

NASA JOHNSON SPACE CENTER ORAL HISTORY PROJECT

ORAL HISTORY TRANSCRIPT

WALTER S. FRULAND
INTERVIEWED BY REBECCA WRIGHT
HOUSTON, TEXAS – SEPTEMBER 24, 2009

The questions in this transcript were asked during an oral history session with Walter S. Fruland. Mr. Fruland has amended the answers for clarification purposes. As a result, this transcript does not exactly match the audio recording.

WRIGHT: Today is September 24th, 2009. This oral history is being conducted with Walter Fruland for the NASA Johnson Space Center Oral History Project in Houston, Texas. Interviewer is Rebecca Wright, assisted by Sandra Johnson. Also the daughter of Walter, Ruth Fruland, is here with us today.

FRULAND: NASA, in a sense, was in retrospect the culmination of one of the interests that I developed when I was just a child. I was attracted to the stories of the day in the 1920s. I was born in 1920, so by 1926, I was old enough to learn of things that were being reported in the newspapers and on the radio.

The events that I seem to recall more vividly than others were the historical accomplishments of the day. That began in about 1926 with Rear Admiral [Richard E.] Byrd [Jr.] and Floyd Bennett making the first flight over the North Pole by airplane. That gave me a certain amount of interest. Then a year later, Charles [A.] Lindbergh flew nonstop to Paris [France]. He was the American hero of the day, and I was young enough to be aware and somewhat infatuated with that. They published this book *We* [1927, about his transatlantic flight] early in that era, and I had a copy. I think I gave it to you [indicating Ruth Fruland]. So it

was a road that I was on. I did other things. I collected stamps and made model airplanes and that sort of thing, just as any kid that doesn't have siblings that are on his back or in their face. So I had to do things like that.

Then the aviation world was constantly changing with faster and bigger airplanes. They had air races around the country and around the world. [General] Jimmy [James H.] Doolittle was a focus of interest. He had been a military pilot, and then he worked for Shell Oil [Company] as an aviation consultant [Aviation Department manager]. Then the dirigibles of Germany and the United States were coming into play in the early '30s.

I was a little concerned about going through this because as I was telling Ruth, this is the arc of my interest in flight and the sky and aviation and man's moving into that medium. I was interested in following the records being broken by aviators, both men and women, in the '30s, and was always conscious of this and entertained and interested. They were the heroes of the day you might say, even including Amelia Earhart, the poor lady. But at any rate, my mother and I made the first flight that either of us had made in 1930 with an airplane in a Chicago [Illinois] outskirt airfield. We flew in a Curtiss [T-32] Condor [II] airplane, a twin-engine biplane. It was like for a penny a pound, and they just flew up and around the airport and came in and landed. That's what people did in the early days.

But I was conscious of the fact that the world was falling apart during the 1930s. I attended high school in Chicago, Lake View High School, one of the oldest schools in the state still in existence. My graduating class in 1937, their motto was "ad astra per aspera," which in a translation means "to the stars through difficulty." I was aware of that, and it fit the time, and one of my major interests, in aviation and flying. I completed junior college in Chicago and decided, with the help of good advisers, to go to the University of Texas in Austin, Texas. This

is the color, Texas orange [referring to shirt]. Anyway, I deliberately brought this on the trip to wear. When I come to Texas, I feel like I have to relate to that.

[Adolf] Hitler invaded Poland in early September 1939, as I was about to board a Greyhound bus to go to Austin, Texas and begin the last two years of my college experience. That was a momentous event that I at my age—at that time I was 19—was conscious of the fact that this probably was going to have an impact on my future, and that it sounded like the beginning of another world war, and how true it was.

When I finished my senior year in the spring of 1941, I had to make a decision of going to summer school to do one last course or take employment. I was offered employment with the Shell Oil Company at a refinery in Houston. At that age, still 20 years old, I thought that would be a perfect place to make a connection and have something, if I survived the war, to come back to. It proved to be that way. I went to work for them in July of '41. Sure enough, one of my college classmates—both of them were college classmates, one older than me—we had a garage apartment that we lived in in Houston. We were having our Sunday dinner and the radio came with the story of Pearl Harbor being attacked.

We took that similarly to the way I took September 1939, that we'd finally breached the wall, and we were in, whether we wanted it or not. So I had become 21 in that summer of 1941, and had to register for the draft. Your number is eventually called if they get to that point, and I was called and had to take a physical. I was classified 1-A, so I knew that my time was short. I decided if I had a choice, I wanted to fly during this war rather than go into another part of the service. I looked around and saw an opening that involved going to an orientation lecture on becoming a pilot for observation aircraft, basically for the field artillery to take spotters up to relay by radio where the targets were.

So I went as a civilian in the enlisted reserve. I learned to fly in Stillwater, Oklahoma in the fall of 1942. We weren't called up to active duty until March of 1943, and then I had to take a flight test at Blackland Army Air Field [Waco, Texas]. I passed the check flight, and went to more training at Lamesa, Texas as a liaison pilot flying single engine L-5s [Sentinel]. When I completed that training, we became staff sergeants with wings to fly and were assigned to the 127th Liaison Squadron at William Northern Army Air Field near Tullahoma, Tennessee.

I spent time in Tennessee and North Carolina and Georgia with this squadron. We moved around from small airfields to large airfields to small airfields and so on. I had some good experiences with that squadron. I had a solo assignment to fly from Statesboro, Georgia up to Riverhead, New York, on the east end of Long Island, to take an artillery officer up and provide him with an opportunity to make some evaluations of how he could perform with the help of an airplane. That was in January of 1944. I had a wonderful experience flying by myself up to that point, going over New York City and the Statue of Liberty and landing at Mitchel Air Force Base on Long Island.

A college chum was stationed on Staten Island in the Army, and he had an apartment in Greenwich Village. He invited me to spend the night with him. I went into town, and we did New York City that night, Times Square and all that sort of thing. This was the height of the war. Servicemen were well treated in New York City at the time because there were a lot of us, and we had a ball. That was a memorable experience. Then flying out on Long Island, and performing this mission, and then flying back down to Statesboro was the coup d'état for me in terms of completing my initial training and learning to handle my job.

In early February, 1944, another chap and I were selected to become replacements for another Liaison Squadron that was already overseas. We were flying the L-5s.

RUTH FRULAND: Were those the Grasshoppers?

FRULAND: The Grasshopper term is associated with the L-4, a civilian aircraft known as a Piper Cub. The L-5s were a more powerful airplane; Stinson built the L-5. It was a single-engine two-seater, pilot in front and passenger in the back. It was largely canopy glass, high wings, but still a canopy of glass around so you could look out and down. It was a nice airplane. It flew about 100 miles an hour no matter how the throttle was set. It had one speed. The L-5s performed well on short fields for landing and takeoff; quite a successful piece of equipment.

My fellow Liaison Pilot and I took the train all the way across from Savannah [Georgia] to San Francisco [California] and Hamilton Army Air Field [Novato, California]. We waited for about three days for an airplane, a four-engine aircraft transport to fly to Hawaii. While we were waiting, we each were able to get time to fly around the San Francisco Bay area to keep our hand in. We were flying L-5s and L-4s.

After about four days, we flew to Hawaii and the airfield that had been bombed during the Japanese attack on Pearl Harbor [Hickam Army Airfield adjacent to the Pearl Harbor Navy Yard]. After being airborne for 30 minutes, we opened our orders and learned we were being assigned to the 25th Liaison Squadron in New Guinea. We spent about three or four days there waiting for another aircraft to take us to New Guinea. While at Hickam, we were able to get flight time around Honolulu and Pearl Harbor.

We then proceeded on our trip on C-47s, the DC-3s of the time that were used as transports for troops and equipment. We island-hopped, and it took us about four days to arrive at the 25th Liaison Squadron. We flew to Christmas Island for one night, Canton Island for one

night, Nanumea for refueling, and then to Guadalcanal at Henderson Air Field for one night. Then we flew on to Port Moresby in [Papua] New Guinea, and from there to the airfield complex at Nadzab in the southeast central part of New Guinea, the major aerodrome that was established after the Japanese were driven out. Nadzab was where Headquarters of the 25th Liaison Squadron was located.

I served as a pilot with that organization from essentially late March of '44 until early October of '44. I had drawn individual missions during that time. One of the most unique ones was to go into a mountain village with a landing field that was on top of a mountain that ended on the edge of one descent and began at the edge of the other side of the mountain. I was to pick up an ANGAU [Australian New Guinea Administrative Unit], which was the Australian national government representative that handled the governmental oversight of the natives in the area, and he had a boy. They always have a porter that assists them in communications and carrying gear. My job was to pick them both up with their gear and carry them back down to the lowlands and return to his normal workplace. This was a challenge because it's just a one-seater passenger plane. The gear and his boy sat on his lap, and we had to take off from this limited airfield that had valleys for several thousand feet dropping down all around.

I was so young and naive, that didn't faze me a bit. I was just excited by the whole thing and enjoying it all. With that kind of self-confidence, it worked out very well. I had no problem, but when I look back upon it, I thought oh my goodness, what could have happened there. But it didn't!

Then I was assigned with another pilot and two airplanes to an island called Wakde, which was northwest of Hollandia, which had been recently taken by the U.S. and the Australians and became another large airfield complex. Then this other chap and I flew our L-5s

about 100 miles up the coast to this small island that the Allies captured to build an airfield for bombers. B-24s were used for that field as well as P-38s and P-63 night fighters. It was a very active airfield because the islands were perfect for building air landing strips on, and this was a landing strip that went from one end of the island to the other end of the island. It was very wide and a wonderful thing for operating aircraft off. I spent about five of the six months that I was flying in New Guinea based on that island.

After you accumulated a given number of flying hours and in a given length of time, you were given R&R [rest and recuperation]. I took my R&R by flying back to Nadzab and boarding a C-47 and flying with one of our first sergeants, who was getting married in Sydney [Australia]. He and I went on the same plane to Sydney. We had a week of leave. He asked me to be the best man at his wedding, so life was going on. It was amazing how much still happens under wartime conditions.

I met this family and went through the wedding experience with my fellow Liaison Pilot. Then I spent three days seeing Sydney, and went to the airfield with him to return to New Guinea. I was the last name on the manifest, and they finally determined that really they couldn't handle my weight. I probably weighed 135 to 140 pounds. I was over the limit, because they had taken on cargo. I'll tell you what the cargo was, it was whiskey.

What it amounted to is that I said to Al, "Al, you take my place. I'll go back. You just got married." Al didn't agree to that. I don't know exactly what the problem was, whether he knew that the Army wasn't going to pay any attention to that or he didn't feel like if I just got the luck of the draw that he should interfere. Whatever it was, I got left behind for another week in Sydney all by myself. I had a wonderful week. I met a wonderful young lady, and she and I

went sight-seeing, to nightclubs and movies, including “Casablanca,” and I really had some R&R.

WRIGHT: Have you ever been back to Sydney since then?

FRULAND: No, no. I would have loved to, but my wife and I agreed on different travel goals. Unfortunately I had achieved a second R&R the last of September and had flown my L-5 to Hollandia to board a large transport plane to go to Sydney, and that night before leaving the next morning, I decided that since my squadron was there and my airplane was there, I wanted to get a little night flying experience. I made the mistake of taking a plane up and flying after dark. I wasn't experienced in flying the L-5 at night. We normally didn't do any missions at night, but I had trained for it, and so I thought I needed to have a little bit more time. I loved flying, and any chance I could get to take my plane up I would do it. It was just so satisfying. It was one of the key highlights of my life that I experienced in learning to fly and serving in the military in the capacity I was fortunate enough to be able to have.

But this night was a fateful night because in coming in for a landing—the plane has just one landing light on the left wing. They have to cut jungle out to make a landing area to the airfield, and there are no lights on the air landing strip or anything like that, but I knew where I was, except I didn't know what the range of the cut out portion of the jungle was. With the light on the left side I was concentrating, looking ahead and to the left. I had drifted over to the right, and as I dropped down to land, I caught a wing in the top of the jungle. It pulled me into the jungle and straight down into the ground.

I was far enough out from the actual airfield that nobody knew that I had crashed, but they became aware that I wasn't coming back. So here I was strapped in my seat with the engine pulled to one side, and I was on the ground, dirt. I felt around and my right arm was broken between the elbow and the shoulder. My right knee had a compound fracture just above my knee. My toes had been smashed. I had lacerations on my head. We didn't wear helmets.

I'm in the dark, and gasoline is leaking out of the wing tanks. I came to because during the impact nature takes over and you blank out. I didn't come to until I was on the ground. I don't know how long I was out, but at any rate, I suddenly realized, "It's pretty damn quiet here." A few sounds of the jungle, but not a heck of a lot. So I started feebly saying, "Help! Hello! Is there anybody there?" Of course there was dead silence, but strangely enough, I was alongside of the jungle area that went up a slope to a road. They finally located me because it was pretty obvious where I must be, and they came along there and they obviously saw some evidence of the airplane. I guess the tail was still up because the airplane was pointed straight down. The jungle might not have been more than 25 to 50 feet high at that time. So I really don't know exactly how much.

My rescuers finally came, and they cut me out of the plane and carried me up to the road to an ambulance. Of course my concern at the time was, "Well, it's great that you're here, and I appreciate it a lot, but be very careful. If you have to cut any of the frame away to get me out of here, please don't set this thing on fire. Be very careful." I was really concerned that I didn't want to be part of a burning airplane. Fortunately for me, they did that successfully.

I ended up in a field hospital for about a week. I was in temporary care. They recognized the problems that I had. Hollandia had a General Hospital, and I was transferred there. I remained in the General Hospital from the middle of October, 1944, until the last of

January, 1945. The General Hospital had the surgeons with the ability to perform whatever was necessary depending on your problem. They set my leg and my arm and put me in traction in a bed in the hospital in a ward occupied only by soldiers with broken legs. That was the organization of patients of General Hospitals. They had people with similar problems in the same ward where they had the same doctors and nurses who were responsible for a similar kind of support.

WRIGHT: I have to tell you that you have my curiosity up now about how a pilot became a protocol officer for NASA.

FRULAND: I had intended to come back from the war and return to work for Shell Oil at the Deer Park, Texas refinery. That wasn't the job that they had to offer me, and they weren't required to even reemploy me because I'd gone back to school and I had severed the relationship of military leave. However, at that time they were looking for new employees. They had built a chemical plant adjacent to the refinery, and they were making products that were taking the feedstocks from the material not used in making gasoline and oil. They were making paint thinners, and they developed a process for making synthetic glycerin, which was highly prized at that time.

I went to work in the Personnel and Industrial Relations department in that Shell Chemical plant. I stayed with them until 1962 when Shell went through a personnel reduction. I lost my job. I had been the assistant manager of the Personnel and Industrial Relations department for more than 10 years, and suddenly I was without a job.

I took the first job I could get with the help of good friends in that field, and got a job with the Thiokol Chemical Company outside of Brigham City, Utah. This was a precursor to my

going to NASA. Thiokol was constructing and testing the first stage of the Minuteman intercontinental ballistic missile. I spent about six months with them. They hired me largely because they wanted to remain nonunion, and they figured I had some experience in a similar kind of operation in Texas and that I could be useful in that regard. They remained nonunion, which was what they wanted. The program for the Minuteman missile was headed by General Sam [Samuel C.] Phillips. He was project manager, and when I left Thiokol in the fall of 1962—I left Thiokol and came back to Houston, and I was floating. I didn't have a permanent job. I worked for a time with the placement office at the University of Houston. That was just something to hang my hat on in a survival mode. The announcement and selection of Houston for the Manned Spacecraft Center [MSC] had been made, and I said to myself, "I've got to try to get with that organization. That would be just perfect, and what I was looking for."

With a bit of maneuvering, NASA offered me a job at the Manned Spacecraft Center. I was hired as the NASA MSC travel office supervisor. At that time in early 1963, the MSC travel office was responsible for making arrangements for all of the travel requirements of the NASA MSC personnel. That involved domestic and international travel, be they astronauts or engineers of certain technology, going to other NASA sites or contractor facilities. We had a lot of travel at that time. MSC employees were traveling to the west coast, the east coast, the Midwest, and overseas on business. This office was responsible, working with the airlines to ticket them, and to make their hotel and car reservations.

I did that for about a year. It was fun. I enjoyed it. I had a group of ladies that were actually doing the reservation process. It was interesting, and I became acquainted with many of the personnel at Houston at the Manned Spacecraft Center including astronauts.

When I was employed by NASA in early 1963, the Manned Spacecraft Center was under construction. I first worked out of the Farnsworth Chambers Building in Southeast Houston, which was the headquarters where Dr. [Robert R.] Gilruth and his deputy worked from. That was interesting. It was a modern building and a nice situation.

Later in the spring of 1963, we moved to the Center, into Building 2. There was still a lot of construction going on and open fields and plantings of baby trees out there, but they had a wonderful concept and a beautiful plan for the Center. It was very inspiring to see what was being done.

The Chief of the Public Affairs Office [PAO] also worked in the Farnsworth Chambers Building. His name was [John A.] "Shorty" Powers. When he retired, Paul [P.] Haney was named Chief of the MSC PAO. The PAO was adding staff and a Protocol Branch was established. Frank [Francis J.] Hickey, [Jr.,] who had been a Secret Service officer working on the White House detail in the 1950s, had been selected to be the head of the Protocol Branch, later renamed the Special Events Branch.

So Frank was looking for help. He had one man and one secretary, and he knew that their function, to handle visitors to the Manned Spacecraft Center, was going to take more hands than those two people. So they looked at me and my background and asked me if I was interested. Well, I jumped at the chance. I couldn't think of anything but yes, I'm ready. So I joined the Protocol Branch at that time under Frank Hickey. My role was to look at the requests for visitations to the Center by all people, be they the general public, groups that were having conferences in the Houston area of any kind, the local citizenry, and dignitaries, be they kings, queens, congressmen, local mayors, local automobile dealers, whoever was interested. We were interested in making people more aware of what NASA was and what we were about doing. We

took it seriously. We were interested in sharing knowledge of our program to help people understand the MSC mission.

Of course in that year, [President John F.] Kennedy—I think it was in '63 that he made the speech in which he delineated the program of taking a man to the Moon and returning him safely to Earth within this decade. One of my associates had that tape, and he would replay that tape because that was a very stimulating piece of oratory that we thought a lot of, and he had visited Houston at the sites that were activated in Houston before the Manned Spacecraft Center became operational. So we had seen him and had that, shall we say, stimulus that made us feel pretty good, because we were on the front page with him.

I had no sooner joined the group, Special Events, and they threw me into the lions' den, so to speak, because that was my job. They wanted a face that would meet and greet and provide agendas and programs for visitors. I had to become acquainted with what we actually were doing at MSC in terms of training of astronauts and the technology that we were using for controlling flights and testing the spacecraft. It was a very diverse operation, and a lot of really interesting individuals with special qualifications that I became acquainted with and learned from so that I could speak with some degree of authority. I also knew which people I needed to have speak on their particular role to whoever the particular visitor happened to be.

My first visit assignment was a very large group of schoolteachers. The schoolteachers of Texas were having a conference in Houston, and had asked for a tour of the Manned Spacecraft Center. Tours generally started with an orientation presentation in the Teague auditorium of Building 1 [later renamed Building 2], where we had a small display in the lobby of aircraft, spacecraft, and elements of the spacecraft system. It was new in the 1960s and a wonderful facility.

The first group that I was charged with arranging an agenda for and having people talk to were these schoolteachers. They came to MSC in a number of highway buses, and there were close to 2,000 individuals. I don't know the exact number, but they filled the auditorium. I had prepared a slideshow with some of the basic elements of the Mercury program to add to my orientation talk.

So there I was, green as grass and getting up by the lectern on the stage in Building 1 looking out at this sea of people. It was a challenge. I had to introduce myself and welcome them to the Manned Spacecraft Center and indicate what we were hoping to accomplish with their visit. Then the lights turned off, and I had to go through the orientation of the slideshow, and then I had the opportunity to introduce a representative of the Director's Office to welcome them. Actually—this is a little out of context in terms of the order—I think I had somebody from Gilruth's office give the official welcome to them to begin with so that they had recognition that they were being recognized by somebody of status you might say in the organization. Then I took over and did the slideshow.

Then I explained to them what they could see. In this large a group, it was difficult to handle. They had to use their buses to move around from site to site. They really didn't have an opportunity to get off and see much because it was so early in our actual activation of the Center, but we had told them what they were going to see. I had some assistants that were on some of the buses, so they were given information while driving around, but that was about the extent of their ability to learn about the Center and see some of it. Part of the problem was that there were so many of them, and the second problem was that we weren't ready to show them much at that time. But that was my beginning, and I survived that. So I had made the first hurdle.

I had the wonderful experience of meeting many interesting people. We had been learning to ski in Colorado before I joined NASA. Aside from the war years, I had been in Houston for close to 30 years. I had in the back of my mind at my age that I would like to relocate to Colorado and finish my life's work up there in a nature environment that I found very satisfying. So I said, "But I want to stay with this program until we accomplish the mission that President Kennedy had set for us." I said, "I'm in this program till that is a success."

As soon as we made that mission successful, Apollo 11, with connections that you can make in the aerospace industry, I had been able to make a connection with Martin Marietta [Corporation] at their aerospace division plant in Denver [Colorado] where they were building the Titan launch vehicle. So I tendered my resignations to move to Denver to go to work for Martin Marietta in that aerospace area at the time. I left with certain misgivings because my experience at the Manned Spacecraft Center was one of the high points of my life and remains among the two or three most impressive parts of what I was able to experience as a human being, other than getting married and raising a family, two daughters with Ruth, which is focal point number one. My experience in flying in the military during World War II is right up alongside of my experience working with NASA. For about three years I was in the military, for about 39 months. This was high on the level of accomplishments and satisfaction, and the pleasure of flying was almost beyond belief. I just loved it so much.

I had one other job that I finally managed with a project in government in the Bureau of Reclamation that I finished my career with. That was centered with the construction of the Central Arizona Project in Arizona, which was the last major water development project that the government was able to fund. They finally got this one authorized, and they were off and running. I was given the position of first public affairs officer for the Arizona Projects Office

that had the job of the construction of the Central Arizona Project. I moved to Phoenix [Airzona] from Denver, leaving my wife in Denver, who decided she was going to wait and see. I had been awarded another great job.

It was a very large construction project by highly qualified people. We had our own helicopter and pilot, and I flew frequently around the state. We used the helicopter to show Senators the project construction. On one occasion after showing a Senator the project, we took him down into the Grand Canyon to join a raft group going down the Colorado River. It was midsummer, and the helicopter could hardly get back up on the rim of the Grand Canyon because of the heat. But those were great experiences, and we did a lot of flying. I had a great job there. Then I retired from the government, and that was that.

But all of that had culminated back in 1963 with my joining NASA. Those years were at the top of my years of job satisfaction. That job of hosting visitors involved dealing with visits of a few people that I can recollect and cite. The king and queen of Belgium. During the year of Apollo 11, we became a focal point of interest by the whole world, and all kinds of people with different ties with America and stimulated by their commercial interests obviously. Belgium is very much a small country that has a lot of business that is international in nature. So the king and queen of Belgium came to the Cape [Canaveral, Florida] and came to the Manned Spacecraft Center. I was largely responsible for their agenda. We had the president of Tunisia, who was given a luncheon by the Clear Lake Chamber of Commerce at the Clear Lake Country Club. That was fascinating. He had his own food-taster along to make sure that he was able to survive the experience.

We hosted the Secretary of the Navy, [Paul H.] Nitze, I believe it was. He landed by helicopter on the perimeter road in front of Building 2, and Frank Hickey and I met him there.

He was one of the senior foreign policy advisers in later years. He played quite a role in the '60s, from the late '50s into the early '70s, in government.

Prince Rainier [III] from Monaco and his wife, Grace Kelly, came to the Center, and I had the opportunity of hosting them and having pictures made. We had all kinds of visitors. Art Linkletter came out. Of course, I enjoyed having Walter Cronkite come into the Public Affairs Office to get the latest fact sheets that we had and get a little background on current program activities. He developed a very strong tie with the space program. He was very supportive of NASA and became very close to the astronauts and asked them to team with him in presentations.

But we had all of these folks. I dealt with individual anchors and people on *The Today Show* [NBC] during the '60s who would come to MSC to get a firsthand look at places like the Mission Control Center so that they would be able to speak with first-hand knowledge on the subjects of our program. We hosted U.S. congressmen, and legislators from Mexico and other countries around the world, and many other dignitaries, and it was always a challenge and a fascination.

The rarest experience that I had in that regard that was a bad one, and Ruth was involved in it. I was hosting the visit by the American Bar Association [ABA]. They were having their annual convention in Houston, and the mayor of New York was a lawyer and was involved in the ABA. The president of the ABA and the mayor of New York City [John V. Lindsay] both came out, and I had them as guests and was taking them around, showing them the Center and taking them to Mission Control Center. I was not feeling well, and when we got to the Mission Control Center, I was suddenly in great pain. I walked into the Mission Control Center, and I in some way was able to keep them under control. I got the manager of the Mission Control Center to

take over, and I called my office and I said, "I've got a problem. I'm not able to complete this assignment."

They had another fellow worker come and quickly take over. I don't know whether I called my own doctor or the dispensary, but eventually I called Ruth. I said, "Ruth, I've got to go into the hospital in town." I was having a kidney stone attack, and I had never had one before. Ruth had to drive me. I had contacted my doctor, and she drove me to a hospital in downtown Houston where I spent about three days there to pass a kidney stone. It was amazing that the kidney stone attack came when it did, with the mayor of New York and the president of the American Bar Association under my wing, and I had to fall by the wayside.

What it amounted to, it just helped prove that we could cope.

WRIGHT: That leads me to a question about processes and procedures. You mentioned you had so many people wanting to come on site. Was it part of your decision-making of who could?

FRULAND: Generally speaking, we welcomed all requests to visit MSC during normal hours. I don't recall receiving any unacceptable requests. We felt it was important that all interested people be able to see and hear about NASA. A phone call would come in and be shunted into my office. I had two associates that were doing the same thing. Bob [Robert J.] McMurrey and eventually Bill [William] Der Bing, who had been working in PAO in another branch and he later joined us. When I started in the protocol Branch, I worked with only one chap who later resigned from NASA, but we ended up with the three of us handling visitors. There was a fourth that was a close associate of Frank Hickey's, he'd done security work in the government, Ed [Edward S.] Barker. So those are the four individuals that handled visitors with me. I was the

senior man actually in terms of that function, but they were equals as far as I was concerned. Bob McMurrey and Bill Der Bing and Ed Barker. We developed a cadre of contractor support people that assisted us and added to our capability.

When you had more than a few people, you needed some other hands to keep people under control, and we didn't have the visitation program that they now have where motorized train-like vehicles take visitors around [Space Center Houston trams]. We were a totally hands-on direction and transportation support people for visitors, be they one or two or fifteen or twenty or a busload. But usually we didn't have much more than a bus at a time. We found that 2,000 people all at once are just a bit much.

WRIGHT: What kind of process was in place when someone wanted to visit?

FRULAND: I'd get the telephone call. I would find out who they were, what they represented, and what their interest was, if there was a special interest or general interest. All four of us could be the recipient of such a telephone query to ask for a visit. We would take the information down, and we would process it. There was general concurrence, usually from Frank Hickey. When Frank went to another branch in NASA, Ben [Bennett W.] James, who was a section head in PAO under Paul Haney, came over and took his place and headed up this Special Events Branch.

The term protocol was used early on, and for a while we were called protocol specialists on the premise that we had a responsibility to handle these people in keeping with good conduct by the government of government officials and other government people from other parts of the world—United Nations or from England or Australia or Germany and so on. We had to deal

with a lot of people like that. I worked very closely with the German consulate because we had a lot of Germans in the program, especially at the Marshall Space Flight Center [Huntsville, Alabama], such as Director Wernher von Braun. So I developed a real rapport with the German consulate because of their interest in the space program, and they had a lot of visitors who asked to see the Manned Spacecraft Center.

Another visitor that I failed to mention that I was intrigued with was the Crown Prince of Norway, Harald [V], who is the current king. He was in Houston to sail in a regatta race on Clear Lake. He was not married at the time. So he was handled with kid gloves and feted by the society of Houston. But I showed him around and had his picture taken. Then a few years later, like 20 years later, I finally made a trip to my—I come from a family of Norwegians, my father was Norwegian, and my ancestors had come to this country during the 1820s and '30s. One was two years old when he came over on a sloop with his mother and father. They eventually settled in northern Illinois and were farmers.

So it was very fascinating for me to have this job of trying to be helpful to the prince of Norway. Later when I visited distant relatives in Norway, and they were extremely gracious, and I had a wonderful experience, my wife and I, and I was able to give them this picture. I felt to myself that's a pretty good souvenir because he had become king. His father had passed away. So that was fun.

But I've given you a general indication of handling visitors. It was a two-prong assignment largely. The second prong was to become support representatives to the astronauts and their families during missions. My first assignment in that arena was the last Mercury mission that [L.] Gordon Cooper flew. Frank took the responsibility of being with his [Cooper's] wife here in Clear Lake at the time. I was assigned to his widowed mother, Mrs.

Hattie Cooper, in Oklahoma. She lived in a town that has an interesting name outside of Oklahoma City [Shawnee]. Her mother was living with her, so Cooper's grandmother and mother were living together in this small town in Oklahoma. ABC [television network] was the pool controller for the television and radio people that were there to cover the event. So I went up there, introduced myself to Hattie Cooper, who was just a fine lady, and her mother, a wonderful grandmother type. I was young enough to appreciate their roles. They were just warmhearted and welcoming and couldn't do enough to help you, make you feel at home. I worked with the pool director from ABC who came out of LA [Los Angeles, California]. The mission was delayed, and it took them a week to get Cooper launched.

So the man in charge of the pool coverage sent all of his crew back to Los Angeles until we got a GO signal on launch. So he and I remained in this little town in Oklahoma for a week of trying to stand by for the GO signal to launch. When it finally came, he reassembled his team and we were off and running. This was the longest duration mission on Mercury. Cooper was up in orbit for more than seven days. It's in the record. So it was a very long mission. Cooper was a pretty unique individual. They all were. There's no question about that. But he was a very quiet man in many ways and was like Neil [A.] Armstrong. They didn't have a great deal to say unless you probed. But his mother was not like that at all. She was very outgoing and very comfortable to be with.

At that point, I then became a regular to go with the parents of the actual pilots or the copilots. For example after MA-9 we began the Gemini program. [Virgil I. "Gus"] Grissom and [John W.] Young flew the first Gemini manned spacecraft. Right at this moment I'm a little bit fuzzy on what my assignment was on that particular mission. After the first manned Gemini mission, I went out to the mothers, to the parents of the astronaut crew.

For example, when [Charles] “Pete” Conrad [Jr.] flew I went up to Pennsylvania at Haverford, Pennsylvania, where his mother lived. She was divorced from Pete’s father, who was living in Florida, and she had remarried a Mr. Sargent. They were living in Haverford, a college town on the Main Line from Philadelphia. She was just a real great lady, and she was appreciative. They were all so appreciative when NASA would send us out to give them briefings and pictures of their sons and insight as to what the mission was going to be.

Then we were there to act as a go-between for the media coverage, so that they weren’t confronted with the difficulties or the unsolicited questions that would be difficult for them to handle. Really, we had minimal problems in that arena. I think there was always the possibility that if things go wrong, the reporters, radio and TV, wanted to tell how the family was coping. That’s the media’s role in a sense. So we were there to ease the potential difficulties the parents, under stress, might be asked when talking to the reporters.

WRIGHT: This was the days before cell phones and fax and computers. How were you able to keep up to date, especially with these delays? How was your office able to contact you?

FRULAND: Well, as far as that is concerned, of course television was there. We listened to television, and we saw this sort of thing as it was announced pretty much that way. Then it was simply a matter of calling back into the office to give a report on how we were doing and what we envisioned having to do to remain there and accomplish it. I would check with the head of the section, originally Frank Hickey, and then at the end of my tenure with Ben James, and they were never without the answers to any problems that we had. We didn’t have any real serious

problems. We had problems with a number of missions with holds that did have the requirement of being flexible and being able to maneuver and to deal with them.

I was with Wally [Walter M.] Schirra's [Jr.] parents in San Diego [California] at the time of this mission that he flew on Gemini with Tom [Thomas P.] Stafford [Jr.]. That mission initially was put on hold because the engines started and then stopped. Do you remember that? They were sitting on the pad and this Titan shut off, and the mission rules gave them the option that they had to make a quick decision, with the help of the flight controllers, of whether to abort and fire the capsule off the rocket. Wally, they were all cool customers, they sat there and sweated it out. He didn't compromise the ability to fix the problem and continue with the use of that vehicle and spacecraft for the mission. It was delayed a few days until they made the fix on it, and then they made a successful launch.

WRIGHT: The next mission was the [Neil] Armstrong/[David R.] Scott mission, the one that they had problems [Gemini VIII]. Were you with one of the parents on that one?

FRULAND: I was with Scott's parents north of San Diego in La Jolla. Really a nice area. He was a retired Air Force general. Nice people, very nice people. They had a lovely home. I was with them during that mission. The Schirras were super people. They were the most unique of any family that I dealt with. He had been a pilot in the early days of biplane open cockpit flying, and she was a wing-walker.

WRIGHT: Oh goodness, what a woman.

FRULAND: They were an amazingly interesting and friendly couple. He was just a wonderful man, and she was a real doll. You couldn't envision her walking wings. The woman had put on quite a bit of weight, yet there she was, and it really happened. She was so outgoing and so warm, it just was amazing. She was willing to deal with the press anytime and say anything, and was never at a loss for words and a joy to be with. Really, it was great.

But the Scotts, that mission had some little difficulty in getting off, because they were working with two vehicles, with the Agena target vehicle and the spacecraft. This was the first rendezvous and docking exercise. It started off, once it finally got launched in sequence so that they had both vehicles up there, as though it were going to work out very well.

Dave Scott, the copilot, and Neil Armstrong were well qualified, well trained individuals and pretty much on top of it. At the time of docking, all of a sudden they had this malfunction of a thruster on the spacecraft, and they started to lose control for maintaining the stability that they were expecting. The mission rules required them to take action for survival purposes, to undock and go into landing mode.

They were out over the Pacific heading east, and between the flight director and Neil they came up with the conclusion. I think that Neil had to be the final decider because he had to do what he could do, and he, with the ground help, tried to establish what the malfunction was and what the fix was. The fix was no fix, let's get out of here and not have a cataclysmic result, so they undocked and they made a landing in the western Pacific. There was a carrier that was positioned in that general vicinity, so there wasn't any unusual difficulty in locating them and picking them up.

WRIGHT: Were you aware that this was going on at the time?

FRULAND: Yes. I was aware to this extent, that I had left the Scotts for a period of time. I was driving listening to the radio when I heard that this problem was occurring. I had to race back to the Scotts in time to try to be there when the press would be descending on them to ask what was going on and what did they think. So that was a little hairy. I had a little bit of a similar kind of situation with the Schirras when he had that launch malfunction, but I didn't know what it was at that particular moment. I had left the house for a brief period of time, and I had to race back because I was aware by radio that conditions warranted me to get back there and be on station with the family.

That happened a couple of times, but it was always resolved with the fact that I had established rapport with the families. I had helped them in understanding how they could relate to the media. They were intelligent people, and they handled their roles very well, and we worked very compatibly all the time.

WRIGHT: Did you continue that role through Apollo?

FRULAND: Yes, I actually was assigned to a crew member's immediate family beginning with the Apollo 8 program.

On Gemini VI, Schirra and Stafford performed a rendezvous at Christmastime [December 15, 1965], as you remember, with Gemini VII.

WRIGHT: Gemini VII had Frank Borman and James A. Lovell, Jr..

FRULAND: Yes. Borman and Lovell were on Gemini VII, and Schirra and Stafford on Gemini VI. Borman and Lovell were up there for a pretty long time. Gemini VI and VII performed a successful rendezvous. They circled each other and took pictures of the individual spacecraft. During that mission I still was with the Schirras, but later on when Borman flew around the Moon on Apollo 8, I was with his wife and family in a residential area just east of the Manned Spacecraft Center.

I went out and spent time with Borman's parents during the Gemini program. They were living in Phoenix, but they had been in business in Tucson [Arizona], so they were oriented to Arizona. I became acquainted with them just before Borman and Lovell's Gemini VII mission.

When he flew around the Moon on Apollo 8, I had moved up a notch, and instead of being with the parents I was with his wife. That began in the Apollo program. I spent time with Scott's wife, as I recall it, during Apollo 9. [James A.] McDivitt was the commander, and Scott and [Russell L. "Rusty"] Schweickart were the team on that one. I was with Scott's wife in Nassau Bay at the time of that mission. She had a couple of children, as I recall. Then on the subsequent mission were Stafford and [Eugene A.] Cernan, and I can't think of the crew member name right offhand.

WRIGHT: John Young.

FRULAND: John Young. They were flying a mission to the Moon, and they were going to dock with the Lunar Module and send it in an independent orbit, then rendezvous and dock while in lunar orbit. I went up to Chicago. In that mission, for some reason I had been assigned to go to Chicago to be with Cernan's family, his mother and father, not the wife.

That was very interesting because that mission was put on hold. My wife and I had planned to go to Europe for three weeks. The holding of that mission would have kept me from making my trip, so my supervisor, Ben James at the time, found it within their capability to have one of the other associates that I worked with cover that assignment, and so we were allowed to make our trip to Germany and the rest of Europe, which we did during the program. It was fascinating to see the European media coverage in the newspapers where we were in the countries visiting. We visited about three or four different countries, Germany, Italy, France, England all during that three-week time. So I was grateful for the opportunity that I had, and at that time, to be aware of how we were being covered around the world. It was fascinating from that point of view.

The next mission was going to be Apollo 11, and I was able to become the man assigned to Neil Armstrong's wife. Her first name was Janet. I went out there—she had asked for me, actually, because the wives talked to each other. Fortunately I had made some friends among that group, so they recommended me to Janet, and she agreed. Neil and she were a little different package. I hadn't gone to Neil's family. Ed Barker had gone up to Ohio to be with his family during—I think that one when I went to Scott's family on that Gemini docking mission. But she was a neat lady. She was very knowledgeable, and she was very involved. She wanted to know all of the questions and answers, and she had been working as the wife of Neil, she knew whatever he was sharing with her. She had seen enough of how the program had been going, and she was pretty strong in making her needs known to the management. She was not hesitant to call up Dr. Gilruth if she felt it was necessary. She felt very comfortable in asserting her role and concern, and she did.

The two Armstrong boys were just young enough to be goggle-eyed about the whole thing. We sat there during the landing on the Moon around midnight watching this event unfold. It was amazing. I couldn't help but be amazed. I thought it was just one of the most once-in-a-lifetime events that we were seeing. I was impressed with the more or less self-contained emotional display that she was able to have under those conditions. It must have been special as the wife of this man. Here he is, talking to her and to the world on television from the Moon. It was really a privilege to be with Neil Armstrong's wife and children watching him step on the Moon.

WRIGHT: Were members of the press there also?

FRULAND: They were not in the house. They were outside. We dealt with them when Janet Armstrong was ready. At that time, they were almost as sleepy as everybody else was, so it was not a confrontational problem at all. It worked out very well. That ended as a successful event, as far as I was concerned, and I think from NASA's point of view that was our goal and we had accomplished it successfully.

The follow-on was special interest to me, because the crew was confined in quarantine at the Lunar Receiving Laboratory. They were shepherded in confined environments into that place from the time they left the spacecraft. After approximately ten days to two weeks, it was determined that they had been monitored sufficiently to allow them to leave the confines of the Lunar Receiving Laboratory. I drew the card to pick Neil up and take him home. This was after 11:00 at night. It was done without any public announcement. That was determined to be the way to handle it. So I went to the Lunar Receiving Laboratory and picked Neil up and took him

back to his wife and children. He was very normal. He didn't show any signs of being a special person or wanted to have a lot of conversation. He never did have that.

I had had dignitaries, special people that I had taken to meet him. We'd run into him in the hall. I had Dr. Rene Dubos from Rockefeller Institute for Medical Research who was there to see Dr. [Charles A. "Chuck"] Berry and talk about the novel aspect of NASA having to maintain the health of this group of astronauts, and that was taking care of healthy people. This was a new endeavor that the medical profession had not paid enough attention to, and they recognized that. Dubos was a well-thought-of research medical doctor with a worldwide reputation, and I was so impressed with he and Berry talking.

I took him into the flight operations area where they had some of the simulators in those days, and we were walking down a hall as Neil came out into the hall. What could you do? You had to introduce Dr. Dubos to Neil Armstrong. That was a nice opportunity for an exchange between the two men. That was one of the interesting little episodes that I thought was so good, because Neil was a thoughtful individual and was very businesslike in almost every situation. He was on message dealing with the subject at hand and wasn't overly responsive, but he spoke enough to get the job done and was friendly enough to make a reasonably nice relationship exist between a visitor and himself.

So that I got a kick out of. I had these contacts with Neil that I treasure. They were important because he is a unique man in the history of man's explorations. I felt very fortunate to be involved with his Earthbound family when he was on the Moon, and I thought it was uniquely great to be able to take him home, be the first Earthling to see the man out of quarantine and ride with him to his home and return him to his family. I just really thought that was special.

WRIGHT: It is special.

FRULAND: I had many interesting occasions. United States Senator Barry [M.] Goldwater of Arizona and his wife visited the Manned Spacecraft Center during one of the space missions. It was during the time when Astronaut Dave Scott and his crew were awarded the [National Geographic Society] Hubbard Medal. I took Barry Goldwater and his wife to John Young's home. John was a crewmember of the current mission. The Senator and his wife went in and talked with John's wife. She also had several astronaut wives and friends in there at the time.

Barry was a well known Senator at that time. He had been a candidate for President back in '64. He was a pilot and a flier who had an Air Force reserve commission, and he was interested in the space program. Later that night, I picked him up at his hotel and took him to a politically important family that was hosting a get-together for Barry. I drove with him out into the suburbs where he was being entertained. I had a long ride with him that night, which was fascinating to me. He was quite talkative. My family had previously retired to Sun City, Arizona, so I was able to share a little bit of knowledge of where he lived. Earlier on I had hosted former Governor J. Howard Pyle of Arizona at the Manned Spacecraft Center, who after serving as Governor, became head of the National Safety Council. He was the Governor in the '50s. I hosted him at the Manned Spacecraft Center, so I had established a fair number of contacts in Arizona.

Well, to run the gamut you might say, another individual that I got a kick out of was Hildegard, the chanteuse back in the '40s and '50s who was a singer who was fairly well known in those days. She had a sister living in Houston, and Hildegard wanted to visit the Manned Spacecraft Center. Interestingly enough, during World War II, I had dated a girl in Chicago

when I was home on leave, and we had gone to the Palmer House Hotel to dine and dance. She was the featured star on the program that night. Twenty years later, I hosted her at the Manned Spacecraft Center and reminded her of that experience.

WRIGHT: You talked about how wonderful it was to work with Apollo 11. Were you involved with the Apollo 1 fire and the aftermath of that?

FRULAND: Oh, very much so. We all were. We were suddenly a team that gathered to try to determine what was going on and how we were going to handle it. I was very pleased in looking back with the fact that this was a very difficult time, yet it was very appropriately handled as best it could be. It was a difficult situation for all concerned. Everybody in NASA felt a real problem had arisen that they had to cope with.

The immediate response was muted. There was not much to say or much to do immediately at the time of the occurrence. We gradually had to sort out what had to be covered and presented to the public and to the media, essentially the media. We weren't the direct contacts with the media when we weren't out on a mission, so it fell to us to be involved with the families and the handling of the deceased. I had been involved when Elliot [M.] See [Jr.] and Charlie [Charles A.] Bassett [II] were killed flying to the Gemini Spacecraft Prime Contractor in St. Louis [Missouri]. I had gone with their families on the [NASA] Gulfstream [aircraft] along with Frank Hickey, and we went up to be there when the burials occurred at Arlington [National Cemetery, Arlington, Virginia].

So with Apollo 1, we were in a similar mode. I was assigned to cover the services for Ed [Edward H.] White [II] at [the United States Military Academy at] West Point [New York]. I

flew commercially to New York City, rented a car, and drove to West Point, and acquainted myself with the people handling the West Point service arrangements. I gave emotional support to Mrs. White, a very nice lady, who was really very emotionally distraught. She was so grateful to have me there to lend a certain amount of MSC representation during a traumatic period of time that she had to get through. She was so helpful because later on when the king and queen of Belgium came, she graciously met with them in one of the rooms over at the Mission Control Center to honor them and their interest in the NASA Apollo Program. They were young, good looking, and enthusiastic visitors, very nice people. I often recall those were wonderful experiences.

With the completion of Apollo 11, there really was one last major event that I participated in. President Nixon decided that the country needed to be rewarded for holding fast for seven years to the manned lunar landing program and returning the crew safely to Earth. He wanted to present the Apollo 11 crew to the nation. A one-day coast-to-coast event was planned. Bill Der Bing and I were assigned to go with the families on Air Force One from Houston. We started the day selected by Nixon leaving from Ellington Field [Ellington Air Force Base, Houston, Texas]. We boarded Air Force One there and flew to New York City.

We landed at [John F.] Kennedy [International Airport], and flew in several helicopters to a landing spot on Lower Manhattan along the East River. The whole entourage gathered in automobiles, and we proceeded to City Hall where the mayor welcomed the crew. Then we did the ticker-tape parade down Broadway in New York City, and eventually wound back over the river into Brooklyn and back to Kennedy. We boarded the plane and flew to Chicago.

We landed at Glen Ellyn airport northwest of Chicago. It was the airfield that I had flown in 1930 from in a Curtiss Condor with my mother. We flew in six to eight small US

military helicopters. They didn't have big transport helicopters at that time for this event. We were a convoy of helicopters that flew close to the tree tops to Meigs Field on the little island off of Grant Park where the Adler Planetarium is located. These helicopters all landed at Meigs Field, and we transferred to a convoy of automobiles. The automobiles in New York and Chicago were large four-door convertibles with tops down where the astronauts could sit on the top of the backseat. The wives didn't sit up on the seats but they were in back in the open and could see the crowds and be seen. I sat up next to the driver in the front of the vehicle with the wives. I was quite pleased to be there since Chicago was where I grew up.

It was amazing to see the outpouring and the ticker-tape that came out of the windows in New York City. It wasn't quite as magic in Chicago as it was in New York City. New York City has been the site where the nation's heroes are originally feted. Normally that's about the major extent of it, but in this case, we did Chicago too. We drove from Meigs Field to the City Hall, where the Chicago Mayor lauded the Apollo 11 crew. The entourage then drove down State Street and the parts of the loop area of Chicago, and ended up going back to Meigs Field to board the helicopters and get back on the plane to go to Los Angeles.

We had the benefit of being on Air Force One, so we had steak for lunch on the way out to LA. We'd earned it. We'd been to two of the major US cities and worked the day well. We had a chance to eat and reflect and rest into LA, where Nixon was hosting a banquet for government dignitaries and local officials and to give the accolades to the crew at the Century Plaza Hotel. We landed at the huge Los Angeles International [Airport]. We transferred to Hueys, the twin-rotor large volume helicopters. Everybody boarded this helicopter and we flew to the hotel parking lot, which had been emptied so that this helicopter could land there adjacent to the hotel. That was fascinating.

That was handled without any SNAFUs [problems] that I was aware of. So at that point, we handed the crew and their families over to the protocol people that were from Washington [D.C.] and the government of California and the Administration took over. The dinner went off quite well, as far as I could tell. I didn't participate, I didn't attend, but I did stay the night at the Century Plaza. Bill Der Bing was the other chap with me. He had been along for the whole thing too. He was a good friend, and a guy that got as much enjoyment out of it as I did. We felt privileged to have the assignment.

So the next morning we got up, went out to the helicopter, flew back to the airport, boarded Air Force One, and flew back that morning to Ellington Air Force Base on Air Force One. We had breakfast on the way back on Air Force One. I had the special pleasure of sitting next to Donald [H.] Rumsfeld for breakfast on the way back. At that point, he had served first as a naval fighter pilot in the early '50s, and then he became a Congressman from an area of Chicago just north of where I lived in Chicago. We were able to use that as a basis for some conversation. He was willing to talk, and he hadn't reached the point where he was the number one man in almost anything that you had to talk about.

We had just a reasonable relationship and a conversation. I knew who he was and I appreciated that. He was becoming a force within the Republican national party at that time and soon moved into positions in the White House when Nixon and [President Gerald R.] Ford, [Jr.], particularly Ford, took office. So he and [Richard B. "Dick"] Cheney then became a tandem team at that point.

That was the culmination of Apollo 11, because that was just one unique day in our life experience. It was good for the country, and it was good for the crews, and good for NASA. It was just a wonderful thing. I was so glad I was part of it. It was such a privilege to be involved.

WRIGHT: Did you leave soon after Apollo 11?

FRULAND: I left about three weeks later and moved to Colorado and the Martin Marietta Aerospace Division, still associated with NASA contractors and NASA products. I spent the last couple weeks saying goodbye to friends and meeting with the crew. I had a special feeling for [Michael] Collins, because I had been with his mother at the Cape when he launched on his first mission in Gemini. She was the widow of an admiral in the Navy. She was a “white glove” elderly, neat lady, just as refined as you could imagine, and so easy to work with. Her daughter was there, and so were other members of the Collin’s family. That was another worthwhile experience. It was my only experience at a launch at the Cape. I went there for some orientation one time, but the main time I was there was for the Gemini Titan flight for which Michael Collins was a member of the crew. It was his initiation into the space program. Another great experience for me. I’m glad I remembered it, because she was a special lady. It’s always a treasure and a privilege to be able to work with the astronaut parents. They produced unique individuals and were a joy to spend time with.

Well, at that point I said goodbye to my NASA career. I left with a certain amount of regret. I talked to people like Gene Cernan, with whom I had a close rapport. He was such a pleasant easy-to-deal-with individual. I had worked with him and Tom Stafford when they were a crew in the Gemini program. I had worked with Stafford’s mother up in Oklahoma, and she came down to the Center, and I helped with her visit to the Center.

Gene couldn’t understand why I was leaving. I tried to explain it to him. I was of the opinion that we had some difficulties looking into the future in NASA and that I could leave on a

high point, and I had other living requirements that included my wife and I and my two daughters.

Ruth had come to work for NASA. She worked for NASA back before I left. I had been aware of this co-op [cooperative education] program at MSC, and I talked to Dr. Elbert [A.] King who was a senior member of the geology group in 1963, '64, '65 about my daughter graduating eventually with a degree in geology, and that I was interested in seeing if she might fit into the co-op program. He recommended her, and she was able to enter that program in '66, and remained there until she graduated from college. Then she came to work full-time. So that worked out very well.

I was aware that NASA was considering the Skylab program. That didn't appeal to me. What I was looking at was the political fact of life that led NASA to determine that Apollo 17 would be the last mission. With components for four more lunar missions ready to go, the mission changed to pirating the hardware to do Skylab. I was extremely disappointed. I felt that we were missing the golden ring that we could reach for. It was in our grasp. We had the momentum. We didn't have as much public support as far as politicians were concerned. It cost a lot of money to put on a lunar mission, so that was a factor. I think it was not, in retrospect, the right decision to go with Skylab. Then the Soyuz program had its value from a political point of view, and entering a relationship with Russia, so it was a justifiable mission and legitimate, and it gave [Donald K. "Deke"] Slayton a chance to fly, which was very meaningful.

The Shuttle did not have the excitement that travel to the Moon had. It performed perfunctorily the mission that it was designed for very well until a couple of episodes that did occur that were most unfortunate. Another couple of low points for the program. When you dealt with man going into space, the kind of people that were employed as the pilots and crew,

many of them had come out of Edwards Air Force Base [California] where they'd been experimental test pilots. They had seen fellow pilots die in crashes in the test mode of trying to develop advance aeronautical vehicles. That's the way they responded to queries from the average public when they were asked how they managed to deal with this experimental program. That's what it was. We were testing vehicles for the first time.

They always indicated, "We lived with that at Edwards and saw the problems that occurred when something malfunctioned. You had to go through a grieving mode, but you had to gather yourself back together and proceed on with the program." That is really what NASA had to do. Most of the pilots had that background and were well trained to recognize what they were doing.

In reality, successes far outweighed failures. They were rewarded by being in a program that was good, and they were on top of it. The tragedy of the planned first manned Apollo spacecraft was a real challenge forcing regrouping and going forward with recognition that the engineering needed to be rethought. We went into that reevaluation of the fire and the Apollo spacecraft. I think they managed the recovery from that with more alacrity than we might have expected, and we got back on program with the Schirra mission in Earth orbit.

The employees at MSC were talented and inspiring—a joy to work with. I worked closely with Paul [E.] Purser, a Special Assistant to Dr. Robert Gilruth. I dealt with him frequently. I also worked with the Deputy Administrator, George M. Low, who was deputy to Gilruth. He eventually became the president of Rensselaer Polytech [Polytechnic Institute, Troy, New York]. The individual who followed Low was George [S.] Trimble, [Jr.], who had been a Martin Marietta executive, and he came as deputy administrator at MSC. He was a man from the civilian side of the business. NASA had a program where they would bring these aeronautical

industry people in to give them the experience and the orientation. Low, after the Apollo spacecraft fire, who was then working at NASA Headquarters, was asked to lead the Apollo Program back to flight status.

[Joseph F.] Shea had been the Apollo Program director at MSC. He suffered quite a bit as a result of that incident. Low did a magnificent job putting the program back on track. He was a hands-on guy, and the deputy to [James E.] Webb, NASA Administrator, in Washington. He and Low were very compatible.

Of course I thought Webb, as a politician, was a very successful administrator for NASA during that period of time. He came across like gangbusters. He was a man I had a great admiration for. I watched him emcee programs, and he had a good feel for the job and said the right things.

NASA attracted many individuals with special abilities. Of course, I had mentioned Phillips being the manager of this program for Thiokol. Then he moved to NASA at Headquarters at the same time I joined NASA. You see, the symbiosis or the arc of the connections in my life with my career all made so much sense. I could see flying and joining NASA and the evolution of myself through being a pilot in World War II that I had to go to work for NASA. It was almost preordained. My high school graduating class motto was “ad astra per aspera,” to the stars through difficulty. What could be more connected?

WRIGHT: Would you like to end on that note, because it seemed like that’s a good place to be?

FRULAND: I’m home free.

RUTH FRULAND: Well, the only thing—

WALTER FRULAND: What did I not cover?

RUTH FRULAND: Well, it seemed to me, and I think it's a flight connection. [Dr. Jeannette] Piccard.

FRULAND: Jeannette Piccard, the wife of the stratosphere balloon pilot of the 1930s, was hired by Dr. Gilruth to be a special assistant to him for much of the time that I worked at NASA. She was a unique individual. She was a hot air balloon pilot. She told this story about flying over the state of Michigan in foggy weather. She was lost. She yelled down to the ground, "Hello down there! Where are you? Where are we?" She would tell this story to visitors and just amaze them. She was an elderly lady because her husband was not a young man when he flew into the stratosphere in the 1930s. This was almost 40 years later. Fantastic!

There was another lady who didn't have anything to do with NASA directly, but Grace [K.] Winn was brought into the organization as a liaison between NASA and Houston. She was a link to the community. Phil [Philip T.] Hamburger, who had been a councilman in Houston, became a special government liaison for MSC with the Congress. They both worked with us in the Special Events Office because they were aware of the special visitors they could help facilitate getting into MSC. They supported us very much, and the public, in NASA's relationship in the communities around here. Grace Winn and Phil Hamburger were instrumental in being extensions of MSC's public relations. They were very good at their assignments!

WRIGHT: Thanks for adding that. That's pretty interesting.

FRULAND: They were unique individuals. They had a role they were very good at. Okay.

WRIGHT: Thank you so much for sharing so much today.

FRULAND: You think you got something?

WRIGHT: Yes, a few things.

FRULAND: Well, I certainly enjoyed it.

[End of interview]