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FERNALD LIVING HISTORY PROJECT
Transcript

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00:00:37
Q:
Thank you for coming today. I want to talk to you a little bit about your experience working out here over the years? How many years did you work out here?

00:00:44
A:
Better than 40 years right now, I began in 1954. And that adds up to 44 years calendar-wise, but as a co-op, and there were some breaks in between, going to college, it comes out around 40 years.

00:01:01
Q:
What is just in general before we start with some specific items. What is it about Fernald that has been in a place that you want to stay and work and build a career.

00:01:12
A:
It's always been an interesting place to work. Fernald played an important part in our nation's nuclear defense programs. And the work was challenging, the people were great. And we did a good job. It was a satisfying place to work.

00:01:29
Q:
What, what did you do in terms of finding that first job out here. You were, did you grow up in the Cincinnati area?

00:01:39
A:
I'm from Cincinnati, Cincinnati is my home. It's the only place I've ever lived. And coming out of high school, just wanted, wanted a job, one of that makes some money.

00:01:52
Q:
What kind of things were you interested in doing in high school? Were you the musical type, the athlete, the guy in the lab? What, what kind of person were you in high school?

00:02:00
A:
The scholar. Aha (laugh).

00:02:02
Q:

Modesty

00:02:04
A:
Well, you asked me. You gave me a few choices there, I am not an athlete although I like to play golf and do things. I like chemistry; I like chemistry and physics, ah, languages.

00:02:17
Q:
In high school, you found out something about a new site, or a new plant coming on-line?

00:02:26
A:
Well, ah, chemistry was very appealing to me in high school. And I felt it was a good means to, to getting a job, which proved to be true as a lab tech. And Fernald was being built. People in Cincinnati knew that an atomic plant was being built at Fernald. So I decided to come out and make application in the personnel department.

00:02:54
Q:
This was after your senior year, or during your senior year in high school?

00:02:57
A:
It was after the senior year, after I had graduated then I had the time to go around, interview and make applications for employment.

00:03:06
Q:
What did just the average person living in Cincinnati you say that knew something was happening out here in terms of atomic plant. What this was in the early 1950s.

00:03:16
A:
It was the early 1950s.

00:03:18
Q:
What were some of the messages that were coming out about this? Was this in the newspaper? Or how did folks find about it?

00:03:24
A:
A construction job this size was news. And that brought in brought jobs with it. So it was in the it was in the newspapers. What was eventually done here was not known. People knew the place was being built. So I, I just drove on out, made application for employment, was interviewed and hired as a lab tech.

00:03:54
Q:

In this time period, late ‘40s and early ‘50s, when someone heard about, terms like national defense, American military, what, what were the feelings kind of in the country of that time?

00:04:10
A:
Oh, that was good. Good feeling because the atomic bomb ended WWII. It’s a subject of debate in the, in the following decades, still continues to be a moral debate. But in the late ‘40s and early ‘50s, the atomic program was respected. And it was a desirable place to work.

00:04:40
Q:
And so there was a sense that, ah, that was a good thing.

00:04:43
A:
Oh, good thing.

00:04:47
Q:
Now, how.

00:04:48
A:
People wanted to work here.

00:04:48
Q:
How long did you work out here before you went to college?

00:04:51
A:
I worked a year. I worked a year as lab tech and then decided to go into, ah, UC College of Engineering.

00:05:03
Q:
And what did you do at UC, in terms of maintaining contact out here?

00:05:09
A:
Oh, ah, I became a co-op, ah, a co-op with National Lead of Ohio. And the co-op program is alternating periods of work in school leading to the degree that I received in chemical engineering.
00:05:25
Q:
And had NLO had any co-ops before?

00:05:30
A:
No. When I terminated and submitted my resignation I asked the department head whether NLO would be interested in the co-op program. And he was very receptive, ah said that it’s a kind of thing they were

looking to get into. And it happened

00:05:50
Q:
And you graduated in fi, four, five years?

00:05:52
A:
Five years. The co-op program at engineering is five years. Graduated in 1960.

00:05:08
Q:
And then did you envision yourself going out to find a different kind of job, or did you have a pretty good sense that you want to come back here. What was?

00:06:08
A:
It was my senior year in college. Of course, there were a number of companies interview the senior class as they do today. And I had three offers but ah, other than Fernald, but Fernald was it.

00:06:26
Q:
Well, so this is like nineteen--.

00:06:30
A:
Nineteen sixty.

00:06:32
Q:
Sixty. So you come back at Fernald. You were no longer a lab tech. What kind of a position were you in at this point?

00:06:36
A:
I'm hired as an engineer. And was given assignments to improve operations, productivity, and chemical plants, Plant 2/3 in particular.

00:06:49
Q:
In what, ah, division of the company was this?

00:06:53
A:
This was the technical division. There were ah, I believe, seven or eight different divisions within NLO at the time. And the technical division supported process development work, pro-, ah; process improvement work for both chemical processes and metals plants processes.

00:07:15
Q:
The late 1950s and early 1960s were, were times of fairly high production out here?

00:07:20
A:
Oh, yes.

00:07:22
Q:
What was like out here? How many employees? How busy you were in those year?

00:07:27
A:
I believe, there were several thousand employees here including construction people who were still on site. There were still a lot of construction activities going on. Through 1954, '55. Production peak in about 1958 as did employment, at least nearly 3000 people. The plant was operated around the clock seven days a week.

00:07:54
Q:
Did you ever have a, they called, the graveyard shift, the second shift?

00:07:59
A:
I worked the third shift. I don't know which one is great. I worked second and third. Part of technical work. We did plant tests at times and provided around the clock technical support to operations when new ideas were tried. Yes, I worked the second shift and third shift.

00:08:18
Q:
And when you said it operated for several years around the clock, 24 hours a day, what did it look like out here. Let's say, Sunday night at midnight or something like that, is it bright lights, a lot of trucks pulling in and out. Or exactly what was it like out here in the evening when the production was ongoing?

00:08:37
A:
At nighttime when production was ongoing, it was kind of a strange sight. Because there was ah, you have the surrounding, the surrounding farms and countryside which is dark. But in the middle, you have this ah, this, this, I want to say, is a glow because it has a nuclear connotation, but you have the lights like some small city is here. So at nighttime the operations. The sounds also travel at night more than they do at daytime. It's, ah, quite a bit different working in the night shifts.

00:09:18
Q:
And some of the production activity is fairly loud in terms of the machining of metal?

00:09:23

A.
Yeah, there were the production noises. The equipment groans at times as the equipment has a tendency to do.

00:09:34
Q:
Now with that happening, this isn't a heavily populated area, but there are residents kind of around the perimeter in the neighboring communities and so on. What was your perception, 'cause you, I think, you said you, you maintain a residence in Cincinnati. What was your perception just as an employee during these high production years about what the community knew and felt about what was going on out here?

00:09:59
A:
There was not very much involvement with the community in the early days. The com-, the community knew that we existed, because you cannot take a thousand acres of prime farmland and put down the production facility and manufacturing plant without somebody knowing ah, something different has happened to their surroundings. There was not much interaction because of security. Everything was very closely guarded. The guards patrolled the property. It was very tight controls in and out. And very tight controls on any information. Most documents, reports were classified, so very little interaction with the public.

00:10:48
Q:
Let's talk just a little more about that, because a lot of the employees lived fairly close by, and so the natural, the natural tendency would be for family members to say, "Dad, what did you do today." So that the employees from time to time were asked what's going on in the atomic plant. So my sense would be that employees at the time of their initial employment then periodically would be briefed in terms of those kinds of interactions of what would be appropriate and inappropriate types of things to talk about. What kind of orientation or briefing employees received in terms of sharing information?

00:11:34
A:
Part of the employee orientation, new employee orientation was the security briefing and it was a very stern briefing on the importance of what we were doing. It was a ah, very strict instructions not to discuss what you do at work with your family when you go home. When you go through the turnstiles when you leave the site, you leave Fernald's business behind you.

00:12:05
Q:
It's so different from many kind of corporate cultures, if you will. Though some corporations maintain a very strict sense of either trade secrets or what have you. (A: Sure). What have you tried to live up to that responsibility? How hard or how easy was it for you or for the average person to kind of say that what, what I do here?

00:12:30
A:

When your friends or family ask what you do at Fernald, that's a natural question. The answer is that I am not at liberty to say and that pretty well closes the discussion.

00:12:42
W:
Shall I ask a question one more time?

00:12:44
A:
Yes.

00:12:45
W:
And right after Steve, after Steve asks the question, you need to pause just a little bit.

00:12:49
A:
All right, I'll try.

00:12:50
W:
Just for editing purposes. I really want to get that comment.

00:12:59
Q:
Right you mention that employees received briefings about not speaking with family members about what went on here at the site. How easy or how hard was it to maintain that responsibility of not discussing what happened at the workplace when you were at home with family or friends?

00:13:19
A:
Part of the orientation for new employees was a very stern briefing on the importance of security. Every employee understood the importance of keeping the things we worked on, the reports, the information private. When we went home when we went through the turnstiles at night or to leave our work behind us and not to discuss it with friends or family. It's a natural inclination for your friends or your family to ask what you did today. The answer to that was usually and always, "I'm not at liberty to say." "I'm not at liberty to say." That usually took care of that was the message that I am not going to talk to you about what I do.

00:14:13
Q:
Was there ever a day out here that either some strange thing happened or maybe a humorous incident or out of the ordinary that you or maybe some of your co-workers were. Says, "Gee, some interesting happened today, but I can't talk about it."

00:14:32
A:

Oh, yes,

00:14:34
Q:
Can you think of a day like that?

00:14:35
A:
Oh, of course, I can't recall any such incidents right off the top, but the ah, I think, that promoted togetherness within the employees. We were a family and when we could not talk about things that happened today at Fernald, we found each other at lunchtime or different points through the day to talk about events that happened here. It drew us together as a family of employees.

00:15:04
Q:
Because you knew that for the most part that would be the extent of your ability to talk about (A: That's it) what happened.

00:15:11
A:
You know you can't talk about it on the outside. So it was a bonding effect with employees to talk together on things that happened here.

00:15:24
Q:
Can you talk a little bit about the role of Fernald with the nuclear complex and the extent to which you did or did not know the grand design of the entire nuclear weapons production program? You had a piece in relation to the other pieces you knew some things but not other things in terms of the overall

weapons production mission. So how does it work between Fernald and other facilities around the country? What kind of things did you know or not know?

00:15:50
A:
In the early days, in the fifties you only knew about what went on at Fernald. You information was restricted to what you needed to know to do your job.

00:16:01
Q:
The need to know concept, can you elaborate on that a little bit. What, what were some things that you would need to know.

00:16:08
A:
Ah, from other production sites?

00:16:13
Q:
Yeah, in terms of the, or things like that?

00:16:17
A:
We had Plant 2 and 3 operation, which is similar to some operation at Hanford. And where there were accidents or equipment failures that occurred in their process then we had information as to what were the conditions that caused that accident because it could possibly happen here that's the need-to-know. We do not need to know what production level Hanford was operating at. We did not need to know what kind of end products were manufactured.

00:16:56
Q:
What about the different pieces of the puzzle and how to fit together to produce the ultimate nuclear weapon stockpile that was the goal of the overall program?

00:17:06
A:
The DOE has a very sharp division between nuclear materials production facility such as Fernald and military applications, which are Rocky Flats and Los Alamos and elsewhere. And the two don't cross over except at very high levels. So ah, our, our involvement was in terms of how many tons of uranium a year Fernald would be expected to make. And later in my career, I was involved in the inter-site planning what I knew what activities were going on at Savannah River and Hanford. Fernald was the integrator in some ways.

00:17:55
Q:
Did that need to know basis relax at all over time or was there a point, which more was known?

00:18:04
A:
The site underwent the declassification to a large extent in the '60s and much of the paper work had been declassified as we went, ah, as we went into, ah, but production numbers still remain classified. And into the seventies, the yearly production numbers became declassified, but the long range sweep where you can get a trend still remain classified. So I could know, I could reveal what the production was in 1975, but I couldn't tell you what it was for the next five years behind that.

00:18:48
Q:
With that gradual declassification, does it change worker orientation toward what happened in the workplace versus what they tell folks about?

00:18:54
A:
I think it was still part of our culture we have lived with it even though there were relaxations in security in terms of what was classified and what wasn't. Those were mainly office place changes that were administrative.

00:19:14
Q:
So for the most part the worker culture of secrecy or maintaining stuff on site pretty much.

00:19:25
A:
We just didn't talk about it. Yes, it's part of the culture.

00:19:31
Q:
You say that one of things that was needed to know which became kind of annual production quota type of issue what was the incentive in National Lead in these years in terms of doing an efficient job or producing high quality or the typical thought about government contracts is that you get a government contract and you don't necessarily have to have a profit or something like that. What were some of the motivations behind some of your work which would be to improve efficiency of operation some things like that, what why would National Lead be interested in maximizing production efficiency.

00:20:11
A:
In the fifties, the goal was to get the tons. **There was a national need and the incentive was to make your delivery schedules. NLO never missed a delivery schedule.** As things turned into the '60s, and Weldon Spring site was built and became competition.

00:20:34
Q:
Where was that site?

00:20:35
A:
That's near St. Louis, Missouri. The incentive there was to be at competition in terms of cost, quality and product. And we did. In the late '70s, our contract became a cost plus award fee, which I think is pretty standard in DOE today. That is a fixed fee and you can earn bonus point depending on how well you do and mutually agreed upon areas such as production, cost, safety and so on.

00:21:09
Q:
But late in the '50s and especially in the '60s, Weldon Spring was more kind of like a private sector competitions.

00:21:15
A:
Yes, run very business like. Improve productivity, improve product quality, beat the competition. In the '50s, it was to get the numbers because 10,000 tons a year, which we ran at one time, was the national need.

00:21:33
Q:
10,000 a year? Can you help us vision what that is in terms of amount, or size how many was railcars or trucks coming out of here daily or monthly? Gives us a sense of that magnitude.

00:21:53

A:
The production was shipped off-site by trucks or railcar. I can't give you a, there were trucks leaving daily with uranium products.

00:22:06
Q:
How much would go into a truck?

00:22:08
A:
That's limited by over-the-road requirements DOT. Whether you are shipping is by weight by gross vehicle weight.

00:22:18
Q:
That magnitude accounts for a twenty-hour production schedule.

00:22:23
A:
Yes, we operated around the schedule for, I think, most of the fifties.

00:22:29
Q:
Shift topic just a little bit on.

00:22:32
A:
Could I get a drink of water?

00:22:33
Q:
Sure.

00:22:40:
W:
It's going really well. It's great stuff.

00:22:43
A:
I think I messed up that re-try on your answer.

00:22:46
Q:
That's all right.

00:22:51
Q:

I'm interested you talked a little about that the employee health and safety, climate and the practices. Did you feel you were safe or did you feel like the, your colleagues on the production side were safe. What was the safety environment from the worker standpoint at Fernald during these years of peak production?

00:23:15
A:
One of the divisions of NLO was the Health and Safety division. And it was organized to provide worker safety, industrial safety practices, criticality control of nuclear materials, a regular medical program, employee-monitoring program. People were given manual, medical exams every year. Records were kept. Records were kept on injuries, whether they were minor, major, lost time. There were monthly safety meetings where these statistics were discussed in every department. There were safety programs; safety incentives tied to lost time accidents, so many million-man hours worked without lost time accident. Safety was important. The theme even though we were going after the production numbers in 1950s, the theme was production with safety. And at the time and I don't know when the company union safety committee was formed to address those workplace injuries, but safety always received a high priority within NLO and every contractor that followed.

00:24:35
Q:
How would you, based on your knowledge, compare the employee health and safety record here versus a comparable industry in the private sector, maybe not comparable in terms of uranium comparable in terms of the type of production.

00:24:52
A:
The injury statistics that were maintained, monthly injury statistics annual injury statistics compared very favorable with industry at large. Our records were two, three times better than the industry standard. Workplace housekeeping inspections, the plants were immaculate for industrial capa-, ah, industrial operation. Visitors that I took through many times remarked how, how clean the plants were for a production operating facility. Things that helped people do their jobs were implemented, safety practices. These were done in advance of OSHA. Our safety was very strong. And I think it continues to be strong.

00:25:44
Q:
Let's talk about a minute or two just about your own personal journey. Some of the types of work that you did over the years. You came back after going to school. Came back with a degree in 1960. You were back as an engineer with what division?

00:26:02
A:
Technical division. I worked in a technical division. In the early days I was hired as a lab tech and co-op when I returned to work, I worked for the technical division.

00:26:13
Q:
What did that division do?

00:26:15
A:
It supported the production operations. It looked at studied process alternatives, how to eliminate production trouble spots, how to make the product better, how to decrease hazard. How to keep the on-line performance up.

00:26:34
Q:
Did you work on a project basis? In other words, you were given an assignment, this topic needs addressing over a certain period time, see what comes up in that periods of time?

00:26:46
A:
That's the way it worked. The technical management working with production supervision and management decided where the production trouble spots were, where the process needed to be improved, and those then initiated the technical studies that supported them.
00:27:07
Q:
What was it about that kind of work that was appealing to you other than a background or kind of your nature there's things that kept interesting for you.

00:27:17
A:
Fernald chemical plants were the chemical engineers' dream. There was every kind of unit operations that are in the books, filtration, solvent-extraction, you name it, we had it. So as a young engineer, this was ah, this was a dream to work at.

00:27:37
Q:
Can you think of an example of a type of project or puzzle that you were given or your group was given that, would illustrate the kind of problem solving, the stuff that you were doing in those days.

00:27:53
A:
The one that comes to mind in my career was an urgent need to develop a thorium purification process. This was in the 1965 and the technical director came into my office and said do you think we can have the Pilot Plant producing a ton a day of thorium nitrate solution, purified thorium nitrate? And I said, "How much time do we have?" And he says, "four weeks." Four weeks, to put together a whole new process and have it up to speed and running. So I went to Oak Ridge and talked to a couple of the leading extraction chemists within DOE. Came back and we did a few lab tests. By golly, this looked good. What the solvent system that they gave us look good. The next week we did higher scale, bench scale, testing and had a flow sheet one of the process flow sheet that would work. The third week we put the equipment, the larger production equipment, back together with on-the-spot engineering, on the spot maintenance. The fourth week we did equipment shakedown testing and operator training and we were making a ton a day of thorium.

00:00:23
Q:
That's a very interesting story about the thorium purification. I 'm interested just in general when you were handed a project like that over the years or project like that, to what extent did you have comparable experience or knowledge to fall back on? To what extent did you kind of have to look around you and ask who out here can help me on such a project like that from a kind of team standpoint.

00:00:49
A:
When projects are assigned, when it was assigned, when projects were assigned, the immediate thing to look at was what was the people mix that this project needs. During most of the years at Fernald, there were senior technical people, senior engineers, management, who mentored and were resources to younger engineers coming in. The success of project depending on the right skill mix and the team building approach to getting the job done, where everyone has a role in that project.

00:01:33
Q:
Did you literally, the cliche is go back to the drawing board or start from scratch, whatever, when you were given a project like that. Let's say you get your team together what were some of the things that you'll do in terms of sorting out either a sequence of things that need to be done or questions and answers, what were some of the problem solving techniques that you used?

00:01:58
A:
The approach was to, ah; the technical manager assigned the task. And the approach was to discuss the objectives of the task, have a full understanding of what the objective is, what talent mix is needed, what the timing is, what is the timetable, and where to focus this project. You did not begin everything with determining the boiling point of water is an expression I used to use that we accept certain things that a predecessor had done as technical fact. We do not need to go back and determine the boiling point of water to do this project. We pick up where in this process we focus the area for the improvement and begin there.

00:02:56
Q:
What happened with your career? We are rolling into the late '60s early 1970s. Did you move out of the technical division at some point?

00:03:06
A:
Yes, I did in the early '70s; I went into production supervision, production management. My initial responsibility was running Plant 1.

00:03:17
Q:
What was Plant 1?

00:03:18
A:
The Sampling Plant. We did the official sampling of residues, off-site material for uranium and weights for accountability. We also did work in support of the other production plant milling, grinding, crushing, storage. It was the, it was the focal point of production area, the in and out the staging area of the uranium materials until they could be used by the production plant. It was the control point.

00:03:52
Q:
And this marks somewhat of a shift in your career?

00:03:56
A:
A dramatic one.

00:03:58
Q:
People in management and planning as opposed to job-by-job problem solving?

00:04:04
A:
By the late '60s, most technical work was directly tied to production, the R&D process development pretty well had been studied in the, in the previous years. As production began to decline in the late '60s there were serious layoffs and severe cutbacks and the workforce became very tied to production and what was going on, the need to stay within cost, the need to make your schedules, the need to do things safely.

00:04:42
Q:
When did you find out, was just once a year that you found out what the production need for the next year or--.

00:04:49
A:
Usually it was early in the fiscal year about three months before the fiscal year began. But we'd also have the mid-year budget reviews to see whether those forecast, those dollars were holding up. They could change in mid-year either up or down.

00:05:05
Q:
What happened to production levels and production needs in the 70s? How did that change the nature of what's going on out here?

00:05:15
A:
The production overall underwent a serious decline. There are reasons that are attributed to national policy but the Three Mile Island incident effectively stopped any commercial nuclear power plants from being built. Even though we weren't tied to that, nuclear power industry, the overall emphasis in defense programs declined. In the late 70s, we reached a low employment level of 538 people in 1978. And our

production was down drastically. And most of the equipment was not utilized. Many parts of the plant was shut down. We, Fernald, was viewed as being in a terminal situation. I was in the planning group at that time. And we were doing consolidation studies. As the production shrunk, how could you consolidate your need with other sites or even have it supplied by the commercial side. So it was very terminal outlook.

00:06:40
Q:
How was the day to day employee morale, just general atmosphere during this time and how did you, did employees trying to cope with it and management try to cope with this changing situation by finding, trying to find different uses for the site.

00:06:55
A:
Part of the contract that NLO had was it included the work for other programs. And work for others simply means you can use the existing facilities, whatever capabilities may exist, or the existing talent to supply uranium metal or technology to other DOE sites, other Federal agencies, and the commercial side. It's not priority basis. You cannot do out side work before you do inside work, but when the production decreased , that opened up a lot of spare excess capability that could be used for external work.

00:07:39
Q:
What about the morale, employee morale, these folks you said many of whom were here for many years. How did employees deal with potential layoffs or shifting or declining production?

00:07:57
A:
It was a morale question, very serious morale problem in the late '70s. We continued to see the employment shrink. People who retired were not replaced. And it was a terminal outlook. The ah, the fortunate thing was that, for Fernald that kept production going was the DOD programs that began to come into play in the late 70s. We played an important part. In what was called manufacturing technology and testing program for the military.

00:08:38
Q:
There were couple of new weapons systems coming on line at that time?

00:08:42
A:
These were programs where depleted uranium metal, alloyed metal, was used as ammunition and later used as armored plate on tanks.

00:08:56
Q:
Early 1980s, did the election of Ronald Reagan change the production needs at all or was it due, take a while before that was seen?

00:09:05
A:
I think the perception on the public is and most of the workers was the President Reagan administration coming in was building back the nuclear defense capabilities that appeared to decline under the previous administration. The realities are or were it was a step-up in production because of new military deployment systems. The Trident submarine and the cruise missile. And each deployment vehicle, as they are called, has its own warhead designed. And this prompted through the interchange within the two sides of DOE, the military applications and nuclear materials production prompted a need for great new demands on Fernald backed up to us.

00:10:06
Q:
So we're in the early to mid '80s you asked or the sites asked to step up production significantly once again. Given what happened in the '70s in terms of the site and equipment and so on, how did that create a significant new challenges for you in terms of meeting those new demands?

00:10:25
A:
The challenge was enormous, because we had an aged facility, pretty well been neglected in the '70s, because of the terminal outlook. You don't invest money in new facilities when you may cease to be a site, but the sudden emergence of new production demand on an aged facility was enormous. The demand numbers kicked in quicker than you could revitalize equipment.

00:11:59
Q:
What role did you play in trying to help the site cope with this challenge?

00:11:04
A:
This was a nationwide effort in the '80s. It had to be integrated planning at the very high levels at DOE. And I was part of that effort as the Fernald site representative. It was a very small group of people relatively small group of people who planned to build back the defense capability. I was fortunate to be on that panel.

00:11:34
Q:
What did, how if it at all, was this issue of equipment modernization addressed at the site, or was it addressed?

00:11:42
A:
I had the task of telling Savannah River that they simply weren't going to get what they were projected to receive. And the reason was that our facility by the early '80s was only able to produce about 20 percent of its installed capability. So where the system wide for looking at Fernald capability at about nominal 10,000 ton a year capability, we were only able to produce about 2000, and this was a shockwave.

00:12:19
Q:

What was the result of that?

00:12:22
A:
Immediate high-level attention on modernizing Fernald. And I got the task of selling the $200 million modernization program and we succeeded in getting that amount.

00:12:34
Q:
What years was. '83, '84?

00:12:37
A:
Eighty-three began the high level attention. We were validated, for $200 million modernization program in '84 and '85.

00:12:50
Q:
And so by the mid and late 1980s where were you in terms of production?

00:12:56
A:
By the mid '80s, we were back up at 5 or 6000 tons a year. We were able to get that out even with our aged facility took a lot of effort, a lot of good people. But we met those demands. The modernization projects were on the board was staged in four packages. Where each year we would receive funding to do a new level of modernization until we finally would be able to take care of modernizing the whole Fernald process plants in about, ah, oh, about it would take about ten years to do it.

00:12:37
Q:
Can you talk a little bit about what this new type of work meant for you personally? You were involved from the '70s on up more on a planning basis first just the site itself and then for a few years complex wide planning in terms of modernization. How does that how do you feel about that type of work?

00:13:58
A:
There are days I would have worked for nothing just to be where I was. I was very fortunate. I didn't tell the boss that, but I would work for nothing just to be involved on a national level like I was. It's the most exciting thing I've ever done.

00:14:19
Q:
What were some of the folks like that you interacted with. Were there some folks from the other site such as DOE headquarters?

00:14:26
A:
There were counterparts at Savannah River, Hanford, Oak Ridge, headquarters. It was small but select group. There are very few people at that time who completely understood the entire DOE production complex. That's an example of a need-to-know. You needed to know that.

00:14:55
Q:
At that time, it was needed to see the big picture.

00:14:56
A:
Yes.

00:14:58
Q:
But the way it was set up in the late '40s and early '50s made it difficult.

00:15:02
A:
It would not happen except at an extremely high level. Then it would require a different level of clearance too. The, the employee at Fernald was, had to have a "Q" clearance but information exchanged on that level would require top secret. You are going at the very heart of the nation's nuclear defense program. We played a role in it.

00:15:35
Q:
By the early eighties the way the site was brought into play in terms of inter-site cooperation changed drastically from the early years.

00:15:43
A:
I can't speak to what extent it was in the early years because I didn't have the need to know. In my view, DOE has always been run very professionally oh very businesslike and when I had the opportunity and fortune to be at that level, I saw it, and there was a good inter-site planning, good inter-site interactions, technical exchanges at that level. It was powerful.

00:16:22
Q:
I want to spend a couple of minutes now on the time period where the general public started to become aware of either through media or through other ways of the site and some perceived environmental concerns were coming out. The years that started happening and what brought you into play in terms of trying to understand and cope with the growing environmental impacts and what the site decided to do about that? Take us back to the mid to late '80s, 1984. Perhaps an initial incident that was the beginning in your mind of the change out here in terms of the interaction between production and the surrounding environment.

00:17:13
A:

There were a series of dust collector losses in Plant 9 in the '80s in late 1984.

00:17:21
Q:
What's Plant 9?

00:17:22
A:
Plant 9 was the called special products plant where ingots were machined that was primarily the activity, machining ingots. And it changed Fernald forever, and I think it changed DOE forever. It took the lid of secrecy off of Fernald and what we did here and created enormous public awareness suddenly. It was a sudden snap change in the public's awareness of what went on at Fernald.

00:18:01
Q:
How could dust collector changes of dust collector lead to that?

00:18:04
A:
Well there were a series of dust collector losses in Plant 9, which was operating seven days a week to meet the new high demand loads. And those losses were not, were not addressed usually when you have a dust collector loss the process of production has shut down.

00:18:28
Q:
What is that a sign of typically?

00:18:31
A:
It's usually a sign of dust collector bags have a failure in them a leak. And the initial step is to take the equipment off-line and re-bag the dust collector, but you do lose production time. And the production continued to operate. There were three subsequent dust collector losses I think the total uranium discharge to the atmosphere was a couple of hundred pounds. If you have two hundred pounds loss in one incident that's a failure which you fix and go back, but this one happened in four incidents. It was a reportable event. I think it was reportable under CERCLA and that was the beginning of the awareness of what Fernald did. It probably created the impact resulted from, I think, the sudden emergence of public health and safety being affected. The awareness of public health and safety was, was being affected by what went on here. I think the community had suspicions for a long time but the dust collector incidents confirmed those suspicions in the minds of the public.

00:20:02
Q:
What about the National Lead response to the Cincinnati, what that had in terms of impacting contractor?

00:20:13
A:
Well, I happened to be in the manager's office the day that the telephones were humming both from Oak Ridge, there was no on-site DOE office at that time, and Oak Ridge was saying, "we don't know whether National Lead of Ohio is the kind of company that we want to lead us into this new high production

period." And NL Industries the parent of NL, NLO had undergone a change in corporate philosophy in the early '80s where their business units were directed toward petroleum related products with the push on oil and everything that went with it. So NL Industries from what I understand was losing interest in continuing the contract at Fernald. They renewed I think it was '83 or '82 for a three-year contract. In the aftermath of the dust collector losses it was almost a mutual, explosive agreement that I said explosive both side were very polarized DOE and NL and it all happened in half an hour that DOE announced that they would re-bid the contract and put it up a bid for industry again, which took place in 1985.

00:21:45
Q:
And the new contractor was?

00:21:47
A:
Westinghouse.

00:21:49
Q:
What did this change do in terms of day to day activities at the site? You had some now some public awareness of environment contaminant release in the atmosphere, change of contractor. Was the mission of the facility still pretty much the same and production still the same, what happened in terms of the day-to-day life of the workers in the mid-1980s?

00:22:15
A:
The site mission didn't change one iota. The site mission was still to support nuclear materials production in DOE defense programs. The contractor change took place in 1986 when Westinghouse came in. I think the immediate thing that Westinghouse did was to address the public awareness with the creation of public affairs department, outreach program to the community. They did a very, Westinghouse coming in, did very effective job of bridging that mistrust that was there. I think the other major thing Westinghouse brought in was controlling worker exposures to radiation exposures, the introduction of personal monitors and friskers, at the change out points was introduced under Westinghouse. The production was still under the hands of long-term employees who grew up together, worked together, and knew how to make uranium.

00:23:33
Q:
There was a discovery of some uranium contamination in the ground water or wells around here as well. What was, what was the impact of that discovery on the, on the workers?

00:23:48
A:
The question of contaminated ground water began in the early '80s. And there were, there was a belief by the public that they were drinking our contaminated water which eventually proved to be true. There was a dispute period in the early '80s where the claims and counter claims took place but by the late 1980, '86 or '87, there was pretty good data that showed that the south plume, as we now know it, was contaminated, contaminating the aquifer so that question came to a head in the 1987 was part of the Federal facilities compliance agreement that took place. Up 'til that point, DOE felt jurisdiction over

controlling monitoring and being accountable for the health, safety, and protection of people and the environment with the FFCA then it became a regulatory, outside regulatory jurisdiction with Ohio and US EPAs.

00:25:13
Q:
From the time period of about 1984 beginning 1985 until 1989, let's say, how did your job change? Did you get involved at all with the growing need to monitor and cope with the environmental issues at the site?

00:25:33
A:
Oh, yes, I was made manager of waste remediation engineering and the group I had was oh, a dozen people or so I never want the departments with armies of people. I liked the smaller high-highly skilled versatile people, but this group did much preliminary engineering work on the site remediation that's taking place today. We did the initial planning of the demolition of Plant 7, the stormwater retention basin, the bio-surge lagoon those things. So we did a lot of the pioneering, preliminary engineering what you see happening today.

00:26:24
Q:
Can you remember the day that production ended out here? What the feeling was like that particular day or the days until the mission officially changed sometime later those days right there where it wasn't going to be a nuclear weapons production facility.

00:26:44
A:
It happened production was halted in 1989 temporarily, to place emphasis on regulatory compliance, environmental compliance and health and safety issues. In the late '80s, DOE had tiger teams as they were called from DOE headquarters. The horror stories were beginning to come out of each every site. We were at the head of the list but the other ones were right behind us with their own horror stories as they were called. This prompted a tiger team to be formed by DOE that went around to all of the sites, spent weeks there assessing safety, health, environmental compliance, amongst some other things. The team the tiger team issued its findings, I think, there were some 57, or 58 specific findings against Fernald. Westinghouse senior management at that time declared a moratorium on production, to place emphasis on correcting these defects. Production resumed for a short period, but with the end of the Cold War in 1989 or thereabouts, it formally ended our production mission in 1991.

00:28:14
Q:
What was the, ah, for those core employees that have been around for much of all of the production phase whether they be salaried or hourly, what was the feeling during this time of transition?

00:28:28
A:
By the late 1980s, the period we are talking about a great change in workforce had taken place in the late '80s. Many of the long-term employees had reached retirement age, the skill mix was changing and the age distribution changed definitely. In 1970, for example, the age distribution was two poles, either you

were about 60 or you were about 30. There was no in between. By the late '80s, the skill mix was taking place. The new employees were coming in. The people who had been there been here a long time like myself you we've been through things like that. We know that the strengths, our own personal strengths and talents, will in the end take you through and that happened. People here have always been the greatest.

00:29:37
Q:
Did your job change after the production ended? You're getting.

00:29:42
A:
Yes, I was getting to a point where in my career where I am looking at the end and with this in flux of people and people from everywhere coming in suddenly working under some of the most difficult conditions that you can imagine. The Westinghouse senior management needed someone to coalesce the workforce. So I was asked to head up total quality.

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00:00:21
Q:
Were you ever involved in a, let's take the 1985 to '91 the time period. Were you ever involved in a community meeting from a standpoint of being a presenter or spokesperson or someone that was called upon to interact with the community and or perhaps a regulator?

00:00:44
A:
In the days immediately following the dust collector loss, I was asked by the manager to head up an employee team that would be willing to talk to the community. We had no public affairs department we had no communications, professional communications type. I agreed to do this and formed a small committee of new faces, new employees that with new ideas that could talk about what happened. We met with one local resident on the situation that caused the awareness of dust collector losses. He was a nearby resident.

00:01:30
Q:
How did that go?
00:01:32
A:
It was very cool at the beginning. But the ice melted and I'll never forget one thing that he said when you tend to trivialize people's fear of, especially something nuclear, it creates anger and that is what NLO experienced with the public and the DOE that in trying to trivialize the events, as routine practice, or not really that important. I think we misread how the public thought. I'm sure we misread it. They had genuine fears and now were told that doesn't amount to a whole lot. We got that dimension.

00:02:28
Q:
Go back to the Total Quality Management said you were asked to play. This was in 1990, '91?

00:02:36
A:
1990, ‘91, ‘92.

00:02:39
Q:
What were you doing in those years?

00:02:42
A:
The influx of new employees from all over caused a need for someone to try to bring people together. People brought different work culture with them from wherever they worked. The top senior management of Westinghouse needed someone to try to coalesce the workers and build a team, team-building, positive outlook, we can accomplish things working together. He asked me to head that up which I did. It was a very enjoyable two years to wind up my career. We did a lot of good things.

00:03:24
Q:
You formally retired in what year?

00:03:27
A:
At the end of ‘92 when Westinghouse left. Fluor Daniel, FERMCO, at that time, came in.

00:03:34
Q:
What have you been doing since?

00:03:36
A:
After about a year of retirement, I was asked to come back to work to help with some of the environmental projects to draw upon site historical knowledge and putting together the feasibility studies for the cleanup of the site. So I responded by saying I am not interested in working full time

again but I’d be glad to do what I can on a part time basis and I‘ve been working on a part time basis since December of ‘93.

00:04:13
Q:
How do you compare the engineering challenges of the environmental remediation to those challenged you faced in the ‘50s and ‘60s with the thorium here or the production efficiency there? How are those challenges different?

00:04:28
A:
The former years 1960s that time frame if you had a good idea, you could get support from your management, the production management, the technical management and begin testing that idea within days or weeks. The climate today its oversight, regulatory oversight, which requires plans to be

developed, public scrutiny and all these are good things. It involves the public. But it can also be a frustrating experience for the engineer in the workplace in trying to see something happen. It takes a lot of self-discipline today, is my observation. It's a much more difficult environment to work professionally because you must go through all of these steps, you must go through the regulatory oversight, you must go through the internal assessments and evaluations. It's part of the game today.

00:05:37
Q:
So it's longer time frame to draw to the board and operation.

00:05:40
A:
Much longer. And much more paper work. You can not just go out into the field within a week or two begin to digging dirt or sinking wells or taking down buildings. It takes. I think the discipline of that plan is good in this climate. It gives the public and community a stake in the clean-up Fernald. As an engineer today, if I were able to go out to dig dirt or sink a well, would I ask public opinion, probably not, but today we involve the stakeholders, that's the correct way.

00:06:22
Q:
I'll ask you a couple of more questions. One is a follow up of your last statement. If you compare and look at the evolution of involvement of the community and public in the activities of the site from the production years to clean up years; what do you think is the current status, if you will, of community involvement in site activities? What do you think about that?

00:06:47
A:
I think DOE together with Fluor Daniel Fernald have been very effective in creating a partnership with the community. The community has complete awareness or has access to all of the reports through the public information center. The community can participate as part of the Citizen's Task Force and advisory boards and has a real role. Even if the community chooses not there are limited memberships

on these task teams or task force and advisory boards, but the public goes to the regular monthly briefings by the different projects of what the plans are, where they are, and what's going to happen. I think it's tremendous partnership that has been created.

00:07:41
Q:
Last question, if you can reflect a little bit on why you think a history project might be valuable, either from educating the adult members of the community that are still around here or in terms of providing resources for future generations to learn about the role of Fernald in the Cold War, and then the role of Fernald as it's undergoing clean up.

00:07:59
A:
The importance of such a documentary is to preserve our role in the nation's nuclear defense programs. We played a very important role. And the end of Cold War is testimony to the success of our role and other DOE sites. The men and women of Fernald should always be proud that we worked here and did

the best jobs that we could do and that we succeeded. The ah, I think the that role that has been, production related, has been missed in contemporary Fernald. There is little interest historically, except in a few cases, of what really went on at Fernald. And I understand that. The mission today is clean it up. Do it quickly do it safely, do it cheaply in inexpensive way as you can, but there is another dimension of Fernald that needs to be preserved and that is our production mission. We should always feel good whether we are long-term employees or whether we've worked here for one year. We should always feel good about working here.

00:09:31
Q:
Even a lawnmower should feel good about.

00:09:32
A:
Even a lawnmower is doing a job

00:09:37
Q:
Where would we be?

00:09:39
A:
Without grass cut. I don't think today is a smog alert day (laughing).

00:09:45
Q:
Well, I don't know. That's the way we get to the last part of it.

00:09:53
Q:
If you have anything else, the way of the lawnmower otherwise.
00:09:57
A:
I am open. I am enjoying this.

00:10:01
Q:
That's fine. You did a great job.