

# NASA JOHNSON SPACE CENTER ORAL HISTORY PROJECT

## ORAL HISTORY TRANSCRIPT

MARK S. GEYER  
INTERVIEWED BY JENNIFER ROSS-NAZZAL  
HOUSTON, TEXAS – JUNE 20, 2019

ROSS-NAZZAL: Today is June 20<sup>th</sup>, 2019. This interview with Mark Geyer is being conducted at the Johnson Space Center for the JSC Oral History Project. The interviewer is Jennifer Ross-Nazzal, assisted by Sandra Johnson. Thanks again for taking time out of your schedule to meet with us this morning. Really appreciate it.

GEYER: Sure. Appreciate it.

ROSS-NAZZAL: Last time we had a chance to talk, you had just accepted the position. You had an all-hands meeting. You were talking about some key things, about flight tempo and the role of JSC in leading partnerships. I was wondering how you think those issues have been resolved so far under your tenure. You were still grappling with how you might handle those issues and assigning tasks to teams.

GEYER: Yes. I think the Center has seen that challenge, especially with the flights happening, [SpaceX] Demo-1 and now AA [Ascent Abort]-2 about to happen on the 2<sup>nd</sup>. I think everybody got it, and we had some specific actions about communication, especially communicating the Commercial Crew launch dates better with the workforce, so they could schedule their work better and some specific things about accelerating decision making that I think helped. I think it

helped the workforce see that we were trying to help them do their job, not just say, “Hey, work harder,” but how do we structure things so that we have a better chance of succeeding.

A couple things have happened too. The Commercial Crew flights have spread a little bit. Demo-1 was a little late. Demo-2 is going to be later now because of the issues that they found. The Boeing flight is more delayed. That’s spread some of the work out, which has helped.

I think also the fact that we had Demo-1 reminded everybody that we’re close. When you have those kind of reminders—and we’ve been seeing it as a management team—it helps shake out the hard choices and helps the team focus, I think. That’s been really good. I think that part has worked well.

Of course added to the mix is that early in the spring, the Vice President [Michael R. Pence] said we’re going to the Moon in ’24, which was exciting, but also another very important thing on top. Also finalizing the Gateway plan with Dan [Daniel W.] Hartman now as the Program Manager, and now awarding that power prop [propulsion] element, which is the first element that’s going to launch in ’22, all those are also a lot happening right on top of everything else.

This is a really good problem to have, all these exciting things happening early. The administration and Congress are supporting them, so we’re getting the support. That’s a good problem to have. Now we’ve just got to prioritize the work. We’ve had good conversations with the major organizations like Engineering and Flight Operations to say, “Do you have all the people you need where they need to be? Do we need to make choices about assignments and move people around?” We’ve had a few of those. I think all in all it’s worked well.

I think the next six months with getting to flight readiness for the two Commercial Crew providers, the intensity will go up. That'll be a big challenge, so we've got to continue to make sure that the right people are still on the right tasks. I think it's worked great. It's an exciting time, but we still have a lot of work ahead of us to make that happen.

ROSS-NAZZAL: What about partnerships? You mentioned that you wanted JSC to lead in partnerships. How is JSC doing that?

GEYER: A good example again, an assignment that we were given mainly because of our experience in that is the CLPS Program, the Commercial Lunar Payload Services Program. The Science Mission Directorate was looking for a way to deliver payloads quickly to the lunar surface and also to create some innovation, get some new participants, and they came to us to set up the strategy and the procurement and now the implementation. We're starting with smaller payloads, so you can get new people in the competition, and we've selected three for the first missions in '20 and '21. They're all three new people, they're not the big guys. We're partnering now with new companies to try to get them in the game and give them enough work that they can start a business case and start flying. That's one way we're a big part of that.

Also in the Gateway we have this power prop element which is the bus, keeps us in orbit, gives us power. The next element is this smaller habitation element that'll be where we dock and aggregate, where the crew comes in from Orion, and eventually the lander will dock. We're looking to partner with one of the commercial companies. That's part of our broad area announcements [BAAs] that we've been working on habitation for the last few years.

The BAAs were a new technique to give companies a chance to innovate and try things on their own, and then we could pick. It turns out it was a great strategy, because now when we're ready to move out on the Gateway we've got a way to select and pick a provider relatively quickly. We're going to contract that in more of a commercial manner, meaning we'll buy it as a fixed price arrangement and allow the company to hold the IP [intellectual property] and those kind of things. Our insight will be just to the level that's necessary. Again there's another example.

On the human lander, Marshall [Space Flight Center, Huntsville, Alabama] is leading the human lander work, but we're providing them with our expertise about how to write requirements like we did on Commercial Crew and on the Gateway. What's the right level of requirements to make sure that we get what we need? We've also provided them with some of our procurement experience with how to go do that. A lot of different ways.

On top of that, the Space Station is starting to move out on specific strategies for commercializing low Earth orbit. Soon we'll go out with a request for companies to tell us how they might utilize one of the ports on the ISS, where they could bring up a commercial module and we give them utilities, but then they run that module as a commercial enterprise, as a way to see whether there's a business model there that eventually they could be a free flier and leave.

We're also looking at free flying capability. Other people might be interested in that, and then these private astronaut missions, where we're going to allow room and time on Station for someone who wants to contract with Boeing or SpaceX to fly a completely commercial mission, which could be up there 30 days or less. Some period of time where they would bring people up and hang out and do stuff on Space Station. Of course they'll pay us for the utilities and crew time if they needed us to support that. To see if there's a market there, we're doing things there

to see if we can seed this low Earth orbit economy. There's a bunch happening all at the same time.

ROSS-NAZZAL: You did mention the Vice President making this announcement, 2024. That's such a rapid pace, especially compared to the first time we did it. What impact has that had on the Center from your perspective since that decision was announced?

GEYER: Originally we had a rough plan for 2028, and we were still figuring out how that worked. I think, one, it's cool that the administration really values NASA, and they see this lunar landing as important for the country, which I agree with. They see it so important that the Vice President, of all the things he wants to talk about, is going to emphasize that. That's really good. It's positive for the country I think, and for NASA.

But having been here a while, and a lot of the workforce has been through a couple of these cycles, there's often some skepticism about, "Does the money come with this," or, "What is the other shoe that will drop on we're going to do this and we're not going to do this," which causes other issues and often doesn't get through Congress.

There was a little bit of that, "Okay, well, this is great. Will I see the next things happen that I know we've lived through that we know need to happen or it will not succeed." Excitement, but also skepticism. When I say skepticism, I don't mean everybody was sitting around with their arms crossed going, "Ah, this is not going to [happen]. Our team worked really hard to support the formulation of what this lander strategy would look like, and they're still working hard, really really long hours. We're going to do everything we can to make sure it

can be a success. It won't be something we did not do. The team is working really hard to do that.

I was very encouraged actually in a couple of ways. One is that I think the [NASA] Administrator [James F. Bridenstine] is really showing his skill, and shows the value of having an Administrator that understands Washington, is smart enough to understand what NASA is doing while he listens to his team—and Jim is definitely [doing] that—and also he understands how Washington works, because it's the Washington part that will make this go or not. Which is what we've seen in the past, the problems in the past.

The first thing he did was to get OMB, Office of Management and Budget in the White House, to agree to ask for more money to enable this. That was huge. I fully expected them to just say, "Yes, you can do it but you need to cancel the Station, or you need to cancel Orion and SLS [Space Launch System], or you need to cut science. I'm not giving you any more money." That would have been DOA [dead on arrival] in Congress. There's no way. That would have been great. I'm glad we had a speech, but it's a complete loser. But they didn't do that.

Actually Jim had to fight very hard is my understanding to make that happen. When they came out and said, "Oh, they're actually asking for more money," I was very encouraged. Jim is working hard to get congressional focus on the Moon, try to avoid [the Moon] being a partisan thing. Everything's very emotionally charged and polarized in Washington, so he's trying to avoid that trap, and doing things like naming it Artemis and providing other outreach that focuses on the United States as a leader, going to the Moon, sending the first woman to the Moon. All these things he knows resonates with certain parts of the public, so it doesn't become an administration thing. Who knows what's going to happen in two years or six years? Either

one, we get a change, and if it's all about the current President it will not survive. We've been through that. We've been to that dance.

I think Jim really sees that as his job, and I think he's doing a really good job. Both of those things have given me a lot of hope that we're not going to fall into the traps we fell in last time. Our job is to do our job. I think there's a lot of hard work ahead of us in being clear on what we want in these contracts in both requirements and emphasis. Is it schedule, is it cost, what are we actually after? All of those are going to be real important to be very clear before we finalize those contractual ideas by the end of July. I think the team is doing a great job trying to work through that, so I'm encouraged.

Now whether it'll actually be '24, we need to get this first part done. We need to get contractors telling us what they can do and what it costs. Then we'll figure out what that looks like. We have another hard part ahead of us. It's a great start. Again I think Jim has given me hope that there's a chance that it'll get out of Washington, which was always our problem the last two times.

ROSS-NAZZAL: What is your role as Center Director in helping to come up with this plan and making sure that the employees, the directorates, the Center has what it needs in order to meet this deadline, this goal?

GEYER: One is I dialogue with Washington about the things I see are going to politically be a problem. I'd been doing that before, so I didn't ramp that up near term. Jim knows those things. That would be one way. If I saw them going down a strategy that I thought was going to be a big problem for Texas or somebody here, I'd need to let them know. So far that's been fine.

Then the other part is I look at this strategy, these programs, where are the skills at JSC that are unique that we feel should be applied to these tasks and make our case. Like program management, integration, mission planning, all these things that are really unique, plus human health and performance and even the science work that we do, our engineering work, all these things.

As they're formulating the idea, I try to make sure that the expertise that we have is applied effectively. That's part of my job. To me that's a matter of how you get the best people in the right seats, so that's part of what we do. We're still in that process for the landing and the other integration. We're still in the process of talking to Washington about that.

It's making sure that our people understand the strategy, including let's get the minimum set of requirements like we did for Commercial Crew. What are the key skills that we think NASA provides that we want these partners to know about. Let's get that list clear. What are the technologies or advanced developments that NASA needs to do because it'll apply to all these people that might be going to the Moon? Like dust mitigation. Let's get that list and figure out how we would propose that be funded, so we can get that work in front of us to help all these people. It's really putting all that together so that basically we're making sure that NASA is doing everything it can to make the mission successful, I guess. There's a lot of different pieces.

Then the last part, which is really for the future, is how does this new plan affect my workforce plan. I don't just mean number of people but skills. As an Orion Program Manager, I was spoiled. I benefited from this expertise in Engineering and Safety, from Shuttle, Station. Commercial Crew benefited from experience that people here got from Orion or Station. These commercial models, they're working really well. It's really interesting, but our people don't get



the same level of hands-on experience. While they learn by watching, “Oh, that was interesting, or that was an innovating way of thinking about it,” it’s different than what we did on Shuttle or even parts of Orion, where we had in-line work, where we did the products, or we did development. Like the parachute development, NASA did that work. You learn a lot, and you become an expert.

How am I going to get expertise in the future if all my contracts are more like this commercial model? One is to have a conversation early like we’re doing on Gateway and lander, to say which pieces do we demand NASA be a lead on. It shouldn’t be very many things but some things: dust mitigation, hazardous avoidance for landing. Those kind of things, I think we lead the world. There’s mission planning that FOD [Flight Operations Directorate] does.

There’s things like that that we’re going to say we need to keep doing those, because we’re the best, there’s no reason for these guys to learn it. We need to be funded to do it. Anything else, any other skills, we’re going to offer them to these companies to say, “Well, I hear that Johnson is great in oxygen compatibility testing at White Sands [Test Facility, Las Cruces, New Mexico],” so they decide to work with us. They come back to us. We give them the cut, they come back to us. That’s happened in Commercial Crew a few times. We’ll get a few of those.

The ones that neither of those happen, how am I going to make sure that we have the right people, smart experienced people in the future, 10 years from now? Once we shake this out for Gateway and lander, we know exactly which areas we’re leading and doing work and which areas we’re just doing insight to, then I have to come up with a plan for the long term for those areas.

I don't have money to do in-house projects that aren't funded through HEO [Human Exploration and Operations Mission Directorate]. I just don't have money laying around. Can we make Space Act Agreements with other companies that are interested in just working with us? Okay. That's a tool.

One of the things we're talking about too is how we hire people that have already done the work at some of these other companies. Can I swap experts with these companies? Right now I'm finding out I can't do that yet, because there's conflict of interest things. I find that DoD [Department of Defense] and other people have authority to do that, and I do not, so we're trying to work that, like send a person to SpaceX for two years. I get a person from SpaceX here for two years. Same with Blue [Origin], same with Boeing, Lockheed. I've got to come up with a plan for the future because we're going to do less and less of this in-line with these programs.

That'll be the big challenge going forward. It's not bad, it's just different. When we had no expertise and we built it, a lot of people forget that, especially after the fire on Apollo 1, we hired a lot of people from McDonnell Aircraft who had built Gemini and Mercury—we pulled people into the team who had built stuff before, so it's happened before. We just got to figure out how to do that in the long run.

ROSS-NAZZAL: Sounds like a major change for the workforce.

GEYER: Yes, I think these contractors will come to us for work, so I think there'll be a significant amount. It just won't be as big as it has been in the past, like it was on Shuttle or Orion. We've got to adapt to that.

ROSS-NAZZAL: In your all-hands you talked about how you were going to ask, “How is this getting us to the Moon by 2024?” I’m sure you’ve asked that question a few times. I wanted to get a couple of examples from you.

GEYER: I would say the requirements example is a good one and then this workforce example. The requirements, we have 60 years, 50 at least, 60 years really, of requirement sets. Actually we started with requirements the DoD created before that. All good things. You add them up and it’s a huge stack of standards and specifications, and they all were meant to be helpful. This gets back to experience too. You have to also know enough to know when those requirements make sense, when they apply. If you’re just reading a book it’s not going to help you.

We have in the past levied a lot of requirements on people. We’ve levied a lot on Orion. It’s going to be a great vehicle, and I think the team did a really good job as they got into some money pinches to go look at what was critical. In the end you and I paid for that. We paid for that flowdown to all the subs [subcontractors] and everybody else. I think we’re being more critical as an Agency to say which ones must they do and which ones are we going to use more as a guideline.

That’s hard for people. If you’re the pyro [pyrotechnic] person and you’ve owned the standard for a long time, you go, “Well, I know why this helps.” It’s a question of whether we’re going to direct them or use it as information. That’s hard to say is this really a safety thing or is this a “I think it’ll work better thing.” The stuff that’s “I think it’ll work better thing,” we got to get it out of the book. We got to let them try that.

We’re going through that now with Gateway and the lander. It’s going to be hard. We have some areas like human health and performance where requirements are always kind of

fuzzy, like human systems interaction. How far do I reach? What's the colors? What's the best tone for the alarm? All good things. What's the appropriate volume for exercise and everything else? If you're not careful—and we've struggled with this in the past—you come up with this huge book. All these shalls about how to go do that. Then you got to verify it. It's a huge amount of paper. They have a unique challenge to take that knowledge and turn it into a few shalls, "You have to do this," and others that say, "This is good practice," and others to say, "I'm going to let you design, but I'll let you know when you're done. You have to show me these things. You have to verify to me that the workload is not too high, that they can access these control." It's hard to do.

They did a reasonably good job in Commercial Crew, but the lander will be more difficult, so I expect that. That's an example. We go through that. You'll always find—and it's not the team's fault—some weird requirement. Why are we telling them this? "You got to have food." Come on.

It started with somebody that said, "Well, I want to make sure that they have room for that kind of thing, and they put it in their plan." Okay. Good. Let's talk about what that means. How would you specify that instead of, "You need food." Those kind of conversations are happening.

These are good people. It's in the book because someone made a mistake in the past, and our people are trying to help. They want to get to the Moon fast as much as anybody else. We're learning maybe a different way to let some of these teams innovate on their own and integrate at a higher level the system, rather than us telling them very low detail about how to go make it happen.

I'm trying to think of another example. I think this workforce question, we're in the midst of having that debate too. Let's say I tell them, "You must test your system at White Sands." I could tell them that. The prop system, you have to do it. It's a great capability. It's a great national asset, I would say. But I'm pushing on the company too to get their cost down and to propose the minimum they think it takes to get this thing to the Moon in '24.

They may decide to build their own test stand. We know two of the companies, Blue and SpaceX, already have prop test stand capability. It's not the same. They would have to build more. This is always the debate. They own it. They control it. They can optimize it to their own task. You and I are still paying them to do it. Yet we've got this facility at White Sands, which would not be optimized for them and would probably be overall more expensive for NASA to make them go there, but we've got to have that conversation. If no one goes there and we shut the place down is that a good long-term plan for the country? Is this helping us? It may not be helping you to 2024 but it may be helping us beyond that [time with] other systems and other testing we want to do. If we lose that whole capability as a country is that really better for us?

By the time it comes to me, I'm not getting any stupid things that I would go, "Why the hell would you do that? We're not going to get to the Moon." It's these complicated questions. How much do we tell them based on our experience? How much do we hold on to capabilities because it could help us in the future, but it will penalize 2024?

ROSS-NAZZAL: Sounds like a lot of weight on your shoulders if you're weighing that option of test stands and using White Sands and keeping it open.

GEYER: It's a lot, but it's not new, it's just more intense now because I think we're doing more commercially contracted things. I think people emotionally are going, "Wow, if this is the way we're going to do it forever, there's some things we have to manage differently." A lot of people are struggling with that. You talk about message.

Part of that is the message that NASA is always going to be in charge of defining the national program. This isn't Elon's dream or Bezos's dream [CEO of SpaceX, Elon Musk, and founder of Blue Origin, Jeff Bezos]. This is the national program. That's NASA's job. Deciding how to buy things is NASA's job. When is it reasonably safe for our astronauts who are doing our job as the nation that we can put our name on it and sign it, flight readiness. Those jobs you don't want to give up. Someone would have to do them for the country. To do all those jobs takes skills that you have to keep. You have to keep top-notch skills.

That is more of what a Center Director job is than program. Program is very much, "Give me what I want now, and I don't want to pay you for anything else." Which is fine. That's what programs do. That's their job. The Center [Director has] got to go, "You're lucky. You got all these people from the last guy. I got to make sure the next guy has got those people."

The hard part—it's not hard, but one of the things as a Center Director I'm pushing on is look, we need to have an Agency conversation about this. We can't just wait for the contract to go out, and I'm hoping Blue will call me and go to White Sands. We can't wait. We got to have a strategy. Now it's okay if we get told no. I may be part of that too saying, "I get it, I don't think this is really worth holding on to." We'll have hard conversations here. As a Center Director if I don't force that conversation it's not going to happen. We're going to get what we get.

Since we have so many capabilities that the country has used and expect to be available, I think Johnson has probably the hardest job of all the Centers because of the wide scope that we have. We need all these things, but maybe we need them in a different way. How do we go do that? I found that especially in the last month. I'm like, "Am I the only one? We need to have this conversation." I'm not the only one. I keep bringing it up. I'm the only one that keeps bringing it up. "When are we going to talk about this?" I've got all my guys. Julie [Kramer] White in Engineering, Cathy [Catherine A.] Koerner in Human Health and Performance, [John A.] McCullough is integrating the whole thing. Let's get our list. I'm not going to wait. Let's get our list and let's go.

I talked to Ralph [R.] Roe, the Chief Engineer. Neither one of us knew where the hell we went to have this conversation. I was just banging on [Associate Administrator for Human Exploration and Operations William H.] Gerstenmaier in this meeting.

"When are we going to talk about this?"

He finally says, "Okay, I agree, we need to."

That's what a Center [Director] has to do. I got to look 20 years ahead, 10 years ahead. I need these choices now so I can figure out how to get my workforce there. I can't just wait like I said for SpaceX to call me or not. That's not a plan.

ROSS-NAZZAL: I'll be interested in hearing more next time we talk to you about that conversation.

GEYER: I think it'll be good. I think everybody understands that. We have some really hard choices on continuing to have the world's leaders in these systems. We're going to have to do things. We're going to have to make choices on that.

ROSS-NAZZAL: You mentioned messaging, which I wanted to talk to you about. Under your tenure you came up with a new vision statement for the Center, which is dare, unite, explore. I wondered if you would talk about what that means to you, and how you're working to achieve those goals.

GEYER: It wasn't just me. I got the senior staff, the leaders of the Center. We identified some issues that we were seeing, including some I would say fear around certifying the commercial launches. "What's NASA's role? Am I going to be forced to sign that it's okay, and I just don't know yet?" Also fear around the future about what our job was going to be.

As we worked through that, then we talked about a way to provide a higher-level vision. Get people off of this thing that they're worried about at the moment. We got to help them with that. Get away from the fear and think of where are we headed. What are we focused on? Dare, unite, explore brings those three pieces together. The dare is we are in a business where daring is what we do. It's not just where we go, but it's how we do our work. The important part was tying it not just to a spaceflight piece of hardware but any process: procurement, HR [human resources]. Let's be aggressive. Let's push the boundaries to help the United States continue to be a leader in space. It's really to tell them I will back them up. Let's be aggressive.

There was a little concern that it not be a conversation about being reckless. There were other words that we decided not to use. We thought being daring was good. "I'm going to be



daring.” I would say we’ve always been that way. It’s important to remind people that that’s what we do. It’s a tough job, but it also applies to everything we do every day. How many meetings we have, all these kind of things.

Then the unite part too was to say, “Look, partnering is not something to be afraid of. Partnering is something we’ve done from the very beginning. It’s critical for us to do more in space.” It’s uniting with our partners around common goals to do the nation’s mission, to do bold things. We’ve united with international partners around things that we have in common. Now we’ve started to unite more with our commercial partners around our mission but that they’re interested in. There’s a lot of power in uniting with these other people to do the nation’s mission, but synergizing enough with what is interesting for them that they’re interested in playing, they put some of their money in, certainly the internationals do. That was it. Hey, uniting is what we do. It also really applies to the other Centers too, that we’re not competing with other Centers. Every program I’ve been in the other Centers were a key part of that. Part of our job at Johnson is to be the uniter, the one that brings people together. I wanted that to be the sense.

Then explore is just—I joke about it. We’re not making potato chips. We’re putting people in space, so it’s different.

ROSS-NAZZAL: [That would] be a good T-shirt.

GEYER: We’re doing all this, and this is why it’s unusual. That’s the idea. There was a lot of energy around it at the beginning. I put the banners up. It’s something that takes reminding. Something that you need to keep showing how things are moving, how they relate to this, so

people get it into a rhythm. Just like any change process, you need to keep reminding people how these fit with what we're trying to do and the actions fit with this.

That's why I appreciate what ERO [External Relations Office] has done tying the directors [into this message]. They have this page about what that means to them, and they talk about it. It helps people relate. "Okay, when I'm doing this it relates to this. It's core to what Johnson does."

I try to put it in every message. I try not to make it too simplistic, saying no matter what I'm going to put the word dare [out there]. I don't do that. I'm [not] always going to put the word dare in there, I don't do that. But there is something about reminding people that this is what it's about, and when they do these things they're fitting into this vision, I think. More to come I think. All the things that are going on. Oh my gosh, the ISS [International Space Station] commercialization, the lander, the Gateway, the finishing Orion, Commercial Crew. I can't think of anything much more daring. Trying new ways to unite with different people. It's perfect.

ROSS-NAZZAL: Public affairs, I'm assuming, came up with a new public tagline. "Giant leaps start here." Talk about that.

GEYER: Dare, unite, explore is really something that resonates with our team inside. They know what we do. Now this puts a focus on an attitude around what we do. "Giant leaps start here" was also more focused for the outside. People go, "Oh yes, I remember the Moon. I remember the landing." The words were spoken here. "Houston, Tranquility Base here." We know that we have a big link to that. The crew was always here. It was part of emphasizing that Johnson

has the skills for any of these future missions. “Giant leaps start here” is okay, yes, that one started here and we believe our role is in the future that all the big things Johnson is going to be a key part of. I think it helps people tie the excitement of the future to the landing on the Moon.

ROSS-NAZZAL: We’ve heard a little bit about a MAP [Mission Support Future Architecture Program] Project. I wonder if you would talk about how you see that impacting JSC employees. I imagine it’s also tied to this workforce issue that you’re dealing with at this moment.

GEYER: What MAP is about is there are 10 Centers in NASA and some smaller adjuncts like White Sands and Wallops [Flight Facility, Wattsville, Virginia]. I think there might be another one. There are functions in all those Centers. I think the Agency has done a pretty good job of eliminating overlap in technical capabilities among the Centers. There are functions that it takes just to run a Center, human resources, Chief Financial Officer, Chief Information Officer, CIO, IT [information technology], all that kind of stuff, facilities, security, that every Center has.

What [former Acting Administrator] Robert [M.] Lightfoot and [former Acting Deputy Administrator] Lesa [B.] Roe really looked at was every Center kind of had their own silo as to how to do that, and there wasn’t a lot of sharing across them. They felt like the Agency could save some money and some civil servant billets if it integrated across the whole Agency, tried to synergize skills. I think it’s a really good idea, but we’re in the middle of it. Like any good idea, you have to keep your attention on it, because it’s the how that can mess you up.

I support the idea. Right now I would say their implementation, there’s still some rough spots in how they’re doing it, which I think you see in a couple different ways. I’m seeing that maybe some of the people in Washington who used to be in charge of 10 people and do policy

are now in charge of hundreds and they're doing budget and all the human resources and everything else that goes along with that. That's a whole different job, and I see some of them are struggling. They don't know how to do it. They weren't hired to do that job. That's normal. I think that's going to be hard. I think they've got some choices to make in Washington if they're really going to do this.

Then the other thing is I see that the Center, because we're closer to the work, the Center Director and the Associate Director were provided a really important skill about integrating all those functions at this location. We could move money around, we could deal with risks in one area or the other by shifting funds around. We provided an integrated solution of all those skills for the workforce here.

Now those people will work for [NASA] Headquarters [Washington, DC]. HR works for Headquarters and CIO is going to work [for HQ], not just [be] the lead but [lead] the whole team. I won't own the money. I won't be responsible for the budget. Again the idea is that'll allow them to be more efficient across the big NASA, and I think there's potential that that will be true, because you can share experiences and be more effective across the Centers.

But it takes my ability away to optimize around Johnson's job. I think that's just going to happen. We've made our case, and I think they're just going to do it. We're trying to work through that because I'll still have risks here on facilities and other things that I've got to figure out how I'm going to budget that, how I'm going to deal with that. If I don't have the flexibility to work across the whole scope.

I think those are the biggies. At the moment, since they're starting this whole process, it's typical that when you change the focus of the work from one place and you aggregate it somewhere else, they tend to add overhead to manage it. That's exactly what we're seeing.

They're hiring a bunch of people. They've increased their staff in Washington. Some of them, it's ridiculous. But again I think it's an experience thing or trying to get their hands around it. Right now I'm not seeing the budget go down. I think that could be transient. It's a beginning, trying to figure it out.

On the workforce side what's important to me is that the folks that live in the zip code know that I know they are critical to Johnson's mission, whether their mail code is Johnson or it ties up to somebody in Washington. I need them to feel like they're part of the mission, because it's important and their work is important.

The way I talk about that now is when I was in a program, like Orion I had 50 people that were really Orion people and I had hundreds that were Engineering that were badged Engineering. They matrixed to me, but I felt like they were as much a part of the team as the 50. That's the way I talk about these, even though all of Anne [E.] Roemer's people [in HR] eventually will be working tied to [Assistant Administrator for the Office of Human Capital] Bob [Robert] Gibbs, and they won't report to me, I still feel like they're matrixed to Johnson to do our work. To me that doesn't really change anything.

I still meet with the leads that don't work for me anymore, just about how things are going here and how we're filling our positions here. I'm going to continue to do that because we've got a job to do. The idea makes sense to me. There will be breakage, and we're trying to work through it.

ROSS-NAZZAL: We have four minutes. I'm trying to figure out what would be a good thing to talk about. How about the Soyuz abort? I was curious how you found out about that. We can talk about the furlough another time.

GEYER: I was there at the launch site. Of course Jim Bridenstine was too. He was with me. It's like a grandstand kind of thing except there are no seats. It's just a slab of concrete with a roof. Then there's a building to our left which is where the search and rescue guys aggregate. Then there's a room for the big Russian bosses. ... We're all here on this thing. Beautiful day, beautiful day. Clear, clear as a bell.

Launch. There's a translator next to me, Evgeny. Evgeny is there. I've been there so many times now, I know what they're saying. This announcer goes through, "This many seconds, everything's okay." He says, "Normalno, 24, normalno, systems normalno," he keeps going through this thing. Then he skips a step. He skips this one thing.

Then I hear Evgeny go, "Something's wrong." Then he skips another one. I'm looking. We saw a puff, but the thing with a puff is you can't tell whether it's really smoke or it's just condensation. Sometimes when you get a separation of a rocket, it lowers the air pressure enough that the water condenses, and you'll get this white [cloud]. We couldn't tell from the ground. It looked odd when the little side tanks came off. It looked odd, but we couldn't tell. Then Evgeny said, "There's an anomaly abort." Then you could see the Russians. They were already moving. They were moving and leaving.

We left the concrete area where we were standing, and we started heading toward the van. I think it was [ISS Program Manager Kirk A.] Shireman came out and told us what he knew, because he had been in the other building, that yes, they had an abort, but they had talked to the crew. We didn't know what that meant, how far downrange. They'd definitely seen high Gs [gravity], so they were in some kind of an abort.

We got in the van. The key for us is to get away from the launch site and get to the hotel, because at the hotel we have all this communication capability. We drove. It's I think an hour drive. We had a sat phone but it didn't work very well. I'm in the window trying to get it. On the way back to the hotel we heard that they had been talking to the crew, and pretty soon we knew that they had landed and talked to the crew since they'd landed.

It wasn't long after the time we got to the hotel that we knew that they had talked to them on the ground, that the search and rescue was headed over there, and they were probably okay. I remember getting to the hotel, and I'm supposed to get into the room where they had the telecon. I'm supposed to be starting making this connection back here with the IMC [International Space Station Management Center], and I forgot where the key was.

I realized the key was under the Wi-Fi thing so got the key. Because these guys, they're out at the launch site, the guys [that] were in this room. I get it open. There's a suite of rooms, and if there's an issue they bring the family to these rooms, which is right by this telecon room. I'm getting in there, and I see Nick's wife [Catie Hague] and his two small boys. They're all with BK [Brian K. Kelly]. They're coming in here. By that time we still didn't know how things were going. It was a real stress. It was emotional. Gosh, that really hits home. They were still trying to figure out.

BK told me on the ride back the boys—they're young, they're little, I don't know. The older [boy], he starts figuring it out. He turns to his mom. "Is Dad okay?" Because he's like—[demonstrates] after all this. That's pretty hard to hear. Fortunately for us he was fine. We knew within an hour they were on the ground, and they were okay. All our systems that we use to keep comm up worked really well. The Russian search and rescue was terrific, and the abort

system worked great. That reminded us for Commercial Crew—do we have all those things pounded out?

They're going to be a little different for SpaceX than Boeing because Boeing is landing on land and SpaceX is landing in the water. An abort off the launch pad they'll be the same. But are we clear on how that's all going to be communicated? All things that are good to know. The team had been working them, but it really emphasized how ready are we to go do this.

It was pretty intense. The fact that people hardly even talk about it anymore, because they launched again in March. They're up there, but it was a pretty big deal. It was very close.

ROSS-NAZZAL: I was curious about that.

GEYER: It was intense.

ROSS-NAZZAL: Thank you for your time today. We took a little more than our time allotted but it's only 11:31, so I think we're okay.

GEYER: Yes, appreciate it.

[End of interview]