An Oral History

with

Samuel Brown

John C. Stennis Space Center
History Project

Interviewer: Tessa Quave

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This is an interview by the Stennis Space Center History Office. The purpose of this interview is to document the story of key personnel during the Apollo and the Space Shuttle Main Engine programs at Stennis. The interview is with Samuel Brown and is taking place on June 18, 2009. The interviewer is Tessa Quave. Also present is Daphne Alford.

Samuel Brown: My name is Samuel Brown. I am a laboratory metrologist.

Tessa Quave: If you would tell me a little about your background, maybe your educational background and how you got started here at Stennis?

Samuel Brown: I attended Phillips Junior College and Pearl River Community College. I have an Associate of Science Degree in Electronics and a Certificate in Industrial Electricity. I started working here as a summer student. In August 1977, I started working full time as an electrical/electronic technician in the SSME [space shuttle main engine] Test Complex area.

Tessa Quave: What company were you working for when you first started?

Samuel Brown: The first company I worked for was General Electric.

Tessa Quave: What got you interested in space or into electronics?

Samuel Brown: Having the opportunity to work and learn about difference types of electronic equipment as a summer student. One day I had delivered some calibrations equipment to the test complex, and I was amazed at the size of the test stands and what they were doing.

Tessa Quave: What do you think are some of the significant events here at Stennis since your time of employment?

Samuel Brown: Since I've been working here, I guess the thing that comes to my mind is the first time an external fuel tank was testing here. It was actually a flight tank. The only one I think has been tested here. They were having problems with the insulation on the tank. We had to install instrumentation and TV cameras to view certain areas on the tank. During the process, we had two cameras that had to be online for that test the next day, so we worked from 10 o'clock that night to 1 or 2 o'clock in the morning trying to get the video cameras online. We worked long hours, but it was something that was

needed for the space program and we accomplished it. That was just one of the events. I could think of others, but to me, this was one that stuck in my mind.

Tessa Quave: Since back in 1975 to 2009, what are the changes that you think have occurred?

Samuel Brown: Technology—the use of computers to collect data, new instrumentation, cell phones, e-mail and the Internet.

Tessa Quave: What do you think are some of the best practices or some processes that have benefited you during your tenure with the program and what do you recommend that we carry on throughout the new program?

Samuel Brown: Going to college and having a degree. The things you learned in college are beneficial, but the experience that you learn from working with people is a big advantage. I started working as a summer student and the guys I worked with were older and had more experience. Having the opportunity to work with them, and learn side-by-side was a big difference. It's a lot of things you're going to learn in book knowledge, but hands-on experience is more beneficial than most of the college studies that I've experienced.

Tessa Quave: What do you think are some of the most significant achievements during the SSME days?

Samuel Brown: I still look at technology as the changes I've seen. Newer technology and equipment that come from the space program.

Tessa Quave: Focusing on the Challenger and Columbia, what was the mood like here at Stennis following the tragedies?

Samuel Brown: I can remember the Challenger accident. We were in the countdown getting ready for an engine test that particular week. I can remember leaving the test control center, taking my lunch break, and happened to be in Building 1100. One of the guys passing me in the hallway was saying 'that was bad what had happened.' Not realizing what had happened, he told me they had had an accident with the space shuttle. I immediately went back to my work area, and everyone at that particular time was glued to the TV monitors watching what had happened. It was a moment that was sad. All that work we had put in the program – the first teacher in space. After then, the down time between the accident and the next engine test here at Stennis was a time to reflect on what had happened. We were trying to get back to testing engines again. Throughout those two years or so, we were motivated more or less to do everything we could to begin the testing again here at Stennis.

Tessa Quave: Do you think that was the mood here at that time to focus on getting back …?

Samuel Brown: Finding out what had happened and getting back to what we do best here at Stennis and that's testing the main engines. That's what I was focused on. The person I worked with was determined to get back to testing, and officially find out what had happened during the accident.

Tessa Quave: You know in 2010 we're going to retire the shuttle, what does that mean for Stennis? What does that mean for all of us?

Samuel Brown: To me and to all of us – a new program. Going back to the moon was another challenge as it was when I started here at the beginning of the Space Shuttle Program. It was a challenge. Anyone that's in the program should be a challenge to work hard and accomplish what they are set out to do.

Tessa Quave: What do you think or envision Stennis' role should be in that program? Do you think it will take a lot what we have learned for SSME or will it roll over into Constellation? What do you envision?

Samuel Brown: I can see that learning what we have done in the past and passing it on to the next program. You know it's going to come with experience, and experience is a big role in any program that you are working with. Based on experience that we have here, it's going to benefit Stennis.

Tessa Quave: Are there any stories -- that I may not know, being in Building 1100 -- that you guys that test the hardware, are there any stories that we may not know stands out in your mind that are worthwhile or immediately captured?

Samuel Brown: Throughout the years, a lot of events have occurred. Each engine test that we had, and the role that we played, leading up to a test. We had to be very careful with the equipment and the system we were working on. The test conductors and test stands manager had to know what we were doing. Leading up to an engine test, it was always a challenge. All of the equipment you worked on and calibrated is working properly during the test. There are so many different things which I could not even think about that occurred.

Tessa Quave: What do you think makes this unique in testing SSMEs? Why are we unique and what are the proudest moments of that program for you?

Samuel Brown: The proudest moment is when the first space shuttle lifted off. I was very proud to see that happen. It took long hours, and the people I worked with – the test conductors, engineering and all the personnel that worked on the mission.

Tessa Quave: Have we kept that mood? Have we kept that enthusiasm from the STS-1 all the way to the STS-128 in August?

Samuel Brown: I could see that, yes. I worked 15 years at the test complex, and now I'm in the calibration laboratory. The times I worked with the personnel on the tests

stands, when it came down to getting the job done, we were all motivated. I'm pretty sure that's the same that is going on out to the test stands now. When there's something to do and to test, we are all motivated to accomplish our mission.

Tessa Quave: Any unsung heroes that stand out in your mind that maybe you can mention in your past that have helped you to be what you are today?

Samuel Brown: I guess I can look at hundreds. I was young when I first began working here, and just working around different personnel – that's including engineering, the technicians. All the personnel had some kind of role in my life and the things I've learned from them, and to pass it on to another generation is sufficient for me because the knowledge that you receive and gain from others is beneficial to the program. It's different coming out and working on a piece of equipment or doing something you learned in school. To be side-by-side with someone that have 10 or 15 years of experience is what we need. It takes that for that younger person to work side-by-side with someone who has the experience and to pass some of that knowledge on to them. For my years out here at Stennis, a lot of people have touched me with different experience and learning from them and not being so busy that I didn't have time to listen. I've always been that type of person to listen to whatever a person had to say or tell me, regardless if it was an engineer or someone who had less experience [might] have something [to say] that you may have missed. You know there is always room for learning. That's the way I've always been. I'm always open to new ideas and to understand the areas.

Tessa Quave: Is there anything you'd like to add?

Samuel Brown: The experience and opportunity to work here, and the different personnel I've met throughout the years, I probably have hundreds of stories to tell. Each day is something new and just being motivated. When I come into work, I'm motivated to the end of my shift. It's always something to accomplish no matter what area I'm working in. I think that's a very important role for the next generation – is to be motivated in whatever you are doing and that's an accomplishment that you will keep the program going. That's just one thing I can say about that is to be motivated at whatever your job may be, and always come in with a great attitude and a willingness to accomplish your job.

Tessa Quave: Thank you so much!

(End of Interview)