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EDITED ORAL HISTORY TRANSCRIPT

GINGER KERRICK
INTERVIEWED BY JENNIFER ROSS-NAZZAL
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ROSS-NAZZAL: Today is September 4th, 2012. This interview with Ginger Kerrick is being conducted in Houston, Texas, for the JSC Oral History Project. The interviewer is Jennifer Ross-Nazzal, assisted by Sandra Johnson. Thanks again for taking time out of your very hectic day, hectic workweek I guess.

KERRICK: Yes, it's been a busy couple weeks.

ROSS-NAZZAL: Tell us about your interest in space and NASA as a child.

KERRICK: I guess it all started when I was about five years old. My dad used to take me to the library, and I got to check out one book every Friday. I checked out this book. I remember the author's name was Zim. It was about astronomy and astronauts. Read that book cover to cover that weekend and came to my parents that Sunday and said, "I know what I want to do when I grow up. I want to be an astronaut. I want to work at NASA."

ROSS-NAZZAL: So you knew from a very young age.

KERRICK: Yes.

ROSS-NAZZAL: How did you follow that dream through high school and college?

KERRICK: I actually wrote to NASA when I was around 11 years old, just to inquire about what it would take to work here, and I got a letter back. I think I still have it somewhere. It basically said, "Study math and science. Do well in school. Play team sports." So I carried that with me through junior high and high school and did exactly as I was told. I played basketball, volleyball, softball, tried out for the boys' baseball team. I was doing the team sports thing, had that box checked. I was always very interested in math and science and took all the honors classes that they had available, and even took some college courses in physics when I was in high school.

My parents were very supportive. We didn't have a whole lot of money, but my mom would take me to the museums and do a bunch of extracurricular activities with me. My dad passed away when I was 11. So I didn't have the advantage of him helping me out in a lot of the areas. It was just really me and my mom.

ROSS-NAZZAL: I understand you worked pretty hard to get a scholarship to UTEP [University of Texas at El Paso] and then also Texas Tech [University, Lubbock].

KERRICK: Yes. When I graduated high school I was actually salutatorian by 1/1,000 of a point, not that I'm bitter. So I had a lot of different scholarships to choose from, and I was supposed to go to UT [University of Texas] Austin on a full five-year scholarship. But I backed out about three days before I was supposed to depart. I didn't feel I was mature enough. So I accepted a scholarship at University of Texas at El Paso, which enabled me to live at home. I tried out for

the basketball team. I made the basketball team, but blew out my knee before the first game of the season. I also took on a side job at a boot store. I enjoyed my time at UT El Paso.

ROSS-NAZZAL: Then you ended up going to Texas Tech I understand because they didn't have a co-op program.

KERRICK: Yes. I inquired about the co-op, and, at the time, NASA did not have an established co-op program with UTEP. So I looked into transferring to Texas Tech because my dad had gone there, my granddaddy had gone there, and I figured it was far enough away where I could establish a little bit of independence. I wrote letters to them, paid them a visit. During my visit the chairman of the physics department there, Dr. Walter [L.] Borst, found me three scholarships and two part-time jobs that would pay for my entire junior year.

ROSS-NAZZAL: You must have shown promise.

KERRICK: I think it was the face-to-face. Whenever I give talks to the co-ops, especially nowadays where it's easier to send an e-mail or send a text message, it was that face-to-face meeting that I had with Dr. Borst where he could see the passion in my eyes when I explained to him that I want to work at NASA, I want to be an astronaut, I'm willing to do anything that it takes. He was just very supportive. He said had I not gone down there with that face-to-face that he may not have helped me as much as he did.

ROSS-NAZZAL: You didn't get to work at NASA until you were a graduate student though.

KERRICK: Right. So my first semester away in school, I was 19 years old when I finally left El Paso. The reason I didn't want to go to UT Austin when I first graduated was I was afraid I would get out there and screw everything up, because I was very sheltered in high school. So when I went to Texas Tech that first semester at 19, yes, I had a really good time. My grade point average did not have a good time, but I did. So I went from a 4.0 to a 2.7 that semester. I lost one of the scholarships and picked up a third part-time job. I called NASA. They were basically laughing at me. "There's no way we're going to pick you up with a 2.7. You need to get at least a 3.2 before we even think about speaking to you." So I got back up to a 3.3, but that was after I'd graduated. So I got my undergraduate degree with 3.3. Then I applied and they accepted me as an intern.

ROSS-NAZZAL: What sort of work did you do as an intern?

KERRICK: It was interesting. So I come down here for my first summer tour. I've been told that I would work with the Safety, Reliability and Quality Assurance [SR&QA] organization in one of their laboratories. I wound up working in the calibration laboratory and the bolts testing laboratory. From the perspective of a physicist, this was a dream come true. I got to tinker and see my physics come to life.

Being in that laboratory I didn't get the chance to interface with the bigger picture of what we do here, human spaceflight, but I was very appreciative of the fact that they were willing to invest in me. At the end of that summer I asked my supervisor to come with me to the co-op office and request that I be converted from an intern to a co-op. I had a couple letters of

recommendation from other areas in the Center that I had worked with, outside of my regular job there. That proved successful. So they promoted me into the co-op program after that summer.

ROSS-NAZZAL: How many tours did you do as a co-op?

KERRICK: One. I tell this to the co-ops as well when I give them talks. With one internship and one co-op tour I was an official co-op. I had to negotiate some special consideration. Given that I was in grad school, I was very close to getting my degree, I asked them to count the internship as credit toward one of my co-op tours. Then I asked for a waiver for the third required co-op tour. I asked, and folks said it was okay so I was ready to be hired upon my graduation.

ROSS-NAZZAL: I understand though, right as you were about to graduate, you were told that there had been a freeze on hiring at JSC.

KERRICK: Of course, yes, because things don't always go as planned. I was supposed to graduate in December of '93. I was informed in roughly October of that year that they would not be hiring. There was a hiring freeze, and they could not let me know when the hiring freeze would be lifted. It progressed on to the spring term. So I did get my master's degree in physics that December, but I elected to reenroll in school in an MBA [Master's in Business Administration] program because I wanted to maintain my student status, as I thought that would help me as I waited out the hiring freeze.

I had exchanged a couple phone calls with the folks here in the co-op office to ask them when the hiring freeze would be lifted. When it went into the spring I realized that I'd be

competing not only against the folks that graduated in December but now the folks that graduated in May. I was informed that was about 60 students. I wanted to make sure that I was remembered. I didn't expect them to lift the hiring freeze and hire all 60, so I wanted to make sure that they remembered my name. So I decided to call the co-op office every Friday at 1:00. I did that and probably annoyed some folks in the co-op office, but I would interject a little humor and entertainment in each conversation so they wouldn't have a totally negative connotation with my name. After doing that for about three or four months, it finally came through. On my last phone call they offered me a position. They said they were hiring 12 of the 60 graduating co-ops.

ROSS-NAZZAL: Where do you think all this determination came from? You seem to be a very determined individual from age five.

KERRICK: Yes. I was always told that there was no reason I can't do exactly what I want to do. A lot of folks are programmed that well, your mom didn't go to college or your dad didn't go to college, so you're not going to go to college. That was never an option. It was, "What do you want to do? Map out a plan to get there. The plan may not go the way you think it's supposed to go so you should be adaptable and have a backup plan." But even then there should be no reason at all why you can't get to where you're going. It was just never a question in anything that I've done.

ROSS-NAZZAL: Good training for a future flight director. Having all those contingency plans.

KERRICK: It comes in handy.

ROSS-NAZZAL: So tell us what was your first position when you came out here to JSC.

KERRICK: I was hired on as a materials research engineer by the same organization that I interned and co-opped with. So I was still working in those laboratories, but I also had some other responsibilities mainly in the Quality Assurance Division. I worked there for about a year before I requested a rotational assignment with the Mission Operations Directorate [MOD].

ROSS-NAZZAL: What interested you in working for MOD?

KERRICK: Well, when I met my minimum requirements for astronaut candidacy, which is a master's degree and one year technical experience, I went to go talk to Duane [L.] Ross here. I submitted my application and I asked him if he thought there were other areas where I could get more operational experience, because as a new employee I didn't really understand the full breadth of what Mission Operations Directorate had to offer. He explained to me that it might make me more marketable to the interview committee if I had some experience in ops [operations]. He explained the concept of the rotational assignment to me as well. I had no idea you could do that.

So I went back to my boss in SR&QA and explained the situation to him. He said, "Oh yes I can support that. You go off for six months and see if this helps you." I started that rotational assignment, I think, in September 1995. I got a call around October of 1995 from the Astronaut Selection Office that I had been selected for interviews that year.

ROSS-NAZZAL: How exciting for you.

KERRICK: Twenty-six years old. I did a dance, I called my mom, and I was really really excited.

ROSS-NAZZAL: Tell us about that application process and the medical process, the interview.

KERRICK: Back then they did the interviews a little differently than they do now. It was a week long. The first day you meet with a psychiatrist for about four hours, and you take a psychological exam. It's basically just to see how comfortable you are talking to folks. I sat there, no problem at all. The exam was fine. Then after that day they went into a series of physical and medical tests. Physical tests I was fine because I was an athlete. Had the treadmill test, some strength tests and did fine on those. During the medical tests they were doing a scan of my lower abdomen area, an ultrasound, and they saw something they weren't sure of. Went back for a subsequent X-ray and CT [Computerized Tomography] scan. At the CT scan level, you were able to see very clearly white dots on my kidneys, and I was informed that I had kidney stones.

Didn't know I had them, because I had never passed one before. What I did know is that that year they'd instituted a new medical disqualification, and it was the ability of your body to actually form the kidney stone. It was a lifetime disqualification from the program, regardless if you get them cleaned out, the fact that your body forms them. So it was traumatic. I don't remember how I got home that day. I remember crying out of control in the doctor's office, and then I had one more day of the interviews to complete. I completed that day. Then I just stayed

in my apartment for the weekend crying and talking to my mom, talking to my friends. Not knowing what I was supposed to do next.

Up until that point in my life, I didn't have money for school, I went and found money for school. They didn't accept co-ops from UTEP, I needed to transfer, I found a way to transfer. I dork up my first semester at Texas Tech, I get myself back on my feet and find a way to get there. I get the internship, but I finally figured out how to turn that into a co-op position. Then I had the hiring freeze, and I couldn't get in. At each turn I had found a way to continue going down the path. In this particular scenario there was nothing I could do, absolutely nothing. It was hard for me to accept that.

But I thought back. As I watched my dad die when I was 11, there was nothing I could do. If that didn't cause me to cave in, then nothing would. So I allowed myself to have my pity party and to grieve the death of the astronaut dream. Then I said all right, what's my backup plan. After talking to Duane Ross about how much I was enjoying the opportunity in Mission Operations, I explained that I was concerned that it was only a six-month rotational assignment. "What can I do? I really like it here."

He said, "Well, maybe you could look for somebody to swap." Again I'm a new hire, only been here a year. I didn't understand the concept of organizational billets. I learned that if I could find somebody in Mission Operations that would trade places with me in SR&QA then maybe I could swap.

So I went door to door, I started on the first floor of 4 South, and I walked in the different cubicles. I said, "Hi. My name is Ginger Kerrick. Are you happy here?" I interviewed several different folks and met some really neat people. By the time I made it to the second floor I found an individual who was not happy there. When I described what I did in Safety and Mission

Assurance she thought that sounded great. So I took her over there, introduced her to my boss and to the things that I did. I asked my boss if he would sign the paperwork to perform the swap, and he did.

ROSS-NAZZAL: How long did this process take?

KERRICK: Oh, let's see. It was probably about a month and a half, probably about a month, because my interviews were in December of '95. I knew that my six-month rotation would be up in February. So I was on a clock. I was trying to find somebody. I won't mention her name, but once she went over there, oh, she was winning awards. She had a great time over there. It was really clear that that was where she was meant to be.

ROSS-NAZZAL: Clear you were supposed to be in MOD.

KERRICK: Oh yes.

ROSS-NAZZAL: Tell us about that six-month rotation. You were working on ISS [International Space Station] and the ECLSS [environmental control and life support] System. How did you learn about the system? Very different from what you had been doing.

KERRICK: Yes, very different than my materials research. So when I first arrived, I was notified that I would be an instructor for the environmental control and life support systems for Space Station. As a physicist, I have the theoretical background. I thought, "Wow! We haven't even

designed that system yet. How am I supposed to learn it myself and teach it to the astronauts?" Well, that was the job. Back then we didn't have any of the training materials developed. So our job was to comb through the software documents, these requirements documents, talk to the operators, and figure out how we thought the crew would be operating the Space Station. Develop classes on that and start teaching.

The first crew I ever taught was the Expedition 1 crew. I taught them a couple of lessons. It was very early on so the operations concepts were not as mature. As we matured them, we would develop the lessons and revise the lessons. That crew was in training for about four years because we kept delaying the start of the Space Station.

ROSS-NAZZAL: What did you learn from the Space Shuttle program that you applied to ISS training?

KERRICK: I had not worked Shuttle program, so when I came into the Space Station we started from scratch. We were really at that point fairly separate from our Shuttle counterparts who were very busy in the throes of Shuttle operations. The lessons learned from our Shuttle counterparts didn't come till I think much later in the program, once we started flying the assembly missions.

ROSS-NAZZAL: Oh, really. Wow. So you just started with a blank slate.

KERRICK: Well, not a completely blank slate, but most of the areas that we looked to for lessons learned was actually the Shuttle-Mir program. Because my area of focus at that time was

environmental control and life support systems, the Shuttle systems weren't really going to help us for a long duration mission. So we looked to the next best thing at that time, which was our Mir counterparts.

ROSS-NAZZAL: Did you also look at Skylab, or was that too far back?

KERRICK: It was too far back, for us. Primarily we were interested in the Mir because a lot of the same systems on board the International Space Station, or at least the early life support systems, were exact replicas of what we flew on Mir.

ROSS-NAZZAL: So you finally got your transfer.

KERRICK: Yes.

ROSS-NAZZAL: So what did you start working on? Were you still working on the ECLSS System for a while?

KERRICK: I was still working on the ECLSS System. It was shortly after the transfer became permanent that I taught my first lesson to the Expedition 1 crew, maybe about a year after that. That led to an opportunity for me to create actually a new position. I had taught Captain Bill [William M. "Shep"] Shepherd a couple of lessons. Then I'd gone over to Russia to work on some dual-language training manual development for the life support system. While I was there, I observed some things that I had some questions about. In talking to Shep I realized the holes

that I was seeing were just a small portion of the overall integration holes between the Russian and the US programs.

When I was in class I noted that as they would put up a diagram of a carbon dioxide removal assembly, they were using different symbols for valves. They were using different symbols for pumps. All the graphical symbols were different. The way that they would teach the lesson—the theory of removing carbon dioxide from the air in space is the same—yet they would go into really deep level of theory. On the US side we would only cover a certain amount of theory. And oh look, the theories are common, perhaps we can integrate our training classes and save the crew some travel time.

When I started looking at the written documentation with their training manuals, again I realized the discrepancy for the training manuals we were making in the US and the training manuals we were making on the Russian side. It was up to the crew to integrate the information. Same thing with our displays. The crew was being told you're going to control the operation of these pieces of hardware via the laptop displays, but we're going to design the US laptop one way and we're going to make you learn a totally different set of standards for the Russian laptop.

The reason nobody had seen this though is because we were siloed. The Russian counterparts were developing their things. We did have some operations folks, but they did not get the level of access that I got going to the classes with the crew. They got whatever their counterparts would feed them.

So it was a really great opportunity to see things from the crew's eyes. I think it allowed me to help explain the level of frustration that that first crew was seeing as they were going through this training process. So I put together a summary, and I talked to my boss. I said, "Hey, I think there are opportunities here for us to improve integration, not only in the training

products but also in the operational products. I'd like to create a new position." I wanted to keep my instructor title so that when all this was over I could go back and teach, because I loved that aspect of my job.

I said, "Hey, let's call it Russian training integration instructor, RTII." That sounds good. So I wrote up a position description. Gave it to my boss, who then gave it to the head of Mission Operations at the time [Brock] Randy Stone. He said, "Sure. Since the scope of this activity is greater than just the training, I'm going to need you to report not only to your training boss but to our operations boss." Who at the time was Jeff [Jeffrey M.] Hanley. He was the lead flight director for the first crew. So I wound up working across divisions in that case.

It was such as unique opportunity. Again when I talk to these co-ops I explain to them that when you're developing a new program, we don't always get it right the first time. It takes folks that can go in and survey the situation. Figure out where the holes are and then be able to put a comprehensive story together to pass on to your management about plans to address those holes. That was a perfect example there. It worked very well. That RTII position still exists today. I think we still have four folks that are doing it, and it has proved invaluable in getting the integration with our Russian counterparts.

ROSS-NAZZAL: Talk to us about your day-to-day work in this position. Did you spend a lot of time in trainers, in the modules we have at JSC, in Russia?

KERRICK: Yes, when I first started this all the modules were on the ground. We hadn't flown any yet. I got to go to the technical reviews inside the modules, basically the acceptance testing to declare them ready for launch. Wherever the crew was, I was there. I got to go inside the

Functional Cargo Block, FGB, got to go inside the Service Module when they were getting ready for shipping in Kazakhstan. I also got to go inside Node 1 and the Laboratory Module when they were at KSC [Kennedy Space Center, Florida]. Basically the training diagrams that I have, verify that these are indeed where the lines run. Explain to the crew some of the tasks that they were going to be performing on orbit. "You're going to be installing this particular system or this valve or this rack." So I got a lot of hands-on experience that not a lot of other people did. I spent so much time in there that now when something fails on board ISS, in one of those modules, I can still see it in my head. When the crew calls down and says, "I can't open this valve." I'm like, "Oh it's right there." It was very valuable experience.

ROSS-NAZZAL: Especially for an upcoming ISS flight director.

KERRICK: Yes, I had no idea at the time. I spent about 65% to 70% of my time in Russia during that four-year span, between 1997 and 2001. I guess it was about a total of three and a half years. The prime modules that were going to be up for Expedition 1 were mainly the Russian modules. The Laboratory Module didn't come till later in their increment.

ROSS-NAZZAL: That must have been a unique experience, coming from Texas and spending so much time in Russia. Tell us about that. Where did you live? What was life like over there?

KERRICK: I lived in the cosmonaut dormitory building. It's called the Profi. The second floor of that building was dedicated to NASA. There were six different bedrooms, kitchen, laundry room and the NASA office. I really lived in my office and every time I was back in Russia that was

my room. When I would come back to the US I would stay with different people. Suburban Lodge was my home for quite some time. I had everything in the storage facility. So this was not my home during those four years, my primary residence was over in Russia.

When I first went I just knew the alphabet. So it's a good thing when you sound things out in Russian; it's a lot easier than sounding things out in English, because you don't have those I before E except after C. With just the alphabet I was able to pick things up because most of my time was spent in the classes. They would have the diagrams. So I started catching on to the technical Russian first. Oh, "nasos", that's a pump, okay. Oh, "klapan", that's a valve. So it was my basic understanding of the physics that allowed me to get a good head start on the language.

I would take Russian language classes here and there. I didn't have a lot of time. It was primarily being there and being entrenched in it all day long and then spending time in the evenings socially with some of my Russian counterparts that helped out a lot.

ROSS-NAZZAL: Talk about working with your Russian counterparts on these different manuals that you were trying to integrate. That must have been pretty challenging, not knowing the language at first.

KERRICK: Yes, I had an interpreter to help me with the training manuals to make sure we didn't miss anything. My first day working with them I was assigned to a 72 years old gentleman, or at least he was when I first started working with him. He was the Russian training manual author. His name was Aleksandr Vasil'evich Kutepov. He told me when he first met me, "I don't know about you, because these NASA people, they come over and they work with us for a couple of

weeks and then they go away. But you came back and you came back and you came back. At that point we decided okay, we trust you."

They were awesome. That entire life support department pretty much adopted me. It's all males. They did not have female instructors there. Most of them were much older, but they set me up with an office. They made me stop to have tea. Because I was really young and enthusiastic, "You've got to work, work, work, work, work; I'm only here for three weeks." "No, we must have tea, we must chat." Gave me an appreciation for slowing down. That's where we got to have some of our more memorable conversations.

I don't remember necessarily how the systems work, but I remember the personal things like the fact that Mr. Kutepov has a daughter who is very artistic. It was a great experience being there, and I was welcomed. We still stay in touch.

ROSS-NAZZAL: How nice. Had they worked on ASTP? The folks that you were working with in the training section?

KERRICK: ASTP.

ROSS-NAZZAL: The Apollo-Soyuz Test Project?

KERRICK: Oh yes, I'm sorry. Mr. Kutepov had because he had been with the program for a very long time. So that was another advantage there that I got to hear the history behind why decisions were made, why they do things a particular way. I was very appreciate of that, because coming in with a new program, I'm brand-new to the system, we're doing something that is very

different than what NASA had been doing with the Shuttle program. I was all about hearing their lessons learned on Mir and the Apollo-Soyuz Test Program. So yes they were very forthcoming with that information.

ROSS-NAZZAL: Were you in Kazakhstan for the launch of Expedition 1?

KERRICK: Yes.

ROSS-NAZZAL: Would you tell us about that?

KERRICK: It's embarrassing. After spending four years with these guys, they were like my kids. When I was at the launch, on the TV I could watch them getting in the capsule. As soon as they shut the door on the capsule I started hyperventilating. I turned to Scott [J.] Kelly, who was one of the management astronauts there, "I said oh, I know how my mom felt when I left for school the first time. You raise these kids, you put them in a spacecraft, and there they go." I was very very nervous. One of the Russian generals saw me. I think I was shaking at the time. He says, "Come." He pulls me through this crowd so I could see a bigger TV screen. As we're going through the crowd he's like, "Eto mama ekipazha, eto mama ekipazha. It's the mother of the crew; it's the mother of the crew." He plopped me down in front of this TV and gave me some tea. He said, "It's going to be okay."

ROSS-NAZZAL: Everything did go well.

KERRICK: It was fine. It was fine. It was a foggy day. It was about two minutes before the launch. The fog lifted, and you could see it. Their adventure began.

ROSS-NAZZAL: How long did you remain in Russia until you came back to the States after that?

KERRICK: I stayed there until January. I worked in mission control Moscow as a crew support engineer. Bottom line, they wanted somebody there that if the crew had specific questions, someone that had watched their training and understood how they would respond to certain situations. It came in handy a couple times. I was just appreciative to be able to be in mission control. I came back in January when the lead control of the ISS transferred from the Russians to the US. That occurred with the launch of the Lab Module. Up until then Moscow was in charge.

So I came back, and there was not a slot for me in Houston mission control. But in the background I assisted here and there. Once they returned, the Expedition 1 crew returned to Earth in March, I took three months off. I was tired.

ROSS-NAZZAL: You had that much comp [compensatory] time?

KERRICK: Randy Stone, bless him, had allowed me to accumulate my comp time over the four-year period, because I didn't have time to take vacation. We were always six months from launch, and then we'd have another delay. So I took three months off and reassessed where I was.

ROSS-NAZZAL: Did you get an apartment, or were you still living in the hotel?

KERRICK: Actually by then I was renting a room out of somebody's house, because the hotel got old. So I bought a house, my first house. I took a motorcycle riding class, bought a motorcycle, took off on a two-week tour of Texas by myself, after only having learned to drive 20 miles an hour in a circle. So that was fun. I came back, adopted a dog, and then I said, "Okay, now what do I do?"

I was investigating options of other jobs that I could pick up in mission control. Each one of them was interesting, but I felt like I had been given this opportunity and I had this broad breadth of knowledge across the Space Station, plus a broad breadth of knowledge about the crew and what they're thinking and what training they receive. I wanted to be in a position where I could utilize that. I didn't see any individual console position in mission control that would allow me to do that. So I met with Randy Stone and talked to him about what I thought I wanted to do. He said, "Hey, I think you'd make a good CapCom [Capsule Communicator], because a CapCom is supposed to take all these discussions that are going on in mission control, all these technical discussions, and formulate them into words that make sense to the crew. So it helps to have a good baseline knowledge of the systems and good understanding of the crew. That'd be perfect."

I said, "Well, Randy, yes, that would be perfect—if I were an astronaut, because only astronauts are CapComs." He says, "Oh, we'll talk to them. Do you know why only astronauts are CapComs?" I said, "No." Randy explained, "Well, historically the folks in space wanted someone on the ground that had seen what they had seen, been where they had been, and walked

in their shoes. How many people you know that have flown on Space Station so far that can say that?" I said, "Oh, that's a good point, Randy."

He said, "You're the closest thing we have to that. So give it a go. Maybe, if you're not too bad at it, this could be a new career path for other people." I thought well, there's no pressure there. Okay. He negotiated it with the head of the Astronaut Office. They let me do it. I worked my first shift during Expedition 3. I remember being so nervous.

So I walked in for my shift. Lo and behold, who was the flight director on console, it's Norm [Norman D.] Knight, who's my boss now, ironically, in the Flight Director's Office. Norm is very serious. I sat down. He asked, "Who are you again?" I explained to him. It's a new concept. Mm-hmm. No one had seen me, because I'd been going back and forth to Russia. So I was an unknown.

Crew makes their first call. Frank [L.] Culbertson calls down. I respond, and there's a pause. Frank says, "Ginger, is that you? Today is your first day, isn't it? How are things going?" So I look at Norm. "Can I answer?" "Sure." So I answer. Then again there's a pause. A little while later you hear, "Gin, is it really you?" It's our cosmonaut Vladimir [N.] Dezhurov, who had not spoken to Houston mission control yet on his mission. He says, "Oh, Gin, it is like present from MCC [mission control center] to hear your voice." So now Norm is looking at me like I'm really nuts. But it was a great icebreaker for my first day.

I think it was the very next day my technical expertise helped out—so Norm didn't think I was just there just to be the chatterbox friend of the crew. There was a Freon leak in the Russian air conditioner. As I'm listening I'm calling up a diagram, because that's part of my life support system. As soon as the crew says, "Oh it's in the large diameter hose." Perfect. So I show Norm. I said, "This thing is leaking right here. Based on the amount of Freon that's in

there, all the Freon could leak out, and you'd still be below the SMAC [Spacecraft Maximum Allowable Concentrations] limit. So there's no safety hazard to the crew." He looks at me like, "How do you know this?" It was great because I could understand the Russian that was going on, and I knew the system. It was that day where I thought wow, okay, yes, I'm here to help. I knew something that I could share with the team to help out.

So I did that job for several increments. I think it was Expedition 3 through 10, about four years. I loved it, I loved it, I loved it. Sitting next to the flight director though, kind of watching what they do, "Hmm. I like what I'm doing now, but I think one day I might want to do that. I might want to lead this team." So I chewed on that for about four years. Then I started talking seriously to folks probably about three years in, and I decided I was going to apply.

ROSS-NAZZAL: I did want to ask how were you accepted by the astronaut corps, being the first nonastronaut CapCom. Were you an honorary astronaut at that point?

KERRICK: No, no, no, not an honorary astronaut, but I had worked with the majority of that office in my training capacity. We used to send a lot of the early Shuttle crews out to Russia for training. The first four crews were actually in training together out in Russia. The fifth and sixth crews had started as well so I knew all of them. So when the proposal came and said, "Hey we'd like to run a test case and it's Ginger." "Oh yeah, that'd be perfect." So they were very welcoming, because they had worked with me before that.

ROSS-NAZZAL: Did you have to undergo training? Or was it just assumed that you knew the systems, and you knew how things worked?

KERRICK: They had a short training flow that would give you an introductory to the systems. So I didn't need to do that. What I wound up doing was sitting sidesaddle with the CapComs in the simulation, just to see. Mission control is a totally different beast. I can know the system inside out, but I need to know how mission control works. So I spent a lot of time in the simulations and then real time just watching the room and getting a feel for how things worked with respect to the communication, learning about our interfaces with the Mission Evaluation Room and the Increment Management Team. So I spent most of the time just learning that kind of stuff. I guess it took me about three months. Two and a half months to certify.

ROSS-NAZZAL: That's pretty quick.

KERRICK: Yes.

ROSS-NAZZAL: So you said you had started thinking that you might want to be a flight director. You might want to lead the orchestra.

KERRICK: I did. Again I like to take the opportunities that are presented to me here and build upon them to help give back to the program. I am a NASA girl all the way. Although I am here because I have fun, I am here to help groom the next generation of folks to go off and do what they do. I saw that as a unique opportunity to build on. I had the knowledge of the room, the

systems. I had the knowledge of the crew. I had a desire to be in a leadership position. So I thought that would be the next best thing to go off and try.

No CapCom had ever been a flight director before. Because that would mean an astronaut had been a flight director, and that certainly hadn't happened. No nonastronaut had ever been a CapCom before, so I figured hey, I'm going to give it a go.

There had been a few folks that had grown up in the Training Division that had crossed the lines. I had talked to them before my interviews just to try to understand. Historically you would work a console position in mission control for a number of years. You commanded the vehicle. You'd get a management position and then that would qualify you to be a flight director. So I knew because I'd taken a different path I needed to be sure what areas I needed to emphasize, either on my application or during the interview process, to make sure that my skills were equally weighted with the standard skills.

ROSS-NAZZAL: Was anyone encouraging you in the office?

KERRICK: Yes. The flight director that I had worked with for the last four years, Jeff [Jeffrey M.] Hanley, had known me. He had seen everything that I had done with the Expedition 1 crew. He was convinced that I had the right qualifications, even though I didn't fit the standard mold. So he was helpful to the extent that he could be, given that he was an active member of the office, but he was very encouraging. Randy Stone, who was one of my main prime mentors, he encouraged me to apply as well.

ROSS-NAZZAL: So what does it take to apply to be a flight director?

KERRICK: There's a call for applications, and you fill it out, just like any other job here. Although it's not like any other job here, but the process for applying is actually just the same. So once I figured out how to use the STARS [Staffing and Recruiting] System, which was a challenge in and of itself, I applied. Actually my entire class had to reapply because there were challenges with that system. We were just starting to use it so it was a little nerve-racking. My application apparently made it through because then I got called in for interviews.

ROSS-NAZZAL: How long did it take before you found out you had been selected?

KERRICK: It was probably about six months from the initial application.

ROSS-NAZZAL: You were the first Hispanic female flight director, the only one that I'm aware of.

KERRICK: Yes the only one. Then ironically the only Hispanic male was in my class. We were both from El Paso. So it's like double bonus day for El Paso.

ROSS-NAZZAL: So how long did it take you to train to become a flight director?

KERRICK: I was selected in February of 2005, and I certified in September of 2005 so seven months.

ROSS-NAZZAL: Were you certified solely on Station or Station and Shuttle?

KERRICK: Just Station, I did not get an opportunity to train on Shuttle until—I worked my missions in 2010, so I trained on Shuttle after I was here for about five years. I was the last one to go through and certify on the Shuttle.

ROSS-NAZZAL: Were you really?

KERRICK: Yes. My boss called me into his office that day, and he said, "I have an opportunity for you." I swear I almost cried. I accepted immediately, "Yes, I would love to do that." I certified—think it was four months of training—once you learn how to be a flight director, that's one of the major skills that takes seven months to figure out. So then I just dove into the systems and spent a lot of time in that Shuttle flight control room, which was very different than the Space Station flight control room, learning the lingo. The communication style was very different; the management reporting very different. I worked my first mission in March of—think it was 2010.

ROSS-NAZZAL: Can you give us an example of what you mean by they were very different in terms of communication or management?

KERRICK: Communication. Shuttle, you're there for a 12-to-16-day mission and you've got a job to do. I don't have time to be having extended conversations. We've got this mission timelined and just have to make it happen. Whereas on the Space Station side, my guys are up

there for six months. They're looking to us not only to guide them through their workday but to provide some source of psychological support and entertainment, as opposed to the crew members on a two-week Shuttle mission. So we talk to them about different things in the Station environment and we have a different pace, unless you're facing a critical situation, in which case you flip right back to Shuttle mode.

There's a distinct difference in how you approach the crew, how you talk things with the crew, even on the loops with the flight control team as well.

ROSS-NAZZAL: What about management?

KERRICK: Our Space Station Program Manager and our Shuttle Program Manager are very different, different individuals with different expectations. We usually work with the IMMT [ISS Mission Management Team] chair for most of the standard ISS activities and don't usually work directly with the ISS Program Manager. Whereas in a Shuttle mission, the Shuttle Program Manager was up in the viewing room and conducted daily MMT [Mission Management Team] meetings.

ROSS-NAZZAL: So you're more autonomous in terms of Station.

KERRICK: Yes we were still autonomous, but you just had to be cognizant of some of the decisions. That's why we have our flight rules and our procedures. We're autonomous operating within those constraints. It's when you go outside of that. You want to make sure that all the right folks at least are consulted or have an opportunity to voice their opinion.

ROSS-NAZZAL: I think I've heard it compared to a sprint versus a long distance run.

KERRICK: Yes. It definitely is. Although on Space Station last two weeks, I think we've been sprinting. But yes.

ROSS-NAZZAL: It sounds like it. So what was the first mission that you were selected for as flight director on Station?

KERRICK: The first crew that I worked with was Expedition 12, but the first lead assignment that I got was Expedition 14. I got certified in September. One month later I was notified I would be the lead for Expedition 14, which would be flying in a year so it was pretty quick.

ROSS-NAZZAL: Talk us through that. Being named and then getting ready for this mission, its goals, its outcomes, planning for the flight. There's a lot to do. NASA makes it look easy but there's a lot of behind-the-scenes work.

KERRICK: It starts about a year out from the increment. Luckily the team that I was assigned to, Michael [E.] Lopez-Alegria [L-A] was my commander, who was also my first boss out in Russia when I went out to work in Star City. So that was ironic. Then my other crew member was Suni [Sunita L.] Williams, who's up now. She was an astronaut support person for the Expedition 1 crew so I'd already worked with her for four years. Then the third crew member was Misha

[Mikhail] Tyurin, who was my backup cosmonaut for Expedition 1. Again I'd already known him for four years.

So I didn't have to spend any time at all getting to know my crew. I already knew them quite well, which was an advantage. Then with the mission you get handed a set of requirements by the program about a year out. You work with the teams to design your training plan and figure out how you're going to get all these objectives accomplished in the time that you're on board.

Then six months out it'll change. Then it changes again, and it changes again. So you spend most of your time trying to keep up with the vehicle. There would be Shuttle missions that would start off in your increment but then discover that those plans would change. So you would make adjustments to the training plan and the operations to account for those.

Probably about four months in is when it started to settle out and we were able to get a handle on what we were going to have in store for us.

ROSS-NAZZAL: How do you work in conjunction with a Space Shuttle lead flight director? You're in charge of Station. They're in charge of Shuttle. How does all that work?

KERRICK: John [M.] Curry was the lead for the 12A.1 mission, which was one of the big missions that came during my increment. What he's interested in is flying that Shuttle mission and completing those assembly task objectives. He wants to know where your crew members can help. He's not as familiar with my crew, but he's very familiar with his crew.

So we would work together and I'd say, "Hey, I think L-A can help do this or Suni can help do this or even Misha can help here and there." As the Shuttle mission would change, he

would need to notify me so I can change the training for the crew. You always give them premission briefings so that they understand who's coming, what are they going to be doing, what are the key milestones for this mission. So it worked out very smoothly.

But the line of responsibility is clear. If it's anything associated with the assembly tasks that are going on in that timeframe or those Shuttle crew members, it's the lead Shuttle flight director's responsibility. If it's anything that is impacting the Space Station crew members or what they're going to have to do once that Shuttle leaves, then it's the increment lead's responsibility. Communication there is key.

ROSS-NAZZAL: As lead flight director for this expedition, are you there for launch? Are you just there while they're in orbit?

KERRICK: Oh, we live in mission control every day. So back when I was lead, we didn't have—now we have what's called a flight director suite. But basically about six weeks before launch you're in that presentation readiness mode where you've got to do the stage operations readiness review, the flight readiness review, giving presentations, getting everybody up to speed. Then the moment you launch, you assume your position in mission control. I had a corner of a little console, because that's all we had, that I reported to every day for—our mission lasted seven months. It was only supposed to be six. So every day at 6:30 a.m., 7:00 a.m., I would report for duty. I would go home whenever the last meeting ended, around 5:30. I would take my computer. I would plug it in at home. I would log on, and I would work in the evenings. This is what you do.

The evening work is really just to put out any brushfires that could be brewing so that folks aren't doing extra work. Ultimately you have the working knowledge of everything that you need to do. Whereas the on-console team can crank away and handle things, but if they ever have a question about what does this mean long term or how it impacts the overall increment objectives, it's got to go through you. So you have to stay engaged the entire time.

ROSS-NAZZAL: So there's no flight director on console when the lead flight director leaves?

KERRICK: No, there's always someone on console. The increment flight director has no on-console responsibilities. You're there every day because things change every day. Although I was sitting in the back of the flight control room, I wasn't working on things occurring on orbit that day. The on console flight director did that. I'd be working other stuff—for the next week, the next month longer lead items.

Things come at you all of the time. It is busy busy busy nonstop. That's not even dealing with what's happening during the workday.

ROSS-NAZZAL: So no time off at all during that mission.

KERRICK: They encourage you to. I never did. I didn't have any time off during that seven months. What I did do, to maintain my sanity, is I would run. That's how I would de-stress. I'd call the console and say, "If anything weird happens in the next hour and a half I'm going to be running. I'll call you when I get back." I actually wound up training for and running a marathon. It kept me sane.

We encourage people to take off a week here and there. We do have flight directors that'll come in and step in, but most people don't take that time away. It's fun. It takes over your life for an extended period of time, but it's fun. It's very odd.

ROSS-NAZZAL: Yes it doesn't sound like fun to me.

KERRICK: To say that out loud. Now that I say it out loud yes.

ROSS-NAZZAL: So what were some of the more memorable events of that flight? Or any big challenges you guys encountered?

KERRICK: Oh we had lots of challenges. We did the first what we call triple EVA [Extravehicular Activity]. It's where you go in knowing that you're going to do three EVAs in the span of nine days. That was a challenge, but our crew came through with shining colors. There was one event, however, that I was not happy with.

We have these Progress vehicles come and bring supplies. During my mission this Progress vehicle is coming along. It's supposed to retract the antenna, because there's a physical interface between the antenna and the handrails on the module. If the antenna doesn't retract, it's supposed to go back and retreat per our flight rules.

They come in. Antenna doesn't retract. The on-console flight director calls over to the Russian counterpart. "Hey, per the flight rules I assume you're going to back out and station keep."

"No. We're going to press."

I was working the management console during that mission. The flight director kept trying to get them to stationkeep. They're continuing to come in. So I pick up the phone, and I call my Russian counterpart over the phone. In Russian I say, "What are you doing? Our flight rules say to retreat."

He says, "No, no, my engineers tell me that the structural integrity of the antenna will yield before the structural integrity of the hull."

So while I am having this conversation on the phone the on-console Flight is talking with her Flight. They kept pressing with the docking so we got them to remove the crew from the module port that the Progress was docking to and seal the hatch, in the event that something did happen. We got them to do that. Then sure enough the antenna gets wedged underneath the handrail. We wind up having to do two spacewalks to saw that handrail off so that we could move the antenna and actually be able to undock the Progress.

That was memorable. I could live my whole life and not see that again. It did cause us to have some pretty serious discussions afterwards with our Russian counterparts and to get them to acknowledge the fact that they should have abided by the rules and the rules are there for a reason.

So that's my most memorable adrenaline-flowing moment, I think, from that particular increment. We had a lot of good memories though. L-A used to have music trivia. He'd play a song and each control center got to play along. Your CapCom had to call up and guess the song title and artist and then you won something, although we were never awarded any prizes. I think it was just to bond with the ground, but he made it a good seven months.

ROSS-NAZZAL: Why did it have to extend for an extra month?

KERRICK: I can't remember why we extended. I don't remember why that happened. That's sad. It was only in 2006.

ROSS-NAZZAL: You've been on other missions since then. Did you take some more comp time after this mission? Or were you immediately assigned another?

KERRICK: Just a couple weeks. I specifically asked my boss. I said, "I'm tired. I just need some time to not do anything for about two or three weeks." He said okay.

When I got back I asked to be assigned to be the flight director for the Generic Joint Operations Panel. That is a panel that the Flight Director's Office owns where you have new concepts for operations, or new rules, or anything that will affect how we do things generically day to day for ISS. That board needs to approve it before it goes off and gets implemented in the ops environment.

Having had things like this Progress incident and several other lessons learned in that increment environment, I thought there were a lot of generic improvements that we could make for future increments so they wouldn't face some of the things that I faced. So I asked if I could be placed in charge of that board so I could help implement some of this change that was still fresh in my mind.

So I was allowed to do that I think for about a year and a half. I had a good time. Before I got assigned lead to STS-126.

ROSS-NAZZAL: Tell us about that mission.

KERRICK: Oh, that was great. So I had a great crew. Fergie was my commander.

ROSS-NAZZAL: Chris [Christopher J.] Ferguson.

KERRICK: Chris Ferguson. Half the time I can't remember people's real names. Chris Ferguson was my commander. For that mission originally we didn't have any concept for our spacewalks. We didn't have anything defined. Then I guess it was 10A, STS-120, discovered in the Solar Alpha Rotary Joint on the starboard side of the vehicle that it was eating itself away. I liken it to if you have a problem with your shoulder and you get rotator cuff and you can sometimes shred the inside of your shoulder. That's what this solar array joint was doing. We found particles out there.

So we wound up having to park that, what we call the solar array alpha rotary joint, the SARJ. We parked the SARJ, which greatly reduces the amount of power that the arrays outboard of that can generate. We realized that if we did not fix this, we wouldn't be able to power our international partner modules that were coming.

We threw a whole bunch of folks at this problem: a lot of engineers, a lot of ops folks, a lot of materials researchers, safety folks. For the better part of a year, we met twice a week. I remember going to our 100th meeting celebration party. Folks just needed to understand the mechanism that was causing this, then figure out how to clean up the damage and then prevent it from happening again.

So it took a long time. What wound up happening was on my mission we had four entire spacewalks dedicated to fixing the SARJ. Three of them were dedicated to cleaning and fixing

the starboard SARJ. Then the last EVA was dedicated to applying some lubrication to the port one so that it would not incur similar damage in the future. So it was new techniques, new hardware, new everything.

I think that's what made it the most fun, because we didn't know where we were going in the beginning. We got to plot our course out for ourselves. The crew in the pool would help, "I don't think that technique is going to work, I think I have a better technique," and work with the engineers. So the crew participated in this whole experience.

ROSS-NAZZAL: Pretty memorable flight then.

KERRICK: Oh yes. Yes. Not only for the SARJ, we also were bringing up the regenerative ECLSS equipment that would allow us to go to a six-person crew. We were tasked with installing certain pieces of that equipment. Generating water with it during the docked timeframe so that that water could be flown back down and tested to give a go/no-go for the six crew. So while we had all this stuff going on on the outside, we were tearing up the inside of the vehicle installing all this stuff and starting the test at a particular time so that by the end of the mission you could get this water sample.

ROSS-NAZZAL: How did all that work?

KERRICK: Oh, it was down to the wire, because we had a failure or two here and there. But we wound up getting the samples that we needed back on the ground, and they were tested successfully, and we went to a six-person crew when we were supposed to. So it was great.

Same thing with the SARJ; we were able to clean out the joint, lubricate it, and it's still rotating today. I think we've had to apply a second set of lube on one mission since then, but now we have a routine for how often we would need to do that. It worked perfectly.

ROSS-NAZZAL: How many missions have you worked as flight director since 2005?

KERRICK: Let's see. Expedition 12 to—where are we now?

ROSS-NAZZAL: 31? 32? Somewhere in there.

KERRICK: 31. 32 is coming up. So 12 to 31. I was on a rotational assignment recently as Deputy Director of XA [mail code for EVA Office] for about nine months so I missed a couple of increments there. Then Shuttle missions, I worked I think four on the Space Station side and three on the Shuttle side. So quite a few.

ROSS-NAZZAL: Yes. You've been busy.

KERRICK: Yes. I'm turning into one of those old heads. I've been around a while.

ROSS-NAZZAL: How many flight directors are there in the office?

KERRICK: Right now I think we're down to about 23, 24, but in the history of the program there's been 82.

ROSS-NAZZAL: Not that many.

KERRICK: No. When I give talks to the co-ops again I say this to make myself feel better, "I could have been an astronaut but there's been over 500 astronauts. So I decided to be a flight director because there's only 82." Sounds better.

ROSS-NAZZAL: How many women have been flight directors in the office?

KERRICK: We have 11; 11 I think was the last count.

ROSS-NAZZAL: Not many at all.

KERRICK: No. The first one didn't occur until I think it was the mid '80s.

ROSS-NAZZAL: How has MOD changed since you started working there until today?

KERRICK: Quite a bit I think. They're getting younger. No, I was laughing the other day. It was in a simulation. I'm talking to these folks and I thought, "Wow, I could be your mom. That's awesome." When you look at the old pictures of mission control, and everybody's in the white shirts and skinny ties and the little buzz cut the mix of folks in there I think has changed. When you look at a snapshot from historical archives and today, I think they're still just as young as they were. I think back in Apollo days they were pretty young, the average age of that crew that

solved that problem. Still today we still have a lot of youth in there so that's good. Especially since the average age of our NASA employees is starting to get a little bit older. It's good to have those young folks in there still enthused about the program.

I told Mr. [Michael L.] Coats, Center Director, one time we were in a briefing about women at NASA and how we need to increase the number of women supporting NASA. I went to mission control later that week, and we had a loss of comm so we all went to the restroom. There was a line in the women's restroom and no line in the men's. I thought, "We've officially made it. I'm waiting in line at the women's restroom in mission control, and I am so happy about this!"

ROSS-NAZZAL: You primarily worked on ISS but do you have a sense of how the Shuttle program ending has impacted MOD?

KERRICK: Oh yes. I was in the Shuttle program or had just completed my training that year that we decided to stop flying. It was hard when we first let everybody go. Right after the landing and the few months right afterwards was tough. Because we knew some folks would be staying, we knew some folks would be leaving. You walk down the hall, and now there are empty offices. Just recently in mission control I walked by the TRAJ MPSR [Trajectory Multi-Purpose Support Room], which is just outside of the white FCR [Flight Control Room for Shuttle]. It had been gutted. I stood there, and I couldn't move. I didn't know they were going to do that. I didn't get to say goodbye. So it's been challenging for folks. But I think given the fact that we still have Space Station, we still have MPCV [Multi-Purpose Crew Vehicle], we're getting these

commercial cargo and crew companies engaged, it has given folks something else to look forward to.

They had to have that mourning process, and we had to help our flight controllers through that. Now I think folks are coming out of it and looking forward to the future, but it was a very difficult time.

ROSS-NAZZAL: I found that you were named Assistant to Chief for the ISS in the Flight Director's Office.

KERRICK: Yes.

ROSS-NAZZAL: Would you tell us about that role?

KERRICK: When we were flying Shuttle, we had the chief of the office, the deputy chief of the office, then we had a lead for Space Station and a lead for Shuttle. The lead for Shuttle of course has gone away, but we still maintain that lead for Space Station. We also have leads for commercial crew and for MPCV and our visiting vehicle program now.

So I got named to be the lead for the Space Station flight directors. With respect to the tasks associated in doing that, I'm responsible for ensuring we have the right folks trained and supporting shifts in real-time and in simulations. I also provide guidance to folks working current and upcoming increments. It's been great. I was talking to my boss the other day. I used to be the technical person. I would get up, and I would defend my technical truth of the day to the program or to whoever I needed to.

Now I'm at a point where the folks under me in my office, it's their turn to be in the spotlight. My job is to make sure they have enough of those moments to establish themselves in this program, to defend them, and just help guide them.

I like that aspect. I have enjoyed making that switch from being the lead technical person to being the manager that just enables their employees to do what they do and to get better and to be the bright shiny example in MOD. I've enjoyed it. I mentioned last week has been a busy week with the spacewalk that didn't go exactly as planned. We have one of our young flight directors leading that spacewalk. We have one of our young flight directors leading the associated increment. They've been working together and solving problems, and we've been providing guidance as required. "You might consider this. You might want to talk to this person about that." But they've been doing the work. I sat there in the IMMT this morning when we did the go-no-go, and I was just so proud of them both.

So I'm really enjoying this job. I've only done it for about a year, but I think I'd like to keep doing it for a little while longer.

ROSS-NAZZAL: Do you miss being on the floor?

KERRICK: I still get on the floor now and then. I pull a shift probably once a month and then I sit at the management console for dynamic operations involving the Soyuz and the Progress. So I still get in there, and I'll do a few sims [simulations]. I'm not as a point where I completely miss it, because I still get my feet wet. I enjoy the management aspect of it more than the day-to-day ops.

ROSS-NAZZAL: What have you taken away from Randy Stone and some of the other folks that you worked with that you've applied in this position?

KERRICK: I talk to Randy all the time. I tell him that he's the reason I mentor the co-ops. I sign up to give them talks once a semester. I give them my e-mail address. They call me or e-mail me with questions about working here or about choices in school. I tell him that I can do this every year, every semester for the rest of my life and never mentor enough co-ops to pay Randy back for what he did for me. I was a handful. I know that I asked for a lot. I demanded a lot, but he was a great mentor. He shaped me and molded me well, and I want to pay back by helping these new folks.

How can I put this? Growing up, I always said exactly what I wanted to say. If it was happening in here [points to head], it was an extremely short trip to make it out of my mouth. While it came in handy in certain circumstances, as you move up the ranks here, you need to learn to curtail that. Randy was always a good calming influence on me. I could go to his office, and I could vent. Then he'd say, "Okay, now how would you explain that to someone else?" So he helped me grow in that way.

Mr. Jose Olivarez is another mentor that I owe a great deal to. He was the reason I came to work here. He worked in Safety. He picked my name out of an application pile only because he was curious as to how somebody with a last name like Kerrick would check the Hispanic box. He just had to call. So I was on my way actually to Fermi National Accelerator Laboratory [Batavia, Illinois] on an internship when I got that first call about the internship from NASA, and it was Mr. O. He said, "Mija, I'm intrigued; how did this happen?" I replied, "Well, when you got an assembly line worker in an ice cream plant named Genoveva Sepulveda, and there's a

supervisor by the name of Kenneth Kerrick from Owensboro, Kentucky, that keeps asking her out every day until she finally agrees to marry him, I am what happens." He said, "Mija, I like you."

So he helped me early on in my career. He was very instrumental in convincing my branch chief to let me go on that rotational assignment so that I could grow. He said, "We love her; she does good work, but we need to let her go. We need to let her grow and do whatever it is she's supposed to do here." So I had always gone to him early on in my career for assistance and guidance as well.

So I've lucked out. I've had a couple of very key folks that have helped me. But pretty much anyone I have worked with, or that I have requested to assist me in some way, they have reached out a helping hand. I think that's just how we are here. We're a team. You see young talent and you want to help them and you want to help them move up. So I've had a lot of great experiences here with that.

ROSS-NAZZAL: You mentioned that problem that you had on Station. Tell us so that readers can find out more about that and what issues had to be resolved.

KERRICK: With respect to the Progress vehicle coming in? In that particular scenario, the on-console flight director has the authority for all decision making. I was there in a management role. So what I can do if she's not getting what she needs is call Russian upper level management. I had done that. We had also notified ISS program management, who was calling their management. Ultimately safety of the vehicle and of the crew, the entire Space Station, is the responsibility of the US flight director console. So we need to do everything in our power to

make sure that the crew and vehicle is safe. Our decisions may not always be popular with everyone, but they are always based on the best data we have at the time with a goal of minimizing the risks to the vehicle and the crew.

We share these experiences with others in the Flight Director Office, so that if they are ever in a similar situation, that they understand that they are the true authority, because it's hard with this International Space Station. You don't want to create a political incident. You want to defer to the expertise of your international partners, but you should hold the line at crew and vehicle safety.

ROSS-NAZZAL: That's interesting. Is that part of that MOD mantra?

KERRICK: Yes.

ROSS-NAZZAL: The tough, confident.

KERRICK: Yes, that is us. I've heard people say that Mission Operations is "like a cult." "No, it's not a cult." In order to do this job and have confidence that everybody working with you is of the same mindset, you have to live and breathe this, you know, like a military code. Human spaceflight is literally about life and death. You have to have complete confidence in your team that they will follow the same path. Writing down these foundations of MOD that we all live by helps establish the guideline for how operations will be conducted.

ROSS-NAZZAL: The international partners recognize that the US MCC is the lead in the flight?

KERRICK: That is documented in our flight rules.

ROSS-NAZZAL: Also documented in the agreements between the nations?

KERRICK: Yes.

ROSS-NAZZAL: I had no idea. Talk to us about press conferences that you participated in over the years and how you dealt with the media.

KERRICK: Participated in several. I think the first one I ever did was with—what is his name? He used to be the space reporter.

ROSS-NAZZAL: Is it Miles O'Brien?

KERRICK: Yes, Miles. For Expedition 1 he and his crew had come out to Star City and the Profi where I lived. They had filmed out there, and the crew, and their cottages. He just wanted an in-depth of Expedition 1. That was fine. I think everything turned out okay there.

When I became a flight director, we actually took formal training on how to deal with the media. I wasn't quite sure why we needed that until STS-126, when during the first spacewalk to repair the SARJ, they had a bag with all these special tools that we lost overboard. We watched it float away. We made do with what tools we had for that EVA. We started making plans for figuring out what to do and how to recover from that and still meet all of our objectives.

I went to my first conference after that spacewalk. Of course they asked about the bag. We explained to them what we knew.

Went back the next day. Did some work. Had another conference. They asked about the bag again and asking if we were going to "punish the crew member." I have a face that is easily readable, but in that training class they made us practice. When you get asked something that you know irritates you to your core, you need to make sure that does not show on your face. When that reporter referred to the crew in that fashion, "Are they going to be punished," I got really irritable. I remembered my training, and I sat there. I counted to four, and then I answered. I think some part of what I said wound up in *Time* magazine. It's little snippet about, "We're all human. Humans make mistakes." It was better than what was going on in my head.

The media means well. They want to be the hit story. So you just have to keep in mind that not everybody that you're dealing with is looking to objectively relay the truth about what's going on. You figure that out as you go along with the types of questions that are asked and the types of personalities that are asking them. You adjust your responses accordingly.

Again that comes with maturity. I was fairly new in the office, three years old, when I first dealt with that. So could I have handled that situation better? Probably. But did I handle it well enough? Yes. Now it's very easy. I do a lot of talks, not just with the news. I'm on YouTube. So whenever I am out in public, I just assume now, especially with today's devices, that I am being filmed and being recorded. Whatever I do or say, I need to act in a way that would reflect favorably upon NASA.

That's hard to instill in our young folks who are growing up in this YouTube Facebook generation. If you see some of their posts, it's sometimes clear that they aren't looking at it from the perspective of how their post might be misconstrued. So it's something that we can continue

to share with this next generation of folks that are highly integrated with the media and the Internet in that way.

ROSS-NAZZAL: You seem very community-minded. You work with the co-ops. I've read that you work with local animal shelters and then you also spend time mentoring folks in El Paso and at Texas Tech. Why are all those things so important to you?

KERRICK: Let's talk about the speaking events. I work with the JSC Speakers Bureau. When I was growing up, after my dad died, I wished I had somebody to bounce off my technical aspirations against. My mom did everything she could to help me. She would try and introduce me to all the right people. But if I'd had somebody that was already working here that I could have talked to, that would have made all the difference in the world, I think, and maybe helped focus me a little bit more. I was fairly focused, but I think it just would have been good to help me plot a better course.

So I go back to El Paso in particular because I am very grateful to the opportunities that the people in El Paso provided me. I also go to Lubbock because I'm very grateful to the opportunities that Texas Tech provided me. I give talks. Whenever I'm there, I just say, "Hey, I'm the only Ginger Kerrick on the planet. Google me, e-mail me if you ever have any questions." It's rare that folks will take me up on it, but those folks that have that spark that want to work here will find me. They will e-mail me, and they will ask me questions. It only takes two minutes of my day. I don't know what effect I'm going to have on them. It might be one day they come to work here because I reached out to them. So that right there is enough for me to continue doing this.

I don't have children of my own. I don't want children of my own, but I like to reach out to the older kids that are looking to find their place in life because I didn't have that option from someone in the professional community when I was growing up. So that's why I help the co-ops and conduct all the speaking engagements.

The dog stuff—so I mentioned that when I finally moved back here from Russia, I adopted a dog. That dog saw me through a lot of life changes, including several boyfriends. They would come and go, but my dog was still there loving me. He passed away suddenly in 2010. I sat at home, and I just cried. I thought, "Wow, I don't remember crying this much when my dad died. I don't remember crying this much when I couldn't be an astronaut. Why am I crying so much?" So, I told myself to call off the pity party and turn this into something positive.

So I talked to my boyfriend at the time and asked him if he would come with me to volunteer at the shelter where I got Bailey from. So we went to that shelter and started walking the dogs that day. The first dog that I took out of there, her name was Francesca, she was a hound dog, very beautiful. I probably got about 30 feet away from the door and started crying. I'm hugging on this dog. I thought, "Oh my God, I can't do this." The dog's just kissing me as if to say, "It's going to be all right, lady, everything's fine."

I started going there two or three times a week, because it made me feel better. After I had been going there for four months, they called me to say that they had not received any interest in Francesca and that they were going to put her down. So I went back to the shelter to say goodbye to her. They brought her out, and I was just bawling. The guy that runs the animal shelter said, "Oh my gosh, I can't have this on my conscience. What do you want?" "Please just give me two or three weeks. I'll find her a home." So I posted a plea for help on Facebook. A

friend of mine, Kym, sees it, sends it around to her people. There was this lady in Ohio who used to go to high school with my friend Kym. She says, "If you can get her to me, I'll take her."

ROSS-NAZZAL: Wow.

KERRICK: That was three days before Thanksgiving. I came home and told my boyfriend, "Hey, we didn't have any plans, did we?" So my friend Kym found a sponsor to give us a car, and we drove Francesca 22 hours in freezing rain to Ohio. Never been to Ohio, saw lots of neat things along the way. We pull up to this house. It must have been 6,000 square feet, just huge house. So I'm texting my mom, "Francesca scored. It's like I'm pulling up at the Waltons', it's so awesome." This lady comes out with her dog. I thought oh, here's the test. These two dogs meet each other and start romping around and having a party. She invites me inside, and I told her, "Hey, I'm not a crazy dog lady, you can Google me, I'm a normal person," so she Googles me. Then she tells me, "Hey, my parents work at NASA."

ROSS-NAZZAL: Oh, how funny.

KERRICK: So we got to talking and they have a wonderful family. It's been great. She sends me pictures and videos of this dog. It's like that dog restored my soul, being able to save her. Then it made me want to save more. So I work with that shelter. Eventually my friend Kym that had found this person, she started her own rescue org after that experience, because it inspired her as well. So I work with her rescue org, Triumphant Tails, Inc. Turns out both the shelter that I

work with and the rescue org that I work with is having an adoption event this Saturday. So when I talk to my co-ops I explain to them when I was their age I never thought to do stuff like this, because I was always busy working or having fun. But now that I'm over 40, I'm looking back and wishing I had done more things like that. Out of the experiences that I have had working at NASA or with anything in my life, the things I remember most are the people I've met, things like tea with Mr. Kutepov, and these dogs that I've saved.

I've been recognized by dogs that I've saved when I go to Boondoggle's. I don't know their owners. But the dog looks at me and I look at the dog and we're like hey. It's those things that make me feel worthwhile, the ability to help these co-ops here at work. A few of them are coming out there with me. Each semester they come out, and they do it. They're like, "Oh, Ms. Kerrick, that was the best, and this is awesome, and I like this, and thank you for opening that door." We're going be out at the Walmart at 646 if you guys need a puppy Saturday. So I really enjoy it. I'm glad I found that avenue.

ROSS-NAZZAL: I found on YouTube—you mentioned YouTube—and someone had shot a video of you at your desk. Apparently you are known as the frog flight.

KERRICK: When I was little, my dad used to take me to the reservoir. I used to hop the back wall, and there was a desert and then a reservoir. In El Paso it doesn't rain very much. It would rain sometimes in May. The reservoir would flood. Frogs would come, do their business, and have their little tadpoles. Then it would start to dry out. So I'd tell my dad, "Hey, they're drying up again." He bought me these tanks to put in the backyard. Bucket by bucket I would take these tadpoles from the reservoir and put them in these tanks. I would raise them.

One tank was strictly for tadpoles. They got fish food. Then once they started getting their legs they needed to be half land half water. So tank two half land half water. You need bugs or fish food, depending upon how you feel today. Then tank three complete land, not quite ready to be on their own, because they could be eaten by other critters in the backyard. But once they lost their tail then I would set them free. There was one summer I had 186 frogs.

When it would rain in the backyard you could just see them just hopping, going to town, happy. I would have them in my Barbie swimming pool. My mom would say, "Oh my goodness." My dad would say, "Yes, that's my girl." After I grew up I missed my frogs, and so I had a frog collection. When I was working in XA as the deputy director, one of the secretaries there happened to collect frogs. So I had gone through my garage and found my old box of frogs. As a practical joke one day when she wasn't there I started putting all my frogs on her desk. She came in later that day and was very surprised. So then they YouTubed that whole setup, unfortunately.

ROSS-NAZZAL: I was curious about that.

KERRICK: There's a logical explanation for it.

ROSS-NAZZAL: I was curious about that because I know flight directors take colors or gemstones but I had never heard of taking an animal.

KERRICK: We have unofficial call signs. Ironically my unofficial call sign is indeed frog flight.

ROSS-NAZZAL: So what is your official call sign?

KERRICK: Vega.

ROSS-NAZZAL: I had to ask about it because I thought that is unusual. Hadn't heard that.

KERRICK: We have our vices.

ROSS-NAZZAL: They look like fun. I was curious how you think women's opportunities at JSC have changed over the years or even for minorities as well.

KERRICK: Since I have been here, I've had a lot of girls—when I go to these conferences for women—ask if I've encountered any roadblocks here in either category, women or minority. Since I've been here I have never felt like an opportunity that was out there wasn't made available to anybody.

So it's never even been a question. When I talk to some of the kids, I explain that if it's not an expectation in your mind when you come here, you'll never see it whether it's minority or female. I've honestly never run into a problem. I've run into a problem in high school once but I took care of that.

ROSS-NAZZAL: I can imagine you did. What do you think has been your greatest accomplishment, having worked out here for more than 20 years?

KERRICK: Wow. I was walking down the hall one day, probably about four years ago. This kid comes up to me. He says, "Do you remember me?" I said, "Oh, I'm not sure." He says, "I'm from New Mexico State [University, Las Cruces], and you came to talk to me once. I just wanted to tell you that you're the reason I'm here." I had to leave the hallway because I was going to cry. You don't cry in the hallways of MOD.

I think about all the technical things that I've done here. Sure, I've helped to solve a problem here and there. But if you ask me the greatest accomplishment, if I can get two or three more of those in the hallway, that's what I'll walk away from here with. That made my year. I know it sounds dorky and sappy but it's true.

ROSS-NAZZAL: What do you think has been your biggest challenge since you've been here? You seem to have overcome so many.

KERRICK: I think the hardest one was the internal shift, when I had to give up on the dream of becoming an astronaut. I was thinking I'd send in my application letter and get the coolest rejection letter ever, because I was only 26. But to get the call and to make it through interviews, the disappointment that I felt to be disqualified was incredible. When I talk to co-ops I talk to them about this too. I could have very easily taken a different turn. I was miserable. I could have given up on this place because I didn't get what I wanted. I had to convince myself that I was going to look at it from a different perspective.

Initially I said, "I can't even continue to teach. Yes I like being an instructor, but now I'm going to be face to face with the astronauts every day—the people that hold the job that I wanted to have."

I made myself stop thinking that way. I said, "No, you're going to wake up every morning, and you're going to say this. You're going to say, 'I can't be an astronaut. There's nothing I can do about it. But if I teach these folks, each one of them can carry a piece of something that I shared with them up. Each one of them will carry a piece of you up into space.'" So every morning I said that to myself when I woke up and I didn't want to get out of bed, because I was miserable.

They tell you this in these self-help books and stuff. You say it enough, and you start believing it. Until you do it, it's just a line that somebody feeds you. It was a couple of months of doing that to myself. After a few months, I didn't have to tell myself any more. I actually started believing it, and then I started having a really great time. It was right around that time where all these other doors started opening then: Russian training integration, CapCom, flight director.

So then I sit here 17 years later after my astronaut interview, and I can't imagine myself being anywhere else. This is exactly where I was supposed to be. So I think that was my biggest challenge early on, making that mindset change. But it has brought so many rewards, and I encourage folks to take themselves out of that pool of misery long enough to have an objective assessment of the situation and see if there's other directions you can go.

ROSS-NAZZAL: It's a great story, I have to say. Great story of inspiration I thought. I'm going to ask Sandra if she had some questions for you.

JOHNSON: I've just got a couple. I was thinking when you were talking about being a CapCom in Expedition 3. Of course 9/11 happened during Expedition 3. You had mentioned that part of

your role in mission control for the ISS is emotional well-being of the crews. Then later also while you were still CapCom the *Columbia* accident [STS-107]. I was just wondering how you did that, and how you helped those crews that were on ISS get through those times.

KERRICK: For 9/11, I didn't work a shift around that timeframe. So I didn't really feel like I played a role at all in helping them. But for *Columbia* I was on the CapCom console in the ISS room. We were listening like we always do to the Shuttle landing, and we realized that something had gone wrong. Then Ken [Kenneth D. "Sox"] Bowersox called down, and he said, "Hey, so how'd the landing go? They should have landed by now, right?"

I looked at the flight director Sally [P.] Davis. I said, "I'll go ahead and answer. Okay? I'm not going to tell them anything yet." She said okay. So I said "Hey. We were just getting ready to call you. Yes. Give me just a second. We're just getting the final updates. I'll give you a call back."

I sounded very cheery. We privatized the comm, and then I got online. I'm like "Sox, I have something to tell you. I just needed to privatize the comm. They didn't make it home." I spent the rest of my shift giving them a play by play of what was being reported on CNN.

When you're in mission control and an event like that occurs, whether you're a CapCom or the flight director, you need to keep everybody calm. So you rehearse what you'll do and what you'll say in times like this. Did I want to start crying? Yes. But I'm not allowed to do that. The crew and the team's well-being is more important than whatever I'm going through right now. So you compartmentalize, and you deal with the immediate situation. Then you can go home and cry, which is what I did. It was tough.

JOHNSON: Then you got to deal with the extension and not knowing. The Shuttle not flying again and that sort of thing.

KERRICK: Yes. Because how are they going to get home now?

JOHNSON: Well, on a little bit lighter note, you wanted to be an astronaut from such an early age. I know you're happy doing what you're doing now. But have you thought about those commercial crews at all?

KERRICK: Oh no, no. This is my calling.

JOHNSON: Just thought I'd ask.

KERRICK: I'm too old now anyway. I would only qualify for the test flight, because eventually they'll likely be pulling from our pool. But I think the first initial flights are going to be open. So yes maybe they need a test flight candidate. But no, I think I've found my spot.

JOHNSON: You're okay on the ground.

ROSS-NAZZAL: Is there anything else we haven't covered that you'd like to talk about? We have about ten minutes, I think.

KERRICK: Cakes.

ROSS-NAZZAL: Yes.

KERRICK: Did you guys know I did this?

ROSS-NAZZAL: I saw a photo of the cake that you made that had—it looked like it had black frosting.

KERRICK: When I first moved here I didn't know anybody. My boyfriend was back at Texas Tech. So I started going to Michaels and taking cake decorating classes. Then I would take my products from that class to work.

After I made a few and started developing my skills, I realized hey, I'm not too bad at this. So I started making them for events. When Randy Stone retired, I made a five-foot-long cake about ten inches wide. I had to get a friend of mine's van, take off the seats. That's how we delivered it to the Gilruth Center. I put a patch for every single mission that he had worked on. He cried when he saw it. He left me a very touching voicemail, which I still have, on my answering machine here. So I've been making folks' retirement cakes. Or if somebody gets a Snoopy award, I'll make a Snoopy cake.

I'm starting to think about post-NASA ways that I can help the dogs that I work with. Creating something, a business that's almost like a 501(c)(3) where you buy a cake from me, I'll charge you market price, pay myself what it cost me to make it, and then donate the rest to a dog. So I'm looking into do that. I need to talk to NASA legal, see if I can do it while I'm still

working here. I don't see why I couldn't. I think that would be good, because I really enjoy making the cake, and it'd be a great way to help the dogs.

ROSS-NAZZAL: Great.

KERRICK: I fly every March and August to California to make my nephews' birthday cakes.

ROSS-NAZZAL: Oh how nice.

KERRICK: So I just got back. It was Angry Birds in space.

ROSS-NAZZAL: Oh yes that's pretty popular now.

KERRICK: Oh yes I thought they were going to hurl them at each other, because they're made out of Rice Krispie treats and fondant.

ROSS-NAZZAL: How funny. Well, I'll buy a cake from you. I'm a sucker for animals. I have two dogs and six cats. Sandra has how many cats now?

JOHNSON: Well, it depends.

KERRICK: That's probably the only other thing about me that I wanted to cover.

ROSS-NAZZAL: Thanks so much for coming in today. This was great.

KERRICK: Thank you.

ROSS-NAZZAL: Enjoyed it.

[End of interview]