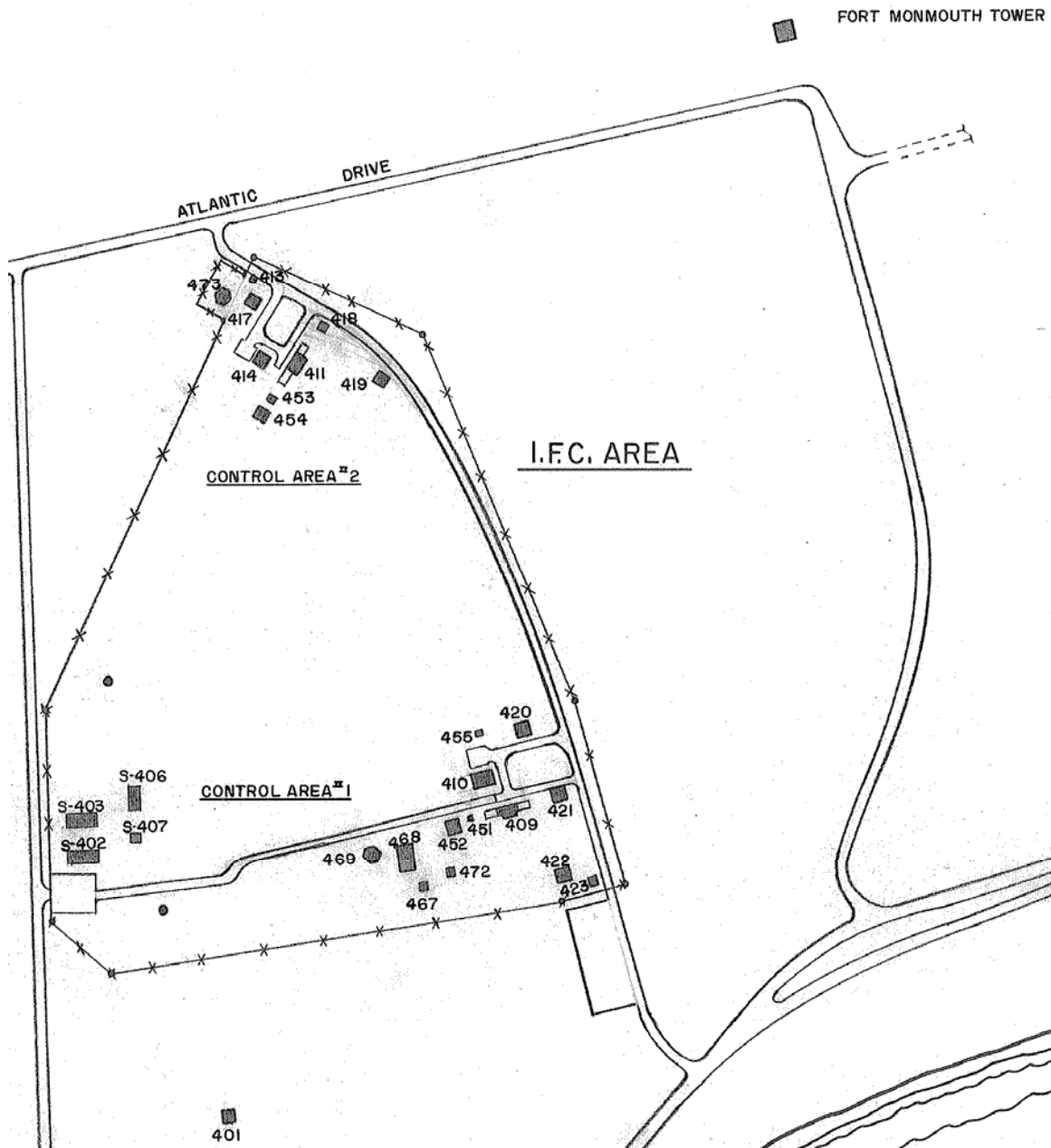
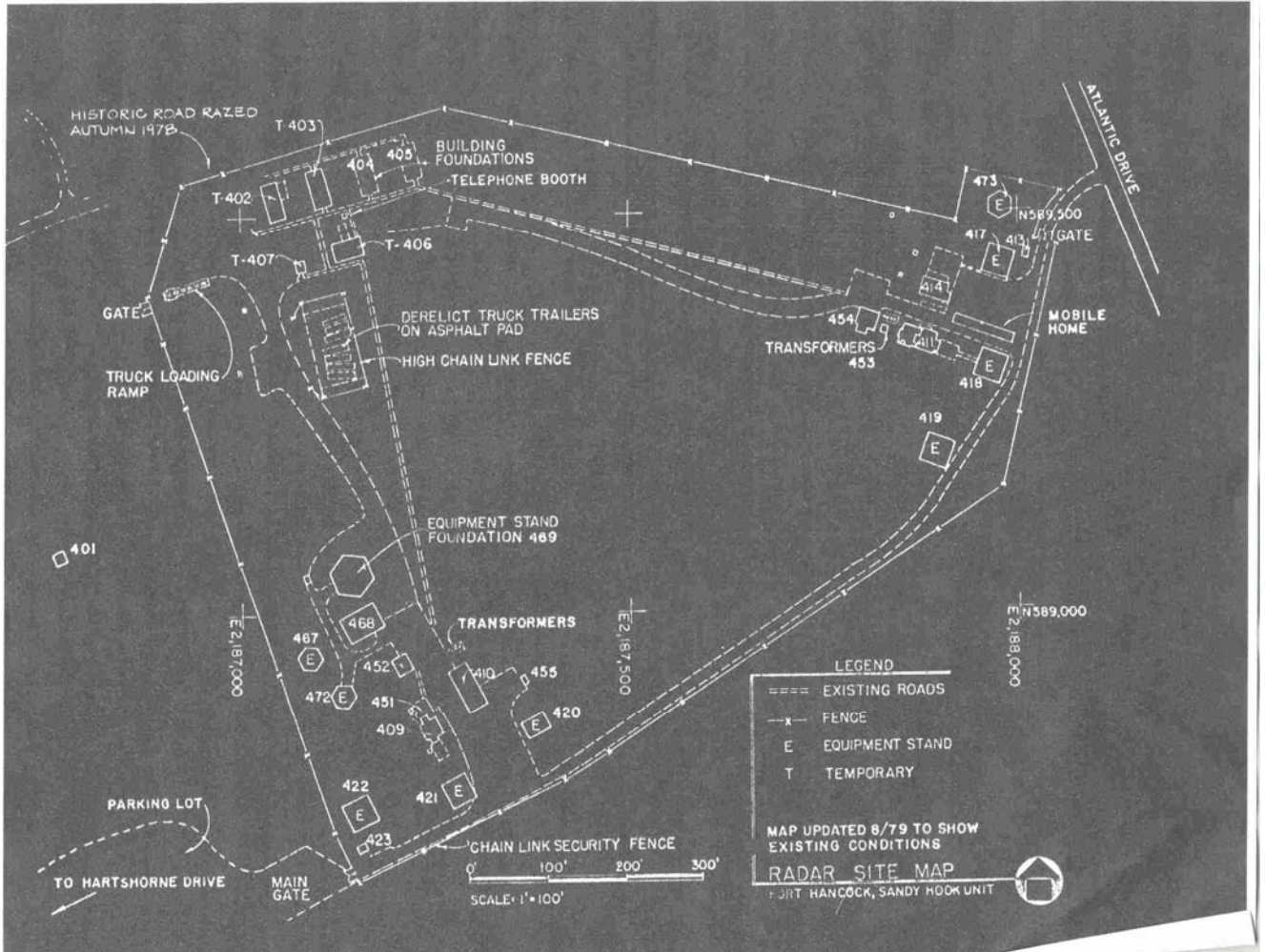


An Oral History Interview with
Ron Hyers (1959-1974) and Ron Kacsmar (1962-1972)
Ordnance Department Civilian Employees
Interviewed by Peter Dessauer and Tom Hoffman, NPS
October 24, 1979
Transcribed by Mary Rasa, 2011



Portion of a U.S. Army map from 1972 of the Fort Hancock IFC Area.



National Park Service Map from August 1979 of Nike IFC Area at Fort Hancock.



Ron Kacsmar in 2003 at Fort Hancock IFC Area.

All images courtesy of NPS/Gateway NRA

Editor's notes in parenthesis ()

PD: Now right next to the Guardhouse 423 (1958) is 422 (1956), which is...



Sentry Box 423. Photo taken in 2003.



422 Missile Tracking Radar Tower. Photo taken in 2003.

RH: On that tower was the Missile Tracking Radar. And the purpose of the Missile Tracking Radar was to track, of course, the missile. And the Hercules system only had the capability of firing one missile at a time. Take it all the way down range and get it close to the target. At that time, by computer order and radar order, it would burst the warhead and destroy the target. And I guess their kill rate with the Hercules Missile was somewhere around 95 or 96 % effective at the maximum range. I see you got there original in relation to other buildings. Okay, the Missile Tracking Radar was well located within, it had to be within 250 feet of the Radar Control Van. The maximum cable length was 252 feet. I think at this site here, the cables were just about at its maximum length so I would say from the RC Van it ran approximately 250 feet. Now the Missile Tracking Radar minimum range to the Launching Area was a mile. Maximum range could be up to six miles. And the reason for the minimum range of a mile was that when the missile was fired it was so fast that it would exceed the tracking rate of the radar if it was any

closer. So, that is the reason why they spread the distance out. Now you see there, you got the Acquisition Radar.

PD: That's the next, that's...

RH: 421 (1956) would be where the Acquisition Radar sat.



421, Acquisition Radar Tower. Photo taken in 2003.

RK: The Low Power (Also referred to as LOPAR. Low Power Acquisition Radar)

RH: The Low Power.

PD: What's the difference between the Missile Tracking Radar and the Acquisition Radar?

RH: Okay, well now the Missile Tracking Radar was mainly just to track the missile, to track the missile down range. What would happen in a normal drill you would lock the, you would get an RH target would come in. The Acquisition Radar would originally be the radar that had the great range that could acquire that target. It would then, they would transfer the target over to the Target Tracking Radar. The Target Tracking Radar which was similar to the Missile Tracking Radar would lock on the target. At that time, the computer, they would go into an action status. The computer would start predicting a burst point for the missile by the information it was fed from the Target Tracking Radar.

RK: The difference between the radars was that the Missile Tracking Radar would go up and down and around. The Acquisition Radar only went around. The Acquisition Radar was radar similar to what you see on television. They show you the weather and the clouds.

PD: Okay.

RK: Strictly gave you 360 degrees. This one would give you horizontal, a direct plane.

RH: A very narrow beam. It only had a beam with I think a .2 degrees.

RK: You go back to the Missile (Tracking) Radar. The missile, the purpose of the Missile (Tracking) Radar was to feed information into the computer where the missile was at all times. So that if the target moved, it relayed the information to the Missile (Tracking) Radar to the missile so that they could turn. The target turned.

PD: Now the Acquisition Radar sighted the target?

RH: Right the Acquisition Radar had a 360 degrees sweep, alright and a range of well over a hundred miles. So, if you had seen an RH aircraft coming in that would be the first radar that would pick it up. Of course, the High Power (Also referred to as HIPAR, High Power Acquisition Radar) had a much further range, a much greater range, a much greater power. The big one that is over here, (Building) 468 (1962). The radar was located, all the receivers and transmitters was located in Building 468. And the pad was where the antenna was located. That radar alone had the power and the resolution ability to pick up a garbage can at maximum range.

RK: We would see weather over Virginia with that radar.

PD: Then what was the Target Tracking Radar? (Structure) 420 (1956)?



420, Target Tracking Tower. Photo taken in 2003.

RH: Okay that was...

PD: So, you had three of these down there?

RH: Well, now here we got something wrong. The one on this, one over here was not used. This tower was not used. It was originally, but when we came into the Improved Herc(ules) Configuration, the radar that was on 420 was moved over to (Structure) 467 (1961).

PD: Alright.

RH: And the Target Ranging Radar was located on 472 (1962). Okay now, the basic Herc system only consisted of Target Tracking, Missile Tracking, and Acquisition.



472, Target Ranging Radar. Photo taken in 2003.

RK: The basic Herc only consisted of 1, 2, 3 radars without the High Power. Then we went in and moved into improved and we got this. Improved High Power and then we got this.

PD: Okay.

RK: So, we got three big modifications.

RH: That's the way, you know, the High Power was to increase the range of the, you had the Low Power, of course, which was located on 421, alright. Now that range was a lot less and its target resolution was a lot less. This High Power, the range was increased by approximately three, three times the range of the Low Power and it had the ability to pick up a target, the garbage can lid at maximum range, alright. You'd be surprised. You've see a small plane that looked like a balloon. It was designed to pick up missiles. The Hercules System had been built to shoot another missile down.

RK: It started going towards the ICBM capabilities of detecting ICBMs.

PD: Getting into buildings now, next to these three tracking radar, radar towers, there is Building 409 and 410. 409 (1956) is called a Connecting Corridor.



Building 409 Inter-connecting Corridor Building. Photo taken in 2003.

RH: Inter-connecting Corridor, right.

PD: Then what was 410 (1962)? It was called a Generator Building.



Building 410, Generator Building. Photo taken in 2003.

RK: A Generator Building right. Within the Generator Building we had three 150 KW Cummings diesel engines and we also had two 65 KW converters. Now the High Power was a strictly 60 cycle piece of equipment. All the other equipment was all 400 cycle. So, what we did with the converters was, we took 60 cycle power from the Post and converted it to 400 cycles to feed the MTR, TTR and Acquisition, Target Ranging Radar.

RK: Plus our generators were all 60 cycles with converters converting into 400 cycle. The reason for 400 cycle is that your motors are about 4 times as small. You know, in other words a 60 cycle motor would be about this big, let's say to run an air conditioner unit. With the 400 cycle come down.

RH: As you increased the frequency you decreased the size.

RK: You decreased the size of all your components.

RH: The High Power ran on strictly a 60 cycle in any configuration and that was a huge piece of equipment. You can see the size of the building we had to house it in.

RK: I should have had the diagram to show you all the equipment that went into that thing and the cables. The wave guys just run up to the High Power just like that.

RH: That put out 9 million watts of power.

RK: 9 million. Can you imagine what you can do with 9 million watts of power?

RH: Of course, of course, at its peak power and when you averaged it down, I would say it was down to maybe 13,000 kilowatts, 13,000 watts of steady power if you averaged it out. If you are not familiar with electronics if you take the peak power and then you take

the pulse repetition and frequency and divide them together you come down with an average power.

RK: This, the generators, or generators and converters, that's why you would need a separate building. With all the power when everything was on almost pretty close to 80-90% of your power came out of these generators.

TH: The reason for having your generators here on site, was that to be self sufficient?

RH: That's right.

RK: This was self sufficient. Run all by itself.

RH: Did not operate with anything on Main Post except the electricity we used when we were in a non-action status. When we went to action we automatically went into our, we started up our engines and we fed our equipment off our generators. We did also have the capability and we did use it when the Hook lost power one time we started up our generators and fed the whole Hook enough power to keep them going.

RK: Just out of that building right there.

RH: Just out of that building right there, those great big diesels.

TH: 410.

RK: 410.

PD: Now the (Inter-)connecting Corridor.

RH: Okay. We had two vans. It was backed up against the Connecting Corridor closest to 421. We had the BC Van which was the Control Van which housed the controls for the Low Power Acquisition Radar and the computers were located in that van.

RK: This controlled the High Power and the Low Power and the computer that was in there. So, the controls in the van were for these two radars. All the equipment to make it operate were in this, the actual controls were in this van.

RH: And you had the RC van which was the Radar Control Van, that controlled the TTR, MTR and the TRR radar.

RK: So, all three radars.

RH: The Target Ranging Radar and I referred to it as TRR. So, if go back to the original configuration of the system in the Improved Herc High Power phase we used the High Power Radar to pick up a target maximum range we could pick up a target the size of a garbage can lid alright coming straight at us or going sideways, no matter what. That is

how much power that radar had. They would in turn transfer that target over to the Target Tracking Radar which would lock on a target. At that time, they would go into what we would call an action phase and the MTR, Missile Tracking Radar would lock on a missile now as the target came in and was an unfriendly target under an actual condition. We would use the, they would go into a countdown phase and they would fire. And when they would fire, the missile would take off and the MTR would guide the missile to the target and explode it and in the meantime the computer would use the information that was fed into it by the Target Tracking Radar.

RK: This building had another purpose too besides the Connecting Corridors. In the back room over there as soon as you walk in over there there was called the FUIF equipment and that was used to...

RH: Fire Unit Integration Facility.

RK: Right. They used to feed us all kinds of information from up on the hill (Highlands) or from the Missile Master or from NORAD. It was all tied in. And they used to interface with our BC Van and that little room back there had another purpose to itself. It had all full of equipment.

RH: Targets were coming in from NORAD (North American Air Defense Command). If you understand the complete defense system the way it was set up you got NORAD and you got the BMEWS Line (Ballistic Missile Early Warning System), The DEW Line (Distant Early Warning). They would all feed information from NORAD.

RK: They would all feed information.

TH: From their radars?

RH: Yes.

RK: From their radars coming up.

TH: Coming up to Highlands and then down to here?

RK: The system all worked like an interface piece of equipment between us and the Air Force. (Shuffling papers) That was housing that were built in here.

PD: Okay. What does IFC stand for?

RH: Integrated Fire Control.

PD: And that is just another term for Radar Site?

RH: Right.

PD: Okay.

RK: That's this, the IFC is this whole block right here we are talking about.

RH: And the integration is the fact that you got the Acquisition, the TTR and the MTR and they are all integrated. Now the Target Ranging Radar was another added attraction because enemy or unfriendly targets coming in...

RK: I have to get down to...

RH: Okay where you at?

PD: I am at 451. The pad right next to 409. I don't know what was on that. Was that that van, those vans that you are talking about?

RK: The two pad stretching out on each side?

PD: That must have been.

RK: Yeah.

RH: The BC van and the RC Van.

RK: That's where the van sat on right there, okay.

PD: Then 452 (1960) where we are sitting right now, what is that?

RH: Well, this is a Ready Room. Well, this is where the troops used to relax. They used to have bunks in here and they used to come in here when they were on 20 minute status and they would lay down in their bunks because on a twenty minute status they used to come in and they hit the gate and they hollered, "Blazing skies," which was a drill and they had to go in and have a missile off the ground within 20 minutes.

RK: You got to remember there was a crew here. In this van, one van took four people to operate. The other took what, 5.

RH: The MTR had 3, 4, 5 in the RC Van had a crew chief plus and operator azimuth, elevation, range, and the MTR you had just the regular operator. The BC Van you had the computer operator, acquisition operator, the BCO and the switchboard operator.



Inside the van in 2003.

RK: Yeah, he took care of the plotting board.

RH: There were about 10 guys involved.

RK: About 11, 11 guys had one.

RH: The Generator operator, the HIPAR operator, that whole crew within 20 minutes had to have a bird off the ground. Well, they used to go through a simulated shoot.

TH: This was military.

RH: Yes. This was all G.I.'s.

RK: This was all Army people stationed here.

PD: Okay next. We have another series of radars. We have the 472, the Target Tracking Radar, the 467, Target Ranging Radar and the 468.

RK: Let's take one at a time. 472 was the Target Tracking Radar. That was the radar that actually tracked the target. We had let's say a bomber coming in.

PD: Is that a later addition to the ...

RK: No. That is probably original concept. That tracked the target. That fed the information to the computer to tell the target where the heck the actual bomber was coming in at. That was a prime function of the target to track the target, the bomber, the enemy target.

PD: And 467, Target Ranging.

RK: That was another piece of equipment for the Army.

RH: Target Ranging Radar, the enemy has the capability to jam us and they would jam us in range and put up a false target and sneak into the gate and steal the gate and what the Target Ranging Radar was, was strictly a ranging radar. It used let's say, let me put it this way the Target Tracking Radar used a frequency range of...

RK: You better stay away from frequency just tell them...if there were targets coming in and they started to jam us, to give us 15, 16 different targets, you got targets all the way out but you only got one true one, this would cut through that jamming and try and stay on that other target. They could move you around and pull you off that original target and try to move you to that other one. This was strictly an anti-jamming type device.

RH: Plus a different frequency range. In other words, when you are looking at a target with only one frequency and he is frequency jamming you and pulse jamming you, you don't have the ability to look at him with another frequency. So, the Target Ranging Radar used a different frequency all together and consequently if it didn't show up as a false target on a Target Ranging Radar you knew right away where the real target was. He was only jamming you. He is putting up 16 targets on the one frequency and on the other frequency he is putting up none so he stands out like a sore thumb. You can get on the actual target.

PD: How about the HIPAR Building? 468.



HIPAR Building 468. Photo taken in 2003.

RH: Okay that's the one right next door to us. That was full of equipment. That had transmitters, receivers, moving target indicator group, which...

RK: Actual big which was all leaded shielded which was a big thing. Almost went up to the ceiling. You had a hoist up there. You could only move it with a hoist. That was the actual instrument that gave you the power to shoot out into space. It converted electrical energy into microwave energy.

RH: It had a power ran, I guess, negative 220,000 volts on a cathode tube. So consequently you got into x rays and that is why we had to have a lead shield.

RK: You had one scope.

RH: And then the receiver. And it was remoted. You remoted the information from here over into the vans. In other words, the radar over here had a receiver and transmitter and everything was over in the building and then it used to be fed over here to 409.

RK: This van right here.

RH: We used to feed them over with a cable. It was cable fed.

PD: The last thing was the HIPAR Base for the HIPAR Tower.

RH: The tower. That had a 25 foot tower with a fiberglass dome and inside there was a 40 foot, it was 40 feet across, the antenna and about 35 feet high that used to rotate and had 2 speeds, 6 and 12 RPMs. And it was all interlocked so that you couldn't walk up there when it was on because it would kill you through the power it was putting out. It would burn a hole right through you.

RK: That supported the whole radar system that base there?

PD: So when you were here there were actually four radar units active? There was 422, 421, 472 and 467. Those are 4 radar units in action. 420 was not used.

RH: 420 was used originally but when we came into the Improved High Power Conversion this radar which was the TTR radar was moved from here over to 467.

PD: 420 was moved to 467.

RH: Right.

RK: That is an addition. That is a new addition to the original.

RH: They built, they had to build two new towers.

RK: When they built that they put in this High Powered Building and the pad that the antenna sat on.

TH: This is something Pete and I both would like to know. The construction dates to the best of your knowledge. Even a rough idea.

PD: When you think some of these additions were made? When you think it was founded?

RH: Well, they went improved let's see....

RK: When was the Ajax? They had Ajax here didn't they?

RH: Yeah. We had Ajax here.

RK: And they were put in

RH: in '53. (IFC dates begin in 1956)

TH: Yeah mid-50s. Yeah.

RH: And they used to be on 50 gallon drums full of cement at one time.

RK: It was strictly on the ground.

RH: They were strictly on the ground before they ever went to this configuration we got now. And then they found out that the sand shifted so much and they wanted to raise them up to get them above the, you know, the higher they raise the tower and the higher they put the radar up the further they could see over the horizon due to the ground clutter and what have you so they kept raising it.

RK: Well, when were these towers built? They were built in the mid 50's right?

RH: '56 is when they put the towers in.

RK: And then the Improved came in...

TH: When was that?

RH: The Improved came in, in '60s.

RK: '60, right '61, '62, somewhere around there the rest of the stuff was built for this High Power.

RH: The High Power went in in '62 or '63. (1962)

PD: Oh, okay.

RK: This was all out of the Corps of Engineers in New York because I have seen the blueprints.

PD: So the HIPAR additions were 468...

RH: 467 and also 472. Of course, they took the radar here that was on 420 and they moved it over to 467.

PD: Okay.

RH: They had to build two new towers.

PD: But 469 was always there?

RH: No. That was built, until they built 468. So that was around '62.

PD: So in 1962 they built 469, 468, 472 and 467?

RH: Right.

PD: Alright. I see.

RH: And, see what they did was they moved this one from there over to here. The TTR and TRR had to be within so many feet of each other plus they had to be in a certain line and with the configuration over here they couldn't do it. That's the reason why they had to move it over here.

RK: You gotta figure out how this whole defense system was set up and what was masking, in other words what interfered with these radars. You had certain things around here that you couldn't. There was dead zones.

RH: See, each site, the reason why we had so many sites in New York and New Jersey is because each site had a PTL, they called the Primary Target Line. In other words, they took a line which would be the line which was most open at this site in other words they sure as hell wouldn't have a line of site back up over the Highlands back up over the hills. So they were more than likely, they were looking mainly over out across the ocean. And they had a PTL and they would have 30 degrees to design that PTL. Primary Target Line, okay so when they went into an actual set up or attack situation they would mainly search for a target on either side of that PTL. And of course the launchers, the get down in the Launching Area they are all faced out over the ocean so that when they shoot they would always shoot out over the ocean. They wouldn't be taking a target that was going over upstate New York because we had sites up there to shoot them down.

TH: I am trying to understand this. We had a blueprint at the Museum which Pete and I were looking over not too long ago that showed that from here from the Radar Site down to the Missile Site all vegetation had to be clear from here to the Missile Site.

RH: We used to come through and cut that down.

RK: On top of the tower, this one here you could look a direct line of sight and see a missile. A missile was about 30 some odd feet and you could see half the missile. Now you can't see anything from here.

TH: Right but was that something what you are talking about?

RH: Well, similar.

RK: Well, see this site, this site was primarily interested in taking over the ocean. If you went out this way.

TH: East over the ocean from here.

RK: From here to Long Branch. Now the Holmdel Site, which is right about the (Garden State) Arts Center...

TH: Right.

RK: That was particularly interested only in south.

TH: South New Jersey. Going south over New Jersey.

RH: Any aircraft coming in there.

TH: A sector of defense.

RH: Right.

RK: And then you had going up to South Plainfield that was more or less sort of in between coming this way. You know what I mean?

RH: We had 22 sites at one time.

TH: Yeah.

RK: And then the Philadelphia site which took everything that we crossed. So, all your radars crossed. All the way down from the Boston Defense to the Washington Defense everybody crossed.

RH: And we had them all the way down as far as Georgia we had sites. They had sites all along the eastern seaboard at one time. All the way up north and all the way down south and then we decided the Russians weren't going to attack us anymore so the put everything...

TH: Is that what it is? Is that what it comes down to?

RH: That's what it boils down to. They decided that nobody would have I guess balls, guts enough to attack us.

RK: The times in the late '50s alright, they had the Texas Towers. You remember the Texas Towers?

TH: Yeah.

RK: One radar sitting about 200 miles out.

TH: Yeah.

RK: They were along the coast. It was straight out here and one fell down or something and they closed them down. Remember the Texas Towers?

TH: The Gulf of Mexico one was swept in during a famous hurricane.

RK: They were tied in with...

RH: NORAD. That's part of the NORAD system, the Air Defense System.

PD: Well, gentlemen I think we can pursue our conversation right where we are.

RK: You want to go on the other side? The Launching Area, oh down below.

TH: Well, right where we can see it from here Pete. You got the basketball court. Was that for recreation?



Basketball court photo taken in 2003.

RH: Yep. Yep.

PD: The truck ramp, what happened there?

RH: Oh, that was actually something that the GIs scavenged when they closed out Holmdel site. They brought that over from the Holmdel site and the Motor Pool and they brought it down here and they used to use it to grease their trucks and mainly work on their cars. (laughter) A GI always had something to do with his car.

TH: So that was more or less unofficial.

RH: Yeah. That was a scavenged piece of equipment believe it or not. That was something they were going to leave when they closed the site down in Holmdel because they closed the site in Holmdel in 1970. Then four years later we closed this one. But they brought that down from Holmdel and used it there. And then you go a little bit further down there, well you mentioned the basketball court. They used to play basketball there and what have you.

PD: How about there, there are two barracks still remaining and there are two others which have disappeared.

RH: Yes. They came in and took them from Fort Monmouth. They took them in 1976.

PD: They are now in Fort Monmouth?

RH: Yes. They took them over to Fort Monmouth. These actually at one time alright the GIs used to live in these barracks.

PD: 404 and 405 are gone.

RH: Right. 402 (1955) was my office when I was here from '70 to '74.

PD: Where were you, Ron?

RK: I used to travel back and forth from Edison.

PD: Okay.

RK: I used to be in the actual shop where we supported. He was there too but then when the sites started to close up he was moved down here.

RH: Yeah. I was in direct contact. The used to live right in these and then 406 (1955) was their showers. There was a big shower in it and at one end was an officers' latrine. Of course 407 (1955) was our boiler room and that used to feed us heat into...



406 Latrines. Photo taken in 2004.



407 Boiler Room. Photo taken in 2004.

PD: Were those barracks comfortable especially during the winter down here or were they..?

RK: They didn't live in there too long. They lived in there up until they went to back on Post.

RH: We, they had a lot of problems with GIs coming in and out all the time so they moved them back up on Main Post.

PD: Where's that?

RK: That big building, the longest building over there.

TH: A wooden barracks building?

RH: Its two floors. It's got a big wooden porch all the way around it.

TH: Oh, the U shaped building. Barracks 74.

RH: Right. Well, that was their headquarters. That's where the old man stayed and that's where they...

RK: That's where the crew started.

RH: But prior to that they lived right in these.

TH: Yeah, they used to have a sign out front of that back in 1974 in front of Building 74 that that was the headquarters for the missile...

RK: C Battery.

TH: C Battery.

RH: Charlie.

RK: There was a chow hall, a mess hall right in the building.

TH: Right.

RH: They lived here at one time but the problem was they used to have to bring the food in from up there. So, they were always eating out of cans.

RK: You got to remember this was an artillery unit. They had what infantry here then? Didn't they?

RH: No.

RK: They had two different, two separate units here at one time. That's why this became all by itself and then when, when they moved out up there these people took it over.

RH: The site used to have what they called five minute status. Alright, in other words they were hot all the time. And the GIs used to live right here. They couldn't go out of here while they were on a five minute status. And then they would drop to a 20 minute status. Well, when they went to a 20 minute status it was alright but on a five minute status they had to be right in the area. They could never leave the area.

RK: So, at the time of the Cuban Missile Crisis in that area or time frame.

TH: Right 1962. How long would they put in duty here? Just normal.

RK: One whole week.

TH: One whole week on duty.

RK: 7 days right here.

TH: Right here at the radar site. In shifts, right?

RH: Oh yeah.

TH: Someone would go off and be sleeping and others would be on duty at the buildings.

RK: You had two crews generally, two full crews.

TH: About how many men would that be?

RH: On each crew I would say approximately there must have been 12 or 13 guys on each crew total.

RK: Plus you had your maintenance officers, your BCO's.

RH: Your maintenance men. There used to be well each site had approximately four or five maintenance men. Your platoon leader was a lieutenant.

RK: You didn't tell him that this building down here was for like all the spare parts.

PD: Where was that? 403 (1955)?

RH: 402. 402 used to have all the spare parts for the system. The front half of that was for spare parts. The back half of that was where we had our office.



Barracks 402 in 2004.

TH: The north end of it?

RH: Yeah. When we had our site contact team, that whole back half of the building was my office and we stayed right here. And we used to come in here and go to work, put in our 8 hours and go home. If they called us out at night we would come out at night and work on the equipment. We were if they had a problem with the system they used to have two hours to fix it. If they couldn't fix it in two hours they had to call us. So then we used to come out. Of course, I only live about 13 miles from here so I would drive in and fix the equipment.

RK: Where I was we had a big maintenance shop. That's where we used to take any part of a radar that had broke down into small components like you do with a television set or some other thing. We used to have shops. We used to set up the actual electrical type functions that performed in the system.

TH: Right on site here?

RK: No, in the shops.

TH: Oh, you take it back.

RK: They had other vans that were similar to what was here and all shop sets. You could test out anything.

RH: Only test equipment and, of course, when I was located, stationed right here on this site my support used to come from Philadelphia and then we used to have to call choppers and we would have to get a chopper to fly and get us parts in and what have you.

RK: You used to have a helicopter pad somewhere here right?

RH: The helo pad was down out on, on the Post. Down on Main Post, yeah. (The helicopter pad was located where Gunnison Beach Parking Lot is today.)

TH: Oh, over...

RH: Where the old airfield is. You know where the old airfield is?

TH: That big empty field? That big empty field back behind, well across from Building 74?

RH: Right.

TH: You had the Coast Guard trailer park. They still have a Coast Guard Trailer Park.

RH: Down further than that.

TH: Going towards Battery Gunnison, the twin guns out there.

RH: Right there. And on the other site of course all this, you know, this was the last dual battery in the United States, Fort Hancock.

RK: Double battery.

TH: Herc battery.

RH: Double Herc Battery. The last dual battery and we had this High Power we used to have a cable. It was buried under the ground over to the site here.

PD: It went from the southwest side to the northeast side?

RH: Right. And it was a heliax cable which is a low loss type cable like a rigid heliax and we used to feed the range and acquisition information from the HIPAR radar to the site over here because they didn't have a HIPAR radar.

PD: There was no HIPAR Building there.

RH: Right.

PD: Alright so if 402 was for equipment and office. 403 to 405 was just barracks?



Barracks 403 taken from telephone booth in 2004.

RH: Right. That's where they stayed. And 406, of course, was their latrine.

PD: Right. We have seen that.

RH: And 407 was the boiler plant.

PD: Tell us about the telephone booth there. It's still there.



Telephone booth in 2004.

RH: Is that still there?

PD: Yeah.

TH: It's a public telephone.

PD: A public telephone and you only have to use 10 cents.

RK: There is likely money in it too.

RH: I don't know when we left here, you know, we boxed up everything. That wasn't part of it. I didn't even realize it was still there.

TH: It's still back there. The phone, the receiver has been ripped off the wire but the box is still there.

RH: The coin box is still there?

TH: Yep. It's still there.

RH: I wonder who is paying for that. (laughter)

RK: They put that in because any of these phones had to be put through the switchboard.

TH: Oh sure you couldn't call out.

RH: The Army didn't want to pay for long distance calls.

RK: All the phones out here were strictly tied into the switchboards, to Highlands switchboard. We used to have direct lines into the Highlands. What was that called?

RH: The FUIF Line.

RK: The FUIF line and the other Tact line.

RH: The Tact line.

TH: What do you think the date is for that complex (Buildings were constructed from 1955 to 1962)? That would be the living quarters complex where the barracks were.

RH: That was built in the late '50s. I would say when the site went to, when they built all these other buildings here they built them at the same time. Late '50s, '56.

TH: By the way, I have to mention this. We have a picture from National Archives taken by the Army in 1959 of the missile site which was taken by a helicopter looking down and they had a couple of hercs up and an Ajax up there and then way in the back on top of Battery Kingman you can see a radar screen. A large radar screen up on top of Battery Kingman, was that....?

RH: Yes, when they originally set the sites up, believe it or not, the radar were set up over on Kingman. (The radars on Battery Kingman were not used by the Nike Missiles. The temporary IFC location was near Battery Peck at the north end of Sandy Hook.)

TH: On top of Kingman?

RH: Yeah.

TH: And that was done around '58, '59?

RH: I would say when they were making this site, building this site, that's where they had the radars and what have you then and over there until they moved it here.

TH: Very interesting.

RH: You know this place in the wintertime it's the only time you find that the snow never comes down. It always comes across. (laughter.)

TH: We know what you mean. Yes.

RH: A good many days I spent up on these towers, Ronnie and I, I mean cold. So damn cold you could burn yourself and you wouldn't realize it. And you know, we had an air inflated radome over top. When you see these radar, the picture of the radar itself it was a big ring. Now these things sat up on these towers and you see that big ring over there.

TH: We had an air inflated radome that used to be held up by the air. Well, we never had them much out here because the first thing that you know the wind would come along and blow the door open and it would just tear it right off. And they were about 1900 bucks apiece just one of them.

RK: You had to push yourself in and poof.

RH: It was held up by pressure.

RK: You see these things like pools, you ever see pools out by rich people?

TH: Like a bubble, yeah inflatable bubble over it.

RH: That is just what we had over on top of it. Yeah, this is only one wall though. Some of those they got now was dual wall inside it. But these were only one wall jobs.

TH: For history sake, there is one thing I am interested in here. There was, I know the Army went from anti-aircraft gun batteries battalions...

RH: 90 and 120 (mm anti-aircraft guns).

TH: Right. And they switched over to the Nike Ajax and then of course the Nike Herc and there is something I don't understand. There used to be C Battery here. 51st Artillery Brigade.

RH: C of the 3rd, 51st, right.

TH: And then in the last years because when I came out here in 1974 there was the 16th ADA and the 19th ADA. I don't know what they are. That's where I lose from battalion. I lose from the battalion days to the 16th and 19th ADA days.

RH: This was the 52nd Brigade. Alright, and it was these two batteries were C of the 3rd, 51st. C-1 of the 3rd and C-2 of the 3rd. They were a battalion. And then when we closed so many of the sites down, alright, the 16th ADA was a group, alright. So instead of that being brigade headquarters, up on the hill, it became group headquarters. And consequently it went from the 16th Group Air Defense Artillery, the brigade, and then the battalions. Let's see, there was 1, 2, 4 batteries in a battalion. And the four batteries in this battalion were C-1 and C-2 on Fort Hancock. C of the 3rd was Holmdel and C-4 was located at Plainfield. So when they closed Plainfield and Holmdel down, these sites here became a portion of the group which I think of the ones on the other side of the river over in Tilden were part of the group. In other words, when they phased the Air Defense System down we closed, we closed Holmdel. We closed South Amboy, which was Old Bridge. So Old Bridge/South Amboy we closed that one. We closed Livingston and that left open Ramsey. In other words, they phased them down at different times and consequently we wound up with only these two batteries here. I think the next battery located south of us was way south.

PD: I have a question about the Connecting Corridor Building. What are those two poles on the sides of the Connecting Corridors?

RH: Lightning arresters.

PD: Lightning arresters, okay.

TH: Oh, that's what they are.

PD: They look like railroad poles. Believe it or not down in Tolchester, Maryland, they had a site and they used to put them down when the site was off status. And when they were hot they used to have a red flag they used to hook onto them and raise them up. Well one night they had the lightning arresters down and they had a storm. It hit one of the radars and burnt the god damn radar up on account of it. So they used to, those were so designed, on top of that there used to be a cone that was well you know that was pointed and it used to come down about that big around on the bottom. But they were so designed that all the stuff in the area were protected by those two lightning rods. In other words, the vans, the corridor and everything else that if lightning would hit that it would throw it off to one side. It wouldn't hit it.

RK: For some reason or another, the electrical components seemed to absorb or attract lightning because we had a few vans hit early in the Ajax systems. Well, you can go back before that was the M-33 radar which was strictly gun. They got hit by lightning a few times. They were made out of magnesium. Once the magnesium started that was the end of it. In fact, this one here had an electrical fire start inside of it.

RH: It burned the whole van down.

RK: It was just puddles of magnesium.

RH: Aluminum.

TH: Magnesium fire?

RK: Yeah, they were made out of magnesium.

TH: That would go right up

RH: The RC van right here just caught on fire on night and it burnt right down to the ground in back. I guess about 20 minutes. We lost about a million dollars of equipment right down the tubes.

RK: Just puddles.

RH: It had an aluminum skin. The outside of the van was all aluminum but inside was all magnesium. And the next day when we came out here.

RK: It was no more than six inches off the ground was left.

RH: It was completely gone. You wouldn't believe it.

RK: The radars were a magnesium, aluminum alloy

PD: Right. Could you tell us about the transformers on both the radar complexes to the southwest and the northeast?

RK: The transformer was a connection for commercial power. At times they used to run off of commercial power. In other words...

RH: Standard operating was commercial power.

RK: Commercial power. There used to be big poles here. Do you remember?

RH: Still is.

RK: I don't see many of them.

RH: Well, down the end down there. That's where the main line is. See where they stop.

TH: Yeah.

RH: Well, that's where they go underground. Down the pole and they go underground and you find E Huts all the way up the road.

RK: The transformer mainly was like any transformer. It boosted power.

RH: And underneath that is big counter pulleys. That is the main ground for the site is located down underneath that transformer. There is a huge ball of copper buried underneath there for grounding.

TH: We don't want to hear that. (laughter)

RH: Believe it or not you won't find any copper in here. We pulled it all out when we left. But there is a main line with copper. You see that pole with the transformer?

TH: Right.

RH: Right there. Well, there is three cables about that big around that run all the way down underneath the ground. There are E Huts all the way under here.

TH: You hold this.

RH: Copper is worth a lot of money.

TH: That's right.

RK: You are not curious about that pail over there? (laughter)

PD: The HIPAR Building.

RH: We had a big radiator.

PD: That is just in the south side of the HIPAR Building.

RK: The largest truck radiator you had ever seen. That was a monstrous radiator that would cool the glycol to cool the klystron which gave us all the power for the High Power. It was a big monstrous thing. The copper in that thing was worth a fortune. It would just cycle glycol which is the same thing as antifreeze.

TH: Was by the way, all of this equipment was taken out by you back when they phased it out.

RH: Boxed it up and shipped it out the depot.

TH: Really? The Army, you still retained all this equipment?

RH: The Army sold it. It's being sold to foreign governments.

RK: Not the Russians I hope. (laughter)

RH: These systems really had some, you know, that High Power had a moving target integrater group into it. Right. You know if you fired up a radar you see it on New York when they show the..

TH: Outline of New York, yeah.

RH: You wouldn't see anything. It would take all of it out. Take the clouds out. Take all of the slow moving stuff out, the chaff that they would drop. You could pick up a target like I say, the size of a garbage can lid in the air. In other words the resolution of it was so great and they used to have there was other modifications in there. It took out jamming. It was a tremendous piece of equipment.

PD: Ron what are those features on top of the HIPAR building? It looked like a...

RK: Well, those were vents. But the big thing that the small building on top of the building that's where the hoist was.

PD: Chain hoist.

RK: To lift the one tube.

RH: And they would take the cover off of it. The cover weighed I think six or seven thousand pounds. About three tons.

RK: There was lead about a half inch thick. That was just for a hoist.

PD: Could either one of you gentlemen tell us anything about the other radar complex at the northeast end of the site? It seems to be about the same development. There is no HIPAR Building or equipment stand but there seems to be three towers and then a hexagon tower, probably added on later.

RH: No. That was for the TRR. 473 was the Target Ranging Radar. 413 was the Tracking Radar, 417 I mean, 417 (1956) was the Target Tracking Radar. 418 was the Acquisition and the 419 (1962) was the Missile Tracking Radar. And you will see that the Missile Tracking Radar at 422 and 419 both of them had a line of site back down this way to the Launching Area.

PD: Yeah that is to the Nike Missile Site. Okay.

RK: That is where they kept the missiles.

RH: Of course your corridor was 411 (1958) with the two vans and if I am not mistaken there is a building on that side too.

PD: Ready Room.

RH: Ready Room. Same as what we are standing in now.

PD: Generator room. Now what are all those little manholes?

RH: There's a septic tank out there.

PD: Okay. That's what it is.

RH: And there is also some E Huts if I am not mistaken.

PD: E huts, what's an E hut? Cable huts?

RH: Cable huts. Yeah. They were out there. But the one you will find out there is a big septic tank. They built that right on top of the ground. That back site at one time when we used to come in here you couldn't there was no connecting road. That was an afterthought putting in the connecting road.

TH: You mean you were separate. There was just a field between us over here on the west side and they over on the east side?

RK: They were the Americans and the Russians you know they were split. You haven't found the pads for the test sets.

RH: There is no pads. The only thing that is left down there is the anchors.

RK: The Anchors. Yeah. The center anchor, that was a cement pad.

RH: Well, we boxed the RF Test set and mast up. We took all that stuff out except, the maybe they can find it still laying open in the field here.

TH: You made an interesting observation a little while ago about the Ajax units being up on concrete drums. We call it south beach now. There is a gravel road that goes out by some big concrete bunkers dated 1937 and 1938. We call that south beach. It's a fisherman's parking lot and you go north in through the dunes up there and there are these big square platforms that are creosote pilings and they are sheeted with plywood back up there. There used to be five. There are only four left and they were layed out in an X. And back that area among them there are concrete fifty five gallon drums filled with concrete.

RH: That's where they had the old, the Ajax systems were originally set on them, on, the antennas were originally set on those drums.

RK: And they were all over here at one time back in the '50s.

TH: Were on the wooden platforms is what the radar was set up on? (The wooden platforms were used to test experimental radar sets in the late 1930s.)

RH: No. Just on the drums.

RK: I wasn't back here in that time.

TH: I thought maybe you had heard something.

RH: I heard some stories you know that they were setting on drums, the antennas and then they finally went to the hard site like we have now, you know the stationary towers.

TH: Right.

RH: But I know like you mentioned the one that was staying up on top of the old battery here they did have the radars over there at one time.

TH: Right.

RH: And we used those, as a matter of fact if you go down along the wall, the furthest ones out we stored missiles in at one time. Them old...

TH: The gun batteries like Battery Kingman.

RH: Well the, all I guess it is like a concrete hut. But its down, it's the furthest one down on the end here. We used to have...

TH: Oh, the igloo bunker. Way, way out down by Spermaceti Cove. Yeah.

RH: We had Ajax Missiles in there. We also had some Ajax missiles in over in these. You know the place has got plenty of history.

TH: Oh yeah. You are helping fill in a big gap here. You are very, very helpful.

PD: I have no further general questions.

TH: I was thinking about security because we went over that at the missile site that they had the dogs down there.

RH: Oh yeah.

TH: What about here? Did they have the same type?

RH: No. It was strictly for missiles.

TH: Were you left more or less out in the open?

RK: One time, at one time they did have nuclear warheads down there. Then they took them out.

RH: He didn't say that. (laughter)

RK: Well, it's gone.

TH: We know it. We have been told that.

RH: The Hercules had a nuclear capability. There is no doubt about that. We did have some AGs but we were mainly, in other words if one lone plane came in, as a matter of fact I was here one time when we had that Russian commercial craft that was headed towards Cuba. It was running out of fuel. Now we were actually locked on him and they were going to blow his ass out of the sky, you know but of course the fighters from McGuire went out and escorted him onto New York so he could get fuel. But yeah, you know they were ready. Of course you couldn't fire. You had to get permission to fire but you know they could go through the whole thing. Lock on, track him all the way in. but hey wouldn't use them unless they felt there was a large group of planes coming in or you know I guess they really rely on our CIA and the rest of them to get us the information. "Yeah they are thinking about attacking us." Well, if they are thinking about attacking us we better be ready.

RK: Did you have anybody from the Launch Area? Any of those people?

TH: Yeah we had a fella by the name of Russell Marsh who was here from '70 to '74.

PD: Do you know him at all?

TH: He was stationed down, he was in the Army. Served in the Army and was down at the missile site.

RH: I more than likely.

TH: You probably know him if you saw him because he is working for us.

RK: Oh yeah.

TH: Yeah he started this summer down at that Ranger Station.

RH: Did you leave the pumps on down in the pits to keep the pits out of..?

TH: No. There is a lot of water down in there. (laughter) You mean to keep the water down in there. Yeah.

RH: Yeah down underneath the elevator there is a pump.

TH: Right. Russ was telling us about it.

RH: And there, it's about a thirty foot suction its got onto it. And that is where all the water used to drain down under the elevator. When we left here we left the power on down in the pits.

RK: You can raise the elevators the way it is.

TH: The one elevator was operating. The others were not when we took it over. Even that one elevator is not operating now.

RH: It's not operating at all.

TH: Not at all. We had to climb down on the ladder. Go through the hatch and go down on the ladder, get out feet wet down there.

RH: Is there much water down on the bottom?

TH: Not that much. Underneath the elevator it's laying in water. The elevators are laying underwater now. But to either side of it is dry. To either side of where the missiles used to be stacked. They used to have a couple of missiles on one side and a couple on the other. But when you come down through the hatchway and you go down through the lock, this one little room and then you go through a corridor and go around. All that is water and it was over my shoes. These shoes got drenched. And Pete here didn't. (laughter)

PD: No. I wore (inaudible) shoes.

RH: Smart. But when we left we left the power on. As a matter of fact, there was electric all the way up into this area. I think they are still using it off the transformer.

PD: The sunset is beautiful.

TH: You are probably familiar with the sunsets out here.

PD: Look at that. All I had is my camera with color film.

RH: We used to stand up on top of those towers in the summertime you know. The GIs you know, we used to have telescopes for optical columniation because we used to have a test set.

RK: (Inaudible)

TH: This sounds interesting.

RK: Well the girls would go out with no clothes on.

RH: What is that building?

PD: That is 410 I think it is.

RK: They used to have a lot of cables underground. They were like telephone buildings.

RH: Oh, that's the E hut, the telephone huts.

RK: They used to have wires. A long time ago.

PD: 401, building 401 (1941).

RH: Fort Hancock always had its own phone system.

PD: A little brick building out there. Now who built that?

TH: Which one, now 401?

PD: Yeah, the little building out there.

TH: Oh way back there, yeah.

RH: Oh, that's been here since the beginning.

PD: Okay. That is a remnant of World War II.

TH: Yeah.

RH: I would say.

RK: There are a lot of little huts around here you find out where underground cables for telephone systems or exchanges.

TH: Or Sewage Pumping Station. I think that might be either. You can walk up and see some.

RK: They still got the water works out here?

TH: Oh, yeah. That is how we get our water.

RH: How much water do they got?

RK: That's something. Did you ever go down in that thing and look how far that thing goes?

TH: Yes. I have seen it.

RH: There was an old metal building over here in the back.

TH: Its still there. Yeah.

RH: Its still there. You guys using it for storage?

TH: Yeah. The maintenance division uses it for storage of road sand.

RK: The family houses by the water works are they still there?

TH: Yeah. Artie Robertson who has been working here, well he worked for the park now he is working for the National Park Service, the state park. (Tape stops and restarts.)

PD: Who should we contact?

RH: I would say the Hercules project officer in Huntsville, Alabama and if you make an address just like that it will get to him. Or I would also suggest NORAD Headquarters in Colorado. Now they should have what batteries were here? When they were here? What times they were here and right up until the end which was in 1974 when we finally boxed all this stuff up and sent it back. That's you know.

RK: About it.

RH: Anything I can do for you at any time.

TH: Oh, yeah.

PD: One last question, why did they move you out of here?

RK: It was Nixon' decision. He closed down all these things. That's what happened.

RH: Salt.

TH: The Salt Treaty.

RH: I think Detent had a lot to do with it.

PD: The submarines?

RK: Yeah. The nuclear submarines that came into play that cut everything down from us.

RH: Our country has no defense. All it has is retaliatory measures at the present time. Even our BMEWS system our last I shouldn't say BMEWS but our last one out there in

the Dakotas. That is strictly scrapped. There is no anti ballistic missile defense at all so if they shoot at us we have got no choice either to sit here and get our ass blown up or shoot back. Simple as that.

RK: These sites were primarily mainly in here to protect the cities. It was the New York Metropolitan Defense.

TH: Right.

RK This became this was the last line of defense.

RH: Protecting the largest industrial chemical complex in the free world right here in the Kill Van Kull.

RK: This replaced the cannons.

RH: Right over in there, I don't know if there is anything in there anymore but there used to be and RF test set, a test mast that we used to run up and lock the radars. That is how we used to check our radars.

TH: Right in front of us here?

RH: Right here in that hill over there.

TH: I remember a real big mast being...

RK: This thing right over here.

TH: We used to have a mast way, way outside the compound back in the dunes outside the fence.

RH: Oh that was that was Fort Monmouth.

RK: That was Signal Corps.

RH: Signal Corps at Fort Monmouth. They were doing some microwave checking. But there was a test set, set right over there in that hill and there was another one right back over there for that site. Each site had a different test site we used to use. And you would lock the radars onto it and do your columniation.

RK: It was a relay station.

RH: Yeah.

RK: Part of a relay station that the Signal Corps at Fort Monmouth used. It was sitting right there, a big tower.

RH: And the cable that you see on that pole goes down underground and comes up over there. And that's an old gun cable. You used that thing and that's been here since Christ knows how long. Now the pole goes down underneath the ground and comes up on the other side by that van or by the building. It's interesting. (Tape stops and restarts.)

PD: Are you glad we asked? (laughter) (Tape stops and restarts.)

RH: For down the oil tank. There was 12,000 gallons of oil we used to store in there.

PD: Okay so now we are on the east side and we have some large concrete blocks. These are the tops on tanks for generator fuel, diesel fuel.

RH: Diesel fuel and there were 12,000 gallons of oil we used to store in here. And we built them for the wall and that was our POL Shed.

TH: What's that now?

RH: Well, we used to stick paint and grease and stuff in there. They weren't allowed to store around the site. (inaudible) We used to fill these full of water. And of course, back here was three great big fans that cooled the 145 KW diesel generators.

TH: You were going to say something? Guys used to lay up there?

RH: They used to lay up there and one of them one time they rode up there and stayed on the top of that platform and the old man had to fly over the site, the general and he got kind of upset about it. So they made him go up there and wipe it out. They used to lay up there and sun themselves. But I cut all the ladders off when I left. That's why there are no ladders.

TH: So you are the one. (laughter)

RH: There is still one over there.

TH: There is still one. Well, it's cut off but its still you can still...

RH: You know where this thing goes up, the ladders are in there too. I only cut off as far as I could reach.

TH: Yeah.

RH: Because I had a torch and I cut them all off so that just in case people came in the area they couldn't get up on top of the towers. We didn't know the state park was going to take over.

TH: National Park.

RH: Well, it was state then.

TH: Yeah that's right. That's right.

RH: If we had known that the National Park system was going to take over we would have left a lot of this stuff.

TH: Yeah.

RH: But we didn't know and at the time we were afraid of somebody coming in there and falling off.

TH: Sure. Sure. That's right.

PD: What is your telephone number at Fort Monmouth?

RH: Let's see. 532-4782 or 4784.

PD: And you are still working under what division?

RH: I work for the Director of Material Management, Depot Programs Division.

PD: Okay.

RK: Tell them about this room here. They used to...

RH: This is the control room for the....

PD: Building 410.

RK: In this room they had the controls for the generator. They used to start and stop them and they used to synched the all the generators together. If they had three generators running they used to have to be synched. They used to have lights that would go on and off like real science fiction. They used to synch them in and throw each generator on at the same time so you wouldn't have...

RK: They used to kick them off.

RH: If they were out of synch.

RK: And the big glass wall was so they could look through and see the generators...

RH: And it was you know the airspace in there deadened the noise because you couldn't stand in the building.

RK: You couldn't stand in there when they got the big diesels running.

TH: Sure.

RK: They had mufflers that went out eight foot high off these buildings. Still got the mufflers there.

RH: I got three of them at home. (laughter) This was BHF Communications and they used to use that. At one time the Air Force, I don't know if you ever heard the radar bomb scoring but the air force used to fly in and they would have spots and we would check their accuracy on bombing with the sights. We would track them and they would release a bomb tone and we would pick up the tone and mark it. You'd be surprised how accurate they could drop a bomb. They used to come from way up. They used to drop it from within 30 feet of the target. Now when you are talking about a nuclear bomb or a high explosive bomb coming within 30 feet of the target you could really wipe something out. But we used to score them. The only reason why we stopped scoring them was because the air traffic in the area got to be so heavy. There was no room. But that was what we used to use that for.

PD: Ron, how does it feel, you know, to come back and see someplace where you spent a...

RH: A good part of my life.

PD: That is now sort of a fossil of history. Sort of, only a skeleton remnant of...finish before you can answer it.

TH: I got it.

RH: Its really, you know, I feel like a part of me had died when I see all of this stuff is all falling down, you know, and I am still around, you know. It's really something you know. We used to sit in there and have coffee with the warrants in the morning and...

PD: And it all deteriorates so fast. In four or five years it's a mess.

RH: I think a lot of it is from people getting in and tearing stuff apart. You know it's really a shame. You figure the days we spent in here having coffee and, a good part of my life.

RK: It's gone with the wind.

RH: It's all gone. You got nothing left but the...

TH: By the way you got that painted compass on the road right here by the main entrance.

RH: Right. GI's did that.

TH: They did that.

RH: We used to, you know what they did it for? We used to go through exercises, CBR attacks. And even today...

TH: And what is that?

RH: Chemical Biological and Radiological Warfare. It's a part of every GI's training. They used to use that to tell where it was coming from, wind direction and all that what have you. It was the only site that ever had one was here. The GIs did it themselves.

TH: I see.

RH: Painted on there.

TH: What about, what time period was that you think?

RH: 1968, '69, somewhere around there. Four or five years I guess before we closed it up I guess they did that.

TH: Is that the flagpole right here? This little pole right in the...

RH: Yeah. They had their battery flag on that. Which always amazed me for how ever long I was out here, they never had the American flag flying. Up at Battery Headquarters they did but each individual site never had anything. They had the battery flag. They used to have their own flag. It was a big thing between the GIs from that side to come over here and steal a flag or put it upside down or do something else with the flagpole. GIs are crazy. (laughter) You had to be half crazy to work with them but we enjoyed it. Ron enjoyed it and I did too.

RK: It was good work.

RH: I would like to have a dime for every hour I spent out here.

TH: And as the sun sets here at Sandy Hook let's get back in the car. (Tape stops and restarts.)

RH: I don't think any of us got any pictures. Even the guys we worked with and we worked with a hell of a bunch of guys. I got pictures when I was in the Army of the systems out on Fort Bliss area. That was all the training for that artillery.

TH: Right.

RK: From them I got some pictures of the High power at Redstone Arsenal. I never had any picture out here.

RH: I never had any pictures out here the whole time I worked for the Army. I never had any pictures but I got old pictures of the Carpenter Shop. My grandfather worked there and my great-grandfather worked here. Retired out of here. My grandfather retired out of here. My father worked here.

TH: Oh, they worked for the Army?

RH: They worked for the Army as civilians, yeah.

TH: Really? And that is going back some time. Wasn't it?

RH: My great grandfather, yeah.

PD: Your great-grandfather working out here?

RH: Yeah. He lost his arm out here.

TH: Really? What was his name now?

PD: A building accident?

RH: Was it Robert? I guess it was Robert. Yeah. My grandfather was the head carpenter out here and he retired out of here in the '30s sometime. And of course my father worked here as a young boy and of course I worked here.

TH: That's great.

RH: My great-grandfather lost his arm. He was a night watchman out on the pier. After he lost his arm he couldn't work. He was an engineer or something.

TH: Was that a on the job?

RH: Yeah. It got stuck in a piece of machinery. It just took it off. He only had a little stump.

TH: But this is what I like. I would like to get together again if we could and...

RH: In summertime. (laughter)

PD: Summertime ended yesterday and...

RH: It was nice you know, nice up until today.

PD: Another season has begun today. (laughter) An abrupt ending and beginning.

RH: One thing about Jersey weather, you wait twenty minutes longer and it will change.

RK: If you ever went into missile command at Redstone (Arsenal) they have big monstrous pictures on the wall of all kinds of site configurations. I think I remember we used to be able to buy them for a buck. I had some types of the Hercules that I brought down to Redstone Arsenal. But write them and they should be able to give you a lot of the history.

TH: Yeah.

RK: And even if, I wonder who would have that for the 52nd Brigade? You would have to go into Fort Bliss.

TH: Yeah. They would know.

RK: That is strictly ordnance in Redstone.

RH: Yes it is.

RK: They will tell you where the sites were and what they did.

TH: Alright. (Tape ends abruptly.)

END OF INTERVIEW