EDITED VERSION OF INTERVIEW WITH ALBERT DONALD GREEN. COMMENTS PROVIDED BY INTERVIEWEE ON JUNE 19, 1998

Tape #1, Side 1

Chris: This is Chris Pfaff at the Denver Federal Center in Building 67 on November 11, 1997 and I'm about to interview Al Green, a retired employee of the General Services Administration (GSA).

Al, would you like to begin by telling us how you came to work for GSA , when you started and tell us a little about your responsibilities with GSA ?

Al: I came to the Denver Federal Center (DFC) June 11, 1961. I started working with GSA. I had transferred from the Bureau of Reclamation (Colorado)-Big Thompson Project to the DFC. Some of my duties when I arrived at the DFC was to operate and maintain the DFC's high voltage distribution system and their alarm systems, particularly the fire alarm systems. I was involved with those systems probably throughout the 35 years I was here, off and on, advising people about them. After two years here at the DFC field office, I transferred to our design and construction branch of GSA and I supervised high voltage projects and alarm projects on the DFC.

Chris: Tell me what that involved Al ? What kinds of work did you do on the fire alarm systems and high voltage systems?

Al: One of the things I did was locate funding, advise A&E engineering firms about what we wanted in an underground 15,000 volt system. What I really put a lot of time on is putting both the high voltage and the alarm systems underground on the DFC and removing all the overhead lines.. Funding wasn't always available for them so when I say it took 35 years to do it, it was mainly due to funding. I always had projects ready to go when there were funds available and ended up with about 99 percent of the alarm systems and high voltage systems on the DFC underground. That helped the appearance quite a bit. It also provided more reliable service. We didn't have trouble with rain, snow, winds, and lightening storms. We didn't have trouble with squirrels and birds that had caused the frequent electric service failures. It turned out to be a very good improvement for the DFC.

Chris: From my own viewpoint I think it has made a tremendous difference in the visual quality. Was it a hard concept to sell to management at first or were they in favor of that?

Al: Well, that was something kind of new to them and, of course, I had come from the Bureau of Reclamation, that's primarily where I had worked. I worked on transmission systems and distribution systems with the Bureau of Reclamation. I felt very comfortable with it and after we had one or two projects completed the enthusiasm picked up and again as funding became available, I didn't have such a hard time selling it and we eventually got more support. I feel very

good about that. Someone that's been in government, at least the way it worked in GSA, you could get things done if you just continually followed them up and even if it was years and years in between projects. Also, beginning around the late 1970's, we had to remove all high voltage transformers that contained P.C.B. which required many changes in the electrical distribution system.

Chris: The fire system that you're describing, is that hooked up to all the buildings?

Al: The fire alarm system, it was a very difficult one. The overhead wiring was very bad and you'd get a rain storm or snow and the fire alarm systems in buildings could not send alarms to the DFC fire department. So when it went underground it received the same benefits that the high voltage did as far as weather and reliability. That alarm system as well as the high voltage system would enter most all buildings on the Federal Center, at least all the large ones. I might point out that the high voltage on the DFC not only was outside the buildings but went inside the buildings to other high voltage equipment where it was lowered as required by the needs of tenants.

Chris: Can you tell me a little bit about the difference between the DFC when you first came to work here and some of the major changes that you've seen happen over the years?

Al: Well I guess the most interesting one I've seen was the growth around the Federal Center. When I first came here I wasn't too enthused about coming to a large city and when I came out for an interview at the Federal Center I thought well gee this isn't bad, it's way out in the country -- I can live with this. Well, that certainly has been a major change. The other change has been in some of the improvements that have been made. Another project that I had a lot of involvement with was the storm sewer project which involved planting new trees and new shrubs, some that were native to this area. McIntyre Gulch, there's a portion of it that has been rehabilitated and it's coming along. It's just a matter of funding so we can go on with the rest if it's deemed necessary later on. Another big change was in the central heating plant boilers that produced high pressure steam. The heating plant was an underground steam distribution system and it went, the piping went, to most DFC buildings. In the 70's we decided that with the fuel shortage we would use our most abundant fuel which was coal. We built what we called a bag house to filter out all the emissions from the plant and that worked very well for probably 10 years. Then it was determined that the underground steam system was too wasteful and that we should put boilers in each building with natural gas the only fuel. I always thought this was wrong. With the central boiler plant we had coal, gar or oil for fuel.

The other thing when I first came here that impressed me was the research on animal diseases that were being accomplished at the Federal Center. There were several veterinarians and the staff that they needed.

Chris: What agency was that?

Al: That was the Department of Agriculture Animal Disease Research Center. There were probably about 50 people involved in it all the way from what they called the handlers, the people that fed the animals, down to the veterinarians and, of course, the administrative people. They primarily started out with enchepalitis in horses. That was a disease that was spread by mosquitoes and had been prevalent in Mexico and still was. It had moved across the border into Texas and it was in southern New Mexico. They worked very hard to develop a vaccine and they were successful. That was from the 60's until about 1988. In 1988, that part of the Department of Agriculture was transferred to Laramie, Wyoming. I was told that one reason they did that is that it was beginning to build up around the FC in the early 80's and that the animals weren't really compatible with the rest of the area around the DFC. And they were planning on moving to Fort Collins but for some reason they couldn't get into Fort Collins so they went to Laramie. And they're still there doing research. One other thing they accomplished at the DFC was to develop a vaccine for blue tongue disease. It's something that sheep get and cattle also. What happens is that it affects the animals hooves. They don't really die from Blue Tongue but their feet get so sore they have to lie down all the time and then they catch pneumonia and die from pneumonia. But again they were successful with that research and that helped the people in ranching. The vaccine for horses was a blessing for people that had race horses and people that just ride horses for recreation. They, of course, wanted to make sure that their horses didn't come down with that and there wasn't any way to prevent it at that time.

Chris: Now its my understanding that they also did experiments involving coyotes and birds?

AL: Yes, that's correct but that was the Fish and Wildlife Service.

Chris: So a different agency was doing that research?

Al: Yes, that was part of the Department of Interior. The birds, well for instance, Quella birds were imported from central Africa and brought to the DFC and they were in quarantine all the way from when they left Africa and as long as they were on the Federal Center. These birds, they're not a very large bird, a little smaller than an English sparrow that we have here. But they destroy crops in Central Africa, they come in large swarms, the sky is black with them. They'll destroy a whole grain crop and people really need those crops. The Fish and Wildlife Service was able to find methods of saving the grain crops.

Chris: Were they doing the research for Africa or to apply in this country?

Al: That was a U.S. Aids Program. Another one was, they did research on Philippino rats. The rats in the Philippines, they would come into the fields at night and they would take a bite out of a stalk and then go on to the next stalk and take another bite out of it and pretty soon the whole field was collapsing, a field of cane.

And then the little radio transmitters that are now being put on birds and animals, that was first developed here at the DFC.

Chris: By the Fish and Wildlife Service?

Al: Yes, by the Fish and Wildlife Service. They did a lot of research about the harm that DDT was doing to waterfowl, ducks and geese. So at one time there was a lot of research done by the Fish and Wildlife Service on that problem here at the DFC. In fact, they had ducks and geese that they fed controlled amounts of DDT and turned them loose but they kept track of them and they actually followed them by radio with the little transmitters that they had on them in a small airplane all the way up above the Arctic circle where they were nesting and they would follow them to their nests in the swamps and bogs up there and gather up some of the eggs and bring them back and determine the amount of DDT that was actually going from one generation to the other. They did research on various compounds for several years to be sure what was definitely harming eagles, waterfowls and other birds.

Chris: Were there a lot more pens and corrals then and other building for these animals on the DFC at that time?

Al: Yes, the pens were located down next to Downing Reservoir. There was one little building there that mostly was for the handlers. The research was in several Fish and Wildlife buildings where their scientists were located. That's just one of the things that I can recall that they did and that was very interesting. They did one with deer too and they were trying to find out how they could keep deer from eating small evergreens in the mountains and so they had deer on the Center and they would put different chemicals on the plants to see if the deer liked them or they didn't like them. As far as I know, I never did know the results of that . I know they tried the same thing with geese. I don't know what the success was on that one either. But they did do that type of research on birds and animals.

Chris: Did any of the animals ever escape? Was there ever an instance where some of these animals in the pens got out?

Al: The deer-- they would get into the Gulch and leave the Federal Center. But for years it was very common to see deer on the Federal Center. They would come down out of the hills and follow the gulch down and they would be here and they'd stay here quite a time as long as there was something for them to eat. They weren't all captive, there were only a few that were captive and kept in pens.

Chris: We still have coyotes on the FC and people have said they have seen foxes. Did you see those a lot more too?

Al: Yes, there was a lot more of those around. Coyotes and red fox-- it was not unusual at all to see those.

Chris: Well that's fascinating. I wanted to go back just a minute. You had said earlier that you worked in the Design and Construction Branch. What was your job title there Al?

Al: Well I started out as an inspector on electrical and alarm systems. And then from there I went back to the operating portion of the DFC. I was general foreman for all the crafts on the operation and maintenance for 90 buildings that included the electrical, the plumbing, the paint, the carpentry, the central heating plant, lock and key, and all streets, grounds, water systems, fire protection, sewer systems, gas lines, and snow removal.

Chris: You had your hands full with all the buildings here. Of course, the FC originally was an ordnance plant and some of the buildings from the ordnance plant days are still here, the larger buildings. Some have disappeared over the years. Can you tell me about some of the features of the ordnance plant days that were here that are no longer standing?

Al: There were many wooden structures on the FC that have been removed. Some were used as laboratories, others were storage buildings. There are still a few original wood structures on the FC but most of those have gone. The bunkers- they're the buildings that were behind the earthen banks where powder was being stored. The buildings are still there but the earth has been removed from them. The intention is to remove those buildings when funds are available to dismantle them. One of the favorite things that I hated to see go was the covered walkways between the powder bunkers and the buildings that were using the powder in ammunition. They were covered walkways, concrete walkways. They were covered probably two-thirds and the bottom third was open on both sides. The people that were working during the war, they had to move powder from the bunkers into the manufacturing zone. These carts, they were carts that they simply pushed along. They soon had a nickname for it, and that was the angel walks. I don't know if any of these ever blew up but they always felt that if one did that's time to see the angels. So that was an appropriate name for it and I think they did a good job there.

Chris: How about the water towers? What was the story with that?

Al: The DFC had two 150,000 gallon water towers that were put up at the time the munitions plant was built. In the early 80's they had begun to leak even though we had done quite a bit of maintenance on the inside of the tanks. The decision was made to replace them and there was a design put together for tanks to replace them and one of the options was to simply replace the bowl and continue to use the structural part of the tank that held it off the ground about 100 feet. That was about to go to contract and we had a change in administration and it was decided that there shouldn't be any towers at all, that the water should go underground so an underground reservoir was built to pump the water from one reservoir to the underground reservoir. What happened when you put it underground, you had to have pumps running continually to keep water pressure in the buildings. Whereas when the tanks were overhead there wasn't any need to pump it again, it was there whenever you needed it. To operate more pumps in place of gravity water flow increased electric and maintenance costs with a less reliable system.

Chris: Was that more an aesthetic decision by the director at that time?

Al: Yes, it was more for aesthetics. They were trying to develop the Federal Center as an office

park and they didn't believe the towers were fitting for that kind of plan or for that kind of use.

Chris: Now I've heard rumors about driving trains in underground tunnels on the FC. Is there any truth to that? And I know there was a train that went around the Federal Center, some of the tracks are still there but they are slowly being ripped out. How was that when you first came ? Were trains still used and when did they stop actually coming onto the FC?

Al: The trains were in full operation when I arrived here. The Federal Center had its own diesel electric engines-they had two of them. They were left over from the munitions plant. The reason the munitions plant had diesel electric engines was that they wouldn't allow a coal burning steam locomotive on the center because of sparks so the railroad company would bring the cars to 6th avenue and then the munitions plant people would have to go pick up the cars and pull them on or take them out of the Federal Center. So the railroads in the FC were all controlled by the government. The government did own the trackage over to just south of Colfax where it joined the main line going to Golden and Denver. The railroad served a huge purpose in getting the munitions plant built in 1941 and it, of course, brought in the supplies for manufacturing and it also moved the finished product back out and shipped overseas. The railroad played another important part in FC history when Building 810, a large warehouse located on Alameda, and it was a GSA federal supply warehouse. Most of their supplies came in and left by rail, probably not so much leaving by rail as came in because some of it went out locally on trucks.

There is no evidence of trains in tunnels. All tunnels were very small and used mostly for utilities.

Chris: Was it a GSA warehouse before it became the USGS lab then?

Al: It was a GSA warehouse probably until the .. and I'm just guessing about this.. it would be about the mid-80's and then they phased it out gradually and as they phased it out the Geological Survey moved some of their operations into there. Their map storage was one of the first ones up there and then their rock core storage and it just went from there and now the whole thing is being used by Geo Survey and there really wasn't much of a use for tracks up there and so when we were doing the grounds project, improving the roads and storm sewers, a lot of the track had been removed, it was removed down to about Building 77.

Chris: Which building is that?

Al: That's the building that we housed our locomotive in right behind the Fitness Center. Well there's double track there for probably two or three blocks. That's still in place but I imagine someday it too will be removed.

Chris: So the Federal Center must have seemed like quite a different place back then with the train going through here. Did a lot of people drive their cars to work at that point from Denver? They were commuting from further away since this was largely undeveloped around here. And

was there bus service and all of that at that time?

Al: Most all transportation was by car, a lot from long distance--Parker, Longmont, Loveland, Fort Collins, Greeley and mountain towns. At that time there wasn't any bus service on the Federal Center and, of course, the train wasn't for people, it was for supplies and so forth. I might mention the train also brought coal in to operate the central steam plant that I spoke of earlier. That was the reason for upgrading it to what we call the bag house, to clean up the gases and so forth from the coal. So many years we brought coal in by train, a 100 ton car and it was dumped in over a grate and then a conveyor belt took it up to the top of the boiler house and there were ten 100 ton bins that they kept filled.

Chris: The appearance of the boiler house has changed in recent years too?

Tape #1, Side #2

Chris: I'm asking Al about the changes to the boiler house and following up on his remarks about the coal being brought in there.

Al: The coal, before we had a way of controlling the pollution-it was just exhausted to the atmosphere and it wasn't unusual for you to go out after work and get ready to go home and your car would be covered with ash dust. It was just the way a plant like that operated but after the air filtration plant was built or gas filtration, it was very clean, it didn't happen anymore. One thing that did happen is that in the summertime we didn't use coal and we had to be very careful about getting the bunkers in the building out of coal and not store any coal over the summer and occasionally they didn't get that done early enough and the coal would catch fire spontaneously and that fire was somewhere down in hundreds of tons of coal. We never knew where but the only way to get to the fire was to dump all that coal on the floor and haul it out and spread it out and you would haul a lot of coal before you got to the flame, the actual burning coal. That happened two or three times and its not a very clean job.

Chris: How would you actually unload the coal? Was that done manually?

Al: When coal came in by train, the coal cars stopped over a grate between the tracks and bottom gates on the cars were opened. When coal came in by truck, they also unloaded over the grate and coal was elevated by conveyor belt to the top.

Chris: When you had the fires?

AL: In the fires, the coal as I said before, was stored up at the top of the building and it came down through chutes and was delivered to the boilers that way. What we did was simply open the chutes and let it all fall down.

Chris: I see, I can imagine that must have been a chore. Did you have a crew working with you?

Al: Yes, when I came back down as the general foreman in the early 70's, that crew was under the building manager's office as well as the fire department. I hadn't said anything about them but they were a great help here on the Federal Center. That's where all the alarms went. The firemen were at that time GSA employees but there were a lot of them that had worked at the munitions plant as firemen when it was first built. So I had the opportunity, and it was a wonderful opportunity, to talk to them and hear some of the things that they talked about when it was the munitions plant. It was just nice to know those type of people.

Chris: So they would help you as well as your own GSA maintenance crew? You had the two crews that would help?

Al: Well, the fire department didn't help so much in removing coal. We had a grounds crew of about 60 men that normally took care of the grounds and the snow removal, which worked fine because we didn't have to let anyone go during the wintertime because we could use them for snow removal. They are the people that were mostly involved with removing the coal.

Chris: Now the fire department must have come in very handy for some of the fires that we've had here on the federal center?

Al: Yes, there's been several major fires on the Federal Center --one of them was Building 25, which was in March of 1976. . the laboratories on the second floor of Building 25, the north end. It appears, to my knowledge it was never made public exactly how the fire started but we do know that they started in several places. It destroyed the whole second floor and we had the DFC fire department, we had Lakewood and Denver and a couple of others helping us on that fire. It did a lot of damage

Chris: So they suspected arson when you say it started in several places?

AL Well that's the only way it could have been. But evidently the information, at least I never heard of it, it might have been made public but I never did hear.

We had a couple of serious fires in Building 41. One of them, I wasn't here at the time, but I've seen photographs and talked to people that were here, that's one of the stories the firemen told me. When the switch was made from an arms plant to a GSA operated facility, the first agencies on the FC were the Bureau of Reclamation, Veterans Administration, and Social Security. In 1947, the latter agency was using part of Building 41 for a large storage area and that's what caught fire and destroyed a portion of Building 41 which has since been rebuilt. And then we had another fire in early 1971 that was on the second floor of Building 41 and it was determined to be caused by an electrical short in some equipment, so, and then there was another small fire in Building 45 and that was a result of Fish and Wildlife research--chemicals that they had stored in a refrigerator that was not explosion proof. Evidently there were some volatile materials stored and it blew up and set the north wing of Building 45 on fire.

Chris: Was the fire department manned all day and night here? They had people here responding at all times?

Al: The fire department, when I first came here, they actually slept there and did their own meals and they were on for 24 hours and then they, I forget how the schedule went really, but they operated that way for many years.

Chris: Did it get turned over then from a GSA fire department to the City of Lakewood before they removed it from the Federal Center?

Al: The fire department....it was decided, and I'm going to say this was the mid 80's, it was decided that it would be more cost efficient to contract out the fire control on the Federal Center rather than have the government forces do it and at that time the firemen either retired or transferred to other jobs and they slowly all just retired and now the City of Lakewood, West Metro Fire Department, that's the name of it now..

Chris: Covers the federal center?

Al: Yes, they don't do internal inspections, they simply will fight a fire if there's one.

Chris: Did all of these fires take place during the day when people were here or did some of them occur at night?

Al: Most all of them were at night. I don't recall one that was during the day.

Chris: Did you end up getting a call and having to coming down here in the middle of the night on those occasions?

Al: Oh yes, it was very important that we were here. Even though we weren't fighting the fire, we helped in many other ways We stationed personnel at the pump house to be sure that there was plenty of water for that many fire departments that were drawing water. One engineer and myself, after we were assured that the water supply would continue and had turned off electrical power to the fire area, we went into the library in the first floor of Building 25, and the water was just pouring through because it was the laboratories above that were on fire. And we had big rolls of plastic and we rolled it out on top of the racks of books ..

Chris: So you saved the USGS library?

Al: Well, we saved a good portion of it. We didn't stop to think that our plastic stopped about a foot from the floor and when the water came down and splashed the floor, books got wet. But I believe they ended up saving most of everything they had there. One interesting thing was that there were a lot of books that they couldn't get to right away to dry them so they took them to an ice storage plant and froze them and then brought them out as they had time to set up tables and

put blank newsprint in between, newspaper, in between pages, about every three or four pages they'd put one and then by the time they got all through they'd go back and do it over and this is a process that took several weeks to get done.

Chris: Now I know that you were here on other occasions in the middle of the night ..that you'd get calls. Can you tell me about some of the things that would wake you up in the middle of the night and cause you to come down here?

Al: Oh yes, there were a lot of them. Probably one reason I really pushed to get all the utilities underground is that it seemed like anytime there was a wind storm or a lightening storm the power would go out. Well, I had been instrumental in taking care of it for many years so I ended up coming out. We didn't really have any high voltage people at that time. I operated the high voltage system just on my own except for major repairs and we would call in a contractor for that but through my years as a general foreman, and then when I went to assistant building manager, I still did some of that. And so for quite a while until it was finally contracted out and I set up the contract for that . I wrote the specifications for it and so now a contractor responds to those after hour things like that. Water breaks were something else. It wasn't unusual particularly in the spring as the frost was leaving the ground, the cast iron water pipes all the way from 12 inch in diameter to 3 and 4 inch, we'd have water squirting out of the ground. So we had to get people out and get it fixed and have the buildings opened for tenants.

Chris: So you would get calls from the guards in the middle of the night?

Al: The guards or the fire department. Yes, I had lots of sleep interrupted. The fires, the water breaks, the boiler plant was a problem too. It wasn't a real pleasant place to work but safety-wise it was ok but people had to work shifts and sometimes they'd forget to come in or get sick or something and then, of course, I had to come out and get somebody else to come in and take that position. . We could not leave the boiler plant by itself although it did run on automatic for two or three hours it would get by, but it depended on the weather . So that was a problem, the boiler house.

Also there was snow removal to deal with, to try to have streets and parking lots open before people came to work.

Chris: So there were actually GSA employees that worked here 24 hours?

AL: Yes, well around the clock, but they were different from the fire department. The fire department stayed the 24 hours and with this there was a shift change. .

Chris: It's a good thing you lived close by Al.

Al: Yes, that helped a lot. That was instrumental in getting me to move close by. It wasn't unusual for water breaks in a building. Pipes broke, they were part of the munitions plant.

Particularly the hot water systems, they would rust out. It wasn't unusual to come out and see a lot of firemen pushing water out of buildings. So interior water breaks were numerous also.

Chris: So when you got here and if there was a water break, would you be the one that would call the fire department and get people over here to help?

AL: No, generally the fire department was notified first and they'd go take a look at it. And if it was a little one that they could control with some sort of a container, they'd do that and if it was a slow drip or something, they could do it. But when it was gushing, they needed lots of help. Since then we've remodeled almost all the buildings and that problem really doesn't happen much anymore. When they do have a broken pipe now, it's because it froze. The heat went off in a particular area where the fire sprinklers were or something like that. And sometimes those didn't show up for a day or two if we had a cold spell so it took a while for those to thaw out and then they would start to turn loose in the middle of the day.

Chris: You had your hands full.

Al: That was a job, I can't say I enjoyed all of it but I certainly did get a feeling that I was doing a lot of good and I had a lot of great people that I worked with, that I really enjoyed, and I took the job and I did the best I could and sometimes that involved things that looked like it was way out of line but it had to be done so...The problem was dealt with and another needed attention. Time went by very quick and never seemed enough.

Chris: Can you tell me about some of the more controversial projects on the Federal Center? I know that Building 67 when it was built was fairly controversial. Did you have anything to do with that?

Al: We didn't have much to do with it and I don't think Bureau of Reclamation engineers had much to do with it . It was a Reclamation contract. They paid to get the building built. Their engineers were in (Building) 53 at that time. They weren't allowed on the job. Since I was with GSA I didn't have any problem getting on the job. Henry Fitz who was the project manager for the Bureau of Reclamation here. I spent a lot of time with Henry. I did watch it go up and it was completed in 1967.

Chris;: What was the reaction on the Federal Center at that time? That would have been the tallest building anywhere around here.

Al: The architecture.. they didn't think it was very appropriate. It certainly didn't blend in with anything that was around here. And so, yes, there was a lot of talk about it but it was built and soon turned over to GSA to manage and provide many things that were not covered by the construction contract.

Chris: And now we have all these other tall buildings in the neighborhood. What about the

reactor that was built here?

Al: It is located in Building 15, built between 1966-67. Building 67 and Building 15 and 16 were all built pretty much nearly the same time. The reactor building was completed and it was occupied by the USGS. A lot of their laboratories were in use in 1967 and by 1969 the reactor went into service in one large room that had been provided for it. The reactor, when it was completed, was sitting in a water tank that was probably thirty feet in the ground with a concrete wall poured around the tank. It was a double wall tank. If the outer wall leaked, they would know about it and the water would still be contained. This hole had to be dug by hand because you couldn't get machinery in there then. So they had two people digging this hole for some time, to get this large hole . It must have been about 10 to 12 feet in diameter

Chris: You're talking about within the building. There was no machinery that could do that kind of thing?

Al: They would have had to tear the roof off and they didn't want to have to do that. It was the contractor's choice to do the work that way. He provided the support requirements, power, water and air conditioning. Its been a very interesting facility.. The reactor.

Chris: Were there any special maintenance concerns that you had to deal with as far as having a reactor there?

Al: The reactor is in a secure area and we were escorted by the operators and had radiation tags that were checked when we left the area. There were radiation monitors all over the building. If they went off, they signaled the fire department and then they contacted the appropriate Geological Survey people and they came out and took a look at it. But I don't ever recall when it was any danger to anyone. Either the alarm went off and malfunctioned or it was some small room that didn't exhaust to the atmosphere.

Chris: Was there publicity about that when it was built? Was there concern for safety at the Federal Center?

Al: No, I never heard of any. I was working in the GSA Engineering Division at that time as the inspector on the project. I enjoyed being on that job, seeing something like that go together. Its been common knowledge but still a lot of people don't know its there but its still operating and it has all the safety devices, so forth, and very competent people who have been operating it for many years. The public is allowed to make reservations and they give tours of it if you're interested.

Chris: I'll have to do that myself sometime. What about the underground bunker west of building 50 that was built as part of the Civil Defense System? And also, of course, Building 710 where FEMA is? Building 710 was built I think in the 60's?

Al: To answer one question you asked me a while ago- it was about tunnels. I don't think I ever answered that one. Major tunnels, there was a tunnel out of the north end of Building 45. It was a test firing range where they would pull ammunition off the assembly lines and fire it in this tunnel . Now there's part of those tunnels still on the Federal Center. When the munitions plant closed down the University of Denver had a contract with the Navy to continue with experimenting with different kinds of ammunition, low caliber, nothing very big but . They still use it as a research area. Denver University has those buildings. The rest of the tunnel that went into Building 45 is now gone. It has been covered over. There was another small tunnel out of the north end of Building 20. It went from... It was a large tunnel that you could walk through . As far as I know, it was mostly for personnel to move back and forth between Building 20 and there was a forge plant that came along the latter part of WWII. They were making artillery shells. It wasn't there much more than a year or two and then it was taken down and that forge plant, as far as I know, was moved to Alaska and the tunnel was just filled in and became a parking lot. So its no longer in existence. There were some small utility tunnels like under Building 41 but they were extremely crowded.. you almost have to crawl through them. I mean it wasn't anything you could walk through. That's about the only tunnels that I remember or was involved in . . I believe I have been in most of them because when you had a water break or a maintenance problem in one of them you'd get into a lot of places. Building 67 has a utility tunnel under it.

Chris: You probably know this facility better than anybody else Al with all the climbing around you've done.

Al: That is probably true, there was a lot to learn on my own and from some very fine people many years ago. Yes, I did climb the water towers often just to sit on top and look at the view. I enjoyed field work. I had a lot of desk work too. But I would come out after hours and look at things that I didn't have time to do during the regular working day. I learned a lot from the people that were on shift then and no, I don't regret that part of it.

Chris: When you say on shift would those have been other people aside from the boiler plant shift? Were there other employees that were here after hours then ? GSA employees?

Al: Generally there were crafts people working overtime on some problem. It was not unusual at all to run into Geological Survey scientists that would have a project underway in their laboratory and they'd be at critical stages and they would simply sleep alongside their project in their chair. So it wasn't unusual to run into people like that in Building 20 , 21, 25 and 56. They were all research laboratories and so they were generally happy to see somebody come around and tell you about what they were doing.

Chris: I bet they were.

Al: Besides the fire department, at that time we also had maintenance personnel on all night.

Chris: And what would they be doing?

Al: They would be doing things that would interrupt the heating and cooling during the regular working hours so they'd do it at night. So between the maintenance people, the fire department, the boiler house and the agencies, there were quite a few people around.

Chris: Now were there ever any security concerns here prior to the Oklahoma City bombing? Were there instances?

Al: Yes, there were bomb threats off and on for many years and we would do a search each time. There were always concerns and appropriate measures taken to protect people and property. Several times administrators wanted to remove the fence around the DFC. By the time that became serious the administration would change and it would be forgotten for awhile. I was always relieved when it didn't happen.

I know that personally when I was walking through a building at night and it was dark or something, I never felt that there was a security problem . We didn't have street lights out here either, not at that time, and there were some women that were working on the mass spectrometers down in Building 21 but I never heard of any problem like is prevalent today in a lot of areas. There may have been and it might have been kept very quiet or something but generally being in management I would have heard about it but I wouldn't swear that there wasn't.

Chris: Was the Federal Protective Service already around or did they come in later?

Al: The Federal Protective Service was.. Again that was another area that guards from the munitions plant switched over to GSA when it became a government facility.. Research and office facility.

Chris: So you never had any problems with thefts or criminal activities occurring on the Federal Center?

Al: Yes, there were thefts. Typewriters would disappear and ..now its lap top computers. Also vehicles and equipment off of vehicles and many smaller items would disappear.

Chris: I suppose when you've had some dignitaries, visiting presidents here, we've had to take very special precautions on the Federal Center that I'm sure involved some special security.

Al: Yes, we've worked with the security people for Vice-president Gore.

TAPE #2, Side 1

Chris: Today is November 14, 1997 and I am continuing an interview with Al Green, retired

employee of the General Services Administration. We're going to pick up where we left off at the end of the last tape. We were talking about visits by presidents and other dignitaries that required special security. Al is going to tell me a little bit about when Vice President Al Gore came to visit the Federal Center.

Al: Approximately 2 weeks before he was due here at the Federal Center, an advance team came out and looked at the area that he would be in-- there was a couple of areas --and interviewed us. We went ahead and made our arrangements and the day that he did arrive they made another sweep through the area, probably a couple of more, and the last one was with dogs to pick up any, I believe, it was explosives that the dogs were attempting to locate if there was any. To attend the meeting, there was only certain people that attended the meeting, or if you had a pass that allowed you in. That was about it and when he did leave he went outside and I was working with one of the Secret Service men and he was concerned that Al Gore was mixing with some of the crowd outside of Building 41 and they were more concerned that he stayed on the schedule that they had for him . But it all worked just fine.

Chris: Did that create a lot of extra work for you those two weeks beforehand?

Al: Well, not a whole lot of extra work on that one. . We had to identify tunnels, water and utility lines, and other lines. In fact, we had a water line break just the day before he arrived right in front of the door where he was going to get out of his car. Well, we worked all night and we got the water line repaired and of course we had somebody come out early in the morning and put down brand new blacktop. Well, that patch in the street was a concern to the people that were protecting him and so we had to go over that and explain what happened there. They looked at everything.

Chris: Can you remember any other dignitaries that visited the Federal Center that would have required special security measures ahead of time like that?

Al: I have been told that President Roosevelt visited the plant during WWII. It was arranged for his car to drive right through some of the buildings. He didn't have to use his wheelchair that way.

President Eisenhower did visit the National Archives located in Building 48.

Chris: Thanks. I wondered whether GSA's role has changed over time as far as administering the Federal Center? During the years that you were here was there a change in the responsibilities of GSA as far as administering the property? Or have their responsibilities pretty much stayed the same through the years?

AL: Well, the responsibilities when I first came here, it was all on GSA. If some remodeling needed to be done or something else, it was done with the in-house GSA carpenters, electricians, air conditioning people. There was very little of that kind of contracting going on. So we had

quite a large shop, well I should say shops, there were probably 15 or so in the electric shop and at least 25 in the carpenter shop and 20 in the air conditioning shop. That was in addition to their regular workload to operate and maintain the heating and cooling, and broken windows, and doormats and janitorial and the whole thing. We went along like that for about 15 years and then we started cutting back on personnel and they had delegated some responsibilities to the agencies if they needed some work done that they could work under some contracts that GSA might have. That went on for quite a while and then they upped the amount of dollars, there was a dollar limit on that, and I believe it was 25,000 dollars. Later on they increased that amount that the agencies could go ahead and take care of the work. We'd cut back so much on personnel in the shops that we were beginning to have to contract some of that work. We did have a contract with Ogden Allied, a large firm that maintains buildings and air force bases and so forth. They won a contract to operate and do all the maintenance on the Federal Center, maintenance and operation. They were here approximately two years and the work was never acceptable and GSA simply did not renew their contract. And GSA went out and we did a lot of emergency hiring to have somebody here to operate the buildings. Ogden Allied left, I believe it was March 1 at midnight, and the next day we had to have a crew of our own people which were all new. We had just very few people that had been here very long
so..

Chris: What year would that have been Al?

Al: I guess I'd say in the 80's. So that was an awkward time. The contractor had new people. We didn't have any people . We had a few people that we were doing the supervision of it with. It just didn't work out very well so then we went along a few years with some of our own people and some contracting, smaller contracts rather than one large one. Right now I would say they are probably pretty much, well at least 90 % of it is being done by contract, but not one contractor. There's a contractor for high voltage, water lines, painting so forth. So that's where we are today. There isn't very many GSA mechanics or ..do any actual work now. What few they have now are mostly supervisors and that type of thing.

Chris: You were the supervisor for these mechanics, carpenters, and electricians initially? Is that right?

Al: Yes, when I... well at one time I was a general foreman and we did have a roads and grounds department that took care of the snow removal and street repair and the trash removal. They also operated our locomotive. We had a locomotive on the center, a diesel.. electric locomotive I should say.. that we moved freight when it came onto the center. The railroads would simply bring the cars on to the center and we would take them from there to Building 810 which was a large supply depot. So we had those folks, we had electricians , we had carpenters, we had a metal shop, machinists, a sign shop, plumbing shop. Seems to me there was more back then..

Chris: Were these shops scattered over the Federal Center or were they located in one building?

Al: No they were all located in one building. They were all located in Building 41, at the north end. They all came to work there and left to go out on a job there and they returned there when the day was over.. We had some excellent craftsman.

Chris: In your opinion then, Al, would you say it was easier to operate the Federal Center with your own in-house people or with contractors working for GSA?

Al: Well, at least at the years I was there, I always felt that it was better with our own people. We knew our people, what kind of work they did, whereas contractors it never seemed to me that we knew exactly what we were getting until after we had them. With our own people, they had a personal...it seemed to me like they were more in tune with the Federal Center, they knew that they had a job here and that it was a secure job and so forth whereas a contractor, he might have a contract for a year, or two years but then there wasn't any guarantee that he would be the next low bidder so consequently they didn't produce the quality of work.

Chris: Has the landscaping changed much on the Federal Center over the years from the times you had your own landscaping crews versus when you had a contractor come in and do it?

Al: Well, the landscaping has changed considerably. It hasn't been necessarily due to the landscape contractor that is on the center now. Most of the trees have been planted by larger contracts when we've done some remodeling around the buildings or upgraded streets and sidewalks and so forth. A lot of that has happened by large contracts that were associated with something else. The landscaping is very much different than it was. We didn't have a whole lot of lawn when I first came here. Well, we didn't have hardly any streetlights. Sidewalks, we would build them, we didn't have money for concrete but we had enough people that we could go up on the hill where they had covered walkways. I think I mentioned earlier about the angel walks. The angel walks were probably about 5 feet wide and 6 foot long and the concrete, it was in sections, so we would pick those up with a forklift and we would bring them down to the area where the main buildings were and grade the earth and put down the concrete and that's the way that we got our sidewalks. Some of them are still in use today so we made very good use of what we had to work with when we didn't have funds.

Chris: Sounds like you used a lot of ingenuity here. So there's many more trees today . And also when you say that there's a lot more lawn it was just prairie, what's left I guess of prairie?

Al. Well, we had planted quite a bit of it in crested wheat, areas where we weren't able to get any water to them. We tried to have lawn at the entrances, the main entrances to buildings, some entrances.. Well, most other entrances didn't have any lawn at all. So there's been a considerable change on that.

Chris: Now I've seen a copy of a 1976 master plan that was done by the Taliesen Associate Architects of the Frank Lloyd Wright Foundation. I think it was a master plan and an environmental impact statement done then and I wonder if you know if any parts of that plan

were implemented?

Al: Well, yes, some of it was, particularly on the activities that went on in various buildings ..like for instance it was set up that the storage areas, the laboratory areas, that portion of it was. Bits and pieces of the study were used. I'm sure some of them are still.. made their way into the latest study.

Chris: So it was more the use of the buildings that you think was implemented rather than design because there were some designs as I recall that were developed for buildings here?

Al: Well, there was a design for one large building but that never was approved or funded at all. But the other buildings, when we remodeled them, we kind of at least followed Frank Lloyd Wright thinking on how they should be done. Not that they did the design on the buildings, that was done by other contractors.

Chris: What was the building that was never built going to be? What was it projected to be?

Al: My understanding, it was to be an office building. It was a large domed building and it would have lawns and trees and so forth and offices around the outside. But it was a huge building and it just didn't happen.

Chris: Are there other projects on the Federal Center that you can recall that were planned and never built?

Al: Not that I can recall. There was always going to be a laboratory for USGS east of Building 25 in the large parking lot there. That never happened but right now there is a large building for USGS being constructed for the water quality laboratories so yes, we heard about that for 25 years before it ever.. But it did finally happen.

Chris: Would GSA have started making plans 25 years ago? Would they have started getting some preliminary designs or was that all too premature ?

AL: That was pretty much premature. The need was there and it was just one of those things that was on the table that someday they would do and it did happen.

Chris: Would GSA contract out the design then? They would hire an architect and then also hire a contractor to do the building?

Al: Yes, that's correct. They'd go out for bids on the design. The agency, USGS reviewed them, and GSA reviewed them and then they finally settled on a design and after the design was completed it was still a couple of years before it actually went on the market to build the building.

Chris: Does the funding for the building actually go to GSA then? Is that how it works? Or does the agency that's getting the building actually get the funding authorized?

Al: Well, it's a mix of things. USGS, I believe, got most of the funding, and GSA had part of it in there too. At least that s the way it was.. Its under construction now so I... Things change but I assume that's still the case.

Chris: So in addition to new buildings, the water lab is our most recent one, there's been constant remodeling going on. Is that usually done in response to agency request and GSA then does the design ?

Al: Well, the remodeling is pretty much that way. If GSA really was trying to upgrade the type of office space.. So GSA initiates those projects and then if the agency has particular needs such as laboratories, then the agency has to fund those. I believe I talked to you last time about Building 15 and 16. Those were new buildings. They weren't here when I came here. And, of course, (Building) 67 wasn't. And the underground..Office of Civil Defense building at that time, that was new . That was Building 710 and then, of course, Building 810, the huge supply depot. So there were quite a number of new buildings. And now its mostly remodeling of the older original Denver Ordinance buildings.

Chris: Did any of the GSA administrators that you worked under have their own pet projects on the Federal Center that they tried to initiate or get through?

Al; Well, in some cases that might have happened but I don't think it was too frequent because some of them might have been here five years and a lot of times these projects are pretty much underway and the design has been completed and the funds are set aside for a particular project so they might change it somewhat during the construction or something like that but as far as pet projects, as we mentioned earlier the water towers, that was turned around considerably, but as a rule I wouldn't say that they had something they were really pushing.

Chris: The next thing I'd like to ask you Al is what you enjoyed most about your job, your 35 years working for GSA. What would you say were the highlights for you?

Al: Well, there were many of them. I guess what really kept me going was the nature of the work, interesting. It was a continually learning process. I worked with a lot of very talented people and that helped a lot and I learned from them. It was just a real challenge and there were many times that uh, I guess I wished I wouldn't have put in so many hours but at the time it seemed like the thing to do, or had to do, so it did happen. I guess that would be about it Chris.

Chris: And what about your biggest headaches Al? What would those have been looking back?

Al: Well, the biggest headache would be the boiler house. Of course, it was a 24 hour operation. It seemed like something was always breaking down or happening over there. So it took... well,

you could always figure something was happening that was taking your time up over at the boiler house. It was just the nature of the work. There were some good people over there although when we were burning coal it was a dusty place. We were continually working trying to keep it clean. When we did use fuel oil, that was a lot easier to operate the boilers, they operated almost automatically but we still had to have people on shift. When we went back to coal again, in fact we went back and forth two or three times with coal. Well, originally it was coal and then when the energy crisis, it was in the early 70's, when fuel shortage was short... We had a short interval there when we were on oil then when the energy shortage hit we had to go back to coal again. Then after it was over we went back..so, no, .. I guess I would say that was one of the biggest pains in the neck.

Chris: I know you put in a lot of extra hours there so I can imagine it was a big headache. Is there anything else that you'd like to talk about at the Federal Center that I have failed to ask you?

Al: Well, recently in the early 90's I was involved with site characterization for hazardous materials on the Federal Center. I worked on that for probably a little over a year..identifying areas, trying to identify what we buried and there was quite a lot when we started. When I first came here we didn't really haul much waste to a landfill or anything so a lot of it was just kept here. We had our own mini landfill but it ...

Chris: Where would that have been Al?

Al: Well, that would be north of Building 810, along Alameda there, in that area. And then there was one in the area where the Park and Ride is now. We did, well it was actually burning. We would haul trash out there and the firemen would light it on weekends and we'd burn it.

Chris: That was all your trash ..everything from the Federal Center?

Al: Well, I wouldn't say everything, but a lot of it, quite a bit of it. Because we really didn't have the trash trucks like they have now or anything like that, it was just regular dump trucks. .I know we did take some out to ..

End of Tape 2, Side 1.

Tape 2, Side 2

Al: Aside from that, those were relatively easy for me to identify. I made up a drawing that's showing those sites. I also reviewed all Remington Arms, I mean the Denver Ordinance Plant drawings and some of those showed where they had dump sites. Also from those drawings I could determine where they had tanks for cutting oil that were buried in the ground. There was..well many of those. So I would identify those areas and if it was supplying oil to a building or for cutting oil for machinists' work then I'd.. Any oil was suspect because at that time we feel there was a lot of PCB in the oils. It really wasn't a concern at that time.. And then where they

had firing ranges, we looked for lead. If they were using a particular chemical in a building, and the drawing would indicate that it was being treated, the process involved, well one of them was cyanide. I located those lines and identified them on the drawing. It just took a lot of research through old drawings and operating manuals and so forth. I came up with quite a bit. I did an estimate on what it would take just to go and do core drillings and take samples to verify whether there was something there or wasn't and that has been done and I guess now its a continuing, ongoing thing, cleaning up areas. One of the first ones that they've done and completed was to intercept the ground water going off the Denver Federal Center. It went off across Kipling and the ground water went through the school grounds and to a residential area. They have since intercepted that water on the Federal Center where its treated and then its just allowed to continue as it always had. So there's no loss of ground water. It's still there, its just been treated. Well, that was another area that was on the drawing, the site characterization study. That has been ongoing.. That has been upgraded by various contractors, that site characterization. I did work considerably with that contractor, off and on. Even today once in awhile they still contact me about something that there is a concern about. So that was one of the highlights. I really enjoyed that. In some ways, I felt like we did it, we didn't know any better but we did it. I was just glad that I had stayed on and was able to help them identify the areas.

Chris: Were the areas then mostly disposal sites of GSA from the post munitions plant days or was there a lot from the ordinance plant days as well?

Al: Well, I would say that most of it was Ordnance Plant. GSA, we were in three of four areas, but some of them weren't very large areas.. Whereas, wherever the railroad track was in place on the Federal Center, that was suspect because we never knew for sure what they were hauling or whether they had any leaks. And, of course, we didn't know the railroad ties were treated with creosote and that sort of thing. And then the Denver Ordinance Plant had a coal storage facility our here and there was a large stockpile of coal during the war just in case there was a strike or something... and the thing would continue. So, no, I would say a lot of it is left over from the arms production.

Chris: Did you find there was anything around Downing Reservoir? Was that an area where there were either oil tanks or any other hazardous materials?

Al: There were some oil tanks within a block of Downing Reservoir. Early on in the Denver Ordnance Plant operation, they didn't have a waste treatment plant where they could treat for cyanide or chemicals or anything. They were putting that directly into Downing Reservoir and then that went off the Center and at that time east of the Federal Center was farm land and they had animals, cows and so forth. Well, in some of the research that I did, the farmers in that area started complaining about their livestock dying and their crops not doing too well and so forth. . And they did do some tests on the water and found that that was very contaminated water that they were dumping in Downing Reservoir. So they did build a treatment plant down near Downing Reservoir.

Chris: Is that treatment plant still there?

Al: No, the concrete tanks are still there, I mean where they treated the chemicals and so forth, or treated the water. There's bits and pieces of it still there but it's not in use as a treatment plant at all. So, I guess to answer your question it's inevitable that something would be in Downing Reservoir. But at least it isn't leaving the center, what's there, and I imagine someday they will be doing a clean-up of that area too.

Chris: Are there a lot of other sites on the Federal Center that you think will require clean up in the future?

Al: Well, it really .. yes, there are other sites but it depends on when they really get all the information on the test wells that they've drilled and what they've found. Naturally if there's a new building going up like the water laboratory for USGS.. we went in there and very thoroughly tested, drilled test wells around that area so we knew we weren't putting a new building on top of something and the same with the Park N Ride. The soil that we removed from the street improvements that we're doing now, we keep that soil on the Federal Center. We use it in berms and so forth. Although it has been tested for contamination, as far as I know nothing major in that but nevertheless, we're keeping it on the Federal Center rather than going to a landfill somewhere and then finding out that it came from the Federal Center and we're still liable.

Chris: Let's see, I was going to ask you if you have any favorite place on the Federal Center, if there's a favorite spot either a building or out on the grounds?

Al: Well, it's out on the grounds not in a building though there's lots of interesting things in buildings. I guess it would be the back area, what we call the back area, along Union and down Alameda and that way. That hasn't been disturbed much and you can see more foxes and coyotes and other things up that way. . I guess along the gulch has always been pretty fascinating to me.

Chris: This brings to mind when you were talking about hazardous waste, the big berm out there with the white cover, that everybody always wants to know what's hidden under there. Maybe you can tell me what it is.

Al: It's feldspar and it was used in steel hardening process although that one that we're speaking of, the one that is still here, I believe it came along after the plant was shut down. Nevertheless, they stored it here. It came from Walden, its just mined up there. Up at Walden, I understand there's several of those types of storage facilities like we have here. It isn't a hazardous material at all. This is a high grade of feldspar that they use for steel making and this was... well what I've seen of it, it has a concrete cap over it now. Keep the concrete cap repaired so the water doesn't get in there. When the water does get in you'll see a kind of purple water run out but its not anything to be concerned about.

Chris: Are there plans to do something with that pile or is it going to be a feature of the Federal Center for a while?

Al: Well, I think it's...it's been moved from one agency to another. At one time it was under GSA's jurisdiction and I think it's under the defense contract or something of that sort now. The last time I spoke to anyone about it was about a year ago, and they said yes, we're trying to surplus it. . But with the closing of all the military bases and some of them have similar things like that stored and the military bases are being developed for various things that this one just keeps slipping. So I would say it's going to be here for awhile.

Chris: Well thank you Al. Is there anything else you can think of that might not be documented anywhere else that you might want to tell us before we end the interview.?

Al: No I don't believe. I think we've gone over everything. Of course, when I leave an hour later I'll think of something but not right now. Thank you.

Chris: Well, thank you Al and if you do think of anything else we can certainly continue this interview at a later time. Thanks very much. END OF INTERVIEW