

ORAL HISTORY INTERVIEW

WITH

STEVEN HALL

MAY 19, 1999

RAPID CITY, SOUTH DAKOTA

INTERVIEWED BY ROBERT HILDERBRAND

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ABSTRACT

EDITORIAL NOTICE

This is a transcript of a tape-recorded interview conducted for Minuteman Missile National Historic Site. The interviewer, or in some cases another qualified staff-member, reviewed the draft and compared it to the tape recordings. The corrections and other changes suggested by the interviewer have been incorporated into this final transcript. Stylistic matters, such as punctuation and capitalization, follow the Chicago Manual of Style, 14th edition. The transcript includes bracketed notices at the end of one tape and the beginning of the next so that, if desired, the reader can find a section of tape more easily by using this transcript.

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INFORMANT: STEVEN HALL
INTERVIEWER: ROBERT HILDERBRAND
DATE: 19 MAY 1999

[Beginning of side one, tape one] [Interview begins]

ROBERT HILDERBRAND: This is Robert Hilderbrand in Rapid City, South Dakota. It's May nineteenth, 1999. I am interviewing Steve Hall. Now, will you just say your full name and your rank and your last assignment, that sort of thing.

STEVEN HALL: Steven Hall. I was a major in the Air Force. My last assignment was at Ellsworth Air Force Base, Operations Squadron in the 44th Missile Wing.

HILDERBRAND: That's great. First, would you just describe your mission for us? What did you do in the missile business?

HALL: I arrived at Ellsworth in 1988 as the Operations Officer for the 68th Strategic Missile Squadron at the time. Second in command of the squadron. Was in that position for a little over a year, I think, at which time I was named chief of the Emergency War Order Branch. It was called DO-22. It was a branch that plans an intelligence division of the missile group. Stayed in that position until we ceased our nuclear alert commitment as we started drawing the missile wing down. At that time I became chief of the operations, training and evaluation branch of division. That was the position I was in when I retired.

HILDERBRAND: Tell me what operations means.

HALL: In the missile wing, there are basically two major elements. One is operations, the other is maintenance. The operators are the people who actually go out and operate the weapons system. In the time of war they'd be the ones who actually execute the war orders. Now that of course includes the crew members. I was not a crew member while I was at Ellsworth, I was on the staff. Of course, I had crew members working for me in those positions. The crew members, the instructors, the evaluators, the plans and intelligence division, those folks comprised the operations branch.

HILDERBRAND: How many crew members worked for you?

HALL: It depended on the particular job. When I was the chief of the operations and training branch I had probably twelve to eighteen crew members working for me. They prepared training and evaluation materials for the rest of the crews, of the two and three squadrons we had.

HILDERBRAND: Did you have crew members working for you who were actually working in the Launch Facilities?

HALL: Oh yes. Now when I say crew member, I mean actually combat certified, as missile work crews.

HILDERBRAND: And they did tours in the Launch Control Facility?

HALL: Oh yes.

HILDERBRAND: Now you talked about another job.

HALL: I started out as the operations officer of the 68th missile squadron. In that position I was basically responsible for pretty much overall management of the squadron. Under the commanding squadron commander, of course, but I was his second in command and interacted on a daily basis with the crew members assigned to that squadron. We probably had, oh, twenty, twenty-five crews assigned. Twenty-five two-person crews, assigned directly to the squadron. They were divided into flights, each one assigned to a particular Launch Control Facility. I was the direct reporting official for the flight commanders, which were the senior members of each of those flights.

HILDERBRAND: Did you spend time in the Launch Control Facilities yourself?

HALL: Actually, yes I did. When I first got there, we had a policy, I believe it was command-wide at the time, where the squadron commander and the squadron operations officer both obtained combat-ready certification and we generally pulled about one alert per month out at a Launch Control Center. Often times the way we did that was, we'd go out for a day. Rather than pulling the same standard alert that a crew member would pull, we might go assume alert duty at two or three different sites during the day. Our particular squadron, we could do that more easily than some other squadrons, simply because the geographical distances weren't as great to travel. We could go out for a twelve-hour day and hit two or three or even maybe four different sites, assume alert from the crew commander on duty, and pull some of the alert duties.

HILDERBRAND: So when you were there, it wasn't exactly in a supervisory capacity? It was being trained to do what they do so you would know their job?

HALL: Well, I trained before we got out there.

HILDERBRAND: Sure. That's right.

HALL: And actually performed the alert duties. If we had, theoretically gotten an alert at the time and been directed to go to war, we certainly could have done that part of the job. Although, I think in reality we would have had enough forewarning that we certainly would have changed over. Not that we weren't qualified, but there were certainly others that were more competent.

The theory behind that was so that we knew what the crew members were doing. Of course, all the squadron commanders and operations officers were former crew members back in our lieutenant days.

HILDERBRAND: That was somewhere else for you?

HALL: Actually yeah, my first assignment was at Whiteman Air Force Base in Missouri. Almost essentially the same weapon system configuration, at least on the Launch Control Center, as here at Ellsworth. But it was a slightly different system. The idea was for us to be able to know exactly what it was that the crewmembers who worked for us, what their duties were and to be able to, well, for example, if they had a problem with training or evaluation, so we could understand what the problem was. If we needed to assign additional training to them or take some sort of action, it wasn't from a position of ignorance but from one of knowledge and experience.

HILDERBRAND: The other job you mentioned had to do with war plans.

HALL: Yeah, the second position I occupied was chief of emergency war plans, emergency war division. We were responsible for the EWO [Emergency War Order], or the emergency war training of the crewmembers. I supervised another six to eight officers who primarily wrote and delivered the monthly training to all the crewmembers on emergency war alerts. I did a little bit of training myself, just to keep my finger in the pie, so to speak. But mostly that was done by the captains who worked for me.

HILDERBRAND: Is there another kind of war order besides emergency?

HALL: Not to my knowledge.

HILDERBRAND: Okay.

HALL: That's kind of a jargon term, but I mean, that's the formal term for the actual nuclear war plan, the emergency war orders.

HILDERBRAND: So anytime they might have been ordered to activate the system, that would come under the rubric of emergency war orders?

HALL: Exactly. We also had the plans and intelligence division. We did very little intelligence work. Virtually all of the intelligence function had been moved out of that branch long before I got there and was handled essentially by the 28th bomb wing. When I first started in the missile business, we did have an intelligence officer assigned to the missile wing who performed intelligence duties and was assigned to that division. But in later years, that pretty much went away, the intelligence function. As far as the plans function was concerned, we did receive the actual top secret documents that contained targeting information for the

missiles and all the different war plans scenarios under which our assets could be executed. We maintained those records. Those documents actually are the ones that helped ensure that the missiles were properly targeted, along with the codes to the mission.

HILDERBRAND: So the plans part of it was really targeting?

HALL: Targeting to some extent, although there was also, yeah, yeah...

HILDERBRAND: I mean, was there any room for maneuver on your part?

HALL: No, not really. I have to be careful of classification of some of this, and I'm not even sure I remember a lot of it anyway. But within a particular scenario we could have several different options for our missiles where we may launch all of them, we may launch some of them, or we may launch none of them. Then another option where some missiles may be targeted in one place under one option, might be targeted to another area under another option. All of that information was stored on targeting tapes that were loaded into the missile guidance and control system when the missile was installed, or a warhead was replaced.

HILDERBRAND: What if you had missiles that were not combat ready, that there was a maintenance problem? Would the others be retargeted? Would that be your responsibility?

HALL: No, very, very rarely would the retargeting happen. Normally because we were in a day-to-day readiness configuration, that was not an advance readiness configuration. The theory being that if we needed to generate those assets that might be off-alert, that could be done in time to have them ready to execute, if and when a directive came down to execute.

Now one of the things that was required, of course we didn't do this necessarily, but as missiles were taken off alert for maintenance reasons or they broke, something went wrong in the computer system, it needed to be repaired, initially SAC headquarters, Strategic Air Command, and then later I forget the new command, but that would be the joint command that replaced SAC, Strategic Command, I guess, U.S. Strategic Command, were advised, by message of any missiles that were off alert. So they were able to track that status (and at the command headquarters, they could), if they felt there was a requirement, they could directly target it. The missiles we had did not have the capability for remote retargeting of the warheads. To retarget our warheads we actually had to send a maintenance team out to the missile itself and load the new targeting information into it.

HILDERBRAND: Did that ever happen?

HALL: Oh yeah. All the time. Every time they changed. Annually at least.

HILDERBRAND: Whenever the war plans changed?

HALL: Whenever the war plans changed they'd go out. Exactly. They'd go out and retarget the missiles.

HILDERBRAND: So I guess my question was, did it ever happen as a result of some missiles being off alert?

HALL: Not to my knowledge. No, as I say, there was enough redundant coverage of targets to preclude that necessity.

HILDERBRAND: I mean, with the redundancy, the expectation was that if you ever launched that you would have one hundred percent on alert status?

HALL: Or certainly be generating towards a hundred percent. One of the things that happened, if we were to be bumped up in readiness levels, was to accelerate regeneration of assets. Figure out which assets were not available right now. For example, we had a training facility, one missile that was always off alert. It was used for maintenance training. Never had a warhead out at the site. Part of generation plan was to bring that facility up to a combat-ready status. Well, obviously because of the way it was configured on a day-to-day basis, that was going to take a lot more time than a missile that had much less serious problems. So, in the order of regeneration, that sortie was going to be considered last. But other missiles, depending on what their state was, and we exercised this quite a bit. One of my functions as the chief of the EWO branch was to be the battle staff coordinator for the missile wing, or one of the coordinators for the missile wing. One of the things we did in the battle staff, which was the wing commander's staff convened under war time conditions, was to determine how and when and where we're going to regenerate the assets that were off alert.

HILDERBRAND: What was the average day-to-day alert status?

HALL: Oh gosh, well let's see, we had a hundred and fifty missiles, I'd say day-to-day, never more than a hundred and forty-five, less than a hundred and forty-five of them were being watched and usually much higher than that. If we had more than two or three off alert at any one time, that was unusual. Very high alert rate, very high. Of course, during the annual SIOOP [Single Integrated Operational Plan] revision and the code change process we'd take a whole squadron down at a time or a flight down at a time, a flight of ten missiles.

HILDERBRAND: Were there enough maintenance teams to do that retargeting in a timely way?

HALL: Oh yeah, oh yeah. That was something that was planned. Once you finish one annual revision, you go on and start at the next. At least at the command level.

We didn't quite get that far in advance at the wing level, but we had, certainly enough teams to be able to do that. A lot of the missiles didn't require extensive changes either. A lot of times it might just be a matter of running a tape into the missile. Of course, it does take time to drive out to the site, to penetrate the site, that is to get the security access onto the site, open the site up. There were times built into that. It wasn't just a matter of undoing a combination lock and opening the door. So it was not a quick procedure, but by the same token it wasn't overly lengthy.

HILDERBRAND: How seriously would you say the people you worked with took all of this?

HALL: I would say, for the vast majority, very seriously. Very seriously. I think it really hit home, especially to the younger officers and enlisted troops when we got the directive from President Bush to stand down from our commitment. I think then they really realized, and this was all subsequent to the Berlin Wall coming down, the, what's the word I'm looking for? The end of the communist rule in the Soviet Union. That sort of thing. All that took place in this time frame. I think that really gave a sense to the younger troops that, yeah, we really did have a real live commitment out there. In fact, a lot of them, I would say, bore some bitterness that we had been directed to stand down.

Of the missile wings that were up and running at that particular time, ours, the 44th had the least advanced weapon system. So of course, it was an obvious choice to stand down first. Whiteman, similarly was not that much more advanced than the system we had, and that was another obvious choice to be taken down. But the troops we had, both the officers, the crewmembers, the staff members and the maintenance troops and the security police who worked out there, and even the communications folks, even though they were not assigned specifically to the missile wing, ninety-nine percent of their duties dealt with the missile wing. They felt a sense of loss I think, when we lost our whole commitment. As I said, a little bit of bitterness there that the mission they'd been doing and training for and were so good at, was no longer there. But I think one of the things that really testifies to their depth of commitment was the fact the even though we had lost our nuclear commitment in 1992, I believe it was, the 44th won the annual missile competition out at Vandenburg. I think a great deal of that was the folks in our wing trying to prove something. We may not be on alert day-to-day pointing at the bad guys anymore, but we still knew what the mission was and had that commitment to the mission.

HILDERBRAND: Before that time, was it your sense that the people working on the wing had a strong commitment to what they were doing? That there was something beyond what you encounter in a corporation or some other job?

HALL: Yeah. That's one of the things. I was fortunate enough not to serve in ICBMs for my entire career. I spent six years in First Tactical Air Force, working on Ground Launch Cruise Missile acquisition program. Then over in Germany, actually working

on GLCM wing. So I got to see a lot of different parts of the Air Force. But the thing that always struck me about the ICBM business was the fact that we did have a very dedicated bunch of people. They did have a strong sense of duty commitment. Obviously, it wasn't a hundred percent. It never is. But I think by and large, both on the crew side and on the support side, the maintenance side, even those young, eighteen, nineteen, twenty-year-olds who were out there actually working on the missiles, really understood what their job was and why it was important. They felt a lot of, I guess I'd say a sense of pride in what they were doing. That was reflected in the results we had. It's not an easy task keeping a thirty-year-old weapon system on alert. One that's designed to run twenty-four hours a day, every single day, with very, very little human intervention to keep it running at the alert level, was a big deal. It took that kind of commitment.

HILDERBRAND: Do you think that it was working on the missiles, the ICBMs and this large strategic role of ICBMs in national security that led to that enhanced sense of importance and seriousness?

HALL: I think it had to. Because if you look at where most of the ICBM wings are located, as I said my initial assignment was at Whiteman Air Force Base, and compared to North Dakota, Wyoming, Montana, and even South Dakota, that is pretty much a garden spot. Even there it's not exactly, California, Florida or Texas. So the places that missileers were assigned are not the ideal locations in the world to live for three or four years of your life at a time. Or to go from one place to the other. So yeah, there was something more than just where they were working. So it had to be what they were doing when they were working that made them do the kind of work they did. I would have to say, by and large, every single man and woman in the missile wing, in every missile wing, worked above and beyond the minimum.

HILDERBRAND: Did you personally have a strong sense of your contribution to national security?

HALL: Yeah, I did personally. I was in, I know I'm getting away from the Minuteman aspect a little bit, but I was fortunate enough to work in the Ground Launch Cruise Missile unit in Germany. I got there shortly after the initial cadre had been on board and started laying the groundwork. We basically built a base from mud up. There was nothing. We literally had mud streets when I first got there.

Just about the time we achieved our initial operational capability, President Reagan signed the Intermediate Nuclear Forces agreement, which basically sounded the death knell for the Ground Launched Cruise Missile units. I was in Germany just long enough for us to undergo our first Soviet inspection as we started drawing that one down. I say it kind of ironically, but I think it's still with a great sense of pride that having started drawing down the 38th Missile Wing in Germany and then going through the draw down on the 44th Missile Wing here in South Dakota, I kind of brag a little bit that I helped win the Cold War twice. I'm very proud of that.

In fact, I remember as a young lieutenant talking to friends, or even before that, when I was still in college and knew where I was going to be going after I graduated from college, that one of the reasons I was going into the business I was going in was to try and make my job obsolete. It took twenty years, but I managed to do that. I'm very, very proud of that.

HILDERBRAND: When you were here, how real did you feel the threat of a Soviet missile attack was?

HALL: I felt it was a lot less of a threat while I was stationed here than I did when I was a lieutenant pulling alert. Part of the reason for that, as I say, I came back from Germany and was assigned here just as the Communist Bloc was breaking up. We had signed the Intermediate Nuclear Forces Agreement. I'd seen the impact of that. While I was here, we started doing a lot of preparations in both the missile and the bomb wings for SALT 2 agreements and inspections and that sort of thing. I took part in a lot of the training inspections we had out at the wing. It was obvious, very obvious that the world order was changing. Certainly there was a threat, still. There's still a threat today. I mean as long as somebody's got the weapons that are capable of delivering a nuclear warhead to the United States, then I think we need to be able to make sure those people understand we can do the same thing. But the actual sense of really being threatened, today the threat is more of a terrorist threat, in my opinion. But even five years ago or six or seven years ago as we started drawing down, there was still some threat there that things could go past the shouting stage and then get into the shooting stage.

HILDERBRAND: Were there ever particular times when that threat seemed heightened to you?

HALL: Well, there were times when, and these are more anecdotal than anything else, but I know there were times when, for example, the Soviets might do a test launch from one of their test sites. Depending on how the radars saw that launch, it could generate a threat response here. While I was never on alert or directly involved in one of those times, I know we got into pretty high states of alert. More than a few times just based on that: seeing a missile launch by satellite.

HILDERBRAND: So you weren't involved. Were you here then at that time?

HALL: Yeah. I can't remember specifically when they occurred. I know when I was on crew duty we had a couple of those. That was back in the mid-to-late seventies. We'd bump up our alert posture pretty high. Within five minutes or so we'd bump back down, once the threat was analyzed or supposed threat. I guess a couple of these things were generated by computer errors and that sort of thing. Although, as I say, I was never directly involved in one, so most of my knowledge of it was anecdotal. Certainly a great deal of questionable credibility of some of some of that.

But, as far as myself feeling that we were in a threat situation, no, I don't really think so. I think there were times when, oh I'm trying to think, seems to me there's a situation in the early nineties where we did increase our alert posture. I'm not even sure if we did this then, I mean I'm just trying to remember if we did increase our posture a little bit in response to some situations going on around the world. I know that during the Yom Kippur War [1973], of course, that got kind of intense. There was some pretty tense political discussions going on then and I know that there was a lot of concern for the Soviet response to our support of Israel.

HILDERBRAND: Um hm.

HALL: I do believe that at that time the SAC alert posture was increased. Again, I was not on alert at that time. I was not on crew duty at that time, so, not really familiar with the specifics. But for the time that I was here at Ellsworth, I don't believe we ever had an increased threat.

HILDERBRAND: Did you ever see any correspondence between your own feelings about threat and what was going on in the world?

HALL: You mean did I feel that ...

HILDERBRAND: I mean, [did] you see something you read in the newspapers and you'd think, "Well, this situation seems more threatening now"?

HALL: No, not really. Not really. I think part of that has to do with the training we had and I think the fact that we were not kept in the dark as far as what was going on in the world. We got regular intelligence briefings on what was going on in the world. Both of a classified and unclassified nature. It just seems to me that while we might be concerned from a social stand-point of situations going on in the world, from a military stand-point, it wasn't that serious.

HILDERBRAND: You didn't have a sense that you were living on a sort of ground zero?

HALL: No, not really.

HILDERBRAND: There was a lot of talk then, when you were here, about the first strike.

HALL: Yeah, that was one of those things that, I mean it was something that was, it was part of the, you recognized that. Just as I imagine, maybe this isn't a real good analogy, but a pilot recognizes that anytime he takes that airplane up in the air, something could go wrong and he might not come back. There's plenty of times that we see all kinds of things where airplanes crash. Into the ground. Into each other. Or, very rarely, fall apart in the air. We knew that if there was a war, we were a target. I guess part of that has to do, at least in my case, with my faith in the political processes. Of course, it may be my naiveté, too, that cooler heads would prevail before we got into a shooting war. Because if I was smart enough to

figure out that there wasn't going to be a winner, hopefully the national command authorities on both sides could figure that out.

HILDERBRAND: Would you say that was kind of a general feeling among the people around you? That although you took your job very seriously, nevertheless, you thought that, in all likelihood, there was never going to be a nuclear war?

HALL: I think, and I may be very wrong on this, but I would bet that if you took a poll of the population and asked them ten years ago what the chances of a nuclear war were, their guesstimate would be a lot higher than it would have been among SAC missileers. Simply because we were a lot closer to the reality of what a war might be. Part of it may have been a defense mechanism. There's absolutely no question in my mind that the SAC missile crews would have executed the emergency war order had they been directed to. Absolutely no question about that. Certainly enough redundancy in that system that even if there had been the stray renegade or renegades who refused to commit, we still would have gotten the job done. So I don't think there was any concern or any thought, "Well, we're not going to have a war because we're not going to do what we're told to do." I think we were too well trained, too knowledgeable of the whole picture, so to speak, not to be able to do what we had been trained to do.

HILDERBRAND: In other words, you say that no one would have imagined that they would receive such an order unless an attack from the other side was already imminent? Or maybe in the air? Or in final states of launch readiness?

HALL: Yeah. I think we were pretty much convinced that, yeah, I know we practiced, we certainly trained to execute a first strike, a pre-emptive strike. But I think by and large, we were pretty well convinced that if we ever launched our missiles, it would be a retaliatory strike. And, I think, the commitment there was, if it's a retaliatory strike then there's already no winners. There absolutely would be no hesitation on anybody's part to do what they needed to do.

HILDERBRAND: Would that have been less true in the case of a pre-emptive first strike?

HALL: Actually, we may not have even known ...

HILDERBRAND: Would you have known the difference?

HALL: I can't even remember if there was a way to tell.

HILDERBRAND: Was there any question, ever any question in your mind, even to the slightest degree, of the rightness of this? I mean that, here you were, involved in a missile system that if the order came down for you to activate, and you did, that the world as we know it at least, and maybe the world, was going to be destroyed?

HALL: Then, no. Today, maybe a little bit, now that I have the perspective that I have of seeing the fact. I lived through the nuclear build-up. I'm a baby-boomer and a child of the fifties and sixties. I remember the drills we did back in the fifties. The "duck and cover" and all that. Dimly, but I remember them. Very dimly. So, I lived through the entire Cold War ... maybe not, I guess the term Cold War was coined in about 1948 and I wasn't even born until '52, but for the most part, I lived in the nuclear age.

The idea of nuclear weapons was not a novelty to me. Hiroshima and Nagasaki are history to me, not something that I lived through. I think I spent my entire career knowing that we had the capability, and believing that we would execute that capability if we had to, and that we would only do that if we were absolutely forced and had absolutely no alternative. I think, in the last fifteen to twenty years, we have probably done a lot more to increase our alternatives. We're certainly seeing evidence of that today in Kosovo. We saw that during Desert Storm. There are alternatives to nuclear weapons that can be just as effective, and a lot more selective. They aren't perfect by any means. I think not just our national conscience or our national will, but I think international, the idea of using nuclear weapons is becoming more, not that it ever wasn't abhorrent, but it's even more so now.

HILDERBRAND: Did you ever talk about this at the time? Among yourselves? With other missileers?

HALL: Not a lot. I think, oh, we'd talk about it a little bit, but not a lot.

HILDERBRAND: Was there ever someone who wanted to talk about it a lot?

HALL: No. No. Part of the reason for that is and I think maybe a small part, but a part of the reason for that is one of the things, as part of our initial training, and even before we go went into training, psychological profiles were done on every missileer. Or prospective missile crew member. That doesn't mean we still didn't have people that maybe shouldn't have been on crew, but not because they were so eager to use weapons, or wouldn't use weapons. But certainly one of the things we did certify to (and it's all part of what we call the Personnel Reliability Program, which you may be familiar with), was the fact that we believed absolutely that we would use the weapons if we were told to.

But I never, ever met anybody, officer or enlisted, operations or maintenance, security police or what have you, who was fixated on either side of the use of nuclear weapons. I mean, none of us were war-mongers. Certainly, we weren't pacifists. Yeah, every once in awhile, maybe at the bar around a beer or two, you'd talk about, "Well, if the Russians did this, sure we'd do that." And "Would we have any hesitation? Hell, no!" That sort of thing. But it just wasn't something that was discussed a lot. We talked about it at work every day. I mean that was training every single month. Crews receive training both in the classroom and in a

simulator, actually executing nuclear war. I think they felt it was not just a responsibility to themselves, but to the positions they held. I may feel a little more strongly than some other officers, but to me it was part of the oath of office I took as an officer. You're given orders. Assuming they're legal orders, and of course we all knew what the difference between a legal and an illegal order was, but we knew if it came over that squawk box in the Launch Control Center, it was going to be a legal order. No question in my mind we'd execute it.

HILDERBRAND: How did you know that? How did you know it would be a legal order?

HALL: The safeguards that were built into the system to ensure that. The authentication systems, the code system, there's just no way to spoof the system. There's absolutely confidence about that.

HILDERBRAND: Could you define legal for me in that sense? Or lawful?

HALL: Oh, I guess lawful orders is the right term. I'm certainly not a legal scholar and even in the military sense, but, a lawful order is one that's received from a superior officer or superior authority that's in consonance with the Uniform Code of Military Justice, basically.

HILDERBRAND: But there is a slight provision in the UCMJ about receiving an unlawful order from a superior officer.

HALL: Absolutely. Yeah. I mean, and I guess I'll use the My Lai example.

HILDERBRAND: Yeah, it's maybe the best example of that.

HALL: That's the best example: **Go shoot women and children** is an unlawful order unless you can absolutely and unequivocally prove that they are a threat.

HILDERBRAND: So, ...

HALL: If we're receiving encoded orders over our alert system, again, those were encoded orders and we had to decode those. The little black box that the president's aide carries around with the launch codes in it, just no way to spoof that.

HILDERBRAND: You're saying, I guess, that you knew these orders couldn't just be coming from a Lieutenant Calley or a Captain Medina [My Lai].

HALL: Absolutely not.

HILDERBRAND: That they had to have worked their way through the chain of command at the highest levels of authority?

HALL: Absolutely had to come from the national command authority. There's no other way ...

HILDERBRAND: But what about the possibility that a president might have been issuing an order that put him in the category of Captain Medina? Well, I'll give you an example. In the final days of the Nixon presidency, the Secretary of Defense, [James] Schlesinger did send a directive through the system saying that an order to activate nuclear weapons from President Nixon must be countersigned by the Secretary of Defense. The idea being that there was concern, Kissinger and others talk about this at great length, that in those final days, Nixon was so incapacitated, his behavior was so erratic, that he might decide to bring the world down around him. Now, I'm not trying to judge that for accuracy one way or the other.

HALL: And again, you need to understand how the system would have worked, too. It just so happens that I came on active duty on August third of 1974. President Nixon resigned, I believe, on August ninth. [Correct]

HILDERBRAND: Um hmm.

HALL: I think that's the day. I had hardly started my training. But the way the system would work is, by the time it got to the crew members, that order was unequivocal. There are intermediate steps between the time it comes from the president and gets to a crew member, there are at least a couple different levels in there where that's going to be authenticated. I'm sure that's where Secretary Schlesinger's directive would have been applied.

HILDERBRAND: Forgive me for pushing this so hard, but it's of interest to me.

HALL: Well, a lot of what I'm answering you is kind of guess work, true.

HILDERBRAND: But in your language a moment ago when you talked about killing innocent women and children at My Lai, I mean, what about in a situation where you knew that, or surmised from the way the order was or from what you knew about what was going on in the world, that what we had here was a war? And that the Soviets were already launching? And that other parts of our SIOP were also going active?

HALL: Um hmm.

HILDERBRAND: And you knew that your weapons were targeted in a way that would have resulted in the deaths of innocent women and children? And you might have thought, "Well, what's the point of this"? Is that possible?

HALL: Well, given the destructive power of nuclear weapons, there's absolutely no doubt that millions of innocents, however you want to define innocent, would be killed. However, the intent of our war plan was not to hit at population centers as

population centers. But to strike at the enemy's war-making and war-waging capability. We had, and you may have heard these terms, counter-force and counter-value. I don't know about other parts of the SIOP, I do know that our weapons were counter-force targets, were targeted at counter-force military installations, political command centers, for example the Kremlin. Now if you target the Kremlin, there is going to be a whole lot of Moscow that's not going to exist anymore. Most of what won't exist anymore of Moscow will be, quote, "innocent women and children and men." Unfortunately that is one of the realities and the horrors of the nuclear war, is that it is not very selective. You can pin-point a target to within a gnat's eyelash, but the "collateral damage" we became so familiar with in Desert Storm, which was certainly not a new concept to anybody who's ever dealt with nuclear weapons, was going to be tremendous.

That was one of the reasons why I firmly believe we never had a nuclear exchange. Nobody could stand, when I say nobody I mean decision-makers, they just could not bring themselves to having that kind of collateral horror. Now you mentioned Hitler when we were walking in here. I am not a student of Hitler, but there's absolutely no doubt in my mind that that man would have used nuclear weapons had he had them and to hell with the consequences. Certainly in 1945. Whether he would have in '44? Probably not in '39. But I think by 1945, if he'd had them, he'd a used them. That's the risk you run. Even as evil as we saw Khrushchev, Brezhnev, Kosygin, any of the Soviet leaders, none of those men, I don't think, were irrational. Certainly, they had their agenda.

[End of side one, tape one] [Beginning side two, tape one]

HILDERBRAND: Tell me something about the Minuteman itself, could you compare them to their Soviet counter, the SS sixes and sevens and the twenties and twenty-twos?

HALL: No, I'm not really an expert on ...

HILDERBRAND: That wasn't what I was after. Your impressions of how they stacked up to things?

HALL: Do you mean the crewmembers?

HILDERBRAND: No, the missiles themselves.

HALL: The missiles?

HILDERBRAND: The missiles.

HALL: We were confident based on intelligence data that our missiles were more accurate. I think by now, probably, the Russians have probably caught up, or are catching up, with the SS-18s and those sorts of things.

HILDERBRAND: Eighteens or after that?

HALL: But we were very accurate very early on. I think the CEP [Circular Error Probable] of our missiles here at Ellsworth was a hundred yards or less. I think of just about all our weapons systems, that's probably the worst. Consider throwing something, how far we throw those things out to Kwajalein ... gosh, I don't know.

HILDERBRAND: Do you ever remember being troubled during, say the Reagan administration, talking about how the Soviets had first strike capabilities, because their missiles were so accurate?

HALL: Not really.

HILDERBRAND: It would seem to me to be implying that they were better than ours.

HALL: Their missiles, I never worried about them being more accurate. The reason, well, it wasn't that they were so much more accurate, it's they were so much, much bigger. Their pay load capacity was a lot bigger than ours. That was one of the reasons why we relied on our accuracy.

HILDERBRAND: But there were times when they were talking about their having such a small CEP, that they could, with their pay load, that they were capable of initiating the first strike. That they could break our, they call them silo busters.

HALL: Yeah, and I'm sure that they had that capability, but by the same token we had missiles targeted the same way, with the same capabilities.

HILDERBRAND: I guess what I was getting at ...

HALL: They were not as big, but I never worried about that.

HILDERBRAND: What I really meant, was there ever a sense that this bothered your pride?

HALL: No, no. I guess, I questioned at times: bigger is always better, right. Why didn't we have that? I know we did with the Titan missile. We had considerable better payload capability. Of course we shut those down many years ago, the Titan IIs.

HILDERBRAND: Thinking that accurate was not what we wanted.

HALL: Slower to respond. It wasn't as fast a missile to respond, as the Minuteman was. Which made it vulnerable.

HILDERBRAND: Part of what I was getting at, I guess, was the issue of morale more than anything else.

HALL: No, that was ...

HILDERBRAND: How was morale?

HALL: I guess you have to look at that from several different perspectives. I mentioned earlier on that the locations where ICBMs are located are not ideal. Let's face it, Minot, North Dakota in the wintertime is not, well, no place in North Dakota in the wintertime is a fun place to be. South Dakota in the wintertime can be absolutely brutal. I can remember one January here where the average temperature never got above freezing. I'm not sure it got much above zero, through the entire month of January. You consider the young troops we had going out doing maintenance on those missiles, and the young troops we had providing security for those guys going out doing maintenance on the missiles, not to mention the crews that had to drive out in that kind of weather. Fortunately they got to spend twenty-four hours underground where the weather was constant. Of course the blizzard came in and they might be spending forty-eight or seventy-two hours out there.

I know just before I got here the winter of '87-88, or actually the spring of '88, I think it was, was a terrific blizzard. Maybe it was '87, but a terrific blizzard. We had crews out who got stuck for three days out there. Three days in something not a whole lot bigger than this room can get pretty close. So it wasn't a fun duty. It's not like getting up and flying an airplane punching holes in the sky. You can't see the results of your efforts, that visibly. If you're a maintenance crew and you're working on an F-16 and it comes in and it needs to be fixed so that you could fly a sortie the next day, and you can get that airplane, no matter what condition it came to you in, you can get it fixed and get it up in the air the next day, you've got a definite sense of accomplishment.

HILDERBRAND: To see it take off.

HALL: Absolutely. More importantly you can see it come back and land. When you're working out there replacing a guidance control unit on a Minuteman missile, you go out, you do the job, regardless of what the weather is, and you come home, and all you know is you've been out in the field for twelve hours and it wasn't a fun time. So to that extent, probably morale wasn't real "rah rah." But go back and look at the overall. The troops had the knowledge of what they were doing was important. Morale: it ebbed and flowed. Sometimes better than others.

HILDERBRAND: What were the sources of ebbing and flowing? Do you know anything about that?

HALL: Minor. The day-to-day stuff that military troops have complained about since day one. The food's no good. The pay's no good.

HILDERBRAND: Pay raises would increase morale?

HALL: Yeah. Yeah. And they never were very big. So morale never got very far! Or a guy was having problems, family problems or something, it's hard to leave those things at home when you come to work. Things like that. Inspections. Alerts. Practice alerts and that sort of thing. While sometimes those were fun, when they went on for two or three days and you had to live in the, well we didn't have to do it here of course, we were in the chemical suits. But you're on twelve-hour shifts instead of eight-hour shifts and that sort of thing. People got a little grumpy. It seemed like we were doing one every month and we were preparing for an operational readiness inspection, for example. That kind of made people unhappy.

But by the same token, when we did really well on those inspections, the troops were really proud of the job they did. They were glad that they could look back and say, "Well, it wasn't fun but it was worth it." You always heard people saying, "Well, morale is the pits." Well, I never really saw that. I'd see people be frustrated and things. I had things that I didn't like doing, that I thought, "This is a dumb thing to be doing, we shouldn't be doing this. It's not doing anything except filling in somebody else's square and they don't know why we're doing it."

One thing I will say is in the last two or three years that I was in the Air Force, they were starting to go toward more of a Total Quality Management concept. We started getting a little bit more into the empowerment thing. That certainly increased my morale. I was able to go in and say, "What we're doing here, this is a dumb way to do it. We can save time and resources by doing it this way." I could get a colonel to listen to me and say "Yeah, you're right." It certainly increased my morale. But a lot of the things we did by rote. The repetitive nature of some of the tasks made people unexcited. But I don't think our morale was any better or any worse than probably any other unit in the Air Force.

HILDERBRAND: As you were aware of the various arms reduction talks—SALT, SALT-2, START— did that have an affect on morale?

HALL: Well, yeah, it did. I think I mentioned this earlier. When we were directed by President Bush to basically draw down our alert commitment, we saw, you know
....

HILDERBRAND: Before that, though. Were you aware that it was going on? Was it ..?

HALL: Oh, no, I don't think so. I don't have that sense. I certainly don't remember it personally and I don't remember the sense of it, within the wing at all. Where it really hit home was when we realized that, and I think a lot of folks kind of took it a little bit personally, is that we weren't on alert anymore. We'd been doing this job for thirty years or however long, been doing it perfectly. Evidence the fact that we never had it. That our deterrent mission had been a success. It was hard for people to understand and to grasp just how successful we had been. A lot of folks wanted to look at it kind of a very narrow personal perspective that, "Hey, Bush is telling us he doesn't need us anymore." I was proud of the fact that we were able

to stand down. I wasn't too happy about the fact that it really caused us more work. But I think a lot of people did take it, I don't want to say as an affront, but I think it was a defense mechanism to some extent. Denial that we weren't necessary anymore.

HILDERBRAND: Did the annoyance or anger focus on the choice of unit that had been made? Or was it on the whole idea of nuclear force reduction?

HALL: I think it was a little bit of both. I think most people recognize that we were a logical choice. If we were going to draw down on a wing, if we were going to turn the missiles off somewhere, that probably ours were the ones to turn off rather than those with three warheads. 'Course then the feeling was, "Yeah, but if we need to use these, ours are bigger than those." The multiple warhead missiles. Our one warhead is bigger than the other three. These kind of petty, collegiate-type feelings. But I think to an even larger extent it was the fact that some people didn't want to accept the fact that the Cold War was ending and that we were extraneous. A lot of people have put a lot more years than I did into that business and it was all they knew. So there was that factor, too.

That was another thing, even with the younger troops. Immediately the question started coming up: "Where do I go from here? What's going to happen to my career?" Certainly among crew members. "This is why I came into the Air Force to do. I enjoy doing this. I'm good at it. But now you tell me I can't do it anymore." Unfortunately this all tied in at the same time that we had an officer RIF—Reduction In Force. Fortunately, things kind of balanced-out a lot. There was also the absorption of the missile units into Air Force Space Command. Basically, SAC had gone away, we'd come under the umbrella of the Air Combat Command, which none of us missileers really were too crazy about since those were a bunch of fighter pilots. There are some pretty definite prejudices in the Air Force and fighter pilots have most of them. [laughter] They either cause them or are the cause of them. Or project them, I should say.

HILDERBRAND: Was Space Command the right place, then, for the missileers?

HALL: Oh yeah. Yeah. My personal feeling, of course that didn't matter to anybody but me, but my personal feeling is that's where the missileers should have gone from the get-go once SAC went away. As far as within the Air Force. But there were those kinds of things, those did affect morale. We had a RIF going on, well, am I going to be a keeper or a carp? You throw the carp away. I had the unenviable task of having to tell an officer who wanted to stay in the Air Force that the Air Force didn't have a place for him anymore. A very, very difficult thing I had to do. I guess that's why I went into Human Resources so I could do more hiring and firing. [laughter]

HILDERBRAND: Hiring's better, I suppose.

HALL: Hiring's much better. Firing's not so good.

HILDERBRAND: Tell me something about the psychological screening of the crew members.

HALL: I remember my pre-commissioning physical was at March Air Force Base in California and I think I had about five minutes with either a psychologist, I mean he must have been a psychiatrist. I think he was an MD. I think he was probably a reservist. I'm not even sure about that. I think he may have been. I have no recollection of any of the questions he asked me except probably, "Are you sure you want to go into this nuclear missile business?" I said, "Yes, sir, I am."

I remember one of the very first days of training at Vandenberg, we had what was called PRPS, which was Professional Responsibilities Preparation or something [Professional Responsibility ProgramS]. I don't remember what it was, but it was one of those things, that kind of gung ho type of thing. "This is what you're going to get into. This is what it all means." At the very end of all this, they ask the question and you had to sign on, not even on a dotted line, it was a solid line, "Yes, I have no reservations about using nuclear weapons if told to do so."

HILDERBRAND: Did you all sign?

HALL: Oh yeah. That was at Vandenberg, and when we got to our operational units, we had to say the same thing again before we were certified as combat ready. But as far as actual psychological evaluation, it was mostly, again, then it was the Human Reliability Program, then we changed it to the Personal Reliability Program. I'm not sure what the difference was except in terminology. Essentially it was a matter of self-monitoring and observation of others. You were obligated, if we observed some kind of strange or erratic behavior on the part of somebody certified in the program, we were supposed to report that to their commander.

HILDERBRAND: Did that happen?

HALL: I never did it.

HILDERBRAND: Did you hear about it ever?

HALL: Gosh, very, very, very rarely. I can't remember a specific circumstance. Certainly we did disqualify a few people under the program on occasion.

HILDERBRAND: You say we ...

HALL: Well, not we, me personally, but it was done.

HILDERBRAND: Was that here? At the 44th?

HALL: Oh yeah. For example, an officer, a crew member who was arrested for DUI. Certainly there would be a suspension of his PRP responsibilities, pending the outcome of an inquiry or investigation or what have you. We had a few officers, a few crew members who did receive DUIs and after a period of time they were restored to their crew duties. I'm trying to think if we ever had any permanent suspensions or permanent disqualification under the program for ...

HILDERBRAND: What other kind of problems could lead to temporary ...?

HALL: Oh, gosh. Any variety of medical problems. If you were on a prescription drug that might make you drowsy, the hospital got into it. Your medical records were stamped PRP, so crew members, when they went to the doctor, it was to the flight surgeon, because the flight surgeons have been trained in monitoring PRP. So anytime you went in, you had to get your records stamped that you had been evaluated under PRP and could or could not perform PRP duties for "x" amount of time. So there was that constant monitoring, that sort of thing.

Oh, we'll say a crew member was going through a divorce. As soon as we found out about that, for example, as the operations officer, I'd bring the crew member in if I knew about something like that. I'd say, "I need to talk to you about this. What kind of stresses are you under? Should we pull you off alert for a week or two while you get through this initial?" Occasionally, and I can't think of any name/date/specifics, but I know that I would recommend to the squadron commander that maybe lieutenant so-and-so probably shouldn't go on alert tomorrow. This has happened, that's happened.

HILDERBRAND: But it wasn't automatic in the sense that there would have been people who might have been going through a divorce that if you talked to them, you thought all this was okay.

HALL: Yeah. Some people, it was fine, other people ... All the people would come in and say, "Listen, this is going on I'd like you to suspend my PRP for a few days" or something.

HILDERBRAND: That happened?

HALL: That happened. Yeah. People were very good about that. They'd come in and tell you that they have a problem that, "Should we do this? Should we do that?" I would hope it was that way in every unit. I felt like I was pretty approachable by the troops that worked for me. They certainly told me I was and I tried to be that way. I never tried to brow beat them or anything like that.

HILDERBRAND: Might there have been injuries that would keep them off?

HALL: Oh sure. Gosh, if you broke a leg, possibly broke an arm or something, that'd generally keep you out. One of the reasons for that was our safety consideration.

If you had to evacuate the LCC, which was very, very, very remote, but if you had to evacuate, you had to climb a ladder anywhere from thirty to sixty feet. [If] the elevator wasn't working, you can't do that with a broken limb. So there were those considerations. But other than that ...

HILDERBRAND: Did anyone ever have to be removed from duty while they were on alert?

HALL: To the best of my knowledge, not for a PRP related reason. Now we would, if we were doing ... a crew is being evaluated, and we were putting an evaluation out. Actually, this changed from the time I was crew member. When I was a crew member and you were evaluated, you were the crew on duty. If you did something to fail your evaluation, then you'd be relieved of duty. In later years, when I got here, the practice changed to where the evaluation crew would assume the alert and they'd relieve you before the evaluation began, so that there wasn't a question of having to relieve you during the alert tour, for cause. We got out of that. I'm not sure when that changed.

HILDERBRAND: There wasn't anyone who couldn't continue for whatever reason?

HALL: Oh, yeah, we did have occasion where a crew member would get sick while on alert, and we'd have to generate a stand-by crewmember to get out there and relieve him. Oh yeah.

HILDERBRAND: You always had stand-by crewmembers?

HALL: Oh yes, there was always at least one or two stand-by crews designated on the alert duty order for each alert day.

HILDERBRAND: Was there ever an incident where someone lost it, when they just couldn't go on? It was the pressure being in there for...

HALL: Nope.

HILDERBRAND: twenty hours had gotten ..?

HALL: Never.

HILDERBRAND: I'm interested in the observation as part of the PRP. Was there ever a sense that any of the crewmembers ever think that was excessive?

HALL: No.

HILDERBRAND: Ever develop feelings that other people were paying too much attention to them?

HALL: No, no. I don't think I ever got even a hint of that. I think that's part of why PRP worked is that we generally didn't place people in those positions unless we felt they were reliable. The monitoring or the observation was not overt as opposed to covert. It wasn't covert either. It was not obtrusive, if that's the right word. It was more of a casual, just paying attention.

HILDERBRAND: There's this popular idea of the two crewmembers, eyeing each other on the theory that one of them might do something erratic.

HALL: Never. The thing is, for many, many years we had side arms. The intent of those was not so we could...

HILDERBRAND: Crew members never shot one another?

HALL: No. Although our guys did practice their fast draw in there, once in awhile, with their weapon loaded.

HILDERBRAND: Went off?

HALL: Oh yeah. I mean, I'm sure every wing has two or three stories of that happening. But the actual purpose for those weapons was in the event somebody tried to break into the capsule, you had a means of defense to keep them out of getting access and stuff. I think even by 1990, oh, I want to say by '92, probably around that area, we finally figured out that the five or six rounds we put in those weapons weren't going to be very effective. I think we finally stopped wearing them. We stopped taking them out.

HILDERBRAND: What happened to the unfortunate soul who was practicing his quick draw and his weapon discharged?

HALL: Oh I'm sure he got a letter of reprimand or something, was relieved from duty for any length of time. I have a feeling that's more anecdotal than anything else. Let's face it, the crewmembers we had were twenty-two and twenty-three, twenty-four years old. Yeah, they had college degrees, but as the father of a twenty-two year old right now, a second lieutenant in the Army. I was there. Some of them aren't as mature as others. We had our mature ones. The guy may have done this every alert, practice his fast draw. But remember to take the bullets out first. One time he forgot. I don't know. But apparently he did blow a hole in the mirror that sits above the crew commander's console, to look back at the deputy with. The mirror was there so they could coordinate actions rather than having to turn around and look at each other.

HILDERBRAND: I suppose he might have damaged something critical.

HALL: Oh, certainly could have. Let's face it. There are only two soft things in a launch control center: one was the crew commander and one was the deputy. The bullet

would bounce around in there until it hit one of them. Actually, that's more of a joke than anything else. They were snub nose .38s with probably training rounds in them. I never fired one of those weapons. We had to qualify, as crewmembers qualified every year ...

HILDERBRAND: You never heard of anyone being shot?

HALL: No.

HILDERBRAND: They didn't bounce around until they hit somebody then?

HALL: No, no. Never heard of anybody being shot with one of those. In fact, most of us were afraid they'd blow up if we tried to fire them. I have no idea when or if those weapons were ever, I guess, I guess, come to think of it, they were cleaned on occasion. I think, once every three or four or five months, we'd take one out and make sure it got cleaned over at the armory or something.

HILDERBRAND: Did you have cases of individuals, giving you PRP information about someone else?

HALL: I can't remember any. I can't remember any.

HILDERBRAND: Maybe a feud?

HALL: No.

HILDERBRAND: and this became a vehicle for trying to damage ..?

HALL: No, no. I mean, obviously you're going to have personality differences, when you have people together in a group. But no, never anything of that petty kind, which would have been more than petty. I think people realized that that was not a joking matter. Maybe part of it was, "Gosh, if I did that, maybe they'd pull my PRP." Which may very well have been the case if they were doing it for a petty reason or jealousy or because they didn't like somebody. In that case it would be more the tellee than the teller.

HILDERBRAND: Did the crewmembers always work together? What I mean is, whenever they pulled their work they would be the same team members?

HALL: For the most part that was true. We tried to crew people together and keep them in a real crew to the maximum extent possible. The big reason for that is that they trained together, they kind of got used to each other's way of working, so that when they were performing their special emergency duties, there was a clear understanding of who was doing what. Even though those responsibilities were pretty much delineated between what the commander's responsibilities were and what the deputy's responsibilities were, still, each crew found its way of working

together. Now we changed crews a lot. We'd get somebody promoted or transferred to training or evaluation division. Or promoted to flight commander, or all kinds of different variables going into there.

For a crew to be crew together six months was pretty unusual. A year was almost unheard of. Although there were some that were. But when a crew was formed, they trained together for as long as they were a crew, and generally pulled alerts together. There would be occasions where they couldn't, if you had an odd number of crewmembers, somebody had to pick up the alerts with that other odd crewmember. So maybe if we had an extra commander we'd have four or five deputies pull alert with this guy or gal for that month until we got them a regular crew partner.

HILDERBRAND: So was there ever a case of extreme personality difference? Where a crew had to be separated?

HALL: Gosh, I'm sure there probably were. I can't put my finger on any particular one. More than personality differences, a lot of times those personality differences manifested themselves in capabilities. Some crewmembers were just more capable than others. If we had real disparity there, for one thing we didn't keep unqualified crewmembers on alert. Everybody who was on alert was qualified, but there were some that were more qualified than others. Occasionally if that got to be a problem where one guy was a lot quicker than the other guy or gal, again, we did have mixed crews, males and females. We might split that crew up to make a better pair. Occasionally, yeah, I guess there were personality conflicts, and that was my duty as an operations officer. I'm the one who made the determination on crew pairings for our squadron. I did that with the input from the flight commanders because they pulled alert with these people all the time. If we made a crew pairing and it didn't look like it was working for some reason or another, yeah we would split the crews up. Again, it was a no-harm, no-foul type thing. Some people just didn't get along with others for whatever reason.

HILDERBRAND: It didn't ever reach a point where it was a harm and foul kind of thing?

HALL: No, not to my knowledge.

HILDERBRAND: Fisticuffs in the capsule?

HALL: No. Everybody had a shouting match now and then. Especially guys got pretty intense when they were just in the training scenario. For one thing, they knew if they did really poorly, they'd have to come and talk to me about it. If they did really bad, they'd have to come in and talk to me and then they'd have to talk to the squadron commander. They really didn't want to have to go up to him because I was good cop, squadron commander was the bad cop.

HILDERBRAND: What was the rate of disqualification?

HALL: Well, hopefully, if there were disqualifications that took place out at Vandenberg before we left, I don't know. Unfortunately we did get a few crew members who were pensive, who for whatever reason had been passed by Vandenberg. Having been an instructor out there I can understand how that happens. We're trying to point fingers, but you get them in and everybody would bend over backwards to make sure we got these guys all the training and help that we could get them. But sometimes, they just were not trainable. They just were not suited to the job.

HILDERBRAND: Would you call that rare?

HALL: Oh, extremely. Probably, in six years at Ellsworth, I think we may have had three, possibly four crew members that we had to basically terminate their crew duties.

HILDERBRAND: What do you think is the basis for that? Why couldn't they do it?

HALL: Just unsuited to the job. Just couldn't understand the concepts involved. For example, froze-up when reading a simple sentence. Just could not understand. It can be a bit daunting. Have you been in the capsule?

HILDERBRAND: Um hmm.

HALL: So you've seen all the lights. I remember the first time I went in. Ninety-nine percent of those [lights] you never look at. There's console racks in there that you care about maybe three indicators on the entire whole rack and there may be fifty indicators on that rack. But the first time you go in, that can be very intimidating. I know the first time I went in, I said "God, how am I going to learn all these things?" For me, it came very easy, but some guys just can't grasp it. They might have been "A" students in college and some of them were, some of them weren't. I mean some of them we wondered how they ever got through college. I know when I was at Vandenberg teaching we had a few of those. For the most part, those types were weeded out at Vandenberg in the initial training. But every once in a while one would get through and get to the wing. Some of them we could get up to speed, and some of them we eventually we had to just say, "You can't do this."

Unfortunately, if they couldn't do that job, there basically wasn't another job in the Air Force for them. Every once in a while we could move to a different position in the Air Force. I know Vandenberg for the most part, if you were a non-prior service, non-academy, session, and you washed out of an initial missile training, you were gone. Your active duty commitment was terminated. We ended up having to do that with a few folks that got here. But like I say, gosh, I can remember maybe three or four. If there were a half-a-dozen in the whole time, and that was in all three of the operations squadrons, that would have been probably excessive.

HILDERBRAND: On this question of how individuals got along in the capsule, how did race figure into it?

HALL: I can honestly say that in twenty years in the Air Force I never saw a race related incident within the crew force. Ever.

HILDERBRAND: I take it that's very different from the way you perceive the Air Force in general.

HALL: No. Not at all. I've had a very narrow focus since for most of my career, almost everybody I dealt with on a day-to-day basis was an officer. Well-educated, better trained. The training in the enlisted troops case was very good, but for the most part, [officers were] well-educated, more worldly if you will. I never personally viewed a racial incident in my entire career.

HILDERBRAND: Were the crews always mixed race? I mean, if there, unless they were all white? Did you ever have an all black crew, I guess?

HALL: Gosh.

HILDERBRAND: What was the, was the ...

HALL: I imagine we probably, I can't remember specifically, but if we didn't, it wasn't an intentional thing.

HILDERBRAND: The issue was of so little significance you wouldn't even have paid attention to it?

HALL: Exactly. I know we had blacks on crew. But as far as I know

HILDERBRAND: Was it a normal ten percent of your crew?

HALL: Oh gosh. I don't remember, Bob. I can't even begin to... yeah, maybe. If that. When we first brought women into the crew force ...

HILDERBRAND: That has to be next. How did this issue ...

HALL: That raised the question of, "Well, what if you have a black man and a white woman on alert?" My reaction to that was, "Well, what if you have white woman and a white woman on alert?" We asked the questions because we knew somebody else would be asking them, but as far as we were concerned, it was not an issue.

HILDERBRAND: You asked the questions and then decided to ignore it?

HALL: Yeah.

HILDERBRAND: And did anybody else ever raise them?

HALL: Never with the unit. When we first started bringing women on crew, some of the other wives had some resistance to that. I know we asked the crew members, "Look, we're going to be integrating the crews, male and female. If you have a real problem with this, tell us. We will do our best to make sure we honor that request." I know there were some wives who had a problem with that. I guess my reaction to that is, if a man and a woman want to go out and have some hanky-panky, there's a hell of a lot better place to do it than sixty feet underground in a Launch Control Center and the phone is ringing off the hook almost twenty-four hours a day. But for those few people who made an issue of it, we tried to recognize that that could be a problem in their family life and we tried to honor it.

HILDERBRAND: Were there men who did not want to serve with women?

HALL: I think initially. I think eventually it came to the point where there were a few. But it was the wives who had the problems with it, but not us. I think it came to the point eventually where it became a non-issue even for them. Once the women got here, started pulling alert, started attending social functions, the issue went away. I'm sure there was still a little bit of a concern in some people, but it never manifested itself to my knowledge.

HILDERBRAND: There weren't ever any instances or anything that was a problem, special problems caused by having a mixed crew? Where, say a man working with a woman, maybe it had nothing to do with her being a woman or her performance, but perhaps she was one of those who was not really as good as some of the other crew members?

HALL: We had a couple of those.

HILDERBRAND: And the man perceived that as being related to her being a woman and that became an issue?

HALL: No. I have to say that for the most part the women we got were really top-notch. They were trailblazers. But we also got the occasional one who wasn't an outstanding performer. But it was never considered to be a gender issue. They went in and they demonstrated that they were as good as the men. When I was the chief of the training branch, I took one of the first women we had and she became our senior crew commander. It was purely based on her abilities and capabilities, not a matter of making her the first female senior instructor. I don't think she was anyway. But she was [first female senior instructor] in our wing. But not in the command or anything. Simply had to do with the qualifications weighed objectively against other candidates, based on how long she'd served, her training and evaluation scores, and all these other considerations. I never heard a whisper or question about that decision. It was my decision to make. Certainly, it had to be

approved by my superiors, but, it was my decision to make. And, I mean, absolutely without hesitation. In fact, I think if I had made any other decision, I'd have been severely questioned.

HILDERBRAND: Were any of the women crew members married? And was that a problem for their husbands?

HALL: Actually, we had crew members married to each other.

HILDERBRAND: Ahh! That's going to be our next question.

HALL: I mean, they came ...

HILDERBRAND: Came that way.

HALL: Came as a unit.

HILDERBRAND: Did they ever pull duty together?

HALL: I don't remember, to tell you the truth. I don't remember, I don't think they ever pulled alert together. I think we pretty much decided early on, actually I think they got to the wing before I got there, and she got pregnant shortly afterwards. But I think the decision was made early on, I'm trying to remember. I think they were assigned to the same squadron, but I think the decision was made that under no circumstances were they to pull alert together. Just to make sure, and I may be wrong on that, but to the best of my knowledge they never did pull alert together.

HILDERBRAND: Married couples might have other issues they could be bringing into the capsule that ...

HALL: Absolutely. Absolutely. Yeah, I think that was more of a concern than anything else. It's now, "Let's let them leave their married life at home and they don't need to take it to work with them. We don't need to force them to." If they're having a bad day as a married couple, that isn't the day we want them going on alert together. [laughter]

HILDERBRAND: Were there ever any reports of sexual activity in the capsule?

HALL: Not to my knowledge, but then I'm sure I would not have been one of those who would've known.

HILDERBRAND: You didn't even hear of stories about that? Or suspicions?

HALL: Oh, I think I heard, again, anecdotes. Women were on Titan crew long before they were on Minuteman Crew because the Titan crew was a four-person crew. I know there were stories around about it. I never heard any of these from first-hand

sources. I certainly never heard anything about our crew members. Now, we did have crew members who dated each other. I'm trying to remember, I know we had one couple that was engaged, but I don't remember if they ever even got married.

HILDERBRAND: Crew members that were partner crew members?

HALL: At one time I think they were crew members together, I'm not sure. Well, maybe not. No, I think they came through training together so they probably would not have been crewed together.

HILDERBRAND: There wasn't a policy about that? About crew members dating?

HALL: No. No. I mean, we put enough restrictions on officers by telling them you can't date enlisted ranks. We don't intend to tell them you can't date a fellow officer. In most situations where I knew about it, and they worked for me, I was their supervisor or superior officer, I would call it informally, but it's hard to be informal when they're coming into the boss's office. But just remind them that their personal time is their own. Make sure they keep their personal life out of the capsule, out of the trainer and out of the classroom. Don't bring it to work with them. I didn't lecture them for a long time or anything like that, I just made them aware, as a reminder. I know they probably thought, "Why is Major Hall telling me this? I don't need to know this. I already know this." But I thought it was my responsibility to make sure they knew that we knew and just to make sure we maintained good orderly discipline. But it didn't, never had a problem.

HILDERBRAND: The official line from the Air Force was that the capsule was survivable of a burst. Was that true?

HALL: Well, I guess it depends on how deep the capsule was and how close, given all the variables.

HILDERBRAND: I guess I'm thinking about what was the perception of the people who were in the capsule. The people who worked with them. What did you think? Whether it's true or not we'll never know.

HALL: I think to a large extent, people didn't really want to think about it too much, but when they did, they figured, "Sure, the capsule may be survivable, but what's there to go upstairs to?"

HILDERBRAND: Well, that's my next question: Those infamous escape tubes. I mean, was there really a sense that those ...

HALL: I have no idea. They were filled with sand. Always the thought was, "The top six feet is going to be glass anyway. How the hell you going to break through that?" Because the heat from an explosion would fuse the sand.

HILDERBRAND: Was there talk about where the sand was going to go?

HALL: Oh, we knew where it would go.

HILDERBRAND: There was enough space for sand?

HALL: Oh there was plenty of space outside the LCC for the sand to drain. Yeah, I don't think that was ever a consideration. Assuming it wasn't just a tube full of obsidian.

HILDERBRAND: The sand wouldn't come into the capsule itself?

HALL: No. if you're familiar with the layout of the LCC, it's basically an egg shell inside a box car except the eggshell is box car shaped and the box car is egg-shell shaped. It's a box car inside an egg shell then. The escape tube is on the outside of the actual launch control capsule. Inside the capsule is the acoustical enclosure where there was a space of probably, I'm trying to think now, three or four feet, where you take the cover off of the tube and that would drop down and then the sand would come out. You may get a little bit in the LCC, but most of it would go outside the acoustical enclosure and go down into the bottom of the Launch Control Center.

HILDERBRAND: Was there a plan for where those crew members were supposed, assuming they could get out, where ...

HALL: Yes. There was what was called a reconstitution plan. I don't even remember any of the details of it.

[end of side two, tape one] [beginning of side one, tape two]

HILDERBRAND: I was going to ask you about how they would get someplace to be reconstituted?

HALL: If there was someplace for them to go and if they could survive above ground again, they'd have to walk, probably. Obviously, we knew the Launch Control Centers were targets, the missile silos were targets. There were going to be a hundred and fifty or a hundred and sixty-five real big holes in western South Dakota if there were a nuclear war.

HILDERBRAND: Yeah.

HALL: But yeah, there was a reconstitution plan that told them to go, gosh, I don't remember where they were supposed to go, it was probably classified anyway. Not that it matters any more, but Philip or Kadoka, or I don't even remember now.

HILDERBRAND: Was there a length of time that they were supposed to stay underground?

HALL: [sighs] I don't remember. I don't think so. We had emergency oxygen regeneration units in the Launch Control Centers. So if your environmental systems all shut down, you could hand crank this thing and generate oxygen for a period of time. I don't remember, we had a survival kit in the Launch Control Center that had C-rations or MREs [Meals Ready-to-Eat] or something. I guess maybe in later years, MREs. Then these oxygen regeneration units, which was a potassium super oxide canister. By cranking it, you caused a chemical reaction that generated more oxygen. I'm not sure how breathable that would have been, but supposedly that was going to provide more air until it was safe to go upstairs.

HILDERBRAND: You say it was something you joked about

HALL: Well, yeah, I mean the crew members figured, "What is there to go up to?" We figured there's going to be nothing but a huge crater in the entire western half of South Dakota. Not to mention the fact that the two missile wings north of us, a couple wings west of us, and one south of us, this Upper Midwestern Plains wasn't going to be a very habitable location. So it wasn't one of those things you really got too concerned about.

HILDERBRAND: In fact, do you think there was really any difference between the way the capsule crew looked at that problem from the way, say, someone living in Chicago looked at it?

HALL: I guess it was one of those things where you just figured, "It's not going to happen." You know?

HILDERBRAND: Supposedly most of us felt ...

HALL: Yeah. When you go on an ocean cruise, you don't spend a whole lot of time thinking about how you're going to survive a shipwreck because you don't really consider the possibility of a shipwreck.

HILDERBRAND: There was something about knowing you are a target?

HALL: Yeah. I guess ...

HILDERBRAND: Or there are ICBMs pointed at us.

HALL: I think that's part of the reason, going back to one of your earlier questions, why the crews could be so pragmatic about having to launch the missiles if they had to do that. It's probably the last thing they'd ever do, to be truthful about it. You were asking about: Was the capsule survivable. I think in 1962 or 1963 or whenever they were put in, yeah, they probably were at that time. I don't think against an SS-18, even a near miss, it would have been survivable. Those things were built to kill hard targets. We don't have too many targets that are harder than a Launch Control Center or an ICBM silo. The underground command post at SAC

in Omaha, or down Cheyenne Mountain, those might be a little harder than what we had here. As far as being penetrable. But an SS-18 was going to dig out any silo, any Launch Control Center. I don't care how deep we buried it.

HILDERBRAND: Was there any talk, then, about this being sort of silly to bother with that? That maybe you just ought to move it all upstairs and get rid of some of the inconvenience?

HALL: Actually, there was a lot of talk about that. When I first got back here to South Dakota, we were looking at, seriously, the Air Force, Defense Department, were looking at rail-mobile ICBMs.

HILDERBRAND: Um hmm.

HALL: You probably are aware of some of that, and I never got involved in that, but there were some operational tests of rail-mobile systems. The Soviet's had them. We knew that. We had certainly demonstrated mobility with the Pershing II and the GLCM systems in Europe. I think one of the difficulties we had in this country with the rail-mobile system is the rail system itself. But certainly that was looked at as a viable option for a number of years. I'm sure there are probably a few dollars for every year now and the Defense Department's still looking at ...

HILDERBRAND: Various kinds of mobility.

HALL: Yeah. Yeah. Because sooner or later these things are going to be obsolete. This gets in a lot further than my knowledge extends. But, yeah, rail-mobile systems were a definite possibility, a rail mobile or some variation of that mobility type system. Or truck mobile even, ICBMs. So, yeah, consideration of having totally soft, hardened against maybe an M-16 or LAWs [Light Anti-tank Weapon] rocket, but that's about the extent of it.

HILDERBRAND: Did it reach the point where the real significance was security? Of having them underground?

HALL: You mean ...?

HILDERBRAND: Security against intruders or sabotage?

HALL: That was always one of the things we exercised, played with, trained. To the best of my knowledge, and I'm sure if there ever have been it would have been well-known, but I don't believe there was ever an attempted penetration of a Launch Control Center. I know I've had vandals out on missile silos. I don't think we've ever had anybody seriously try to penetrate a silo to get at a missile. Simply because, there may have been an attempt, but it would have been thwarted within minutes, just because it takes so long to get in, even when you're supposed to be getting into one of those things, let alone when you're not supposed to be.

Obviously you could blast your way in, but that would kind of defeat the purpose since it would probably destroy whatever you were going after. We had lots of security. Obviously that was an effective deterrent, but that's not why the capsules were buried in the first place.

HILDERBRAND: No. But I mean eventually when there was talk that, "Gee, we're not going to be able to survive this anyway, why not move upstairs with all of this?"

HALL: The cost would have been prohibitive to do that. It would have been absolutely prohibitive. I guess I could daydream about that. It could be done. Certainly, it could be done. I mean with today's technology core, computers and stuff. Let's face it: The computers that are down in the Launch Control Center are pretty antiquated.

HILDERBRAND: Um hmm.

HALL: Unfortunately, the interfaces are all very proprietary now. I can't imagine how there would be any cost-effectiveness to that. I'm sure there were probably some studies for the Pentagon evaluating that very thing. It seems they study everything, but just from my limited knowledge, I can't see that that would be a practical thing.

HILDERBRAND: We talked a little bit before about weather problems. A question that came to my mind about the crews was: Did you ever have a time when you had a crew [stay] on site? You said sometimes they had to stay over in the space upstairs. But did they ever have to stay in the capsule because you couldn't get another crew out?

HALL: Oh yeah. Oh yeah.

HILDERBRAND: So they had to ...

HALL: They were down there for three days.

HILDERBRAND: Oh? They were down there for three days?

HALL: Oh yeah. Absolutely.

HILDERBRAND: I was thinking that they were just up in the facility upstairs for three days and another crew had taken over for them.

HALL: No. Back in the late seventies, we moved totally to twenty-four hour alerts. When I first started on crew, a lot of the wings had a forty-hour alert, I think it was a forty-hour alert tour. They'd be on for eight, off for eight, on for eight. Is that what it was? I think it was a forty-hour tour. Yeah, that sounds right. In other words, you had three shifts of eight on and two off and then they'd come home.

HILDERBRAND: Um hmm.

HALL: At Whiteman, we had it a little different. We had a thirty-six hour tour. Ours was a twelve, twelve, and twelve. We'd go out, be on alert for twelve hours, either day-alert or night-alert. Off for twelve hours upstairs. Then you'd go back on for twelve hours and then come home. Of course, they were never exactly twelve hours because of changeover times and that sort of thing. You could have one shift that was as short as eight and another one that was almost eighteen. But essentially, we did it all within a thirty-six hour period. So in that case, you could have the crews rotating back and forth, because you always had two crews on site. I had to do that a couple of times when I was at Whiteman. When the number one guy changed-over, I was the night crew, so the day crew would come on duty for their second shift and then, you were being held from going home. Of course, I could see all these cars going on the highway. Because of snow. We had a little bit of snow, so a deputy commander for operations wanted to hold us up so we didn't have any accidents. That's when morale starts to take a beating.

HILDERBRAND: Um hmm. Protecting their one-hundred-percent accident-free-status.

HALL: Yeah. Exactly. That sort of thing. All I knew was I wanted to be home. I think I had to pull an extra shift or something, I don't remember, but I'm ready to go home!

HILDERBRAND: Was there ever talk that twenty-four hours was too long?

HALL: No. Because once we went to the twenty-four hour tour, crews were permitted to sleep while on alert. They had enough safeguards. The security and safeguards of the components in the capsule itself had been improved to the point where, one of the big concerns was tampering with the nuclear critical components, codes and that sort of thing. We had all these tamper-proof seals and everything that ...

HILDERBRAND: You mean by one of the two crew members?

HALL: Right. Right. It was this two-man policy. One of the big reasons why there were two was to make sure there was no deliberate or inadvertent violation of critical components by either crew member.

HILDERBRAND: And that never changed for the maintenance personnel. I mean they still have that "no alone" rule.

HALL: Yeah. Of course we still had a "no lone zone." It was still a "no lone zone," but we ...

HILDERBRAND: But if one of the two individuals is sleeping, the other was pretty effectively alone!

HALL: Well, yes, but, again, the determinations were made that the tamper-proof seals and that sort of thing, the safeguards were there. An unauthorized act would have been detected. That being said, even in the days before sleeping was allowed, it happened.

HILDERBRAND: Sure.

HALL: I mean, that's just the nature of the beast.

HILDERBRAND: How much sleep was possible? Weren't there always bells and whistles and things going off?

HALL: Oh, let me tell you! You get tired enough, you could sleep. You get used to the sounds and there were ways. Crew members were very innovative. They'd go in and pull circuit breakers on alarm panels. Finally we put a tamper-resistant seal on the alarm panel so the circuit breakers couldn't be pulled. There were ways of silencing other bells, pushing the silence push button in.

I remember one of the machines was the SACs message, which was a teleprinter machine that had a very, very loud bell. What you'd do is, you'd get an eighteen-inch ruler out there, or a twenty-four inch ruler, and a roll of printer tape. You could wedge this ruler and that roll of paper, pressing that bell in constantly so that bell never rang. You could hear the machine when it activated, believe me! If we were both supposed to be awake, why have the bell in the first place? You can hear the machine. But you got used to the sounds so you could sleep. In later years we put acoustical curtains around the bed and made those pretty comfortable.

HILDERBRAND: Now was one person supposed to be awake at all times?

HALL: Yes. You had to have one person awake at all times. In fact, even in later years, well, of course, this may have been once our nuclear commitment was relieved, but we had a crew member go upstairs and keep an eye on the LCC, just to monitor communications and stuff. But you usually could get about six to eight [hours of sleep]. Again, this is where rank had its privileges, who got which sleep shift and when. The preferable one was to have the second sleep shift. You'd stay awake till two or three o'clock in the morning and then get your deputy up and the commander would sleep until the crew arrived for change over at eight-thirty, nine-thirty. It was awesome.

HILDERBRAND: Now were there times when they both had to be awake?

HALL: Oh yeah. If there was an alert going on, an exercise going on or something like that. Usually during the day when maintenance activity was going on, it was busy and generally they'd both be awake.

HILDERBRAND: But would alerts occur in the night in order to make it more difficult?

HALL: No. Actually what happened, the SAC or the STRATCOM [US Strategic Command] command post would have communications exercises all the time. We had the primary alerting system, which you may be familiar with, it was basically a telephone system, is what it was. It was run right over telephone lines. But that had a very, very unique warble tone. A "deedle-deedle" type warble tone. That would go off, gosh they'd do that every couple of hours. You just got used to it.

HILDERBRAND: That's what I was getting at. Wasn't the idea that perhaps the system, if the system was at its least efficient, that might be in the middle of the night when someone was asleep. They might want to have a practice alert at that time. Where they were able to test this?

HALL: No. Not for that purpose. Not for that purpose. Simply because, and again, that was one of the thoughts behind allowing one crew member to sleep was the fact that we would get enough warning. The threat was so minimal from a "bolt from the blue" type attack. We practiced them, but really the evaluation of the threat was that it was so minimal to be of negligible concern. We felt we would have the time to generate the forces. We'd have time to send additional crews out so we wouldn't have one crew out there alone, so if we got into an extended period, we could change over the crews periodically. We got a lot more realistic in our threat assessment and our analysis of how we would go to war, as the years went on. Especially as we got into the '80s and the '90s.

HILDERBRAND: Were there ever any interesting encounters with animals in the Launch Control Facility?

HALL: Every once in a while you'd get a wasp or a bee down there. You'd get flies. That was a pain.

HILDERBRAND: Never any rattlesnakes or spiders?

HALL: No. No. Occasionally you might get a fly or a bee or something like that and it might go down the elevator shaft and happen to fly in as you had the blast door open or something. But, no, nothing.

HILDERBRAND: The blast door was usually open?

HALL: Blast door was usually closed. It was supposed to be closed.

HILDERBRAND: Oh. I see,

HALL: It was supposed to be closed.

HILDERBRAND: Whenever a new tour started, the blast door was closed and then it was only opened for the next alert group?

HALL: Only opened to allow meals in, or the next crew, or whatever. Again, that idea to preserve the hardness of the site.

HILDERBRAND: Was that a rule that was often broken?

HALL: [sighs] Probably the one that was broken was, if you've seen the blast door, you know there are the eight pins on the blast door that are pumped out hydraulically. There's also a latch that holds the door in place while you're pumping those pins in. Once the pins are extended, the door is held in place, you lower the latch. Probably the thing that was violated more was not pumping the pins, but simply keeping the latch up and in place. A lot easier to open the door than pumping that mechanism.

HILDERBRAND: How long did it take to open if you had to do the whole process?

HALL: Thirty seconds.

HILDERBRAND: Oh?

HALL: Thirty seconds to a minute.

HILDERBRAND: But it was a little bit of labor?

HALL: Yeah. The latch had a ratchet on it. You tighten that up, it held the door closed so that you could extend the pins so they'd go into the holes that were to receive them. The reason that was not allowed was the fact that, a) the capsule wasn't hard if the pins weren't extended, okay? Hardened against a blast. Secondly, there was no way the pins could be manually pumped open from the outside. The Facility Manager was trained on how to take off the panel and he had a kit where if there were an emergency in the capsule or for some reason crew became incapacitated, they could retract those pins from the outside. No way over that latch from the outside. So actually the crew was putting itself at risk. Minimal. Never heard of a crew that had to be rescued.

Occasionally, I think there may have been a time or two when the pump failed on the capsule side and in fact they did have to retract the pins from the outside. But that was the reason why the latch wasn't supposed to be used. A) The capsule was no longer hardened. B) You couldn't get the crew out if they only had the latch up. I'm sure a small charge could have bumped that door enough to drop that latch. 'Cause again, the reason it was held in place was because it was cold. Oh gosh, you'd have to, well, without going into any more detail than necessary, it was simply held up there, and once the latch went down, the door could open. So if you could push the door enough, give the door enough of a shock where that latch

would drop. The crews didn't tighten that thing really, really tight, either, I mean enough to keep the air squeal out.

HILDERBRAND: There may even have been a procedure for doing that if the ...

HALL: Not that I was aware of, but again, it wasn't suppose to have to happen. [laughter]

HILDERBRAND: That's right.

HALL: But see, that's why one of the procedures we had in the event of a terrorist attack was to manually harden the Launch Control Center. One of the steps in that procedure was to engage that latch so that even if the pins were retracted, they couldn't open the door.

HILDERBRAND: If the terrorists knew how to do that ...

HALL: Yeah, if they could do that. Yeah. Yeah.

HILDERBRAND: How would you assess your relations with the people who lived around the sites?

HALL: As far as the ranchers and the landowners?

HILDERBRAND: Or whoever you might have come in contact with or knew about?

HALL: During the time that I was in the 44th, we had absolutely outstanding relations with the people of Rapid City and surrounding areas. The Husted's in Wall were huge supporters of the missile wing. Of course, you may have seen pictures of the sign, I don't think it's been painted over since, but it said, "Free Coffee and Donuts to Missile Crews." Like it says now, "Free Coffee for, Free Donuts for Honeymooners" or something like that. And the famous free ice water and the five cent coffee and all that. But the Husted's were great supporters of the missile wing and the whole mission out here.

The people of Rapid City, the Chamber of Commerce had and still has a very active military affairs committee. Huge, huge support from the civilian community. Let's be honest, the big reason for that is that the base provides a huge economic boost to the area.

HILDERBRAND: Um hmm.

HALL: Obviously, they are the largest employer and they were certainly much bigger when we had both a missile and a bomb wing there. By the same token, you had those people and some of the landowners whose land was impacted by the missile wing, were not as friendly towards the wing. I think the missile wing commanders worked very hard to try and minimize that animosity or resentment.

Certainly the years I was there, we did a lot more to bring the landowners out and we had periodic open houses where we'd bring them out. Invite them and their families to see a missile site and the LCCs. Certainly during the draw-down, as we pulled the missiles out and the site implosions, [we] invited them out to witness those.

We were careful every year during the Sturgis bike rally to take alternate routes. You know the main route out to a lot of the sites in the 68th was through downtown Sturgis. Not where we wanted to be driving military vehicles that first week in August.

HILDERBRAND: Um hmm.

HALL: For a couple of reasons. One, we didn't want to give anybody an excuse to throw rocks and that sort of thing, although a lot of those people are fairly conservative anyway and they were very supportive in the first place. But by the same token, if you've seen Sturgis in August, it's very, very crowded. Just more trouble than it was worth.

HILDERBRAND: Were there ever any incidents with those folks?

HALL: Gosh, not that I can remember. Not while I was here. We kept a very low profile just to avoid any incidents like that.

HILDERBRAND: Were you aware of any protest demonstration from any other source?

HALL: Oh, we'd have them, occasionally there'd be a protest. Maybe a religious group or some other group might go out. I think there was an annual one and I can't remember ...

HILDERBRAND: Easter.

HALL: Yeah. Easter seems to be the one where they'd go out and stand in silent vigil or something. Or have some kind of vigil at one of the sites.

HILDERBRAND: That was at a Launch Site. Did that ever happen at a Launch Facility?

HALL: I think it happened at a missile, at a silo actually.

HILDERBRAND: Yeah. I thought so too. At a Launch Facility.

HALL: I think it was at a silo. A Launch Facility, which is the missile site.

HILDERBRAND: Oh. Yeah.

HALL: Launch Control Facility is where the crews were.

HILDERBRAND: But it never happened at a Launch Control Facility?

HALL: Gosh, not that I remember. I think, probably they were scared off by the fact that we did have security police out there.

HILDERBRAND: Was the security higher at the Launch Control Facility? Or was it the same?

HALL: That's where the cops were based.

HILDERBRAND: Um hmm.

HALL: That's where all our communications were. Again, automatic detection devices at the Launch Facilities, those were triggered, the crew would see that alarm, and they'd relay the indications upstairs to the Flight Security Supervisor who would then dispatch a security police crew out there.

HILDERBRAND: I guess what I meant was, was the SOP the same for responding to an intruder on the LC, as on the LF?

HALL: Um ...

HILDERBRAND: Was one regarded as more, as needing more protection than the other?

HALL: Not necessarily.

HILDERBRAND: More strenuous protection?

HALL: No. I think it was just a matter of convenience more than anything else, because the sleeping facilities and eating facilities and all that were at the LCF. We certainly responded in a big hurry to intrusion alarms at the LFs, but I think because of the fact that the cops were generally at the LCF, there wasn't those kinds of vandalisms that we saw at the LFs.

HILDERBRAND: How were relations with Native Americans?

HALL: I never knew that they were not good. I just don't remember any kind of a protest directed at the missiles from the Native American community at all. Certainly, we drove through or drove by Bear Butte a lot. Maybe once in awhile if they were having a special ceremony out there we might have taken an alternate route or something. But simply just to absolutely minimize the possibility of a confrontation of any kind. Not that there was any expectation of such a thing, but just, why provide the opportunity?

HILDERBRAND: Are there any personalities you came into contact with that you'd like to talk about?

HALL: You mean in the civilian community?

HILDERBRAND: I meant anyone. Maybe other officers or ...

HALL: Oh gosh.

HILDERBRAND: crew members who had some particularly interesting facet to their personality that you would like to talk about?

HALL: Crew members are a pretty boring lot. I don't want to say we're all cut from the same cookie cutter, but not a lot of real flamboyant types. Maybe I'm stereotyping, but it's not like the fighter-pilot thing.

HILDERBRAND: Um hmm.

HALL: And, gosh, even given the fighter pilots I've known, I mean, we didn't have any "Top Gun" types that I knew. I just can't really think of any. Not any more so than in the general populace. Probably a lot less so. For the most part, military people are a fairly conservative lot. By the fact that they'd all chosen the same profession, they all do have a lot in common just in that aspect. So you're not going to have any real odd balls, so to speak.

HILDERBRAND: That's all my questions. Do you have any concluding comments? Anything you'd like to get on the record? Off your chest?

HALL: Gosh, I think you've touched on just about everything I could've imagined.

HILDERBRAND: Well, good!

HALL: I'm really happy to have had this opportunity to help you, relive a few things and remember a lot of the good things. I've probably forgotten all the bad! [laughter] We tend to do that.

HILDERBRAND: Yeah. Yeah. Well, thank you Major Hall. This concludes our interview.

HALL: Okay.
[End of interview]