

NASA JOHNSON SPACE CENTER ORAL HISTORY PROJECT

ORAL HISTORY TRANSCRIPT

KENNETH R. HAYNES
INTERVIEWED BY SANDRA JOHNSON
LAS CRUCES, NEW MEXICO—21 JANUARY 2003

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

JOHNSON: Today is January 21st, 2003. This oral history with Kenneth Haynes is being conducted in Las Cruces, New Mexico, for the NASA Johnson Space Center Oral History Project. The interviewer is Sandra Johnson, assisted by Rebecca Wright and Jennifer Ross-Nazzal.

I want to thank you for joining us today and agreeing to participate. I'd like to start out by asking you to give us some background on your career before you joined NASA.

HAYNES: My procurement career started when I was called to the Air Force in 1955, reported to Wright-Patterson Air Force Base [WPAFB] Ohio, and worked in the F-101 Project Office as a Production Procurement Officer. We bought F-101 aircraft, which was the first supersonic weapon system in the Air Force at that time, and it was the largest dollar expenditure in the Air Force. I worked at WPAFB through the total program until it was transferred to Warner Robins, Georgia. The F-101 was to support SAC [Strategic Air Command].

In 1960, the ballistic missile centers were just opening. They came to WPAFB—that was old Headquarters AMC [Air Material Command], which was worldwide procurement for the Air Force. Most of the experienced procurement people in the world were at WPAFB. They came and offered all of us, or any of us that were willing to go to the missile centers a one-grade

promotion and we could select the site. With that, I elected to go to [BMC] Ballistic Missile Center, which was in Los Angeles, California.

I worked there as Procurement Specialist, responsible for the communications for the Atlas missile sites, and I was there until Major General Robert E. Greer, who was assigned from Washington to head up the Special Projects Office, asked for volunteers to come work with him. He needed four buyers and I thought that sounded interesting, so I accepted his offer and went to work in Special Projects.

I transferred to the NASA Marshall Space Flight Center for about six months. I worked there in the Saturn Office; I went back to the Special Projects Office and worked there until I came to NASA White Sands Test Facility, New Mexico. I was with NASA from that date until 1981.

JOHNSON: What were your initial impressions when you came out to Las Cruces, about the facilities?

HAYNES: Since the Huntsville move wasn't what I thought it would be, I decided I would not go anyplace until I looked the site over first. The individual who was Chief of Administration I had met back at WPAFB. He worked in the Personnel Office at JSC before he came to WSTF. He knew my background from WPAFB, BMC and through Special Projects, so he was aware of my capabilities..

He called me, said he needed me, and wanted to know if I would come to WSTF. I told him no. I had driven through Las Cruces twice, and I couldn't remember coming through the town, so I thought it must not be a very impressive town. I told him I was not interested but he kept calling me until he finally caught me on a bad Friday. I told him I would not come unless I

could look the place over first. He said, "Well, what time does an airplane leave LA tonight?" I got on the plane and he met me in El Paso, Texas about midnight. We drove back through the range, which was about forty miles from El Paso, up through the White Sands Missile Range [WSMR]. The only thing we saw coming from El Paso were a few coyotes running across the road and some snakes on the road. We came across the hill from WSMR to the little town of Organ, New Mexico to the entrance of WSTF. He wanted to show me where our site was going to be. The road was unpaved from Route 70 up to our site, which was about five miles. At the end of the road was a trailer, which housed one guard and there were no other facilities. That was it. Then we came into town of Las Cruces and some of the streets within the city were still unpaved. There were even some outdoor privies. Had one stoplight in town, which was at Picacho and Main Street. I was not too impressed. I told him I would go back home and think about it. I finally decided to accept the position.

JOHNSON: How many people were here when you started?

HAYNES: I was number six.

JOHNSON: You were definitely there at the beginning.

HAYNES: I was there at the beginning.

JOHNSON: What were your duties, as you understood them, when you started in your position?

HAYNES: I was responsible for Procurement and NASA Property. There were two other individuals in the office.

JOHNSON: What sorts of activities were going on at that time, or had anything started up here, or were you just trying to get things sorted out and get things started?

HAYNES: They had begun. A maintenance and operations contractor has been selected, and he was on board, but there were no facilities. The White Sands Missile Range provided us office space on the range. Of course, they invited us to use their facilities, which included the use of their clubs, Post Exchange and housing, if available. Our maintenance and operations contractor was not authorized to perform any work on the range.

The Little Joe II project was under way, which flight-tested the Apollo escape tower. We launched from Complex 36 on the range. There were very few records when I came on board. As I indicated earlier, I almost decided to go back home.

The one individual was supposed to be handling the property and the other who had come from the Personnel Office had very limited experience in their fields. I asked where the records for the property were, and he opened the desk drawer and said, "Well, I think there's some in here, and maybe there's some over there". I said, "How much property do you have?" He had no idea how much property we had. I asked where the records on the procurements were. He didn't know. He didn't know who bought anything.

I found out we were immune from GAO audits for the first two years. Frank Clark had come over from WSMR so he knew everybody on site. I asked him if he could get some of the Army people who worked in property to perform an inventory for me. The Army agreed they

could do that if they did the inventory on other than regular work hours. So we had to pay them overtime. Worked overtime in the evenings and weekends until I got an inventory of the property, which was the base for starting with property control. We had to develop procurement procedures primarily based on past experience. We started with the basic purchase order. It was quite interesting though. Las Cruces was a quiet little town, and not any of the vendors in town were used to NASA type requirements. They were used to the Army. If one wanted a common item, they might be able to provide that but if you wanted something less common, they could get it for you in maybe two to six weeks. For example, there was only one electronic place in town. I would call them and they would tell me they could get something for me in two weeks. I would explain that we had a test launch and needed the item within the hour. That was a problem we had to overcome. We found an electronic business in El Paso who understood NASA requirements. He would deliver the procured items, even those with a short delivery schedule. That was the type of procurement environment we had to work with.

JOHNSON: You mentioned that you didn't have any personnel. Were you able to hire people at that time?

HAYNES: Hired Al Duran to head the procurement function. He was with me all through the years, and later hired a secretary. It turns out both of them were Spanish and later on when we had to hire a percentage of minorities in our workforce, I almost met the requirement for the whole site. But that was a continuous problem over the next couple of years, to hire qualified people to meet our requirements.

JOHNSON: So the numbers just gradually grew all the way through Apollo?

HAYNES: The numbers grew. Yes, I had the authority to hire all I needed, and my supervisor didn't question when I told him what I needed. At the peak, we had twenty-one in my office, and when I left, it was back down to seven or nine, which was actually a little bit less than minimum, in my opinion.

JOHNSON: You mentioned that Las Cruces had some dirt roads and the vendors weren't used to having to deal with providing things quite as quickly as you needed them. What sort of other effects do you think White Sands Test Facility had on Las Cruces itself? Obviously, it is a larger town now, but do you think they had something to do with that?

HAYNES: Oh yes, no question. The main industry in town at that time was the university [NMSU] and Stahmann's Pecan Farm. They had approximately 5,000 employees. It was the largest pecan farm in the world. Other than that, we didn't really have any heavy industry. I don't remember, but it was several millions of dollars that we added, particularly in the housing industry.

JOHNSON: What type of relationship did White Sands have with Johnson Space Center at the beginning, or Manned Spacecraft Center, obviously, then?

HAYNES: The only way I know how to answer that, the Army was a well-established DoD [Department of Defense] agent and they have a regulation for everything. With the tight testing

schedule, it was very difficult at times. Utilizing their range, we had to conform to their rules. At times, there was some stress, but on the other hand, they did support us, particularly the Post Engineers who were responsible for all the work on the range. If we wanted work done in maintenance and operations, we would go through the Post Engineers, using their procedures.

I have a funny to tell you there. We'd moved into barracks—these were old World War II barracks. A water fountain line broke. Water was squirting out into the barracks. I called Post Engineers and told them we needed a plumber fast, that a water line had broken. “Just a minute. Yes, we can get that tomorrow afternoon, at two o'clock.” You don't understand, the water line is broken and the water.” “Sorry, we can't get to you until two o'clock the next day.” I said, “Never mind, I'll have Zia do it.” “You can't do that.” And about thirty minutes, here came the Post Engineers to fix the fountain.

Overall, I'd say, under the restrictions and their regulations, they supported us well. As a matter of fact, it got to a point later on that they wanted to support us too well. Specifically, they wanted to provide security at our site. Of course, we didn't want that and we prevailed. We hired our own security. Overall, I'd say they did well, under the circumstances.

JOHNSON: Having to share the facilities at the beginning, at what point did the facilities, specifically for the test facility for your offices, when were they built, and when did you get to move into them?

HAYNES: A year later. Building 100 was the first office building, and we completed 200 a few months after we moved. Of course, building the facilities was a continuous thing. Have you

talked to Archie Beckett yet? He could tell you. He was in charge of getting the facilities ready. I know it took us a while because we had lots of problems that he has probably told you about.

JOHNSON: When they were first building them, what sort of things did they provide for the employees?

HAYNES: Just basically office space. Of course, we had a fire station, and since we were remote, we were twenty-two miles from Las Cruces, we knew the type of work that we were going to be doing and dangerous materials that we would use. We knew we had to do something to provide for the workforce, for example, hot meals. So, in Building 100, we built a cafeteria. Medical services were quite lacking at that time. We found out later that even the doctors in town didn't know how to handle accidents that we would have with the various propellants. We built a dispensary and hired a doctor and a nurse. Our nurse was the supervisor of nurses at the local hospital in Las Cruces at that time. We hired the best talent that was available. It worked out great.

Later on, we provided bus service for the site, but that was a few years down the road. We were so busy and had such tight schedules to meet, you would have thought everybody was working for themselves.

JOHNSON: If you could talk for a minute about the structure of the organization itself when it first began.

HAYNES: We had a manager and four office chiefs, and the manager reported to the Director at JSC. Each of the office chiefs reported to their respective counterpart, which was a Division Chief at JSC. After about a year of that, it was determined that wasn't working at all. JSC Director, sent his Deputy Director, George Abbey, out to review the management structure. He came out and stayed with us about six months, went back, made a recommendation, and based on that recommendation, the manager was delegated authority from the JSC Director. The office chiefs reported to the local manager, with one exception. I got my contracting officer delegation from Dave Lang, who was the Director of Procurement, JSC. I had the responsibilities of a contracting officer, aside from my administrative support to the manager, and that got touchy at times. The contracting officer's responsibility is clearly set forth in NASA regulations. You could see how that could get to be a problem. But, never had a problem that we didn't resolve and get on with administrative tasks.

JOHNSON: Tell us a little bit about your role in the Procurement and Contracts Branch during the Apollo Program.

HAYNES: We had a requirement to build a warehouse early on and stock it with supplies and spare parts to support the facility, and that got to be quite a chore. That must have happened after the first two years because here came the auditors [GAO] and criticized us for many actions. We had an auditor from JSC who criticized us for awarding a contract for a warehouse. He stated that we were wasting NASA's money, that we should not build a warehouse. The auditor had gone over to White Sands and found a building that was available and said we should utilize that facility.

With the tight testing schedules that we had, we would have had to have driven twenty miles to WSMR and return. One would still been trying to launch Apollo if we had not completed warehouse construction and awarded contracts accordingly. We set up open contracts, or call contracts, which we were authorized up to \$25,000. With this type of contract, we could phone and follow up in writing. This gave us a fast turnaround on purchases. Anything larger or more dollar value, we had to go through required competitive procurement procedure.

JOHNSON: If the purchase was over \$25,000, would you release a Request for Proposal [RFP]? Can you just describe that procedure for the other contracts?

HAYNES: Yes. This is one area that gave us some trouble. In the procurement field, it depends upon the type of contract, dollar amount as to what type of contract you write. Thanks for GSA contracts. If a contractor negotiated with the General Service Administration [GSA] and they had their products listed with a price they charged the government, you could just place a call against that contract. We ordered everything that we could through GSA contracts.

You asked me what I felt was one of my greatest accomplishments. I think the greatest accomplishment of our office was we never had a case where we were the cause of a test schedule delay.

JOHNSON: Maybe you want to just talk about that just for a minute. Why should you have been the cause of a delay?

HAYNES: We were working in the state of the art and in many instances beyond the state of the art, as you were at JSC. We had to work with current knowledge, and design and build our facilities, which we did, based upon known requirements at the time. When I say “we,” I include JSC and NASA Headquarters. But it turns out, as the schedules developed and as we got into the testing phase, our facilities were undersigned, particularly in the capacities to hold the liquids, the propellants that were required.

If all tests had gone as scheduled with the propellants that we had ordered, we didn’t have the capacity to unload them or to hold them without paying excess demurrage charges. Thank goodness, we had anomalies in the testing, which delayed the testing schedule, and gave us time to unload the propellants.

JOHNSON: There were a number of contractors and subcontractors working on site. What was the relationship between the civil servants and the contract personnel, as you remember it?

HAYNES: I think the relationship was good. I don’t know what the contractors might have thought. We had a team that was just phenomenal. No one there was concerned about hours of work, what time you got to work, or when you went home. They didn’t ask for overtime, although a few people got it. I think that we were respected and accepted. We got along exceptionally well. I am sure we had small problems that anyone in testing operations would have, but overall it was very good.

JOHNSON: One of your responsibilities was to evaluate the prime contractors and subcontractors while you were there. Can you describe that process?

HAYNES: Prior to the award fee type contracts, the office chiefs were responsible for the evaluation of the contractor work in their respective areas. These duties were delegated to the engineers and personnel who were assigned to monitor the work in their areas of responsibility. After award fee type contracts were issued, the evaluation process remained basically the same except the criteria for evaluation was established and issued as part of the contract. The evaluation consisted of both objective and subjective criteria and was evaluated in a daily basis with weekly scheduled meetings with the contractors.

JOHNSON: At what point were the regulations in place?

HAYNES: It was an evolving type thing. They weren't just sent to us, they came to us as they were formulated. WSTF had a Procedures Board, which was made up of the office chiefs and the manager. We wrote internal procedures called WSTFIs [White Sands Test Facility Internal Procedures] and as it became necessary or there were problems, we would write a new procedure. The board met on a weekly basis to write new regulations. JSCIs [Johnson Space Center Internal Procedures] were the implementing instructions of the Headquarters, and, of course, we complied with those as well.

JOHNSON: Of course, Grumman and North American, being the prime contractors, and you mentioned that the people that were there sometimes may have felt like they weren't sure about NASA having complete control, but what type of relationship did your office have with them?

HAYNES: Excellent, particularly with North American, which was the most active in the early stages. The manager from North American had a technical background as most of NASA personnel. North American Administrator understood what had to be done and he would come to me and ask, "How can we resolve this?" We would resolve the problem between us. We would go back to our respective managers with our solution and attempt to convince them this was the way it should be done. That is how we resolved many problems and the system worked beautifully.

JOHNSON: Were there any other companies that you worked closely with on a regular basis?

HAYNES: Yes, Grumman Aircraft. But those contracts were awarded out of JSC. The Grumman Contracting Officer was Jim Neal, and Hank Wycheck was the Contracting Officer for North American. I really didn't have any problem from that standpoint, although I did stay in contact with both Jim and Hank.

JOHNSON: What about the relationship of the Procurement Office at White Sands with other NASA centers and NASA Headquarters?

HAYNES: If I had a problem that I didn't know how to handle, I usually called J. P. Harris at JSC procurement office, or the legal office, depending on the nature of the problem. They may suggest to me to call either NASA Kennedy Space Center, FL or one of the other centers who had handled similar problems. Other than that, we handled 95 to 98 percent of everything at WSTF or JSC.

JOHNSON: Let's talk about Apollo for a minute, the actual program itself. Of course, the Apollo 1 fire. Can you tell us what kind of effect that had on White Sands and your office in particular?

HAYNES: Yes. We were so involved with total requirements; we attended staff meetings every week from the time I was at WSFT. Plus, I spent 50 to 60 percent of my time in meetings for almost the entire time. I was involved with many aspects of the WSTF requirements and I knew what was going on over most of the site. When that came along, we had not done flammability testing. NASA was operating in 100 percent oxygen environment, and we had not tested the materials, nor did we have a requirement at that time to test flammability of the wiring inside the command module. When that happened, the requirement was given to the laboratory to perform the testing. Have you talked to Dave Pippen yet?

JOHNSON: No

HAYNES: Dave is the individual you need to talk with. He did the flammability testing. The laboratory developed the testing equipment. No one had ever done that type of testing before, to my knowledge. Dave developed the procedures for testing and then the lab immediately started performing testing on the materials. JSC engineers would write what needed to be tested and how they wanted it tested, and the environment they wanted the testing performed. The laboratory then did the testing. The only way it affected the Administration Office was added procurement to support the testing. I didn't see very much difference in the way we were normally operating.

JOHNSON: Even with building the test area?

HAYNES: The test areas themselves, yes. We issued the contracts on some of the testing equipment.

JOHNSON: There was a feeling of commitment in the whole facility to get it working?

HAYNES: Oh yes, and it continued to be so up until after the Apollo Program. It was quite a letdown after the Apollo Program. The work had been quite exciting, and everyone was actually proud to be a part of it. But when the Shuttle came along, we were interested in doing it, of course, but the enthusiasm wasn't there to the same extent as in Apollo.

JOHNSON: At what point did the unions come in, time-wise?

HAYNES: It was during the time Dynaelectron was the Maintenance and Operations Contractor.

JOHNSON: Was it during the Apollo Program?

HAYNES: It might have been at the end of the Apollo Program.

JOHNSON: In 1968, Martin L. Raines recommended to George M. Low that they start phasing down the contractor operations. What type of effect did that have on the test facility and the morale and day-to-day activities?

HAYNES: Of course, we had people that were concerned. We had built up around 2,100 people at that time. We may have been a little overstaffed based upon the current testing requirements. Past experience has shown you start laying off personnel, productivity increases. I think we actually saw a little productivity increase from the initial layoff. Morale stayed high. We didn't see any additional, significant problems.

JOHNSON: In 1969, you headed the White Sands Test Facility's Administration Office.

HAYNES: Yes.

JOHNSON: What changed as far as your job duties?

HAYNES: Just a lot more responsibility. The Administration Office was assigned most of the non-technical duties. I had procurement, contract administration, subcontracts; property and supply; budgets; financial management; personnel; reproduction; travel; communications; transportation; and mail service.

JOHNSON: How many people did you have supporting you?

HAYNES: At that time?

JOHNSON: Yes.

HAYNES: Including me, we had twenty-one people, which was minimal. I can't overemphasize this was a group effort, what I called a team concept. We truly had a good team. They performed the work in an outstanding manner with very little complaint.

JOHNSON: How was the office organized? How were those twenty-one people organized under you?

HAYNES: The Administration Office consisted of procurement, contract administration, property, communications, transportation, mail, financial management and budget, travel and site personnel, and other duties as assigned. The duties were assigned to the branches, Procurement, Contract Administration and Financial Management and Budget. Personnel and Travel were a staff function to my office and Transportation and Communications were assigned to the Property Officer.

JOHNSON: Were there any personnel issues or anything that you can remember during your time there that you dealt with specifically?

HAYNES: Yes.

JOHNSON: Anything you want to mention? [Laughter]

HAYNES: If personnel from the contractors, Propulsion Office, Facilities Office, or the Laboratory had a problem that they didn't feel was being addressed or solved, they came to see me. They knew their issue would be kept confidential and every effort would be made to correct or settle the issue. We tried to resolve a personnel issue in-house and were very successful in doing so.

JOHNSON: In 1970, I believe NASA planned to close White Sands. What were your thoughts about that decision?

HAYNES: We all recognized that the time would come when the Apollo Program work would be completed at WSTF. I was told not to expect to stay more than five years at the outset. But when it came, we were very concerned. I recognized that to close down a site, the people required to do that would be personnel and property administration. I wasn't personally too concerned. I knew the office chiefs were going to try very hard to get additional work, and I knew that the work we had been doing was one of a kind and requirement would be needed to continue NASA's work.

JOHNSON: You mentioned that they told you, when you first began, not to expect to be here any longer than five years. Do you feel that that's the way they were setting this place up, as something that would be closed down completely and not opened again, or just closed and then possibly opened again?

HAYNES: No, I think at the time they made that statement, they felt that once the testing was completed, they would close down the facility.

JOHNSON: So a lot of people did go back to Johnson?

HAYNES: Yes. And, in turn, came back to WSTF later on. The current manager is one of those. He started at WSTF, went to JSC and returned as manager.

JOHNSON: How many people did the total number go down to at that time? You mentioned it was, I think, 2,100 at one time. What it go down to? How small did it become?

HAYNES: I am not absolutely sure.

JOHNSON: You can give an approximation.

HAYNES: I am not sure of the exact number, but approximately 400.

JOHNSON: That small?

HAYNES: Yes.

JOHNSON: That's interesting. Let's talk about the Space Shuttle Program and then how it affected White Sands and the workforce out here.

HAYNES: As far as my office was concerned, if anything, we many have seen somewhat less requirements come through our office, but it really didn't have any material effect on what we were doing.

JOHNSON: Did the atmosphere change? You mentioned before that with Apollo everyone had that goal in mind.

HAYNES: Yes, because this was the time that I told you that they brought the unions in. If one directed a craft member to do work that was not within the scope of his craft, he could not perform the work. Up until that time, it didn't make any difference if you were a carpenter or a plumber, if you needed the work done, whoever was available did it.

JOHNSON: You mentioned in your list of duties, budget was one of the things you were responsible for. So what were some of the differences between the Apollo Program and the Shuttle Program?

HAYNES: We had developed a computerized cost-accounting system. All work was defined by task. All the work done on the site was authorized by test preparation sheet [TPS] or work order. When a requirement came in to us, it was in the test area, we would issue a TPS. The Budget

Office used a funding number, assigned a task number, and every hour worked would be charged to that task. The computer printout was issued on a weekly basis.

JOHNSON: During the seventies, the budget with NASA was shrinking, and you had less to work with. How did you maintain your responsibilities out here?

HAYNES: I guess, like all organizations. In our meetings with the office chiefs and the managers, we reviewed all the work that had to be done and ask, "Where can we cut?" Normally, you never got an unanimous decision among the office chiefs, and in that case, the manager would just make an arbitrary cut. Then if we got into trouble, usually, you could get help. It was in everyone's interest that each office meet their responsibilities. I will have to admit , it was cut pretty thin at times, but we always managed to meet our schedules.

JOHNSON: You touched on, a minute ago, the reimbursable work.

HAYNES: Yes.

JOHNSON: Do you want to talk about that a little bit and how that process worked?

HAYNES: When we received reimbursable work, the area that was to perform the testing would come up with a budget, with estimated hours to perform the work. If WSTF agreed that we could do the work within the budget, we accepted the work. A task order was assigned and as work progressed, all changes were made to the assigned task order number. Task order reports

came out on a weekly basis or were made available more often, if office chief desired. This permitted the office chief to keep current in trucking cost and performance.

JOHNSON: What type of contracts were those? You worked with the Army and the Air Force, too; is that correct?

HAYNES: Even though they were not specifically designated as such, they ere in effect a fixed price type contract. Yes, we worked with the Army and Air Force and some work with contractors.

JOHNSON: In 1978, I believe, there was a reduction in force [RIF]. Do you remember that?

HAYNES: Yes, I do. The RIF had very little impact as the net result. We had a few volunteers to leave or transfer.

JOHNSON: Was there any indication before it happened that this was coming in your offices? Did you know it was inevitable?

HAYNES: We suspected it, sure, since I had the personnel function, I worked closely with personnel. I pretty much knew what was coming. As office chiefs, we were constantly going through personnel cuts with the contractors. When we had cuts in budget, we had to reduce the contractor's workforce.

JOHNSON: When you first started here, going throughout your career here, obviously there was a lot of technological changes as far as the testing facility and engineers and that sort of thing. How did the technology over time, affect your offices?

HAYNES: Made it easier. The effects it had on us went from typewriter to computer. But the early computers were not very user friendly. In my office, we didn't have that much of a problem, the mainframe computer system was assigned to the facilities office. The priority was test reports. Everything else was secondary. That meant my office was secondary, except for payroll.

JOHNSON: You mentioned that all the astronauts had come through at various times to watch some of the testing. What were your feelings during the Apollo Program, watching them fly, the different astronauts? The ones that always come to mind are Apollo 8 or Apollo 11. Maybe you can describe some of those experiences and where you were and what you were doing.

HAYNES: I would say we were probably as tense as the group in JSC and Kennedy or maybe more so because we knew the anomalies from the testing we had done and what we hadn't done. When Apollo 11 touched down on the moon, a great sense of pride for having been a member of the NASA team.

JOHNSON: Where were you when Apollo 11 landed? Were you at work?

HAYNES: I must have been at work. I do remember that it was quite exciting and a very proud moment.

JOHNSON: You were attentive.

HAYNES: I was attentive.

JOHNSON: While you were at White Sands, during your tenure there you worked under several different managers. Is there anything about their management styles or anything you would like to share as far as the way it was run or any of their styles, like I said, their management styles?

HAYNES: I alluded to you earlier that NASA was a technical organization, but our managers didn't necessarily possess a management background. They had a technical background, which was consistent with the policy of NASA. But generally, I don't think we found managers any different from what you might find in a similar type technical organization. I think we covered the spectrum. We had from very good managers to poor. A good manager manages people. If you have a manager who manages the work, that is what a technician should do. When you get a manager who manages work, I put him on the bottom of the scale. We had one of those and we had the other.

JOHNSON: Across the board?

HAYNES: Yes, But I think the key is that we got the job done. We were successful and that is the important thing.

JOHNSON: I noticed also in your list of duties, one of the things that was under there was communication. What did that entail?

HAYNES: Providing for all the land lines, telephones, fax machines and installations to meet the requirements of all site personnel. We got help from the telephone company, who wrote up a plan and made suggestions of what would be the best for the site. The biggest effort was monitoring the requirements and keeping up with the changes to the system.

JOHNSON: You left NASA in 1981.

HAYNES: Yes.

JOHNSON: What lead to that decision?

HAYNES: The enthusiasm was over. We began to get into Skylab at that point, which was not quite as glamorous. We were to a point where we had written so many regulations that it was more difficult to get the job done. I just felt that it was time to give somebody else a shot, and I really intended to retire, but it turned out I didn't. The experience I got after that was quite interesting too.

JOHNSON: What did you do when you left NASA?

HAYNES: I worked at New Mexico State University [NMSU] for five years as their contracts manager, consulted for Dynaelectron Corporation for about a year. Then I went to work for Cortez III Corporation and worked there for five years. After that, I finally retired.

JOHNSON: If you will, looking at the time you were there from 1963 to 1981, if you can give us just an overview, in your mind, of the changes at White Sands Test Facility and how it changed overtime as far as in the Las Cruces area also.

HAYNES: You can't imagine how Las Cruces has changed. The area was desert all the way out from Las Cruces to WSTF. There was one abandoned service station and on out a little ways, there was an old warehouse. Now there are houses and businesses from Las Cruces to the NASA turnoff from U.S. Route 70, with a four lane highway which replaced a two lane road. The WSTF site continued to be kept operational, as well as added capabilities in both engine testing and laboratory functions. The Air Force built a Tracking Data Relay Satellite System [TRSS] adjacent to the 100 area of WSTF.

JOHNSON: You mentioned your most significant accomplishment, in you mind, was never having caused a schedule delay. What about the most challenging part of your job?

HAYNES: I would say the most challenging was meeting the tight schedule requirements and supporting the other offices to meet their requirements. One example comes to mind, the logistics of getting delivery of propellants and gases to meet the test.

JOHNSON: Well, if it is okay with you, at this time I'm going to ask Jennifer and Rebecca if they have any questions. Jennifer?

ROSS-NAZZAL: I have a couple of questions. Did White Sands Test Facility ever do any work with New Mexico State University?

HAYNES: Yes, we did.

ROSS-NAZZAL: Could you talk to us a little bit about that relationship and the different programs or type of work that you may have done, generally?

HAYNES: When we came to town, the medical facilities were not adequate. Nor were the personnel familiar with how to treat personnel who had been exposed to oxidizer or propellant fuels. The hospital had no method to calibrate their equipment. We did some equipment calibration and set standards for equipment with the medical community as well as the Physical Science Laboratory at NMSU.

ROSS-NAZZAL: I just have one general question. Could you define what procurement is specifically, and then compare and contrast it with things like budget work or contract work? If

somebody were to ask you about that, if they wanted to write a paper on procurement, what would you tell them?

HAYNES: The process of obtaining materials and supplies and service support which includes warehousing, surplus disposal and construction contracts.

ROSS-NAZZAL: And how does that differ from doing budget work or contract work? They seem to me to be almost part of that process. They also seem to be different in a sense.

HAYNES: Oh, I would say quite different. The budget process is developing, planning and tracking costs. Payroll is part of the budget process whereas contracting is very different as defined above.

ROSS-NAZZAL: Since we are interviewing someone who did all of these things, and we are going to be interviewing other people from these areas, I thought it would be a good idea for us to get a good grasp of what these different areas entailed.

HAYNES: Did I explain it enough for you?

ROSS-NAZZAL: I think so, yes.

HAYNES: Okay.

ROSS-NAZZAL: That's all the questions I have.

WRIGHT: I have a couple, and they're not related. I want to go back, and you originally were talking about the first couple of years that you were here and when you arrived you had pretty much a budget that wasn't—or maybe was—an unlimited budget. You had money that you could spend. You didn't have auditing. Can you give us the background on this? Where did that come from, and did you know that when you walked in the door, that the first two years it was kind of open at that?

HAYNES: The President gave us this task of sending a man to the Moon and returning him, in this decade. The budget was developed by NASA and submitted to Congress. We didn't have any cost time, so it was just a matter of best guess and past experience. I found out later that even though we seemed to have plenty of budget, we still had our budget reviews with JSC. Initially they were on a monthly basis. We were required to submit our budgets to JSC for approval.

WRIGHT: My last question is, you talked about different relationships between the military agencies and between the contractors, but when you and others moved into Las Cruces, how did the community receive you, and how did that change over the years?

HAYNES: The biggest problem that my office had was dealing with local vendors. They were used to supplying common items they had in stock and if there was a requirement for something

not in stock, it would take two to six weeks to get it. NASA's policy was to contract first in the state of New Mexico and the city of Las Cruces.

WRIGHT: How the community received you and the people and how that changed over the years.

HAYNES: When we first arrived in Las Cruces, it was a sleepy, little town. It was the land of manana. It is still somewhat the land of manana. When I first arrived, Mr. Hugh Milton, former Under Secretary of Defense, personally met me and drove me around town to look for a house to rent or buy. This is representative of how the community of Las Cruces thought of NASA folks. When my supervisor told me who he was, I couldn't believe it. Another example, invitations were sent to all the realtors in Las Cruces to come to WSTF and work with NASA on helping with housing for NASA and the contractor's employees. Only one realtor responded and came to WSTF to determine NASA requirements. For example, if we had North American coming to Las Cruces, that was all you had to tell him. He made up packets and sent them to incoming personnel. Told them he would meet them at the airport, inform them what housing was available, price range, etc. He provided similar services when they were leaving. He provided excellent support to personnel coming in or moving out.

JOHNSON: I thought of something while you were talking with Jennifer about the accidents and that sort of thing. Was there any type of training for safety available, and did that come out of your office?

HAYNES: No, not from my office. We had a Safety Office and the Safety Officer worked on the staff of the manager. He had an ongoing safety training program for WSTF personnel. His safety training was very effective. There was only one major accident and no deaths in the course of the total test program at WSTF, while I was there.

JOHNSON: Is there anything in closing that you'd like to say or anything we didn't cover?

HAYNES: Yes, I would like to say that I was always proud to be part of NASA and the work they did and the way they did it. I was glad to be a member of the team.

JOHNSON: We want to thank you for being here with us this afternoon.

HAYNES: You are very welcome.

[End of Interview]