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Transcript

Name: Claude Griffin

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Tape: E-1

Project Number 20012

Tape FEMP

00:01:31

Q:

Tell us, tell us where we are standing right now, in the, within the Fernald property.

00:01:36

A:

In the background, you see Silos 1 and 2, which contain K-65 material.

00:01:43

Q:

What is that?

00:01:44

A:

K-65 material is radioactive waste that was generated in the '50s and these silos in particular were built to store the material until such time that we develop a process to take material out and place it for final disposition.

00:02:02

Q:

What is the relationship between these silos and the current cleanup mission of the facility in terms of one of the areas slated for cleanup what is it called is there a technical name for that as far as environmental regulations are concerned, or?

00:02:17

A:

These silos comprise part of what is called Operable Unit number 4. And there are four silos in particular, three of which are filled and silo number 4 is empty. So Silos 1 and 2 are more commonly known as K-65 silos and Silo 3 is another silo that contains radioactive material as well.

00:02:39

Q:

What, where does the term K65 come from? Do you know that?

00:02:42

A:

No, I don't know. I don't know that answer.

00:02:45

Q:

We'll have to save that one for another interview, but I wondered about that. Well we want to talk to

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you for a few minutes about how you got to this point today as an employee of Fluor Daniel Fernald, a little

bit about your personal background and what you think about working out here. So why don't you begin at the beginning and let us know where you were born, where you grew up, and where you went to school?

00:03:05

A:

I was born in Greensboro, North Carolina. I went to school there, high school as well as college. When I graduated high school, I attended North Carolina NT State University.

00:03:16

Q:

Where is that located?

00:03:17

A:

It's located in Greensboro, my hometown. It turns out during my junior high and high school years I wasn't quite sure what I wanted to major in but I knew it was something kind of engineering related. And primarily either electrical engineering or possibly architectural engineering. Some of the friends of my family were also on staff at North Carolina NT State University so I had an opportunity to talk to several professors and so forth ahead of time. And while in high school, I was in Boy Scouts specifically the Explorers. It was hosted by a company at the time called Western Electric, which was an engineering-related firm primarily electric engineering. So in the Explorers pulse, I had the opportunity to gain a little more experience and exposure to electrical kinds of things and that kind of primed me a little bit more to go in that direction.

00:04:11

Q:

Some people are artistically gifted. My wife is a math teacher. She knew pretty early on that she wanted to be a teacher 'cause she liked that. In general, what is there about the engineering area of work that appeals to you maybe from your personality or from your personal interest level that kind of led you to pursue that career.

00:04:34

A:

One of the things that really draws my interest in the engineering sense is the challenge associated with solving technically-related problems. Even though my degree is electrical engineering, in my capacity here at the site I'm more involved from an overall project engineering standpoint. As a result I get exposed to a lot of areas other than electrical engineering. But we certainly have many opportunities just from a technical standpoint to gain, not only understanding but also apply various levels of technology here at the site in the means that we can remediate the silos, Silo 3 in particular.

00:05:14

Q:

Were you someone who as a kid liked to take apart Dad's razor and put it back together or you know,

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do that kind of a thing? My brother was like that. He liked to put things together or take things apart, put them back together. How did you know when you were a kid that these were some of the things you like to do? Was it Scouting or?

00:05:32

A:

It was a combination of several things. One is that I had taken apart several radios in my day. Some I was able to put back together successfully, and some not. Also, another friend of the family owned a radio and TV repair shop. I guess my dad figured if I am going to take these things apart, he is going to expose me to someone who knew a little bit about putting them back together. So I would spend weekends with, his name is Mr. Bowling, who owned a local radio and TV repair shop. And on the side he also was involved in public address systems and so forth. So my time spent with him on the weekend wound up being extremely educational for me and I learned quite a bit there.

00:06:13

Q:

When did you graduate from college, if you don't mind me asking?

00:06:16

A:

I graduated from college in 1975.

00:06:18

Q:

And out of college, where did you go for your first job?

00:06:22

A:

Out of college, I started at Procter and Gamble, as a matter fact, at the Ivorydale Soap Plant. I was specifically involved with the manufacture of the miniature bars. When you go to hotels and you see the small bars of soap that was the department that I worked in at that time.

00:06:39

Q:

So how did you find the Cincinnati-based job? Everyone knows Procter and Gamble in general. Was that just something posted on the bulletin board or how did you wind up taking the job in Cincinnati?

00:06:48

A:

Procter and Gamble recruited very heavily at the university I attended specifically in the college of engineering. Not only that, but several graduates would also return and we would have opportunity for them to share with the students what it was like to work in the real world, if you will. And P & G had built up very good rapport with the students and by having them being very active in the recruiting process at North Carolina NT, they were able to interview and be offered a very good job.

00:07:20

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Q:

What was it like working at Ivorydale? Is that a pretty big industrial facility? What kinds of experiences did you gain there that would serve you well later on here with another large facility?

00:07:31

A:

I gained a lot of experiences working at the Ivorydale Soap Plant. One is one of a competitive nature even though Procter is pretty much a _____ company, it's common that the products compete with each other. Specifically, various plants would compete for a large percentage of the business. If you could produce your product at a lower cost to the company then the chances were pretty good that you would get a larger share of the business at the particular facility. So one of things I learned in that environment was competitive nature, if you will, with regard to producing a product at as low a cost as possible. Another thing I learned has to do with just working with several individuals to accomplish the end result. Procter Ivorydale facility is a union environment and I had the opportunity to develop some very close relationships with individuals who were important to me. I thought we did an excellent job in producing the miniature bars not only at the lowest cost but also at the highest rate compared to several of the other facilities at the time.

00:08:46

Q:

The sometimes it's called corporate culture, or environment, workplace environment that is fostered by everywhere from management to the management-employee communication to expectations and so on, Procter and Gamble is known internationally as a fairly clearly defined and effective corporate culture or workplace environment. Can you just share and reminisce for just a couple of minutes about that side of your Procter and Gamble work because I think it also can bear a relation to what we are talking about here in terms of a point of comparison. So talk just a little bit about that corporate culture that Procter and Gamble instilled.

00:09:26

A:

The corporate culture that I experienced particularly in the manufacturing environment at Procter was one of very professional in nature certainly. As I mentioned early, that was very competitive with regard to producing a product at the lowest cost. Procter also was very strong in terms of the training that it placed the employees through before you were given specific responsibilities; there was a pretty extensive six-month training program that you went through. And there was a formal turnover process that occurred prior to your taking over and you had to prove that you are certainly very knowledgeable of the areas that you would be made responsible for before you were given responsibilities. Once you were given these responsibilities, Procter expected from all its employees a lot of effort, a lot of efforts in terms of one producing quality product. And a quality product was certainly at the top of the list not above safety certainty, safety first, then a very quality product not only did we compete with other competitors as I mentioned before, we competed amongst ourselves within the Procter environment. Procter and Gamble considered to be a very conservative company and I think even today is still considered one of the best managed companies in the world. And the products are known worldwide. And when you hear the Procter name, I think, you can very clearly associate it with a quality product.

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00:11:05

Q:

I asked you that because in a couple of minutes, we are going to kind of move to a discussion of your work out at the Fernald site. I may ask you to reflect on the kinds of environments that you have experienced through National Lead Ohio for a couple of years, then Westinghouse and most recently Fluor Daniel. That's why I ask you about Procter. So you go through 1975, you spend some time at Procter, how long?

00:11:28

A:

I was at Procter until 1982.

00:11:31

Q:

Then you moved, you changed jobs, what, what was the impetus for that?

00:11:37

A:

I was looking for some different opportunities. When I left Procter, I was project engineer and I wanted to continue in that vein but in a different kind of arena. And it turns out that the difference was made available here at the site. I can't say that I knew a lot about this site prior to talking with the interviewer that I spoke with prior to, but I was looking for some different opportunities and it turned out that at the time NLO was the company that could provide it.

00:12:05

Q:

How did you find out about this company and the possibility of a job opening out here?

00:12:11

A:

The interviewer that I was speaking with was, I made him aware of the goals that I had and the types of opportunities I was looking for. He was the one actually who asked me had I considered NLO. And I asked who was NLO and what do they do? He went on to share specifically what NLO did at the time and it was certainly very different than what I had been exposed to before and I wanted to take a look at it to see if it possibly would meet the goals that I set for myself.

00:12:42

Q:

If you can remember the very first day you came to work here or the first few weeks, what kinds of employee orientations ramping you up to the types of work that was going on out here. What was the employee orientation program out here in 1982?

00:13:01

A:

For the first few days, maybe first few weeks, I didn't have a lot association with any of the other employees only because there was an employee orientation process that you went through which

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included a lot of reading, becoming familiar with the different environment that you would work in. Again this is a government environment. I came from commercial environment. I also had to get a security clearance. And the security clearance, I don't believe, had been approved yet. And as a result, I could not be allowed beyond a certain point into the rest of the process area. So the first few weeks involved more administrative kinds of things. The other individuals I came into contact with who were similar in nature in terms of having been recently identified as employees here. We developed very good relationships early on. And another piece was those that were here, the permanent employees that had been here for a while had the opportunity to speak with him and learned quite a bit fairly early on. (Can I interrupt for just a second I've been paged three times)

00:14:15

Q:

Yeah, in 1982, you had some orientation time, what did, what were you told in terms of the mission of the site at that time; any other kind of national security or information kinds of issues that you could or couldn't share or weren't supposed to share with either family or friends or those kinds of things? What kind of a security briefing did you have?

00:14:38

A:

The mission statement that was shared with me at the time I joined in 1982 was focused primarily on the enrichment and production of uranium for the Department of Energy. It didn't get much more detail than that, however, if I became aware of other details during the course of performing the work that I was assigned for the purpose of security, you know, it needed to be kept within the work environment here. Only those who had a need-to-know. We were not very open with the public in general about what we did but certainly you needed to have access to information that was important for the success or accomplishment of your task or your assignments here.

00:15:22

Q:

It seems radically different from most job, jobs that you would have. But I imagine that at Procter there were certain concepts or formulas or something that was, that you were encouraged not to, not to share perhaps it wasn't as closed an environment as it was up here. But it's true in the private sector too from time to time that things need kind of to stay within the organization. How much of an adjustment did you need to make in terms of that kind of need-to-know basis that was out here?

00:15:55

A:

Well, some of it was not as much as an adjustment. The example just given in terms of what exists in the commercial industry around formulas and so forth, that's the specific example I have with Procter after my assignment in the miniature bar department. I had the opportunity to be the department manager of the perfume making department. Perfume making consisted of very specific formulas. And those were kept in very tight security for obvious reasons. So when I made the switch to this environment, that was not that much of a change certainly. But what was a change was just the overall communication with the public in general around what I did. And when I shared where I worked, the question was where is that, what do you do and so forth. So on my part, there was just not that very; not the willingness to openly share where I worked only because I knew I couldn't share very much

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about what I did, where I worked.

00:16:58

Q:

Where did you work for the first few years kind of in terms of the location in relationship to where we are now?

00:17:04

A:

I was in the maintenance department and the specific area that I was responsible for was, what was called, the refinery area on the cold side of the plant. Which consisted of Plant 4, Plant 8, Plant 2 and 3 and occasionally I also spent some time in Boiler Plant from the maintenance perspective.

00:17:25

Q:

Where is that on the property compared to where we are now. It's over that direction?

00:17:28

A:

Most of it is due east of us and the Boiler Plant is to the northeast of us.

00:17:35

Q:

Can you describe a typical day of coming to work? You worked which shift, when did you get here, kind of the daily interaction you might have, did you eat lunch with your co-workers, just kind of day to day activities out here during the years of production in the 1980s.

00:17:54

A:

I worked first shift the entire time I was here during the early eighties to mid-eighties. The typical day consisted of nothing that was typical. Each day you had different problems to resolve. Not only was I involved from maintenance planning perspective, but also running the maintenance crews and certainly you had to become knowledgeable of the process before you could effectively work any solutions to the problems. Many of the guys who reported to me had been here longer and much more familiar with the specific processes and some of the problems they had experienced before. As a result we utilized their prior knowledge and also the knowledge that I brought with me to determine solutions to specific equipment problems that we had.

00:18:44

Q:

How was it working with folks that were here maybe 25, 30 years? Did that cause challenges? How did that work from a team perspective to try to solve the day-to-day problems?

00:18:59

A:

I think, initially there were challenges but no different than you would in any environment. You are

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the new kid on the block and in certain ways you've got to prove yourself. As a result, we spent some time looking at what techniques I used to solve problems, what input I had. Was it valuable input or not and over time my ability, I think, to just prove myself not only to the other supervisors and managers but certainly to the maintenance crafts themselves proved very beneficial to me. And also had priority to coming to this site, an opportunity to work the crafts so I was familiar with some of that experience before coming here.

00:19:40

Q:

And 1984, '85, '86, there is a little bit of information getting out to the community and the Cincinnati-area public about some potential risks to environmental media because of production activities and also during that time the contract or changes from National Lead to Westinghouse. What was going through your mind during these years of change, still during production, but years where a little bit more is being known or being reported about what production activities are and potential environmental hazards, and a new contractor?

00:20:15

A:

The mid-80s were a very challenging period for us because of the significant changes that occurred. One that went from a period where very little, if any, information was shared with the public in general concerning what we do, to being very informative with the public. And certainly telling the public essentially everything now, not having had a baseline that says this is what you did before. The public was not very pleased with that at all. How could we keep this kind of information from them? Even though it was a very challenging period before us we took that as an opportunity. The opportunity was this. Several of the employees here became part of team that would go out into the community. It was called the Speaker's Bureau. Essentially we made ourselves available either during work or after work hours to speak to civic organizations, social groups, church clubs, schools, whatever, to speak in more detail about the kinds of things we did here and what levels of contamination existed. What information in the general media was correct and which was not correct. And that was one of the things that we were fighting as well because not everything that was read in the paper was certainly correct. So it gave us an opportunity to more directly speak for ourselves versus relying on what the media in general was sharing about us.

00:21:40

D:

You were part of that Speaker's Bureau part time?

00:21:41

A:

Yes, I was.

00:21:43

Q:

Can you remember any particular example of meeting with a community group that maybe can illustrate this point? Some of the types of questions that were asked and types of reception that you got and how you dealt with that? Did you enjoy it or what kinds of challenges does those pose?

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00:22:01

A:

I certainly enjoyed it. It gave me an opportunity to look at my job a little differently than before. I didn't see myself just confined, if you will, to this particular site. As I went out into the community, I was in effect a representative of not only the company but the kinds of things we did at the site. One meeting in particular that I recall was of a group that I was part of at my church. And one of the things that group did was once a month or so, we would invite guest speakers to come in and it turns out that I offered the opportunity not only for myself but a co-worker to come in and specifically talk about Fernald, if you will. That was a very good opportunity for me to share a side of myself with those who know me well but didn't know the work side of me. And specifically to look at what kinds of things are going on here at Fernald, where Fernald is, and what are the challenges before us in terms of dealing with this contamination. Many of the individuals are also engineers and as a result, from their perspective, it gave them an opportunity to begin to look at things a little differently. Even though one of the issues we deal with here at the site is radioactive contamination; we still have a large chemical issue. The Cincinnati area, Miami Valley in particular, is very much heavy in chemical industry. So the engineers that I have developed relationships with over the years are also involved from a chemical perspective. So they were very much interested in the kinds of things we did in terms of mitigating not only the radioactive but also the chemical contamination and hazards that we have here at the site.

00:23:44

Q:

1989 to '91 things change from a time of high production to a temporary shut down of production processes, and ultimately a termination of production, a change of mission to remediation. As a worker, did you see your role change or did you feel that potentially you would be working out here any more or how in those particular years when the day-to-day work out here changed forever toward remediation. How did your job change during those years?

00:24:23

A:

During that period of transition from production to remediation, it was also certainly transition for the employees. That also brought with it some uncertainties because we never dealt with remediation before. Certainly there was more history with regard to production, so we many times would ask ourselves well, what does remediation really mean? And what level, what level of remediation are we trying to attain? Are we going to, you know, one of the older terms greenfield, returning it to the original state? Just what level of remediation is it that we want to attain? In the process of asking those questions and meeting with our customer the Department of Energy and having those kinds of discussions, the picture became at least clearer at that time, what the overall goal was that we were shooting for. Once we were able to establish an initial baseline we began to develop the Operable Units and the team necessary to help focus the cleanup for the site as a whole toward the end, the ultimate goal. Once we got the Operable Units in place, each one focusing on specific areas. I became a part of the Operable Unit number 3 and it essentially was primarily responsible for the buildings within the previously production area. And as a part of that team, I was able to help develop a strategy that addressed at least the sequence that facilities should come down as well as some possible methods that should come down. We dealt first with the sequence because at that time we were very much limited in funding. We weren't sure just how much funding we would get with the Department of Energy. And as a result, we wanted a plan that would be effective regardless of the level of funding. Certainly, if we obtained more funding in a shorter period of time, that's is. We could remediate more buildings in a shorter period. However, if the funding was stretched out, the sequence would still be viable because

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it still met the needs at that time at the site. Because of those changes, certainly was able to be a part of the early phases of establishing the plant and the path for the site forward for the site from a remediation standpoint.

00:26:38

Q:

How was it that you were chosen for OU3 to start with? Was that, a what, how were those assignments made?

00:26:46

A:

That is an interesting question. I'd like to think it was because in part I had I think a pretty good knowledge of things that went on, on site in general. The capacity that I worked in prior to that were all in a project- related capacity. After my assignment in the maintenance department, I was in the project engineering group and the project could be on any facility adding the facility here at the site. And I had pretty good knowledge of what was going on within the site boundary in general. And, I think, that wide knowledge was one of reasons why I was selected to go to OU3.

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00:00:21

Q:

You're a remediation engineer now essentially. What was it about your background in training and prior experience, in either Procter and Gamble or here, that allowed you to tackle this kind of new problem solving challenge? You moved from production to things like figuring out which buildings to tear down when, how quickly, how safely, you know a totally different kind of an arena.

00:00:48

A:

I think the engineering experiences in general provided a good baseline for remediation experience. I don't know that you are gonna find many remediation engineers. This site to best of my knowledge is the first of the DOE sites to go into a full remediation mode. Certainly from an environmental perspective there are individuals who have environmental cleanup experience, but in terms of total remediation, you can't say that you have someone that has that total package in hand. I think the transition was easy for me in that one, again, I was very knowledgeable of the things that went on, on the site. And it gave me an opportunity as well to gain some additional experience working on cleaning up on a different part of the site and also becoming part of history, if you will. This is something that is very significant not only for us here at the site but for the community at large. So the experience that I had combined with the opportunities that were presented gave me an opportunity to take a look at some areas that would not have previously been made available to me.

00:02:03

Q:

The demolition of is it Plant 7?

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00:02:05

A:

Plant 7. Yes.

00:02:06

Q:

Is marked by some as a milestone symbolic and substantive of real work, if you will, being done to D&D decommission and dismantle these buildings. What were the feelings that you and your group went through as this day approached and when it actually happened?

00:02:23

A:

Well, it was difficult to describe exactly how we felt. Certainly it was one day that we were all very excited about. And if you recall the first implosion attempt it didn't work as well as we had expected. Well, we went back took a look at the implosion plans, made some modifications to the plans, and certainly having made the changes effectively that we were able to bring Plant 7 down safely without incident. Secondly, to get to a point of D&Ding a building, there is a tremendous amount of planning and paper work that has to go in, and that's one of the pieces that the average person doesn't necessarily see. The event itself could occur within a very short period of time. But prior to that, it takes several

meetings, not only with the customer but project team meetings, meetings with the public in general. And making everyone aware of the plan and getting buy in to the plan, meets with the EPA. So, prior to getting to that eventful moment where the building comes down, there is a lot of preparation, a lot of discussion, a lot of meetings that take place to get us there. So that really for us is a tremendous exciting period that is really difficult to describe. We were certainly happy that when it came down, it came down first safely and secondly without incident.

00:03:43

Q:

At UC we had a similar challenge several years ago with a tall, Sander Hall, the tall dormitory we had to bring down. It had to be one in a confined space. So it will not fall back on the football stadium something like that. It had to be done very carefully. It represents a challenge. I have identified that event as a milestone. Can you think of any other milestones? Let's say in 1990, the early to mid 1990s that you felt the site kind of turned the corner in terms of either the design for remediation or strategy. A milestone or a time or project where you felt this was turning a corner in terms of both work out here or in terms of community interaction with now it's Fluor Daniel that is the contractor?

00:04:51

A:

I want to identify the Vitrification Pilot Plant as a turning point. Some may view that as not having been successful as, however, I look at it as a success in several ways. First of all, the mission of the Vitrification Pilot Plant was to simulate K-65 material being converted into glass and look at how effectively could we do that in a non-radioactive environment. Once we determined how well we were able to do that, then we would transition into using actual K-65 material. We learned a lot on this project. Vitrification as far as technology is concerned has been around for a long time. We were

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dealing with a material that was different, but we felt could still be successful, and we were successful with that. We were successfully able to convert the simulated K-65 material into glass, into gems, as well as monolith. So for that reason, we were able to effectively use the Pilot Plant for what it was designed to do. I think that was a turning point for us and you know, we had other sites come and look at what we were doing and how we were able to do it. They too have taken some lessons learned from this site and have applied it to other sites as well.

00:06:17

Q:

So at that point, you are now on a new Operable Unit moving from 3 to which Operable Unit?

00:06:24

A:

Operable Unit 4.

00:06:25

Q:

That happened in, you are saying, 1984, 85.

00:06:29

A:

That happened around 1984, yes.

00:06:32

Q:

The task there was to initially design this Pilot Vitrification Plant. You had some success in the conversation. In the last year or so, the facility has been looking at vitrification in relationship to other non-vit options and how have you been involved with that kind of discussion as the ultimate disposition decision is made regarding these K-65 materials.

00:07:00

A:

I haven't been as involved with those discussions concerning the K-65 material. I've been more involved with Silo 3, cold metal oxides.

00:07:09

Q:

Describe what is in Silo 3 and how in the last few years you have been looking at what's in there?

00:07:15

A:

What is located in Silo 3 are cold metal oxides that have been dried, if you will. The consistency of the material has been described as dry, approximately 10 percent moisture, powder like material. It's not very high in terms of its radioactive content, but it is radioactive material, it does have a particular component of which is concern thorium 230. The concern about thorium 230 primarily is that is an inhalation hazard. If you inhale it or ingest it, at that point, it becomes a problem. For that reason,

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any method we design or use to one retrieve material or treated we must take into consideration the fact that this material can become airborne very easily. And as a result, we must take special measures to contain it. Once it is contained, we need to look at how do we retrieve the material out of the silo, keep it contained and treat it. My primary focus right now is to retrieve a small amount of material from silo 3 primarily to make it available to the vendors who are bidding on the silo RFP that is on the street. Their objective would be to treat that small amount of material approximately a 30-gallon drums worth. Using their treatability process, provide the results of that process in their response to the RFP. As a result, we will evaluate the resulting data to determine just how effective it is and see if it meets the criteria established.

00:08:58

Q:

To lay person it may not seem that hard to kind of just climb down into a cave and get a shovel and put some stuff in a drum and take it out and ship it off. But of course, it is a lot more complicated than that. How does this engineering challenge that you're tackling kind of illustrate the types of work that you are doing out here throughout your career in terms of problem-solving that project-based engineering?

00:09:21

A:

One of the first things we consider in any project we do is how to do it safely, safely first to the workers here on site those who would be most directly involved in handling it or handling the equipment that the material is being conveyed through. Secondly, we want to make sure that safe in terms of the public in general and certainly with respect to the environment and applying those three criteria, we go into the project taking a look at well what type of material are we dealing with. What properties does it have? What kind of equipment could be possibly used to remove it? How do we convey it from point A to point B still keeping it contained? So whatever method we select to handle it, it must be done safely and if at any point it is unsafe, we are not going to pursue it. Secondly, when we identify a method to use, we make sure that people who are directly involved are part of the decision making as well. On the project team that I am a part of right now, the workers as well as the craftspeople, have been very involved throughout the whole process. Even during the design when it comes to taking a look at the design and not only the equipment that's going to retrieve it and that places it into the drums. But also in the enclosure that they have to work in and the procedures that are developed to remove the material. The procedures that is developed to place the material in the drums and the methods used. Once we develop the procedures, the team as a whole practices the procedures, we walk through the steps and we have again those same people very involved in the process. We want to make sure they are comfortable. They feel safe that this is going to work and if they don't feel safe, then we are not going to do it. Because we want to make sure that it is a successful project all the way around. And one of ways to make sure it successful is to have a safe project time. And we get the people most directly involved in that process.

00:11:28

Q:

You've gotten three phone calls or beepers today. You were joking about uh you stopped on the way someone walking along the way here about needing a 20 foot length of pipe. What about the day-to-day comradery or teamwork or ability to draw on different skills and abilities from across the site? How are you able to use your years of experience in different places at the site to help you on this

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particular project?

00:11:54

A:

One of things that is good about the experience on this project is the experience that each team member brings to the project. Many of them bring experience from the site as a whole and there are only a couple of individuals who don't have as much site experience but they are still valued members of the project. We have come across many obstacles on the project that we are currently on, the silo 3 small-scale waste retrieval project. I call them an obstacle not a problem for this reason. Each time an obstacle is identified, the teams as a whole met and we critiqued the problem. We did some problem solving as a team and we, the team, came up with a solution to the problem. In many cases, there was more than one solution. So, it was not a matter of one idea working and another not working. It was a matter of applying some other information that says okay, here is the best solution at this point in time for these reasons. But the key being this, each team member is a valued member of the team and their input was considered. For that reason, we have been able to successfully overcome each hurdle. We are getting through some recent hurdles even now as we are getting prepared to retrieve material out of the silo and there are some things going on with the material inside that are making it a little more challenging to get it to come out freely. But we have come up with a solution that, several individuals having input on, and we are in the process right now of acquiring the materials that we're going to making the device. We call it a reamer. That would be inserted into the material to break it up and make it more easily retrievable by the otter, which will place the material into the drum. And again all of that has come about as a result of input from various team members and that kind of involvement that has been there from the very beginning.

00:13:53

Q:

I hear stories like this in terms of these remediation projects and what image comes to my mind is a sand lot football game where the team gets back in the hurdle and they get down on the dirt, on the ground, and they kind of diagram a play. Each person on team can contribute to a successful play. It's kind of a combination of know-how and creativity. What about the engineering projects you've done on the site have enabled you to combine your training and engineering expertise with a little bit of creativity or little bit of applying something in a new way that keeps your job interesting.

00:14:29

A:

Well, I think, teamwork in general allows you to take advantage of experience that you previously had and apply it in different ways. I can't say that technology itself is so drastically different. It's really not. It's the application of the technology. There are individuals who have been involved in other industries where material retrieval was one of things that they were involved with. So it's not so much the new technology, it's the application of the system technology in some cases. At the same time, when given opportunity, we do take advantage of a team here on site that is called technology programs group. One of their objectives was to apply new technology to existing projects. And one of the things that we looked at very closely early on in the OU4 days was the use of robotics to go into the silos and assist in the retrieval of radioactive material. As I mentioned before, safety is still first and foremost in our minds concerning any method we employ. We want to use ALARA (As Low As Reasonably Achievable) in every situation. So any opportunity we have where we can reduce exposure to

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employees. We are going to do that and possibly using robotics is a means of accomplishing that. Unfortunately for the silo 3 small-scale retrieval, we weren't given and don't have that opportunity but certainly we'll continue to look at those kinds of applications for retrieval and remediation of the site.

00:16:02

Q:

A couple of more questions before we get out of the hot sun kind of in the realm of the historical significance and value of a history project in general. We were talking coming over here about in many respects the stuff that's at, going on at Fernald just because of the timing. And because of certain aspects of the site are somewhat groundbreaking certainly within the DOE complex in terms of cleanup technologies or abilities to develop good relationships with the community to allow you to set plans in place that kind of thing. Can you comment a little bit about from your perspective what it is about the remediation work at Fernald that has long lasting historical significance in terms of how the rest of the DOE is going to clean up the nuclear weapons legacy?

00:16:47

A:

One of the things that I find interesting about history in general is when the event is occurring, you don't necessarily see the significance it has in history, but when you look back on it, you begin to see "well hey, that was a significant turning point." I like to think that the remediation that we're doing here at the site will certainly become one more known across the country not only within the DOE sites, but the commercial industry as well. The kinds of cleanup we are doing here at the site the application of it goes well beyond cleaning up of radioactive sites. So for those reasons, thinking from a historical perspective you begin to see just how significant remediation here at the Fernald site has played a part in the success of cleanup of sites in general across the country. It started first from here and certainly is going to spread within the DOE site, but I believe that there is much more application to environment clean up in general even outside of DOE arena.

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00:17:48

Q:

Last question. The goal of our history project is to develop historical materials that can be used in the area schools for adult education. To inform folks about what happened here at the site, a broad historical sweep from about 1950 to the present. And also to involve multiple points of view to tell a little bit of the farmer's perspective. A little bit of the worker's perspective. A little bit of the regulator's perspective. What do you think the potential value of that kind of project for the folks in the southwest Ohio?

00:18:18

A:

I think there are several aspects. One is for the young individual who are not quite sure what they want to do when they grow up. They can look at the experience that others like myself have acquired at this facility over the years and knowing a little bit about my background, can see well he's not significantly different than me and look at the kinds of things he was able to do along with several others in this kind of environment. So one of the implications is that by viewing the historical tape of this site, you can see where one person and several people together can make a significant difference. So for that reason, I think it gonna be very valuable for us to proceed with this tape. I'm sure it's gonna be used in schools and would be very good educational tool for young students and old students as well, but particularly young students. For the community at large, this is a part of history, this site even though early on was not well advertised not a lot was known about it but it played a very significant part in our history particularly during the Cold War era. That's a part of history. And when you study history, you want to know as much of it as you possibly can. This is just another piece of history that we want the public in general to know about.