last ship assignment. The only work dives I did for that ship were hull inspections and issues down on the hull. You needed to do a dive a month to maintain proficiency. We found out from the local dive shop where a Japanese Zero was supposed to have been close to a reef offshore in sixty-five feet of water off the west side of Guam. We found it, and all took turns sitting in the cockpit, going [inaudible] like this. [laughter] But my last regular use was on the survey party in the middle '70s doing circle searches primarily. But also, on my second sea assignment, we did tide-gauge tending and the wrecks up on the Great Lakes. But also, we were doing this side scan survey for one of our other NOAA offices, not nautical charting, and we were towing a fish. Our ships, the class twos and class threes, were – constant revolution, with variable pitch. When you go from ahead to astern, it's by rotating the pitch of the blades, and you never stop – those blades never stop until you kill the engines. Well, we were towing that fish, and as they were – there must have been – I don't know if they were letting it out to stream or if they're bringing it in. It got caught on one of the props. We were like, "Oh my god, oh my god." They're screaming up in the – they had sound powered telephones – ring-up style, old – "Kill the engines, kill the engines." This very savvy deck member came over with a rigging knife and cut the tow line – not the sensor line, but the tow line – to keep it from coming all the way in. We're out there adrift and needing to get this thing just off our prop. One guy, the experienced guy in our deck department – we called them seaman surveyors. He was a former Navy demolition diver. I went down with him, and I was basically handing him tools. [laughter] The ship's stern's going up and down, up and down. I've got myself stuck in on the struts just to keep myself positioned to be able to help him. He's using a big, long worm gear to get into the line and bring it out and then bring it around. There was a propellor guard around the prop itself. He was having to work that over and over again. All I was there for, as the ship was going up and down, was to hand him the various tools that he needed. I had a similar experience – not for the dive itself. Our divers had to retrieve a submerged tide gauge sensor when I was on the *Oceanographer*. The poor divers, when they were working – one of them experienced motion sickness when he was underwater. I was like, "I don't like that." But I did get to help bring one of the arrays back. It had a flotation buoy, they called it. It was made of steel, but it was full of air, and their array hung below it. When it popped up after it was cut loose [from] the bottom. What you saw on the surface was this yellow ball, and it had a line off it. So we went over in a Zodiac and grabbed it to bring it back. It was

really overpowering us – a little Zodiac versus that array. We had to try to bring it in. I probably was not as adroit as I could have been coming in as we were passing the line up to the ship on the stern. The stern aspect of the vessel is that it's got a very flat transom, and then it comes down from there on a bit of an angle until it gets over to where the screws are, which is quite a distance. You could see the underside of the ship as it was going up, and we're getting in close. Well, and as it rides up, you're getting pulled towards the stern. There was a point at which we technically were underneath the ship. But that was because we were getting pulled in, and then as the ship came back down, we were getting pushed away. Up on deck, they were screaming at me, "Get away, get away. Watch out. Watch it." Anyway, we weren't that far underneath it. It was one of those aspects of the experience that – at the time, I wasn't all that worried about it. I was in my early twenties, and how stupid are people in their early twenties? On that Coast Pilot assignment, one of the other things I did that was not specifically required, but I wanted to do, was if the harbor pilots pointed out there were landmarks, significant landmarks, that weren't charted, I would make a point of either going to the property owner, and if they had it surveyed, getting that survey information, or if they didn't, I had my handy sextant with me, and I'd go up, and I'd take angles from other charted objects. They call it a three-point fix. I would turn that information in so it could get charted. I did so much climbing during that assignment. It wasn't part of the assignment itself, but I wanted to make sure that useful prominent landmarks were the landmarks on the chart. I can remember at one point, I was climbing up/scaling up this one tower, and yeah, there was a bit of a cage around me. But I was hundreds of feet in the air, and there was nobody around. I was looking, going, "Huh, maybe this isn't so great." You'd think I'd have learned from that. But when I was on the Southeast Alaska Coast Pilot, there were these oil storage tanks ashore. There was a ladder on one of the tanks. Then there were these – not two by sixes. It was a little bit thicker than that, but they were planks from one tank top to the next. I was walking across to get to the tank that was the most landmark-worthy tank. As I'm walking across on the plank and I'm looking down from a storage tank, I go, "Huh, maybe this isn't such a wise idea." Because on the survey ships, the way you got aboard the survey launches is after you've had breakfast and everybody's ready to get to work, you lower it from the cradle to the boat deck. If there's any seas, this is doing this [morning weaving in and out], and you're standing there like this – ready, ready, ready, jump. I didn't have any problem with that on my first sea tour. But after these experiences on the Coast Pilot Trip on my second sea tour, I'm standing there, and I'm going, "Oh, wait a minute, wait a minute." You can't object to this. You need to be able to leap across. But it did cause me pause. My search for adventure was somewhat truncated after numerous times of probably being in a circumstance that OSHA [Occupational Safety and Health Administration] wouldn't approve of.

MG: [2:25:19] Well, I'm so glad you've survived to tell all the tales. I wish I weren't out of time for today, but I'm looking forward to when we can pick up next time. I'll send you an email with some possible dates.

PCK: [2:25:32] Sure, okay.

MG: [2:25:35] This has been such a treat, Pam, and I can't wait to hear more stories.

PCK: [2:25:40] [laughter] Well, if nothing else, sea stories – well, sometimes, my husband's even worse than I am at remembering – “Oh, well, don't you remember this? And don't you remember that?” [laughter]

MG: [2:25:51] He's welcome to chime in.

PCK: [2:25:53] I'll let him know. Okay, thanks.

MG: [2:25:56] Well, thanks again for today. I'll talk to you soon.

PCK: [2:25:59] Okay, thanks. Bye.

MG: [2:26:00] Bye-bye.

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Reviewed by Molly Graham 7/19/2023

Reviewed by Pamela Chelgren-Koterba 7/22/2023

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