



Oral History Interview

With

Andy Knight

May 19, 1999
Rapid City, South Dakota

Interviewed by Steven Bucklin

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ABSTRACT

Andy Knight was born in Hilo, Hawaii and grew up in several different states predominantly in the Midwestern and Western United States. Mr. Knight served in a variety of positions with the 44th Strategic Missile Wing at Ellsworth Air Force Base. He started as a missileer in the 68th Strategic Missile Squadron in 1968. He was then chosen as the Senior Missile Combat Crew Instructor with the responsibility for leading the instructors who trained missile crews at Ellsworth. In 1972, Mr. Knight was transferred to the Fourth Airborne Command and Control Squadron, as part of a missile launch crew on an Airborne Launch Command System, known as the Looking Glass. In 1976 he was promoted to major and reassigned to Offutt Air Force Base, Strategic Air Command Headquarters as an officer, again on the Looking Glass. His last position, as the Assistant Deputy Commander for Resource Management for missile operations at Minot Air Force Base, ended with his retirement in 1985.

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: ANDY KNIGHT
INTERVIEWER: STEVEN BUCKLIN
DATE: 19 May 1999

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

STEVEN BUCKLIN: This is Assistant Professor Steven Bucklin, conducting an interview with Andy Knight, on the 19th of May 1999, at the Hotel Alex Johnson in Rapid City, South Dakota. Andy Knight, that's k-n-i-g-h-t.

ANDY KNIGHT: Yes.

BUCKLIN: Retired as a lieutenant colonel, an O5 in 1985. Your unit of assignment at the time of retirement was?

KNIGHT: I was the assistant deputy commander for resource management at Minot Air Force Base.

BUCKLIN: At Minot Air Force Base.

KNIGHT: North Dakota.

BUCKLIN: Okay. You served here with the 44th Wing Command, and you were attached to the 68th...

KNIGHT: Strategic Missile Squadron.

BUCKLIN: Okay. Describe your mission, if you would, when you were attached to the 68th, or assigned to the 68th.

KNIGHT: I can, that's real easy.

BUCKLIN: Okay.

KNIGHT: It all evolved around the concept of deterrence. At that time the 44th Strategic Missile Wing had the Minuteman I missile, which was one missile and one warhead. We were on alert 365 days a year. Somebody was on alert 365 days a year, 24 hours a day, ready to fire off the missiles. If we ever got what we called the EWO, or the go to war message. And it was authenticated properly. That was the whole concept of deterrence.

Deterrence is sort of like a Mexican stand off. Where you got a gun barrel pointed at the Russians, and some of their satellite, the Warsaw Pact countries. And they, of course, had a gun barrel pointed at our heads, too. That's the whole concept of deterrence and that was our main mission. We knew that as

long as we were pulling alert and doing our job and accomplishing our mission, we were fulfilling that concept of deterrence.

BUCKLIN: So it's sort of the idea of mutually assured destruction?

KNIGHT: Yeah. The acronym was MAD.

BUCKLIN: Um hmm.

KNIGHT: That's right. That's right. And it was madness. But in one way it was, but in another way, both you and I are still here talking! [laughter]

BUCKLIN: I guess that's pretty important!

KNIGHT: Yeah.

BUCKLIN: I notice as well that you served in several different positions. In 1968, you were a crew member. Will you tell us what a crew member was?

KNIGHT: Sure. There were two different types of crew members. There was the Missile Combat Crew Commander--M triple C--and there was a DM triple C which stood for Deputy Missile Combat Crew Commander. Those were the two people who actually pulled the alert duty in the launch control centers. There was just two of them down there at one time. One person had to be awake at all times. The other person, there was a single cot in the launch control center and one person could be awake, I mean, had to be awake at all times, the other person could sleep. So there was two people in there. The only other time that there was more than two people down in the launch control center was if we were served our meals or if the security, the cook came down. Or what we call crew change over, which always happened in the morning. About 0800 in the morning or so. sometimes 0900, depending on the weather. Then the crew would come down, we'd do a changeover.

BUCKLIN: So one cook came down. Was the "no lone zone" applied?

KNIGHT: Yes. Always. It was a no lone zone at all times, twenty-four hours a day. There always had to be two officers present in that capsule. Those capsules, the launch control centers, were manned for years and years and years and years and years and years with two officers always present. That was required. Couldn't be an officer and an enlisted man. It had to be two officers.

BUCKLIN: Two officers.

KNIGHT: Two launch control . . .

BUCKLIN: Any particular rank?

KNIGHT: No.

BUCKLIN: So, then it also mentions that you were a crew trainer. How long were you a crew member first?

KNIGHT: I was a crew member for about eighteen months. Then I upgraded to a missile combat crew commander instructor.

BUCKLIN: And what were your duties as such?

KNIGHT: My primary duty was to train new crew members that came in from the operational readiness training school in Vandenberg. Also, to train existing crew members, keep their proficiency level up.

BUCKLIN: That was all in the 68th?

KNIGHT: No. That was in the entire 44th Strategic Missile Wing.

BUCKLIN: Okay.

KNIGHT: When I became an instructor, I left the 68th Strategic Missile Squadron and went to a staff position within the missile wing itself. The director of training.

BUCKLIN: And then you eventually became senior crew instructor?

KNIGHT: Senior Missile Combat Crew Instructor. And in that job I was responsible for all of the instructors who trained all the missile combat crew members, in the wing.

BUCKLIN: Okay. When did you leave Ellsworth for Minot?

KNIGHT: Well, I left Ellsworth for Offutt Air Force Base. [Omaha]

BUCKLIN: Offutt?

KNIGHT: That was an interim. I actually was at the missile wing, at I went to Ellsworth in October of '68, was assigned to the 44th Strategic Missile Wing from '68 to '72 and then in 1972 I went to the Fourth Airborne Command and Control Squadron. Now that was also located at Ellsworth Air Force Base. The Fourth Airborne Command and Control Squadron, Fourth ACCS had a little bit different mission than the Strategic Missile Wing. But I went there as a missile crew member. I was in what they call an airborne launch control system.

BUCKLIN: That was Looking Glass?

KNIGHT: Yes. Well, not at that time it wasn't Looking Glass. Here at Offutt it was just part of the post attack command and control system. I provided the back-up. Okay, the primary means of launching missiles during war-time, it was always done between capsules and the interconnectivity that turning the keys and what not. But if the interconnectivity—we did expect that was part of the Cold War and deterrence—we knew that our missile fields were targeted by the Russians. So we knew that a lot of the incoming rounds would destroy some missiles and maybe some launch control centers, because each launch control center was about ninety feet underneath the ground. We also knew that the electrical inter- connectivity would be disrupted . . .

BUCKLIN: By the EMP [Electro-magnetic Pulse]?

KNIGHT: Yeah, well, it could be by EMP or it could be just by nuclear dig-out.

BUCKLIN: Um hmm.

KNIGHT: You know, bombs landing all over, God forbid. So the mission of the Fourth ACCS and the Airborne Launch Control System was to act as a back-up. We had the capability to actually launch missiles from the air.

BUCKLIN: And that would via sending a signal to a UHF antenna?

KNIGHT: A UHF antenna. Yes. The Fourth Airborne Command and Control Squadron at Ellsworth was part of that system. From 1972 to 1976, I just went over to the bomb wing, because it was a flying outfit so we were assigned to the bomb wing. And I flew with Fourth Airborne Command and Control Squadron until 1976. Then I promoted to major, and was reassigned to Offutt Air Force Base, SAC Headquarters in 1976. And flew again as an airborne launch control system, ALCS, officer. Then when I made major, I was assigned to the Looking Glass.

Back in those days, they referred to the Looking Glass aircraft as the Doomsday plane, which I think was a misnomer. Because again, it was all part of the nuclear deterrence. The Looking Glass was nothing more than a plane that was ordered into the sky 365 days a year, 24 hours a day, with a complete battle staff present, along with a general officer present. We were in constant contact with the national military command center. They had an alternate national military command, NORAD, and the White House Communications Agency so that we could, if directed by the president, could direct the war from that plane and his plane.

BUCKLIN: I've got a question for you about that. What if the president were knocked out before the launch codes could be given?

KNIGHT: Then there was a chain of command and the chain of command went from the president to the vice president to the ...

BUCKLIN: Secretary of State?

KNIGHT: Secretary of State. I think ...

BUCKLIN: Speaker of the House?

KNIGHT: No. No. To the Vice president to the Speaker of the House.

BUCKLIN: Um hmm.

KNIGHT: And then it went from the Speaker of the House, I think to the Secretary of Defense then to the Secretary of State. I can't remember. There was a chain of command.

BUCKLIN: Was there a football in Looking Glass?

KNIGHT: Yes. Yes.

BUCKLIN: Do you want to tell us what a football was?

KNIGHT: It was the go-to-war codes. That's the bottom line. It was the go-to-war codes. And it wasn't in a football. It was kept in a safe, of which I had the key to the safe, and the general who was flying had the other key. So it took both of us to open that up.

BUCKLIN: Not unlike it took two people to launch in the capsule.

KNIGHT: It's the very same concept.

BUCKLIN: You know, I've got a question for you. You mentioned earlier about survivability, and the expectation that some LCFs [Launch Control Facilities] and LFs [Launch Facilities—silos] would be taken out in an attack.

KNIGHT: Yep.

BUCKLIN: There was an expectation, especially from the Kennedy administration onward of our ability to have a flexible response within this sort of mutually assured destruction environment.

KNIGHT: Yes. Yes.

BUCKLIN: Did you think an LCF or an LF [would] have survived an air burst? A ground burst?

KNIGHT: I am sure there were tests that were done down in Nevada and what not. It's my personal opinion that I don't think any Launch Facility or Launch Control Center could have survived a direct hit. It just wasn't possible, I don't think. Because there was these dug-outs. How close it was, I don't have any idea. But we were told that some LFs and some Launch Control Centers in every emergency war scenario that we practiced, we always lost Launch Control Centers and Launch Facilities and so we would have to react accordingly.

BUCKLIN: That surprises me that even Soviet missiles get could through or Soviet bombs could get through before our missiles could be launched. That's essentially the scenario?

KNIGHT: Yes. Because there was no anti-ballistic-missile defense then and there isn't now.

BUCKLIN: And there wouldn't be sufficient warning of a Soviet launch?

KNIGHT: Well, there could be warning, but what are you going to do? The bottom line is if the Soviet Yankee Class submarines were sitting off the East Coast or West Coast, which they were...

BUCKLIN: It would take ten minutes to target?

KNIGHT: Time on target was ten minutes, what are you going to do? NORAD is going to detect the incoming, so what? [laughter] You just sit there.

BUCKLIN: Right.

KNIGHT: Not much you can do! Except launch yours.

BUCKLIN: Okay. How seriously did you take your job?

KNIGHT: Deadly serious. It was probably the most responsibility that I've ever had in my life. We were tested constantly. The tests that we were [given], whether it was multiple choice or written exams, or whether it was actual training scenarios in the simulator ... we always had on the written exams one hundred percent was passing. If you missed one question, you failed, and you had to start all over again. So there was no room for error. In the simulators we used to have, we would call missile procedures trainers, there was room for mistakes. Obviously, because this is how you were trained. But there was no room for error.

BUCKLIN: Did you feel that your colleagues and peers shared that . . .

KNIGHT: Yes. Without a doubt. We had what they called the Human Reliability, well, first it was called Personal Reliability.

BUCKLIN: HRP and PRP?

KNIGHT: Yeah. Then it was Human Reliability Program. We monitored one-another. I know it sounds like Big Brother, but when it comes to nuclear weapons, you just can't make those errors.

BUCKLIN: So you had to be aware of the sensibilities of your colleagues and peers.

KNIGHT: Yes. If I thought that one of my friends or somebody who was in missiles was drinking too much or had a personal problem, whatever it may be, then it was incumbent upon me to notify the authorities.

BUCKLIN: Subordinate and superior?

KNIGHT: Superiors. Not so much subordinates, but superiors.

BUCKLIN: Okay. Tell us about your motto. What was the motto? Aggressor Beware?

KNIGHT: That was at the 44th Strategic Missile Wing. Yes, it was the Aggressor Beware.

BUCKLIN: Did that say something about your sense of mission?

KNIGHT: Yes. Yes. I think that looking back on it, each squadron had their own slogan, like the Aggressor Beware was the 44th Strategic Missile Wing.

BUCKLIN: Did it reflect American nuclear policy at all?

KNIGHT: Yes.

BUCKLIN: What was American nuclear policy? Would we use our missiles under first strike conditions?

KNIGHT: If we were told to, yes.

BUCKLIN: Okay. America has foresworn first use of nuclear weapons, though.

KNIGHT: When you say "foresworn," what do you . . . ?

BUCKLIN: That we will not be the first to use nuclear weapons.

KNIGHT: Yeah, we have said that, yes. But again . . .

BUCKLIN: But if you got the order to go ...

KNIGHT: But if I got the order to go, then, we were trained to the extent we were just like Pavlov's dog.

BUCKLIN: Did you think that the threat of Soviet attack was real?

KNIGHT: Yes.

BUCKLIN: Why?

KNIGHT: Primarily because of the intelligence updates that we were getting and later on, when I went to the Looking Glass aircraft, we were privy to the satellite photography and imagery. Please remember this was over twenty years ago when I was flying the Looking Glass. The imagery that everybody thinks of today was present back then. It was just very highly classified. We knew where their targets were. We were tracking their submarines. So we knew it was a very real threat. Now, whether or not the accuracy was what it was supposed to be, I've been told since that they weren't entirely as accurate as they are now.

BUCKLIN: Yeah. I think one thing that has become clear but I'll ask you anyway, it has become clear to me over the course of the interviews I've conducted. Did you have faith in our missiles' superiority over the Soviet counterparts?

KNIGHT: Yes. When I was the missile squadron commander up in Minot, I was also a task force commander. The Air Force has a program, back then they called it "Glory Trip." The Glory Trip missions, where they would arbitrarily pick a missile from a particular wing and that was on alert, sitting in a Launch Facility, and they would designate that particular missile as a Glory Trip missile. What that meant was, the only thing that we were to do with it was to remove the warheads and, I use warheads in the plural sense because at Minot they have three warheads.

BUCKLIN: Those were Minuteman IIIs?

KNIGHT: Yes. At Ellsworth you only have one. We would take the missile out to Vandenberg Air Force Base, and the only thing we were allowed to do was to take off the warheads and put dummy warheads on. Then we would launch that missile from Vandenberg Air Force Base down to the target range, which was the Kwajalein/Eniwitok atoll. That was a little over three thousand miles down range. Most of the time they were all within two, three, four hundred feet of the target.

BUCKLIN: That give you a sense of satisfaction?

KNIGHT: Yes.

BUCKLIN: To see birds in flight?

KNIGHT: Yes. And to see them hit where they're supposed to.

BUCKLIN: Something that I haven't asked anyone else yet, but it comes to mind now, is that, not too long ago a missile was launched, actually not a missile, a rocket was fired out of Norway. It was a NATO rocket test fire. They had notified the CIS, the Commonwealth of Independent States, what we call Russia now. Apparently the notification didn't reach the Kremlin and, as a consequence, Russia put its nuclear forces on alert. What did you think the possibility was for an accidental launch?

KNIGHT: An accidental launch?

BUCKLIN: Under those types of circumstances.

KNIGHT: As far as we were concerned, I don't know about the Russians, but as far as the Air Force was concerned, it was zero. I think.

BUCKLIN: Did the Soviets inform us of their test launches and did we inform the Soviets of our test launches to avoid those types of misunderstandings?

KNIGHT: Yes. Now when I say accidental launch, or when you said accidental launch, I'm talking about the physical turning of the keys, because you know ...

BUCKLIN: No, I was talking about the lack of communication.

KNIGHT: Oh, lack of communication.

BUCKLIN: That almost led to the Soviet's launching ...

KNIGHT: Yes. I feel very confident that the communication link was there. The red telephone, what not. I had the occasion once to go down into the National Military Command Center, in the Pentagon. This was in the late seventies, early eighties. I actually saw the red telephone so to speak.

BUCKLIN: Um hmm.

KNIGHT: They always back that up with printed teletype. So in other words, we have a Russian interpreter right there and he'd type in what was being said on the telephone and they'd shoot that up to us. So I mean it was

BUCKLIN: So there was some redundancy?

KNIGHT: Oh yes. Without a doubt. Without a doubt.

BUCKLIN: Okay.

KNIGHT: There were some close calls. But not in that respect.

BUCKLIN: Can you tell us about the close calls.

KNIGHT: Well, yeah, I think so, because I think it's since been declassified. In fact, I know it is because I saw one incidence on the Discovery Channel. [laughter] The Air Force was running some training tapes down at NORAD. Somehow, one of the people down at NORAD at the Combat Operations Center got a training tape into the real system. It was a lot of incoming. I happened to be flying the Looking Glass plane that morning that it happened, and boy, we got the go-to-war, the initial incoming . . .

BUCKLIN: You got the actual?

KNIGHT: It wasn't the go-to-war message, no. No. But it was incoming. And it was a sitrep, what we call a sitrep message.

BUCKLIN: And you want to tell us what that acronym stands for?

KNIGHT: Ah, I can't, I forget now. But I remember sitrep. [situation report]

BUCKLIN: That's alright. [laughter]

KNIGHT: I can't remember . . . situation something. But at any rate, I nudged the general next to me. I said "This is real." Of course we had the satellite communications back then. I mean everything was satellite back then, much as it is today. We were immediately plugged into NORAD.

[phone interruption]

BUCKLIN: There we go. We were interrupted by a phone call. Going back to sitrep, we have determined that it's the situation report. And you were plugged into NORAD?

KNIGHT: And the National Military Command Center and the alternate National Military Command Center and the White House Communications Agency and the Primary Alerting System which was the PAS for all strategic air command. That was all done via satellite communications. We immediately determined through the authentication procedures that were in existence at that time that NORAD had a problem. It was authenticated out and, the system worked the way it was supposed to.

BUCKLIN: When you say immediately, how, what time frame?

KNIGHT: Within ten seconds.

BUCKLIN: So how long were you thinking that the balloon had gone up?

KNIGHT: Oh, about ten or fifteen seconds.

BUCKLIN: That was it?

KNIGHT: It was not a pleasant ...

BUCKLIN: I was going to say, was there a sense of relief, collective?

KNIGHT: Yes, it's kind of interesting, though, because, again, as I've said, we were trained to react just like Pavlov's dog and that's exactly what we did.

BUCKLIN: You said you recalled a couple incidents?

KNIGHT: That was one, yes. There was another one. I was stationed with Fourth ACCS, that would be between '72 and '76, and I think it was in the Six Day War between Egypt and Israel, when we went into an increased DEFCON. We went to a DEFCON 3.

BUCKLIN: I think it was in October of 1973.
[Yom Kippur War began 6 Oct. 1973. Six Day War began 5 June 1967.]

KNIGHT: Yeah. Yeah. I was on alert up at Minot in the post attack Command and Control System. We went out to the points. We sat on the planes for twenty-four hours, waiting to go. That's not a pleasant feeling.

BUCKLIN: I'm sure. How would you describe morale among missileers?

KNIGHT: Then it was just great. Super. At times it was very stressful. We would let off steam, at least I would encourage my folks to let off steam. There is always a time to work, but then a time to play, too.

BUCKLIN: So how do you let off steam?

KNIGHT: Oh, you name it, we did it! [laughter]. We had a lot of parties, a lot of squadron parties, missile wing parties, that kind of thing.

BUCKLIN: Sporting activities?

KNIGHT: Yeah, yeah. But primarily parties. There was drinking and what not. But it blew it off, the steam that way.

BUCKLIN: Um hmm. And you're keeping an eye on each other.

KNIGHT: Oh yeah. Yeah. Nobody was allowed to drive that had too much to drink and that kind of thing.

BUCKLIN: You said, "then it was super," which implies to me that perhaps later on it wasn't "super"?

KNIGHT: I think as time went on, the missileer in the sixties and the seventies, it was a very ...

[cell phone interruption]

BUCKLIN: We think that was our last phone call! We're talking about morale then in the sixties and seventies.

KNIGHT: I think the morale in the sixties and seventies was great. Because missileers then, I think, were selectively manned. But as time went on, in the eighties and then when once the Cold War dissipated, then I think the morale kind of went downhill.

BUCKLIN: Do you think that any of the strategic arms limitation negotiations--SALT-1, SALT 2, START, INF--do you think that affected morale?

KNIGHT: Yes, but I think it affected them in a positive way. Because again, that meant the concept of deterrence was working.

BUCKLIN: Um hmm.

KNIGHT: I think what affected morale more than anything else in the eighties was missileers were not getting promoted as fast as they were in the sixties and seventies.

BUCKLIN: Was there a sense that the missileers were sort of second-class citizens in the Air Force?

KNIGHT: Probably. If you're not a pilot, then ... [laughter]

BUCKLIN: And so their promotions weren't coming as rapidly?

KNIGHT: Um hmm.

BUCKLIN: Opportunity was thus limited?

KNIGHT: Um hmm.

BUCKLIN: Okay. Missileers were screened psychologically, weren't they?

KNIGHT: Yes.

BUCKLIN: And what were they looking for?

KNIGHT: Obviously, emotional stability. All missileers had to have a top-secret cryptographic clearance, at that time I think it was the Defense Intelligence Agency that's doing the background checks. They were pretty good background checks.

BUCKLIN: So, if you were a missileer and you believed you were no longer able to conduct your duties, could you opt out?

KNIGHT: Oh, without a doubt!

BUCKLIN: Um hmm. And were you encouraged to do so?

KNIGHT: Yes. Yes. If you felt that you couldn't turn the keys, then yes, by all means.

BUCKLIN: Did you ever experience a problem with a fellow capsule crewman?

KNIGHT: Not me personally, but I've heard of people.

BUCKLIN: What kind of problems did you hear?

KNIGHT: They just decided that they couldn't turn the key if ordered to through the authentication process.

BUCKLIN: Would they face any recrimination for telling their superiors that "I can't do this"?

KNIGHT: No. They were decertified and sent to another field.

BUCKLIN: So, it wasn't career threatening? You could still stay in the Air Force.

KNIGHT: Oh, yeah. You could still stay in the Air Force, but career threatening it probably was. But you could still stay in the Air Force. They'd just put you in supply or something.

BUCKLIN: And you might not make your next promotion board?

KNIGHT: That's right.

BUCKLIN: You mentioned the DEFCON 3, I think, in 1973. During that period, actually in the next year, the secretary of defense was concerned about our president's [Nixon's] mental stability. And in fact, issued a directive that if the president tried to launch, it could not be done without the secretary of defense's counter signature. Were there any circumstances under which you would have refused a launch order.

KNIGHT: No.

BUCKLIN: No?

KNIGHT: None. Providing, well, providing I had the right authentication. If the launch order did not authenticate out, then well, obviously it wasn't a good message, we wouldn't have launched. So that's one. If everything was in order and it came from the National Command Authority and it authenticated out, no.

BUCKLIN: So, I think you've already answered this question, but I'm going to ask you again anyway. How did you feel about the removal of the four-hundred fifty missiles we had in South Dakota?

KNIGHT: Oh, yes. Well, in South Dakota, there was only 150. They just closed the 44th SMW. There's ten launch control centers and there's fifteen missiles total, correction, there's ten missiles to the fifteen launch control centers, so there were 150 missiles on alert.

BUCKLIN: Um hmm

KNIGHT: Okay. They closed that down a couple years ago. They also closed down a couple other wings. And I personally thought it was okay. I did not, and I to this day don't think that it will jeopardize deterrence capabilities simply because, at that time we had over a thousand missiles on alert, which would have blown the world apart.

BUCKLIN: And that's just land-based missiles?

KNIGHT: That's just land-based missiles. [laughter]

BUCKLIN: Not including the submarines and?

KNIGHT: Yeah. Yeah. And so, I think it was, yeah.

BUCKLIN: It was militarily justified?

KNIGHT: Yes.

BUCKLIN: I am kind of curious, too, I've sensed a sort of nostalgia among military personnel for the old Cold War Days because we had an enemy we knew. It seemed that there was only one threat. Do you think the post Cold War environment poses more of a threat to our national security than in the old days when we just dealt with the Soviet Union?

KNIGHT: I think it does. The thing that I fear the most is, these people like Muammar Ghadafi, Saddam Hussein, now Slobodan

BUCKLIN: Milosovic.

KNIGHT: Milosovic. That's a hard name to pronounce!

BUCKLIN: Um hmm.

KNIGHT: and the proliferation of nuclear weapons in some of the third world countries like Pakistan ...

BUCKLIN: North Korea.

KNIGHT: North Korea. Now China. Of course China always had nuclear capabilities, but they didn't have the delivery system back then, so we didn't have to worry about those people. But I think the threat is still there, and it worries me because some of these third world countries have nothing to lose.

BUCKLIN: What do you think of the current debate over ABMs--Anti Ballistic Missile systems?

KNIGHT: I think it's necessary. I think we needed an ABM thirty years ago. And we need one now.

BUCKLIN: Okay. Did anyone die in the line of duty while you were with the 44th and the 68th?

KNIGHT: Yes. We lost a helicopter. A Huey Helicopter went down with several security policemen. They were on the way out to a Launch Control Center to do a changeover thing, right here at Ellsworth. They went down and there were some security police people killed. Yes.

BUCKLIN: How did that affect your people?

KNIGHT: If I remember correctly we decided, the crew members in the missile wing, we didn't want to fly those Huey helicopters anymore! [laughter] I think there was a boycott of some kind--it didn't last too long--because we thought they were unsafe.

BUCKLIN: I want to get back to another question that occurred to me and that is that you served as a capsule crewman for a twenty-four hour period, right?

KNIGHT: Yes.

BUCKLIN: And then were relieved. When would your next duty begin then?

KNIGHT: Normally, we would pull, on the average of seven to nine twenty-four hour tours a month.

BUCKLIN: And what did you do in between those tours?

KNIGHT: Trained.

BUCKLIN: Trained?

KNIGHT: Yes.

BUCKLIN: Okay. I want to ask you some sort of environmental questions now, I guess. Where are you from originally?

KNIGHT: I was born in Hilo, Hawaii. Then lived in California and Colorado and Michigan and New Jersey and Nevada and then wherever and came into the Air Force.

BUCKLIN: Married?

KNIGHT: Yes. I've been married for twenty-five years.

BUCKLIN: Children?

KNIGHT: Three. Three sons.

BUCKLIN: So when you came to South Dakota, can you describe your impressions of the land, the weather, the terrain?

KNIGHT: I got here in October of 1968 and that was after finishing a tour in Vietnam. When I received orders to come to South Dakota, I said, "Ooh." All I could think of was blowing snow and reindeer and tundra! [laughter] I got up here and it was one those fall October days, Indian summer days, and it was just absolutely beautiful. I said "Now this is not the South Dakota that I expected." So I got up here and it was just great. Of course, Rapid City is the banana belt. That was in October of '68 and I met my wife here, and she is a fourth generation Rapid Citian, so her roots go back a long, long ways.

BUCKLIN: That's unusual.

KNIGHT: Yes. We got married and then we went up to Offutt Air Force Base and Minot and then when the time came to retire from the Air Force in 1985 there was no question in our mind where we were coming back to.

BUCKLIN: And it's fair to say you could have gone anywhere, really?

KNIGHT: That's right. In fact, I had a job offer based on my missile experience in the Air Force from TRW down in Los Angeles, El Segundo, California. It's a good paying job, and I turned it down because I didn't want to put up with that lousy environment down there.

BUCKLIN: So tell me, you're from Hilo, Hawaii originally. What was your first South Dakota winter like?

KNIGHT: Surprisingly enough, it wasn't that bad. It really wasn't. Here in Rapid City it's the banana belt, and we get some snow, we get cold weather, but then we get those warm Chinook winds that come down through here and melt the snow. I'm what they consider a transplant here in Rapid City and South Dakota. I'm not a native South Dakotan. And that's okay.

BUCKLIN: How did other Air Force personnel deal with South Dakota?

KNIGHT: They didn't like it, most of them. It was sort of like a love-hate relationship. They either really loved it or they just couldn't stand it.

BUCKLIN: And what would you attribute that to?

KNIGHT: Some of the people that I've met that are my peer groups, they were from large metropolitan areas, and they were accustomed to more cultural activity than what was offered here.

BUCKLIN: Um hmm.

KNIGHT: That kind of thing. A lot of the people from the South that were assigned up here didn't like the weather. I didn't think it was that bad.

BUCKLIN: Okay. Were you ever stuck on site because of weather?

KNIGHT: Many times. During the winter. It was always during the winter. If there was a big snow storm or a blizzard that came through and we weren't relieved, then we had to spend forty-eight hours on site. I think the longest I ever spent was seventy-two.

BUCKLIN: And were you well supplied?

KNIGHT: Oh yes.

BUCKLIN: Well prepared for those eventualities?

KNIGHT: Yes. Because the Launch Control Center, as I said before, was many feet below the ground and then there was a support building, the Launch Control Center support building right above the Launch Control Center itself. There they have

the cook and they have the security police and the missile maintenance, some of the maintenance people, facilities manager, all stayed right there. There was enough food there for a long time.

BUCKLIN: Okay. Any interesting encounters with animals?

KNIGHT: No. [laughs]

BUCKLIN: Never ran into a rattlesnake?

KNIGHT: No. [breathes a sigh of relief]

BUCKLIN: We've had a lot of people tell us about encounters with animals.

KNIGHT: Oh, is that right?

BUCKLIN: Um hmm. How were your relations with the people of South Dakota? Obviously good with one, for sure.

KNIGHT: Oh. Nowhere in my Air Force career, and I've been around the world and fourteen county fairs, believe me, have I encountered anybody, or any people that are like here in South Dakota. That was one of the primary reasons that we wanted to raise our children and what not, right here in South Dakota. It's just great. The people are great, the environment's great, and I think that's probably one of the reasons why Rapid City environs is experiencing such a tremendous growth right now is all of the sudden it's not a well-kept secret anymore.

BUCKLIN: Were there any tensions at all between the community and the Air Force and the missile silos?

KNIGHT: If there were, I wasn't aware of them.

BUCKLIN: Okay. How were race relations?

KNIGHT: The Air Force has a program that, when I was in they called it "social actions." The Air Force was very, very sensitive to race relations. We just couldn't discriminate in any way, shape, or form. As far as I was concerned, it was good.

BUCKLIN: Um hmm. Relations with Native American communities?

KNIGHT: I had no problems with Native Americans. Or blacks. Still don't. I don't to this day.

BUCKLIN: Um hmm. Okay. You were here when the '72 flood occurred, weren't you?

KNIGHT: Yes.

BUCKLIN: Did you experience it?

KNIGHT: I was in the '72 flood.

BUCKLIN: You want to tell us a little bit about that?

KNIGHT: At the time, I was engaged to a gal who was from Virginia and she was out visiting me. We were up at the corner of Mountain View Road and Omaha. We'd just come out of a movie and we were going home to the apartment. It was the ninth of June 1972, well, the evening of the ninth and tenth.

BUCKLIN: Right.

KNIGHT: I started to see the street lamps go out right down the road. It was raining and I happened to look up towards Bacon Park. I saw this wall of water and it was maybe about five, six feet coming down. There was a car in front of me and a car in the rear and, I was honking my horn because all I had to do was make it across that Deadwood Avenue bridge there up on the hill and I'd have been okay. But the people in the car in front of me at least, were mesmerized by it. There was nothing I could do about it, so I finally put it in first gear, but I couldn't do it. The water just swept us right into Rapid Creek. The bottom line was, I lost my fiancée. Janice Elaine Hall--her name is on the monument right now. And they never did find the pick-up truck. They found Elaine down by the **** feed plant. I was in the water. That's the closest to dying I ever came because I remember losing it under water. I made it to a tree. And I was just as blue as the day I was born.

BUCKLIN: I'm really sorry for your loss, by the way.

KNIGHT: Yeah. Thank you. The flood was a horrible disaster. It really was. But there is so much good that has come out of that flood that it makes the tragedy of losing someone easier to take.

BUCKLIN: How did the Air Force respond to it?

KNIGHT: The Air Force immediately responded, along with the South Dakota National Guard. Between the National Guard and the Air Force, those were probably the two organizations that effected most all the rescue operations.

BUCKLIN: In 1985, the Air Force brought aboard the first female crew member. The mixed gender missile crew debuted in August in 1989. I'm kind of curious how you felt about that.

KNIGHT: I was skeptical at first. The reason I was skeptical was there is no doubt in my ex-military mind that females, I know how that sounded, but there's a lot more

intelligent females out there than males, okay? They could certainly handle the intellectual aspect of missile duty. They could certainly handle the stress of missile duty. What I objected to was the fact that they were down there in the Launch Control Center with a male. There was just the two of them down there. Anything could happen. I had no problem with, and this was after I retired, all female crews, you bet. In a heart beat. But to mix them up, male and female, I think that was a mistake. If it happened, I don't know.

BUCKLIN: And the mistake was because of the potential for ...

KNIGHT: Sexual ...

BUCKLIN: Sexual relations between crew members, okay.
Do you have any feelings about gays in the military?

KNIGHT: I think they shouldn't be there.

BUCKLIN: Should not or?

KNIGHT: Should not.

BUCKLIN: Um hmm. Did you ever serve with ...

KNIGHT: Because of morale.

BUCKLIN: Did you ever serve with anyone you knew was gay?

KNIGHT: No. But I don't think they belong in the military. Not because they can't do the job. That I don't think is an issue. It's a morale issue. I don't know what the percentage is, but the majority of military people are non-gay people. There's a perception out there, and I don't think, it's just a morale problem. I'm sure gay people can do the job just as good as non-gay people can, but it's from a morale standpoint. I don't think they should be allowed in the military for that reason.

BUCKLIN: Okay. Let me see here. How's food?

KNIGHT: Great! I liked it. You know, that's a question it depends on who you ask.
[laughter] But I'm a chow hound, so!

BUCKLIN: So both on the LCF as a capsule crewman?

KNIGHT: Oh, I loved the Launch Control Center food. Now, there were certain cooks who were a little bit better than others, but you know, Thanksgiving time we always had a turkey with all the dressing and what not. Easter, it was an Easter ham. So I think the food was great.

BUCKLIN: How'd the capsule crew get along with FMs?

KNIGHT: Really good. I mean if you didn't, then they could hurt you.

BUCKLIN: Um hmm.

KNIGHT: But I always paid a lot of attention to the Facility Managers and Flight Security Controllers and the cooks.

BUCKLIN: We're going to stop and flip the tape here.

KNIGHT: Sure

BUCKLIN: Let it wind up. What was a typical alert like for you?

KNIGHT: The typical alert is we'd get into the pre-alert briefing, and that was usually right around seven o'clock in the morning, that would take about a half hour to forty-five minutes. Then we would all get together and, depending on the weather, sometimes we'd go out in a helicopter, sometimes we'd go out in two-and-a-half ton trucks. Myself and my deputy would go out in the truck. If we were flying, then it would be two or three crews on the helicopter. They'd either fly or drive us out. We usually get out on site, if we were driving, it would probably be around ten o'clock in the morning. If we were flying, it's probably about eight-thirty, nine o'clock. We would go through a briefing topside with the facilities manager. We would do our inspections topside of some of the equipment.

I would talk to the FSC, the Flight Security Controller. We'd pass our authentication codes back and forth, we'd establish the authentication codes. Then once that would happen, then we would call the Launch Control Crew, the center crew that we were going to relieve and we would authenticate with them and they would open the door for us. Not the blast door, but the top-side one. Then we got in an elevator and we'd go down in the elevator and by that time, once the capsule crew had determined that the top-side door to the flight security offices was closed and locked and secured, then they'd start opening up the nine or ten ton blast door.

By the time we got down there, the blast door was slowly swinging open. You got to remember we tried to keep that blast door closed as much as possible because it did degrade the capsule when that was open. We'd go right into the capsule and we'd close the blast door again and lock the pins in and we'd do a crew changeover. After the crew changeover, we'd inventory the authentication codes and that kind of thing. After the changeover was accomplished, the old crew would go upstairs where they would either get in the truck that we brought out or they'd wait for a helicopter to come. Then the alert tour started. Ninety percent or ninety-five percent of the time usually we'd just sit there. We

would read magazines. Study for the professional military PMA programs, or some people would work on their master's degree.

It was a great time, at that time. At that time they didn't allow any kind of TV sets or anything like that down there. It was just the crew. As I said before, there was one cot there and one crew member could go to sleep. Usually the person who had the graveyard shift--the midnight to six o'clock in the morning shift--usually that person would crawl into the cot right after dinner. Usually we'd have dinner right around five o'clock, so that person would get in the cot and go to sleep from five until about midnight. At midnight then we'd swap off. You'd get into, it was like a hot bunk and you'd sleep until about six o'clock in the morning. That was generally what took our tour.

BUCKLIN: How often?

KNIGHT: Those twenty-four hour tours, I would say anywhere from seven to ten alerts a month, depending on manning.

BUCKLIN: Did they have any way to observe the capsule crew? Was there closed circuit television? Anybody?

KNIGHT: No.

BUCKLIN: You were strictly on your own?

KNIGHT: That's right.

BUCKLIN: Now did you carry weapons in the capsule?

KNIGHT: Yes.

BUCKLIN: What was issued?

KNIGHT: .38s. Each one of us had a .38. We had to be armed any time we opened up the safe. Which is where we kept the 'go to war' codes.

BUCKLIN: Was there a standard operating procedure in terms of your colleague if somebody lost it? I mean, under what circumstances would you use that weapon?

KNIGHT: I would use the weapon under any circumstances which endangered the 'go to war' codes, obviously. The way the capsule was configured there was no way that one person could initiate any kind of launch procedure. It's just not possible.

BUCKLIN: Uh-hum.

KNIGHT: So I think the only way that I would have used my .38 would have been if for some reason the Launch Control Center was in jeopardy. There were terrorists top-side or something like that, but again we had a nine-ton blast door between us, too. So we were pretty secure down there.

BUCKLIN: Uh-hum.

KNIGHT: I've never heard of a crew member going off the deep end.

BUCKLIN: Ever get claustrophobic?

KNIGHT: No, I didn't.

BUCKLIN: Anybody you ever served with?

KNIGHT: No, no.

BUCKLIN: What did you think about this escape tube?

KNIGHT: Ah, geez, that was a farce. [Laughter.]

BUCKLIN: Can you tell us about the escape tube?

KNIGHT: Yeah, oh yeah. All the missile fields were target areas for the Russians. So we knew that if nuclear war ever occurred that the top-side would be gone. We expected that. I don't know if it was the Boeing people or the Air Force people, but somebody designed what they called an escape tube. It was down by the missile combat crew commander's seat. They [the original builders] had dug from the launch control center that was suspended on shock isolators, up through ninety feet of ground, up to the top. It was filled with sand. We had these big huge lug wrenches that we could open this tube with. It was permanently sealed, but you could also open it up with these lug wrenches. If the time ever came.

We presumed that we would use this escape tube because the elevator shaft would be covered with debris and what not, and we wouldn't be able to get out. They finally ran a test down here at Ellsworth. I forget which site it was, but they figured they hadn't opened up one of these escape tubes in many, many, many, many years. So they decided to open one up. It was kind of interesting because when they opened it up, the sand had hardened. So you couldn't leave. You really, really couldn't get all the way up there, ninety feet through hardened sand. And then once they did get out through it, they found out that the entrance to this so-called escape tube had been paved over, and was in the missile parking lot. [Laughter.]

BUCKLIN: I often wondered if the volume of the sand was more than the volume of the capsule?

KNIGHT: No, no, I thought of that originally. But if you've ever been down in one of these launch control centers you'll notice that the capsule is suspended on four shocks isolators. There are batteries for the capsule, in case we went from diesel operation to battery operation. But we are always underneath the capsule, okay, and then below that there was a good six, seven feet. Oh no, probably four, five feet. So no, I don't think the volume of sand...

BUCKLIN: Um hmm. But ...

KNIGHT: But it was hardened.

BUCKLIN: You don't really think you would have escaped through the tunnel?

KNIGHT: Ah, anything's possible. But it would have been real hard.

BUCKLIN: So then the next question is: "What if you had"? Did you have orders? Where were you to go?

KNIGHT: That's a good question, because we didn't have anything that was post-attack.

BUCKLIN: Um hmm.

KNIGHT: I guess it was to each his own, you know?

BUCKLIN: I wonder if part of this might be the myth of survivability. You've got to believe on one level that you might be able to survive in order to continue with that type of mission.

KNIGHT: Oh yes. I don't think we could have survived a direct hit with a nuclear weapon. But I think we could have survived a near miss. I don't know what you would call a near miss. But I think I always knew I'd survive.

BUCKLIN: I've got another question for you. How many kilo tons were on the warhead on a Minuteman II?

KNIGHT: You know, I can't remember that.

BUCKLIN: Did they teach you? Or demonstrate to you via movies or whatever, what the damage was that this weapon could do?

KNIGHT: No.

BUCKLIN: Okay. So you didn't really have a sense of

KNIGHT: Uh uh.

BUCKLIN: You just knew it would make a big ...

KNIGHT: I knew that, and they did say how many kilotons or megatons, or whatever it is, but I can't remember what it was.

BUCKLIN: You just knew it would make a big dent someplace?

KNIGHT: Oh yes.

BUCKLIN: Okay. We talked about the boredom on occasion and that there's a time to work and there's a time to play. I noticed that on Delta One on the steel door that closes the capsule they've got painted the Domino Pizza delivery motto: "Anywhere in the world in thirty minutes or your next one is free."

KNIGHT: Yeah.

BUCKLIN: You know? Was there a particular sense of humor that?

KNIGHT: Oh yeah. To be candid with you, I can't remember all the sayings, but it kept the morale up.

BUCKLIN: So, to relieve the boredom in the capsule itself ...

KNIGHT: You read a lot. You really read a lot. It's my understanding, later on they allowed TV sets.

BUCKLIN: Um hmm.

KNIGHT: But when we were pulling on alert there were no TV sets.

BUCKLIN: What would you call your most vivid memory of your missile experience?

KNIGHT: Probably being a task force commander and launching a missile out of Vandenberg.

BUCKLIN: In Vandenberg? Watching a bird in flight?

KNIGHT: Yeah. We would actual launch a Minuteman III missile down to the Kwajalein atoll area.

BUCKLIN: And it worked?

KNIGHT: Oh yes.

BUCKLIN: Did its job well?

KNIGHT: Um hmm.

BUCKLIN: Any humorous missile field experience that you recall?

KNIGHT: Well. I'm sure there were a lot of them, but I can't ... [laughter] You know its been almost fourteen years since I retired.

BUCKLIN: That's alright. So nothing stands out at this point?

KNIGHT: No.

BUCKLIN: Did you ever have cause to go to an LF?

KNIGHT: Yes. Yes. Just out of curiosity.

BUCKLIN: Uh hmm. Not officially?

KNIGHT: No. Not officially. Out of curiosity. When I was a squadron commander up at Minot, I did go out to the launch facilities a lot because I was directly responsible for the missiles up there.

BUCKLIN: When you talked about authentication codes, when you would come out to the LCF, did anybody ever forget them? Or have any problems with the security police? Anybody get jacked up on a crew coming out there?

KNIGHT: Yeah. It happened occasionally. Yes.

BUCKLIN: Can you tell us a little bit about what happened?

KNIGHT: Well, yeah.

BUCKLIN: In those events, under those circumstances?

KNIGHT: I can remember, I had one Flight Security Controller call me up. I was on alert and I think it was out at Oscar right here in the 44th. He called me and he said, "Sir," he says, "I've just discharged my weapon." There was a long pause and I said "Would you please authenticate 'kilo whiskey'?" There was always a two digit, and he authenticated properly. So, I said "Are you okay? Is there any type of situation up there?" "No, sir. I was just fooling around and my weapon discharged." So I immediately had a line, what we called a direct line, a speed line right straight to Wing Security Control here at Ellsworth and I called up Wing Security Control and I told them what had happened. And that he authenticated okay.

BUCKLIN: Um hmm.

KNIGHT: They came out. They dispatched a helicopter out, and immediately relieved him. And put [in] another. What it turned out to be, he was bored and he was practicing his quick draw with his .38 and fired a shot right through the window.

BUCKLIN: And he paid a price for it?

KNIGHT: That's right. He was decertified. Yeah.

BUCKLIN: Do you know of any, or did you ever observe any launch enclosures being blown open by the ballistic actuators?

KNIGHT: Ah, none other than the missile I launched.

BUCKLIN: At Vandenberg?

KNIGHT: At Vandenberg, yeah.

BUCKLIN: Um hmm. What's that like?

KNIGHT: Oh geez. It's awesome.

BUCKLIN: Is the test site just like the LF here.

KNIGHT: Yes. Exactly.

BUCKLIN: So there's the eighty ton closure that ...

KNIGHT: Yes, and it just bounces right back and it's boom! It's unbelievable.

BUCKLIN: Some people expressed concern during the course of interviews that maybe in South Dakota winters where snow is piled high behind these lids that they might not have functioned properly. Do you think that would ...

KNIGHT: I don't think that would have been a concern. I saw one out at Vandenberg, and it's the same door. It's the same configured launch facility and what not. The same explosive actuators and what not. And I don't think the snow, no. Because the way these doors were constructed, they were on a slight slant. So, when you got an eighty-ton door that's moved a little bit, the gravitational pull is going to slide it down. There could be, I don't care, five feet of snow and I'm sure ...

BUCKLIN: The impetus alone will shove it back.

KNIGHT: Yeah.

BUCKLIN: Okay. Were there major problems that you faced in accomplishing your assignment? Did you face shortages of personnel? Or shortages of equipment?

KNIGHT: No. No. I can't say that we did.

BUCKLIN: What would you say was your most significant accomplishment?

KNIGHT: Keeping the peace. I really feel that, I really believe that. I really believe that what we were doing then contributed to keeping the peace. Yeah.

BUCKLIN: And you see that as an important part of victory in the Cold War?

KNIGHT: Yes. Without a doubt. Without a doubt.

BUCKLIN: Any personalities that you recall who were important? [laughter]

KNIGHT: I think everybody was important!

BUCKLIN: Okay. Any legends? Any folklore? I've had people tell me about ghosts in launch facilities and nothing like that in your experience?

KNIGHT: Uh uh. No. No.

BUCKLIN: Okay. Alright, I've got just a couple other questions and I think we'll be done, Andy. What do you think about preserving Delta 1 and Delta 9?

KNIGHT: I think it's great. I think it's necessary. I think it's an important part not only of the local history, but more importantly, I think it's a history that needs to be preserved and I think it's a history that the American people should know about. I think it's a history that has not been promulgated so to speak, to the average American citizen out there.

BUCKLIN: Um hmm.

KNIGHT: And I think that it would be a history that the average American citizen would appreciate and would be very interesting for them. I think if they opened up Delta 1 and configured it as it really was then, I think you'd get all kinds of tourists during the summer through here.

BUCKLIN: I tend to agree with you. When we went down into Delta 9, I grew up in South Dakota, and we used to drive from Mobridge to Rapid City for vacation and we'd see these missile silos and just think "wow," expecting one to take off any moment. I think you're right there. The follow-up on that would be: Should we aid the Russians in developing a similar site for their people?

KNIGHT: I think it'd be a good idea. I really do.

BUCKLIN: Okay.

KNIGHT: I think it would be a good idea. Something I've never given a thought to, but it's a good idea.

BUCKLIN: Did you go out and witness any of the extractions when they deactivated?

KNIGHT: No.

BUCKLIN: Did deactivation have a personal feeling for you?

KNIGHT: No, it didn't. I was glad was that the deactivation was occurring, because I've always said that there was too many missiles on alert.

BUCKLIN: Um hmm.

KNIGHT: We don't need that many missiles to accomplish the concept of deterrence. Even now, or so I'm told, there's missiles, the MXs down at F. E. Warren, and there's missiles at Minot and Maelstrom. I don't know if they still have the IRCs missiles down at Whiteman. I don't know, I think Whiteman's might be down too. But we still have a lot of missiles. I mean the MX has got ten MIRVs. Given that with the tactical nuclear missiles in the Army and the Navy boomers, the SLBMs, we've still got too many, I think.

BUCKLIN: Plus B-1, B-2, B-52s.

KNIGHT: I mean, yeah, really. Because when you think of the destructive power of a nuclear weapon, it's not going to take a lot to cripple the United States or any other country for that matter.

BUCKLIN: Okay. If you had it to do all over again ...

KNIGHT: I'd do it the same way. Without exception. With no regrets.

BUCKLIN: Okay. Any other comments? Anything that I haven't asked you that you think I should?

KNIGHT: No. [laughter]

BUCKLIN: Anything else then?

KNIGHT: No. No.

BUCKLIN: Alright. Well, Andy Knight, I want to thank you very much for participating in this interview. We appreciate your time and your memories.

KNIGHT: Sure.

BUCKLIN: And we appreciate the service you gave us.

KNIGHT: Oh, not a problem, Steve. Thank you!