



U.S. ARMY
JOINT MUNITIONS COMMAND (PROV)

Mr. Louis “Louie” Dellamonica
Hawthorne Army Depot
16 December 1941- Present

Oral History Interview
9-10 September 2002

August 2003
History Office
Headquarters, U.S. Army Joint Munitions Command (PROV)
Rock Island, Illinois

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PREFACE

This interview with Mr. Louis “Louie” Dellamonica, General Engineer, Hawthorne Army Depot, Hawthorne, Nevada is part of a continuing series of oral history interviews conducted by the US Army Field Support Command/US Army Joint Munitions Command History Office.

In this lengthy interview, Mr. Dellamonica gives his perspectives on his 61 year plus and continuing career as an engineer at the Army Ammunition Depot. Mr. Dellamonica relates his experiences growing up in Nevada in the 1910s and 1920’s, his experiences at Hawthorne Nevada since joining the Federal service in December 1941, his contributions to the depot and the town of Hawthorne, and his experience in demilitarization of munitions. This is a story not only of a career, but also of the Navy and Army ammunition industry since the beginning of World War II.

This interview was conducted over 8 hours on 9-10 September 2002 at Hawthorne Army Depot. At the time of publication Mr. Dellamonica was the oldest serving federal civilian employee on active service. He was also the longest serving civilian employee on active service. Mr. Dellamonica approved public release of this transcript. Copies may be ordered from the Commander, US Army Field Support Command, ATTN: History Office, 1 Rock Island Arsenal, Rock Island, Illinois, 61299

George Eaton
Command Historian

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Mr. Louis "Louie" Dellamonica, 1942

BIOGRAPHY

Louis “Louie” Dellamonica was born March 23, 1912, in Yerington, Nevada and began his federal career one week after the bombing of Pearl Harbor in December 1941 at the Hawthorne Naval Ammunition Depot, Hawthorne, Nevada. He received a Bachelor of Science Degree in Electrical Engineering from the University of Nevada – Reno in 1934.

Mr. Dellamonica has been serving at the Hawthorne Army Depot since December 1941. His life for the past 62 years is characterized by selfless service and loyalty to the installation and his community. He is a quiet, unassuming gentleman who is embarrassed by praise and lives a personal philosophy of service to others. Mr. Dellamonica’s personal qualities are best summed up in his own words: “pride means do-it-yourself to the best of your ability, disregarding whether you are a big wheel, little log, keystone or cobblestone.” He is truly a very unique individual.

Mr. Dellamonica has demonstrated an exemplary work ethic. His achievements serve as a role model for all of us. He is a rare combination of practicality and visionary, common sense and uncommon intellect. He has mentored several generations of Navy, Army and Contractor personnel in achieving engineering excellence at Hawthorne Army Depot. His engineering expertise has been a guiding force on the development of a multitude of critical defense related projects beginning in World War II and continuing through the present Iraqi freedom effort.

Mr. Dellamonica has been very active in the local community by serving in the Civil Air Patrol for 40 years and obtaining the rank of Lieutenant Colonel. Mr. Dellamonica obtained his pilot license in 1935 and has flown hundreds of search and rescue missions throughout Nevada and California. He also is a licensed “ham radio operator” and maintained the radio equipment for the Mineral County Fire Department and Sheriff’s Office for a number of years.

Mr. Dellamonica was the driving force in bringing television to the Town of Hawthorne in the mid 1950s and was actively involved in maintenance and upgrading of this system until 1995. On numerous occasions, Mr. Dellamonica would put on snowshoes and hike into the remote translator site during the winter months to restore services during those early years.

Mr. Dellamonica has received numerous awards and recognition for his outstanding and unselfish dedication to duty in service of his country.

Date: 9 and 10 September, 2002
Interview of: Louie Dellamonica
Interviewed by: George Eaton

9 September 2002

EARLY YEARS AND HIGH SCHOOL

Eaton: From what you told me before we started the tape I know you were born on 11 August, 1911 and you grew up in Yerington, Nevada and went to high school there. I know that your parents were Swiss immigrants. When did your family move to the United States?

Dellamonica: Oh, let's see, probably around 1901 or 1902. My Dad came to this country and actually ended up over in Minden and Gardnerville and he started milking cows over there. Then he moved over to Yerington and then he went back to Switzerland and got married. My mother and he came back to the US and settled in Yerington.

Eaton: He was a farmer in Yerington?

Dellamonica: Yes.

Eaton: Yerington doesn't look very much like Switzerland to me. There's no mountains like there are in Switzerland around here.

Dellamonica: No, but I still have lots of relations in Switzerland. Once in a while, there was one of them would come across and he would stay here for two or three weeks and go back. I never did go back to visit them.

Eaton: So your father was a farmer in Yerington and you grew up there in the 1910's. When did you graduate from high school?

Dellamonica: 1928.

Eaton: How far is Yerington from here? About 40 miles?

Dellamonica: It's 58 miles.

Eaton: When you were in high school were you working in the mining camps when you weren't in school?

Dellamonica: Well, when I was going to high school, I did a little bit of electrical work, probably during my second year of high school. I did some electrical work in a butchering plant over there and that was my first work that I did that I was paid for. Minor electrical work.

Eaton: Was your home electrified then?

Dellamonica: Well, to start with, there was no power. In the early days, there was no power in our home, but we did have separate small generating plants that charged batteries that we took home. The batteries only furnished power for the house lights. Finally in 1926 we got power. Oh let's see, it was at the start of going into high school. When I was going to grammar school there was no power. But finally a power company came by and put in what was call a "peanut" line. A single wire down through the country that picked up some of the farms. At that time then, you had to think about putting more electrical lights in the house. And at that time there was a copper smelter down in Wabuska that was being secured. I went down there and got a lot of the electrical material that came available down there at no cost. That was my first contact with anything that was electrical.

STUDENT AT UNIVERSITY OF NEVADA, CAREER BEFORE HAWTHORNE, AND HAWTHORNE CONSTRUCTION AS A NAVY FACILITY

Eaton: What caused you to decide that you wanted to pursue a career in Electrical Engineering?

Dellamonica: Well, I was going to high school and there was a fellow in Yerington that had an amateur radio station and I was going to school with one of his sons. His son was doing a little bit of electrical work around Yerington and I helped him do a little bit of electrical work on a building. In those days, of course, everything was tube type, no solid state. I got interested in that and I eventually obtained an amateur station license myself, while I was still going to high school.

We did not have commercial power out at the ranch. So, I had to use batteries to drive the high voltage generators to produce the voltage necessary to operate my transmitter. And the transmitter consisted of one tube which produced the RF... energy to produce the continuous wave (CW) signals.

And that's the way I got interested in being electrical. I was actually interested in aviation at that time also. When I graduated from high school, I wanted to go to a technical engineering boarding school for aeronautics, but we just couldn't afford it, you know, and I would have had to move up to Seattle or someplace up there. The University of Nevada was the closest point to be able to get home on the weekends and work on the farm.

Also, the same fellow that had the amateur station had a relative that was connected with the University of Nevada. He was a comptroller or something like that. The University hired an instructor and this instructor had come through Yerington. I don't know where he came from, but he was referred to this relative up at the University. He landed this job up there and he was going to teach Electrical Engineering and I knew him. So, I went to the University of Nevada after I graduated from high school.

Eaton: That was in Reno right?

Dellamonica: In Reno, right. In the summertime I worked doing electrical work and picked up a few bucks to go to school. And in those days, I can remember, \$800 would take me right through the semester. Now, \$800 won't buy the books.

Eaton: Especially Electrical Engineering books.

Dellamonica: That's right. So, that's the way I bought my education, as far as the university is concerned, in Electrical Engineering.

Eaton: How many kids your age went to college from Yerington?

Dellamonica: Oh, gosh. Just a few. In Engineering, it was probably only one, two or three. And then most of those people, actually not from Yerington, but from Yerington and Hawthorne and the ones from Hawthorne were interested in mining because they had some mines out there and around here. There were a few taking up mining, a few for mechanical and chemical. From Yerington, I think I was the only one that chose electrical.

Eaton: Electrical back then, was not like computers today.

Dellamonica: Slide rules! I hadn't taken some of the courses that was required for electrical. The prerequisites, you know, hadn't been taught in high school, so the first couple of semesters were hard.

Eaton: You were playing catch up.

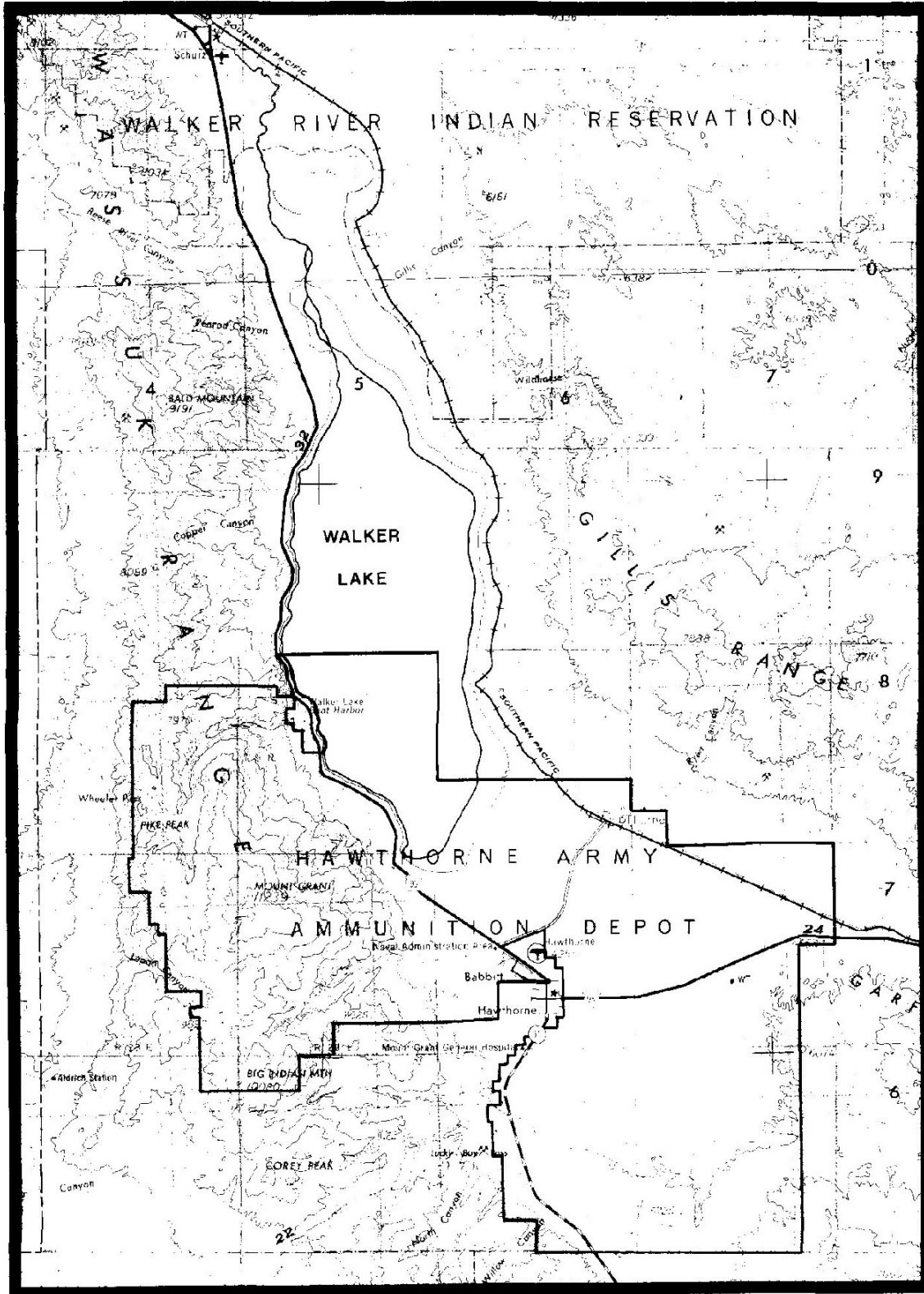
Dellamonica: I was playing catch up, that's right.

Eaton: Now while you were in college... I'm trying to understand how the areas were laid out... so were there hard paved roads between Yerington and Reno?

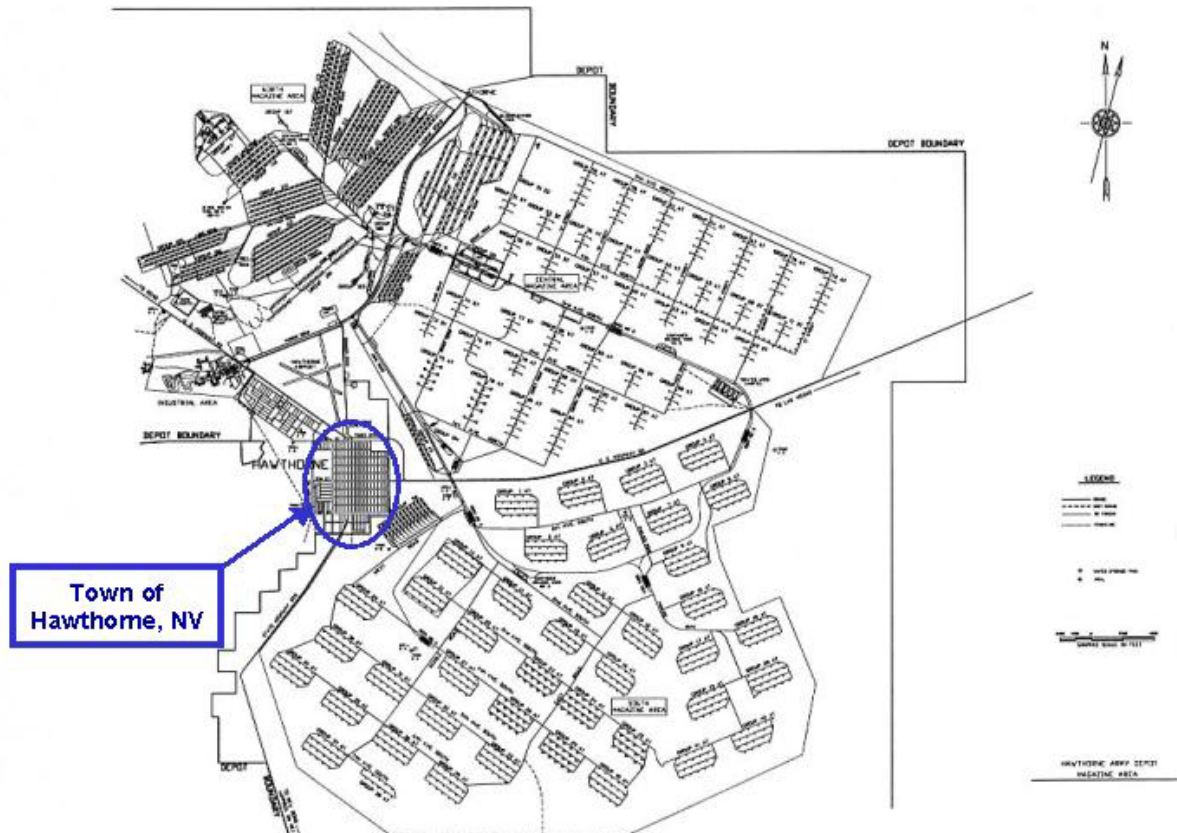
Dellamonica: No, there were no paved roads. It was all gravel up to Fallon and then there were paved roads from Fallon into Reno. There was gravel from Yerington down to here as well.

Eaton: Today there is one railroad track. Did the railroad track run all the way into Hawthorne before they started building the depot?

Dellamonica: Yes, there was a railroad track that went all the way to Mina, because the mines were over there and the some shipping from Gabbs. Gabbs was mining and they hauled materials from Gabbs to Luning and there they loaded it on the rail and then from there they went to a smelter. It didn't stop in Yerington or Hawthorne.



Hawthorne Army Depot and Surrounding Area



Hawthorne Army Depot - 147,236 Acres

Hawthorne Army Depot Facilities Map

Eaton: Mina is east of here, right?

Dellamonica: Yes

Eaton: And Gabbs is southeast of here?

Dellamonica: Gabbs is north and east of Hawthorne.

Eaton: Is it still there?

Dellamonica: Well, yes, it's still there, but there's nothing going on. All that's left is the town. Right now there is still a few people living there. And since that time, for a while, they had a gold mine out there, pretty close to Gabbs and kept Gabbs alive, but now that's secured also.

Eaton: So, back in 1925, 1930, Hawthorne was becoming the mining industry in the county. About how many people lived in Hawthorne then? Do you remember?

Dellamonica: Oh, maybe a couple hundred.

Eaton: A couple hundred at the most. Okay, that's kind of what I thought. So, most of the mines that supported Hawthorne are closed down now?

Dellamonica: Yes.

Eaton: So, Hawthorne is really dependent on the depot.

Dellamonica: The town is dependent on the depot, yes.

Eaton: How big did the population of Hawthorne get through all that time?

Dellamonica: Well, in the 30's the population didn't really go up very much. When I, maybe I probably had about a hundred people employed at the depot.

Eaton: I was very surprised last night. I was flipping through some of the information fact sheets, to realize that through a large part of Hawthorne's history there were more military uniformed employees here than there were civilian employees here. Back in the 30's was it Navy guys that were doing the work and a few civilian employees?

Dellamonica: Yeah, there were quite a few Navy people and of course the Marines were security and firemen.

Eaton: Right.

Dellamonica: And they built those torpedo buildings. There aren't any now, they're just used as warehouses. And there were torpedo buildings and there were torpedo men working in there, but they were civilian. Of course, there was more, the officers in charge of those people were Navy.

Eaton: Right. Uniformed.

Dellamonica: Navy Chiefs

Eaton: Now, you told me on the phone earlier, a month ago, that you actually were here for the groundbreaking ceremony in 1929.

Dellamonica: Yes.

Eaton: Can you tell me a little bit about what went on there?

Dellamonica: My dad had some friends he knew that were working in the mining camp over in California. They came over to visit and also be involved in the groundbreaking ceremonies that were going on because the Navy had decided to build a facility over here. And so, I came over with my dad and mother and they went out to see the groundbreaking. And they had a barnstormer selling rides for \$5 a ride. And I talked my dad into a ride. And that's when I got

interested in flying and I eventually got a private pilot's license. I flew for forty some odd years in the Civil Air Patrol and I finally I quit because they wouldn't approve my physical. My physical condition got to a point where they wouldn't allow me to fly aircraft. So I ended up staying on the ground, you know. And so I can't remember exactly the last flight that I made. I have to look in my log book.

Eaton: Probably 20 years ago?

Dellamonica: Yes, over twenty years.

Eaton: Over twenty years ago. That's too bad. So the Navy did the groundbreaking when?

Dellamonica: 1929

Eaton: You were already in college then?

Dellamonica: Yes.

Eaton: So, you must have been back there for a vacation or...?

Dellamonica: Well, the groundbreaking I was here. I think it was during the summer break or maybe on the weekends. I can't remember exactly. At that time there was only one railroad into Hawthorne and you passed Schurz and the main road was on the other side of the lake into Hawthorne.

Eaton: Oh, okay, on the east side.

Dellamonica: On the east side of the lake, yeah. And I used to come down, when I was going to high school. I used to come down and fish in the lake. And at Yerington the Indians always used to bring over fish and sell the there. They were nice big trout. And I used to come over and fish in the lake and the lake was about two or three miles this side of Schurz, the lake was that high.

Eaton: It was that high? It was that big?

Dellamonica: The upstream irrigations took over and the lake has been going down ever since.

Eaton: So, we did groundbreaking here, some time in 1929 and they didn't start really building until 1930.

Dellamonica: Right, 1930

Eaton: Now, as I recall, the government took about 200 square miles?

Dellamonica: They bought up a lot of mining claims and private property and the watershed of Mount Grant for water purposes and things like that. At that time, the only thing down here that

was going on was a little bit of mining.

Eaton: So, the history that I read a little bit about, the little bit that I picked up on Hawthorne, said that the government withdrew property. Withdrew the property into the federal domain. But it doesn't really talk about the fact that they bought anybody out, but there were some buy outs and some claims bought.

Dellamonica: Yes.

Eaton: Was there any bad feeling in the area over that?

Dellamonica: No, a lot of those claims were just claims. And they were not being worked and I know in the summertime, I worked on one of the claims up on top of Mount Grant. And I put in the electrical system for the plant. And that was about the 2nd year in college, about 1931. And I worked up there in the summer on that job and all I did was install an electrical system. We had the generators sitting up there and off the side and I helped put the plant together and helped operate it. And of course, the Navy was operating down here. They were still doing some building. And the security was tight. They had Marines for security and they would come by up there once a week on horseback and check us out and see what we were doing.

Eaton: How did they get everything in here? There were only gravel roads into here and only one rail line, how did they get all the construction materials in?

Dellamonica: It came in mostly by rail.

Eaton: Did they build a cement plant?

Dellamonica: They had three cement plants. Well, not in 1930. In 1930, they only had one plant.

Eaton: Did they have it on the site or did they have it up in some other place and they had to bring the concrete here?

Dellamonica: No, they had it down here. It was out here at the edge of the lake and they had gravel built up on the west side of the lake, where they got the gravel above the level of the lake. And that's where the first plant was. They built just a few magazines and a couple loading plants and the Industrial Area.

Eaton: That was it in the 1930's.

Dellamonica: In the 1930's. And of course, the Industrial Area was built first.

Eaton: The personnel and the industrial area were built first and the housing area, the first housing area?

Dellamonica: That's right.

Eaton: Today I can take route 95 down into Hawthorne and then take a hard left and there's other storage facilities to the south of 95 there. Back in the 1930's, was everything was to the north of where 95 is today?

Dellamonica: Yes

Eaton: So, they built magazines first?

Dellamonica: Well, no.

Eaton: I thought they built storage magazines first.

Dellamonica: Well, they built the two loading plants and the magazines went together about the same time. And those magazines were right close to the loading plants and they also built a couple of storage buildings for powder out of brick. The first one's to do it. And they're actually red brick. They did use a little bit of concrete for the two loading plants, but they were very small loading plants. And that was it. And that took them until about 1932.

Eaton: That took them three or four years to do all of that, or two and a half years?

Dellamonica: Yes, about two to three.

Eaton: The Navy must have had to improve the roads, before they did anything else.

Dellamonica: Oh, yes. However, the roads from Schurtz down to here were improved by the state.

Eaton: Again, they had to improve the roads on the east side of the lake first, because that is where the rail line was.

Dellamonica: Yes, that's where the rail line is and most of the materials came in by rail because in those days we didn't have all these crazy trucks. The trucks were smaller.

Eaton: Do you remember knowing about the Lake Denmark explosion? Do you remember hearing about that before the Navy ever came out here?

Dellamonica: No. It was news to me and news to everybody that the Navy was going to



Construction of the Industrial Area, 1930



Navy Beach Recreation Area on Walker Lake, 1930



Main Gate, 1930

build something at Hawthorne and what for? I came over here during the groundbreaking and naturally there were all kinds of explanations of what was going on. There was a party and, of course, all the bars were open.

Eaton: You said the Navy built to about '32 and they opened really ran this in '32 and do you remember just from being around what they were loading then? Were they loading mines?

Dellamonica: Yes, mostly mines.

Eaton: And they were only loading what was needed for the Pacific fleet? Is that true?

Dellamonica: Yes.

Eaton: So, anything they had they sent up to the Pacific Fleet, up to San Francisco, up to Bremerton or something like that.

Dellamonica: Well, the filling plants, I think loaded the big old spherical mines

Eaton: The round ones.

Dellamonica: The round ones. And I think that maybe some of the depth charges that they used on their destroyers and things like that. And pure TNT.

Eaton: Pure TNT. So they were all loaded with TNT back then?

Dellamonica: Yes.

Eaton: Now, did they make all the TNT here back then?

Dellamonica: No, nothing manufactured here. The containers came in empty and the explosives came in separately. They just melted it and poured it into the cases.

Eaton: They basically did the same thing then that we do today. They have chemical works and they have metal body works and they have load, assemble, and pack plants just like we do today.

Dellamonica: Yes.

GRADUATION AND BECOMING AN ENGINEER

Eaton: Now, you graduated from the University of Nevada in 1932?

Dellamonica: 1934.

Eaton: With a degree in Electrical Engineering. What did you do between that and 1941?

Dellamonica: I worked in the mining camps and on power lines. Construction of mills, which

were going in not only in this range but in the other range south of Yerington. I helped install electrical equipment and generators and operated mills. I took on quite a bit of mechanical work along with my electrical. And also, I took a few mining courses too, because I was involved in the mining work. When you take courses in the school, the instructors like to take you to their favorite mines but their favorite mines were not in this direction. They were down in California but eventually I did get one of the geologists to come to the Hawthorne area.

Eaton: The way you talk, you sound like you were actually physically putting in the generators and putting in the motors and putting in the wiring for the electrical systems.

Dellamonica: Yes.

Eaton: Today, I thought, if you are an Electrical Engineer, you are designing. It must have been a different profession back then.

Dellamonica: That's right. But a lot of the work was the Engineering required for the installations.

Eaton: Tell me a little bit about what an Electrical Engineer did in 1934 and 1935 and then later on we'll talk about how that progressed over the decades.

Dellamonica: In 1934 and '35, there was hardly any true engineering work but we were just doing electrical work. There was no engineering involved, except what you got out of a textbook. You didn't actually design the equipment. It was all install equipment. I know I was traveling around to different places looking at equipment that was abandoned at some other mining facilities and I just picked the equipment up and got it moved and reinstalled.

Eaton: You have to understand capacity, and voltage, and layout, and distribution systems.

Dellamonica: Yes, that's the engineering part. I was doing engineering when I was young. I was doing a little bit of engineering out at the ranch and I was building something from scratch, you know what I mean.

Eaton: How much, let's say from 1928, when you first started getting interested in Electrical Engineering work, up until 1945. How much did electrical mechanics and motors-- how much did that change?

Dellamonica: You know, that stayed pretty stable.

Eaton: So, it wasn't until the 70's and 80's that things really started exploding in new directions?

Dellamonica: Right, that's right. Solid state revolution.

Eaton: Throughout that whole period, what you've learned in college and you had enough experience was enough to keep you going?

Dellamonica: Yes, keep me going, right.

Eaton: Well that's one of questions I have for you. In the long term, how do you keep up in the Electrical Engineering profession? In the many years after you graduated from college, how did you keep current in what going was on?

Dellamonica: I didn't go back to college or anything. I was just working with the equipment and learning how it was supposed to operate and making it work. I've installed heavy equipment and light equipment. I've installed diesel generators and operated electrical systems and that didn't require a lot of Engineering, but actually I used some of the data that I had acquired at the University. But when I was going to school at the University, at lot of my Electrical classes, the instructors knew that I was familiar with electrical work so the only thing I had to do was check out their lab work to see that they weren't connecting anything wrong and blow it up. And they gave me credit for that.

Eaton: So, there really has been a revolution in Electrical Engineering in your time. I mean solid state circuitry has been a big change.

Dellamonica: There has been a big in revolution in computers.

Eaton: So, you were experienced enough that when the solid state came in you were able to understand what was going on?

Dellamonica: Yes, a little bit.

Eaton: How to bypass tubes and things like that.

Dellamonica: That's right, and of course I was familiar with tubes, because I was a ham operator and all that and playing around with electronics in that area and that was all vacuum tubes.

HAWTHORNE AND WORLD WAR II

Eaton: Okay, let's move ahead. Had you already applied for a job here before the attack on Pearl Harbor?

Dellamonica: Yes, I had applied in several places for Electrical Engineering work-- some companies in the Bay area and the power company in Reno and here. I was involved in some construction work on the power line from Donner Summit down to Truckee which was just actually labor work. I was a powder monkey because I had worked in the mines and so I knew how to drill holes in the rock and I would do blasting so they could site some of the poles and things like that. And then, they found out I knew a little bit about electrical, so I put some of the switches together, just simple mechanical and electrical work.

Eaton: Now, in that period of time, that would have been in mid '41 in when you were applying for jobs here, had the depot already started expanding? I know they really started building the Army ammunition network up in the late 1940 and 1941, but was Navy Hawthorne already

growing?

Dellamonica: When I came over here they had just started expanding.

Eaton: I thought the Navy was on the same time line the Army was. They recognized there was a war coming and they'd better expand, and they finally had money. The Army let contracts in mid-1941, but the work often wasn't started until after Pearl Harbor.

Dellamonica: And they were hiring anybody that would come along and, of course, when I got a notice on a Friday that there was a job available as an Electrician at Mare Island and it was the same one offered at Hawthorne. So, I thought, well hey, Hawthorne is a lot closer to move, so I came over here.

Eaton: Mare Island is in Vallejo, in the Bay area?

Dellamonica: Yes.

Eaton: So, were you looking for stability or were you looking for a longer career path?

Dellamonica: Well, I thought, I'll just come on over here and I thought that possibly they would have an Engineering Department and I could move into that. I came over on 13 December 1941 and I came to work and they put me in the filling plant area as an Electrician at \$.92 an hour and they paid me cash.

Eaton: Paid in cash every Friday?

Dellamonica: Yes

Eaton: I think you said you got a pay raise in about six months. You got a couple cents more?

Dellamonica: I think it was six a cent raise.

Eaton: You were married by then weren't you?

Dellamonica: Oh, yes.

Eaton: And you'd been living in Yerington?

Dellamonica: Yes, I'd been living in Yerington.

Eaton: So, did you move down here right away or...?

Dellamonica: Well, they had just started to build the Babbitt Housing area and so naturally I wrote my name on the list to get one of the units. I had to commute about a month. Finally, they called me and said we have a unit, but you are going to have to finish painting it. I said okay, so I came over and finished painting it and moved in. I stayed there for 20 years.

Eaton: Twenty years. Was that government provided housing or did you have to pay rent?

Dellamonica: No, we paid rent and it was government housing. I think we paid \$30 a month or something like that.

Eaton: So, then in this area of Hawthorne, you would have the military people who were living on base, you would have the government employees living in Babbitt. And what about Hawthorne itself? Who lived there? Was it still mining or were people in other occupations?

Dellamonica: No, it was mainly mining. But people were moving in to work at the plant. There were trailer courts all over the place. People were moving trailers in and moving in and Hawthorne was expanding.

Eaton: And how did Hawthorne deal with that? How did the City Council react?

Dellamonica: Well, they were having problems growing up, of course. Babbitt had everything. They had their own post office, their own shops, post office and a large grocery store. Everything was in Babbitt and Hawthorne did not have much.

Eaton: All that's left now is the bowling alley isn't it?

Dellamonica: Yeah, all that's left is the bowling alley and the school that we built later. There's nothing left.

Eaton: I know there are a couple of houses between here and Fallon that I passed that I think were old Babbitt houses.

Dellamonica: Yes, they are scattered all over. Some are in Hawthorne and some on the side of the hill. Bought and moved.

Eaton: Did the City of Hawthorne itself have to put in power and sewer and all of those kinds of things to match?

Dellamonica: Only power. In fact, the first power line that came in was power coming in from Southern California Edison at Mill Creek and Lee Vining over the original power lines. They came through the mining camps and they came down the mining camps and the Lucky Boy Mine and then into Hawthorne and that was it. And then in the thirties they had extended that line out into the filling plant area and that's all the power that was available for the Naval facility.

Eaton: Now, in the thirties, the Navy built a power generation facility?

Dellamonica: Yes, they had to expand, because of the workload and everything else. And they built magazines and warehouses just all over the place and they increased the size of the two filling plants and started to build two more. The [electrical] line that came over was owned by

Mineral County and couldn't handle the load. So, the Navy put in a new line all the way on over to California. A 55 mile line to Mill Creek just this side of Lee Vining which had hydroelectric plants. The new Navy line ended at the Substation at the Mill Creek plant. And there was no highway over there and the only road out there over in that area, was the road that was built to build the power line. Unless you want to go up through the canyons and around through all the mining camps to get over to California.

Eaton: So, when the Navy put the dam in that was to create a reservoir for water for production, not for power generation?

Dellamonica: Which dam? Cat Creek?

Eaton: Up on Grant Mountain.

Dellamonica: That was just for water.

Eaton: Just to get a fresh water reservoir.

Dellamonica: Yes. During the 30's there was a CCC camp up here. A civilian conservation corps group who built a lot of those dirt roads around here. And they built dirt roads up the side of Mount Grant so they could get up there to develop water sources. So, they had to expand and Hawthorne wasn't expanding fast enough to handle all the influx of the people that were required to operate and so they built the Babbitt housing area.

Eaton: A lot of places did that back then.

Dellamonica: Yes, that's right.

Eaton: I was up in Badger Army Ammunition Plant a couple of weeks ago and found that they had the same issue in 1942. Wartime construction and production workers were coming in trailers and locals wanted to ban trailer parks, so they wouldn't change the zoning. The Army finally took some of the land it owned and built a housing area. They told the state that if they wouldn't cooperate, the Army would fix it.

Dellamonica: That was the same as here. They built 1100 duplex units and the facilities that went with it and the Seabees were in here building and building and building.

Eaton: Did they put a sewer system in? Sewer and water purification and water treatment and all that good stuff?

Dellamonica: No, there was no water treatment. The water's off of the reservoir up there and the dams that were constructed provided potable water.

Eaton: Sewage treatment though?

Dellamonica: Yes, there's sewage treatment out at the lake and that was another problem that

Hawthorne had, you know that sewage treatment just couldn't keep up.

Eaton: It must've been hard on the Hawthorne city government, because they were such a small sleepy little town and then all of a sudden all of this growth.

Dellamonica: That's right.

Eaton: And it probably hit them twice, because there was a little bit of growth in 1928 to '32 when they were actually doing the plant and then it went down to such a small plant afterwards and then again in the early 40's it started building and that it really hit them hard.

Dellamonica: That's right.

Eaton: So, you were actually hired before the big rush after Pearl Harbor?

Dellamonica: Yes.

Eaton: You didn't start until a week after Pearl, but it was part of a planned hiring boom. So, even at that point in time, you had seniority over all the rest of the hiring explosion and growth. You were doing the electrical work for the rest of the expansion that was going up?

Dellamonica: That's right. I was down there when the contractors came in, they set up a construction camp out here where we now have a truck inspection lot. That was a big construction camp. And of course, they set up some engineering groups out there. And the engineering groups naturally found out that I had an Electrical Engineering degree, so I started working with the Westinghouse people, but I was still an Electrician. The Navy didn't have an Engineering Department, not yet.

Eaton: So, you were a government employee electrician, helping the contractors out in electrical engineering.

Dellamonica: Yes, helping the contractor and working in the filling plant area at the same time.



Boiler, Stables, and Green House, 1945



Industrial Area Storehouse, 1945

Eaton: How familiar was Westinghouse with building an ammunition plant and all the electrical safety that you have to take care of?

Dellamonica: Well, their problem was they were trying to convince the Navy that they should modernize their thinking on electrical distribution systems, because too many of these Navy Chiefs were so used to shipboard work. And you know, that was the big problem. And I can remember, I was all for it and so was the Westinghouse people, that the distribution system should've been higher voltage than it is now, but the shipyard people, 4160 was the high voltage they knew and so everything ended up 4160. And it should have gone to the 15 KV, which is the more modern system. So, we ended up with 4160.

Eaton: When was that finally upgraded?

Dellamonica: Well, they're still at it. And of course, during the construction, early in the construction we put in some generators to supplement the power lines coming down from Mill Creek that the County was operating. They were trying to improve that power line, so they could handle some of the Navy load, but they were not succeeding very well so we had to build a generating plant. The Navy installed a generating plant that eventually was destroyed by fire, and was never replaced. Later on, the Sierra Pacific Power Company came along and improved their coverage of the state and the Navy ended up going with that company for their commercial power source.

Eaton: So the power came from a different direction.

Dellamonica: Yes. But I can remember when I used to get calls on weekends and sometimes during the week from the Southern California power people saying hey, we're running out of water at Mill Creek, can you start up your diesels and carry Hawthorne? So, I'd go out there and fire up the diesels until Southern California could come back on line. We were operating the plants and feeding Hawthorne power and everybody else on the line.

Eaton: When they were building the magazines did they put lights and power inside those magazines?

Dellamonica: No.

Eaton: So, it was all dark in there and you had to bring a torch in to see what you were doing?

Dellamonica: The majority of the magazines have no electrical systems. Since then a couple of the magazines have been modified and electrical systems put in there for special purposes, heating and air conditioning to keep the temperatures within the limits for the missiles and things like that.

Eaton: So, all those magazines, all the igloos out there are slabs of concrete and there's no utilities going into those at all?

Dellamonica: That's right. Not until the security system started coming in.

Eaton: So, your special ammunition electrical problems have been related to the security systems.

Dellamonica: That's right.

Eaton: And what sort of special considerations did you have to take when you were putting those lines together with electricity?

Dellamonica: Well, I did some work with Southern Pacific Power, when they put that line in the camp from Truckee and so I was familiar with high voltage lines.

Eaton: We were just talking about the electrical specifications for the ammunition line.

Dellamonica: And actually the only lines that we were concerned with are the ones in the housing area and we had to increase the power sources for our filling plant area and the additional wells that we were putting in for water, so all of that was overhead power lines and there was no problem with that.

Eaton: The reason I asked the question about electrical safety is because a friend of mine is an electrical contractor back home and he did electrical work at Iowa and he was talking about having to run all of the cables on the outside of the building and no lights the inside, so they had to cut holes in the walls and put glass over them so the light was actually shining through, so there was no spark or anything like that inside the filling line. Back when you were building this place were they not worried about that sort of thing?

Dellamonica: Yes, we had some of the structures that went in, but I had electrical systems in them, but they also had the glass block walls, which allowed natural lighting in and even some of the warehouses that were built, not the igloo type magazines, but the warehouse type magazines had some glass block windows in the front, just to bring in a little bit of light, because there's no power inside.

Eaton: That's interesting, but on the line itself they would have to have some sort of power.

Dellamonica: Oh, yes, part of that was electrified, yes.

Eaton: Was there any anti-spark type of process you had to take care of?

Dellamonica: Oh yes, sure, the construction of the loading facilities, all those structures had to meet certain requirements. The equipment had to be explosion proof.

Eaton: How did they make it explosion proof?

Dellamonica: Well, that was a new art. That was something that many of the electricians have

problems coping with. There's companies that were making explosion proof equipment, because they were used in the refineries apparently and the oil fields and gas plants. But when they had to adapt it to ammunition and loading facilities, you couldn't find an electrician that knew what explosion proof was. So we had to train almost everybody that came in, to make sure they had some sort of experience to do it properly. We had a lot of inspection work in that area to make sure the systems would be suitable.

Eaton: But did they dampen the connections or things like that? Did they put something around connections? How did they seal something so that it is explosion proof?

Dellamonica: That's right, a lot of seals and everything has to be heavy so that if there's any explosives get inside the item and it exploded, it wouldn't vent out. So, it was contained in other words.

Eaton: So it's a "containment system" as much as an anti-spark system.

Dellamonica: And also we put seals all around it to keep the gases or dust from getting in there in the first place, so it is a "different ball of wax".

Eaton: Let's go back to World War II a little bit more here. If they only had four lines and they were making four or five different products and they would have to shift work, did you have to get involved every time they did a shift over, when they went from loading mines to bombs?

Dellamonica: Yes. For a filling plant shift we had to modify the filling stations and things like that to fit the newer item, yes.

Eaton: That was probably just top load gravity feed?

Dellamonica: Everything was gravity feed. We never did have any pumps operating with explosives.

Eaton: So, really as long as the bombs are coming on the line and the mines are coming on the line, everything above them is probably the same?

Dellamonica: That's right.

Eaton: Okay. What about the cooling stations where the TNT was set up, did you have to change those for different kinds of bombs?

Dellamonica: Well, the only bomb cooling that we had was in the cooling sheds of course and that stayed pretty well the same. There was not much involved there. The only involvement we had down there was when we were producing low drag bombs, we were producing them so fast that we didn't have time for them to cool and they would go down to the cooling shed into the boxcar and away they went.

Eaton: Cool them on the road, huh?

Dellamonica: Yes, actually we had some incidents on the rail line.

Eaton: Explosions?

Dellamonica: Yes, we had an explosion down in California.

Eaton: I could imagine you could get dribble coming out.

Dellamonica: We don't know what happened. We think one of the 14 inch rounds broke down through the floor of the box car and got caught under the wheels and on to the track.

Eaton: And sparked off...

Dellamonica: Yes, and it just took off.

Eaton: The reason why I ask that was, because I know that specifications had to have been looser back then. At Iowa AAP I think they have one cooling shed for the 81mm mortars and they have a different cooling shed for other items, because the cool down temperatures have to be different. Specifications had to have been a lot looser back then.

Dellamonica: Yes, they were. They didn't care about the bomb loading as long as it was filled all the way up and shipped.

Eaton: So, how did you inspect them for quality to make sure that you had a good round? You didn't get an x-ray machine until after the war.

Dellamonica: (Laugh) That was something else. We had some split cases which we would fill and then let cool off in the cooling shed and then we would split the case apart. Then I would take a hand saw and saw it down through the center and expose the explosive to see if it was full or expose any cavities in the fill.

Eaton: (Laugh) You actually did that as an Electrician, huh?

Dellamonica: That's right.

Eaton: You did everything, didn't you?

Dellamonica: I did everything.

Eaton: Were you the only guy that wasn't afraid to do it?

Dellamonica: (Laugh) I guess so.

Eaton: Do you remember Hawthorne getting any reports back on having premature explosions out in the Pacific fleets, because they didn't fill cavities and things like that?

Dellamonica: Not that I know of. I know of reports made on large size spheres used by the Navy for tests but we never did hear what the results. They wanted a sphere that was three foot in diameter made of TNT or RDX or some special mix we poured as specified.

Eaton: TNT got to be kind of expensive during the war, so they started adding other chemicals into it, right?

Dellamonica: Yes, wax and aluminum, things like that.

Eaton: Did they just mix that into the kettle?

Dellamonica: Yes.

Eaton: Okay, and RDX is a different compound.

Dellamonica: Yes, a different compound. They came up with all kinds of different exotic mixtures that we poured.

Eaton: But you guys didn't really care. You got it out of the boxcars and you put it into the kettles and melted it down.

Dellamonica: Yes, it didn't matter. Of course we always had our maintenance problems. As we increased requirements we had to increase the sizes of our motors to drive the larger agitators and all that.

Eaton: Right, so the constant improvement process.

Dellamonica: Yes, constant improvement process. And while I was in the 101 area I did maintenance work. When I first went to work there, there was only seven pieces of material handling equipment and each one of them was just a little boom truck that would handle 1100 pounds and if you swung the boom over to the side they would tip over.

Eaton: They had too much weight on them.

Dellamonica: So, I had 7 or 8 batteries to keep charged up and all that, but then when the war got going and the material handling equipment kept coming by the tons. We ended up with 580 pieces of equipment at one time and I had three charging locations.

Eaton: And they were all battery operated?

Dellamonica: All battery operated. So, I ran out of space in the 101 area and went to another building and ran out of space there and went to a third building. We were charging batteries in three buildings.

Eaton: You had two batteries for every vehicle so you can just swap one in and swap another

out?

Dellamonica: That's right. We had a warehouse full of spare batteries that had a thousand batteries in it.

Eaton: Did they at least have all the same size battery or were they all different?

Dellamonica: No, there was explosion proof batteries, two or three different sizes. We had spark-proof ones and we had explosion proof trucks and non-explosion proof.

Eaton: So, at full production in World War II, what was it five thousand employees here, I can't remember?

Dellamonica: Oh, there was probably more than that.

Eaton: The construction was still ongoing when the war ended? Some of the plants in the East slowed down after May of '45, but you must have been going full blast up until August, September?

Dellamonica: We were still building. I know one facility we had designed was a new battery charging and maintenance facility for materiel handling equipment. We started it, but when the stop order came, everything stopped. Right now, all we have out there now is some concrete.

Eaton: I found the number-- it says when they began in '32 there were 72 military and 90 civilian employees and the peak rate of employment was in '44, December of '44 with 2600 people. But there were 2500 military people there at the time?

Dellamonica: Yes.

Eaton: That caught me by surprise, the fact that there were almost an equal number of military and civilians.

Dellamonica: Yeah. They had a Navy detachment outside the main gate out here. I think they had four barracks and what is Building 67 now was the brig and their supply warehouse for their troops. They had everything over there.

Eaton: For every civilian employee there was one military person, too?

Dellamonica: Yes, there were ensigns and lieutenants all over the place. When I was running the tests on the rockets I had two ensigns and half a dozen enlisted men processing all the film and getting the information off the film until we went back into the field. Firing the rockets and taking pictures of them and some of them are going off and wondering why they went off and all that.

Eaton: So, in the early years were they actually on the line helping pour the TNT or was that all a civilian employee operation?

Dellamonica: No, that was all civilian.

Eaton: All civilian employees. The Navy people were doing other ancillary things?

Dellamonica: Oh yes, because they were coming and going. Some of those were special teams that had special assignments out and they were down here for three or four months and then they would go out for maybe two or three months and then they would come back.

Eaton: Okay. This report says that later on, in actually August of '45, the civilian employees were going down and the military actually went up to almost 4,000 people. That's interesting. No other plant I've been to that has those sort of numbers for the military. That's kind of surprising.

Dellamonica: We still had the Marine security and we had clashes between the two groups.

Eaton: Between the Navy guys, and the Marines, and the civilians?

Dellamonica: (Laugh) That's why the brig is still here.

Eaton: The brig was full a lot I'm sure. If you lived in Babbitt with its own post office and everything, when you had law problems who took care of it? Did the Sheriff of Mineral County get involved or was it federal jurisdiction?

Dellamonica: Well, we had Shore Patrols, but it was mostly the Sheriff's office.

Eaton: Let the Sheriff come in and if one of them out here got into a fist fight in the bar?

Dellamonica: Yes. Of course, Hawthorne was continuously turning over.

Eaton: What was the turnover rate like back then in WWII. Would the people come in here and stay throughout the war and work or did they come here for awhile because they just get tired of living so far away in the boonies?

Dellamonica: We actually had what they called Camp Jumbo-- that was for single people and things like that.

Eaton: What did they call it?

Dellamonica: Camp Jumbo. Yes, they had a big barracks and they had their own mess halls and all that. That's where those people stayed. They were the first ones to bail out and go, and of course they started cutting back in the population of the housing area. When I first started in the house, they were duplex units and later they allowed us to occupy the second half just by putting a doorway through the unit. So I had the whole unit for a long time, with the family growing up and all.

Eaton: Let me ask you one more World War II question and then we'll move on. How did you keep from getting drafted?

Dellamonica: I lost my fingers when I was about three years old at the ranch. On the cream separator there was a big gear and a small gear on the drive which someone had left the guard off of. Apparently they were working on the separator for some reason. I walked up to it and I guess followed the big gear around and as it was turning crushed three of my right hand fingers. Doctor could only save part of one.

Eaton: About three fingers, two fingers.

Dellamonica: I lost three fingers and I was 4F.

Eaton: So, they never came after you.

Dellamonica: Never came after me.



Officer Quarters, 1945

WORLD WAR II TO KOREA

Eaton: When World War II ended in August of '45 they stopped construction. How fast did they start letting the people go?

Dellamonica: Immediately? Most left the area of course and some of them went to Fallon, some of them went to work up there because there was construction going on up there at the Naval Air Station. And of course the mines started operating around there too.

Eaton: After the war, the mines opened up again?

Dellamonica: Yes, so other people went back to the mining for work.

Eaton: Did the Navy continue operations in '46 or was it pretty much they started putting equipment in layaway?

Dellamonica: In '46 there was still a lot of work for Pacific area.

Eaton: That's what I'm trying to figure out, once the shooting was over did they replenish their stock and keep pouring or...?

Dellamonica: Well, no the loading dropped off, although there was still some work going on. I think we had some loading for some of the rockets that were being developed by the people in China Lake. They were developing the rockets and we would produce an amount of those rockets.

Eaton: So they were producing rockets and testing rockets right in the beginning of '46 up until 1950, they were doing that kind of work.

Dellamonica: Yes, and we fired a lot of rockets out in the lake. (Laugh) Some of them are still there.

Eaton: The rockets obviously were something that was moving forward through the early forties?

Dellamonica: We built facilities out here to produce rockets that never produced one rocket-- like the Tiny Tim, a 11.75 rocket. About 20 feet long. On the preliminary test at China Lake when they fired them, they lost the aircraft. They were mounted under the wings and the wings just came off from the blast of the rocket. So, they came up here and they designed a trapeze to drop down or clear the aircraft and then fire it. That was the last one, they gave up on that and then they went to some other ideas.

Eaton: I have heard a story that you didn't just do Electrical Engineering work, that you were a small enough guy that you had to get inside the equipment and machinery.

Dellamonica: Oh yes, we had an explosion in one of our filling plants and we lost some people.

Eaton: Do you remember what year that was?

Dellamonica: It was after World War II. We were loading rockets in the filling plant and they had two or three of the rounds went off and killed the personnel. Naturally, we shut down both the filling plants and when they shut down the plants, they shut the steam off, so any explosives that was in the kettles solidified. And the kettles had a little round manhole that they poured the TNT into it, so they wanted that explosive taken out of there. So, I crawled inside the kettle and broke up the explosive with a crowbar and passed it out through the openings.

Eaton: Did it make you feel a little nervous?

Dellamonica: No, it didn't bother me too much, because by that time I was pretty familiar with the explosives. Well, I was breaking it up with a bar, it had some cracks in it when it cooled. It cracked around the agitators and things like that. Some of them weren't completely full; they were down fairly low.

Eaton: So tell me how you went from becoming... What was your career progression. You started in '41, you were an Electrician, and what did you do through the war years and progress your own career?

Dellamonica: Well, finally after World War II, of course some of those other things were going on in the Pacific area. We had a lot of work associated with those excursions over there and I was still working as an electrician when they finally established an Engineering Department and of course they were looking for someone to do engineering work and I ended up doing electrical and transferred from electrician to electrical engineering.

Eaton: So, was that between World War II and Korea?

Dellamonica: Yes. And of course, the Engineering Department kept expanding and expanding. The Civil Engineers and the Mechanical Engineers were one group. Of course by that time, most of the magazines were in, but we still had some expansion going on and there was quite a bit of design for new equipment and then other conversions came along.

And I can remember going back to some of the plants back in the Midwest, when they shut down, looking at equipment and getting it transferred so that we could utilize it. That was machine shop equipment, things like that. But I can remember some of the early automated equipment that was available; it was all tube type. Just big equipment full of tubes. And the programming was on some type of key punch machine on a paper tape.

Eaton: Were you picking equipment up from just Navy plants that had shut down or were you getting them from Army and Navy?

Dellamonica: Well, they're mostly Navy plants that had shut down back in Illinois and south of Illinois, some of the plants out there. And there were Navy plants and I went to Washington,

D.C. and the Naval Gun Factory and they were upgrading their x-ray system so I went back and picked up their x-ray system and moved it out here and installed it in Building 101-11 for a loading project requiring x-raying.

Eaton: Was that the first x-ray system you had out here?

Dellamonica: Yes.

Eaton: After World War II, the Navy did a pretty good job of grabbing all the machinery, because they were afraid they would have another start-up in the future. Did some of that machinery come out here to just get stored or did that happen later on?

Dellamonica: No, everything that I shipped out here, I planned on using. We were building equipment right here locally. We were designing and building production equipment and putting it in the production plants.

Eaton: But how did you design it? Did you first think of the process and then think about how the process should work and then go try to find machinery that would fit the process?

Dellamonica: Yes, we knew what they were trying to do and we needed larger capacities and things like that which went along with our filling operation. And the fact was, we weren't getting TNT all the time-- we had mixtures, all the different types. And we actually put systems in that were never operated. Yes, a lot of cut and trying of equipment that came in which was not exactly what we were looking for. We had to modify it to work in our machine shops.

Eaton: Now during World War II, they started off loading mines and then they did some shells, bombs. They did bombs for Navy?

Dellamonica: Lots of bombs, low drag bombs for operations.

Eaton: For Air. They made Navy guns, shells, artillery shells here?

Dellamonica: We loaded them with explosive.

Eaton: They loaded the shells.

Dellamonica: We loaded all types and sizes.

Eaton: They did mines, they did bombs, they did shells as well?

Dellamonica: Yes, and then of course, they were still loading the depth chargers and mines, we had a big line load.

Eaton: So, that build up started some time in late '40 probably.

Dellamonica: Yes. In early and mid 40s

Eaton: And there were only two lines before that started?

Dellamonica: Yes.

Eaton: So, how many lines were there here by the end of the war?

Dellamonica: We had four load lines.

Eaton: Four lines, so you would run shells for a while and then run bombs for a while and go back and forth.

Dellamonica: Yes. The last line that I modified was at filling plant 4. We were planning on going to 2000 pound bombs. I got larger kettles and designed and installed them. That was my last job as far as doing any design work, which involved mechanical, electrical, and civil expertise.

Eaton: So, that was during World War II?

Dellamonica: No, that was after World War II.

Eaton: You were in the Engineering Department by then?

Dellamonica: I was in the Engineering Department then. We did a lot of installing equipment to keep up with the workload that was coming up for low drag bombs and rockets. The rockets started to come in and I was designing and building test equipment for their production and also doing some of the testing of the rockets on our test ranges. I had to do a lot of instrumentation with cameras and other systems that we utilized to produce large quantities of those items. At that time, China Lake, the Navy facility down south of us, was actively involved in producing a lot of the prototypes of a number of the weapons and they were trying to move their workload here. I retooled buildings and installed different equipment and I traveled many times to Utah where they had a lot of the warehouses full of equipment that was available and was shipped here for utilization on production lines where applicable.

Eaton: Where was that, Tooele?

Dellamonica: No, not Tooele, Clearfield [next to Hill AFB].

Eaton: It was a Naval Depot?

Dellamonica: It was a Naval Supply Depot, Clearfield, and they had some warehousing there that had a lot of equipment that had been excessed.

Eaton: Would that be part of the National Industrial Reserve?

Dellamonica: Yes... I picked up the first high pressure wash system that we installed here from

down there. I set it up in Building 101-44. And that was the first belt flaker equipment that was utilized on this base. I picked it up out of that equipment down there. From just running around warehouses and looking at equipment and deciding well, maybe I can use that and put a tag on it and ship it to Hawthorne.

Eaton: The Army tends to put that equipment in plants.

Dellamonica: Some of the equipment was Army and had to be transferred to the Navy.

KOREAN WAR AND AFTER

Eaton: Let's talk about then Hawthorne and Korea. What happened at Hawthorne in the Korean conflict or what changes happened in the way Hawthorne did business.

Dellamonica: Well, in Korea, that was 1950?

Eaton: 1950 to 1953. I see on the employment chart the civilian population here went from over 2,500 in 1945 and down to about a 1,000 in '46 or '47 and all of a sudden, of course in 1950 it bounced back up to over 2,000 again. So, there must have been some sort of big ramp up again.

Dellamonica: That's when we were involved, I think, in the rockets, and I can remember going down to China Lake on the Zuni. They had a production run set up in one of the corridors down there making prototype fuses. I went down there to see what was required to set up a production line at Hawthorne for those fuses. I worked on that and redesigned the safety equipment. Part of the process was assembling the booster into the rest of the fuse and they wanted to protect the operator. They had a big metal shield with a window in it so they could see their work behind this glass portion while assembling the fuses.

We had operated that building for a while to do a contour drilling job, so we had to modify the assembly stations to fit the construction of this fuse. And I can remember when we decided to run a test on the safety shield for the operator, we put a booster in behind the glass and wired it to a detonator and then went to another building. I told the guys and I said hey you better open up all the windows and doors. Oh no, they said, that glass will stand. And guess what happened. They set it off and they lost all the windows and the glass. The safety glass wasn't heavy enough.

Eaton: What kind of connection was that? Was this a straight electrical connection that they were having to wire together?

Dellamonica: No, it was assembling the fuse. No the test was to see if a particular pellet would shatter that glass.

Eaton: And it did.

Dellamonica: And it did. I thought to myself, the people that made the glass said that it would

stand it and I wasn't quite sure that it might. We lost every bit of glass in the doors and the windows of that building.

Eaton: All this rocket work that Hawthorne was doing, was it aircraft rockets or was any of it for shipboard?

Dellamonica: Well, it was aircraft 2.75 inch.

Eaton: What did you call that big 12 inch one? I think it was Tiny Tim?

Dellamonica: Tiny Tim, that was never produced. I think mostly the 3 inch, 2.75, the 5 inch fin stabilized and spin stabilized, and that was our main workload down there.

Eaton: How big was the Zuni, was it 2.75? Are those the smaller ones?

Dellamonica: Wait a minute that was... It's a 5 inch. We designed and built the launcher and the launcher was about 6 or 8, about 10 feet long. The rocket was supposed to go on out and then fins deploy to stabilize it. We set up a test range up on Cory Peak. We had a slope on the mountain that fit requirements and the proximity fuse was supposed to go off at a distance 4 or 5 feet above the ground. We had looked at all the different sites around in front of the mountain. Across from it at the right distance of about 2 or 3,000 feet away was the launcher and we were supposed to measure the time the battery activated and when the proximity fuse activated and then when it went off.

They wanted all that data and decided they wanted to take pictures of the thing going off, so they could determine how far above the ground it impacted. So we set that range up, up there and operated it. I was involved in all of that instrumentation.

Eaton: And did you actually fire into the lake?

Dellamonica: No, this is just the hillside.

Eaton: Oh you actually hit the hillside, okay, got it. I understand now. So the slope you're looking for is the slope to hit, not the slope to launch.

Dellamonica: The launcher was horizontal or a degree or two up to take care of the reflection and all. They had this slope on the side of the hill and they had a road around there, so they could drive around there and check for duds and all that. And so, that was one of the projects that we had.

Eaton: Hawthorne was actually helping design the launchers though?

Dellamonica: Oh yes, we designed the launcher and built the launcher.

Eaton: Was there a separate Navy office here that was in charge of that sort of research and development or was that just one of Naval Ammunition Depot Hawthorne's missions?

Dellamonica: That was one of Hawthorne's missions. We had another system that we designed and built for a 2.75, the smaller rocket. I designed and built the automated test equipment. There were 20 rockets on a cart and it ran electrical tests on all 20. I utilized telephone switchboard stepping switches and designed automatic checking of the primer of each rocket. Then we took the rockets out for testing at another site that we developed at Old Bomb where we took the top of the mountain and installed radar equipment on a tower and so we could follow those rockets on their test flights.

Eaton: So this is real electrical engineering work.

Dellamonica: Yes, that was all real electrical engineering work. And at that time we started getting into the solid state electronics design.

Eaton: That was in the early 60's or late 50's?

Dellamonica: I can't remember now exactly when. The original equipment was just tube type. I know there are still a lot of tube types stuck out there. A lot of our test equipment is still tube type.

Eaton: Right after World War II and before Korea did they actually layaway any lines or they always have low level production going on?

Dellamonica: We had a lot of different projects going on. I can't recall exactly.

Eaton: But, there was something going on all the time? It wasn't like the Army plants, where a lot of them were shut down, the power turned off, and they walked away?

Dellamonica: No, we weren't really a production facility but there was always this experimental stuff going on. Pouring some large spheres. All sizes and shapes.

Eaton: They must've been for mines.

Dellamonica: Yes for mines they took somewhere for tests. I don't know where some island out there. A lot of the spheres went out there. And we had to make the molds for some of the smaller ones in our shops.

Eaton: Make the mold?

Dellamonica: Yes, we would construct the mold, fill with explosive, remove the mold, box up the explosive, and ship the explosive spheres out.

Eaton: Now, did they keep building more igloos and magazines after World War II?

Dellamonica: No, during that period we didn't have a whole lot of construction. We expanded some of our magazine roads and we modified the design. The original magazine roads in the

gun ammunition area, were built strictly for railroad handling. They didn't have any dock extensions which could be used for trucks, so, we built a few of those roads routed down to the existing dock stairways.

Eaton: Did they finish the hard paved roads down there? Was that after the war or was that before World War II?

Dellamonica: The World War II paved roads were getting pretty poor about that time and we started improving some of the railroads around the areas.

(Rest Break)

Eaton: We were talking about the roads. How they got the hard ball roads into Hawthorne.

Dellamonica: Well, the roads that were constructed during World War II and shortly after that remained in poor condition, incident to all the traffic they withstood. Just a few years ago, two or three years ago they started working on some of the main roads, but they've only done the main roads. A lot of the old magazine roads are still the old roads.

Eaton: When you started working here in 1941, was it a paved road by then from Yerington down to here or was it still gravel in 1941?

Dellamonica: It was gravel from Yerington to here. It was all gravel then.

Eaton: So, they actually paved the roads during World War II, with all the extra traffic coming through.

Dellamonica: Yes. Of course, they've improved it since then on two occasions that I know of. I think they went down to Walker on one increment and then from then on to Schurz on another increment, you know. And that's when mostly the new highway came through then. And now, this is a very busy road with all the truck traffic.

Eaton: So, the magazines, if they were all built primarily for rail loading in front of each of the igloos, you started to say that they have done some work on dock extensions or something now?



Old bunkers with limited access



Bunker with rail access and loading dock

Dellamonica: Yes, we did. We built some of those in that time frame, as I recall, with dock extensions on them. So, we could have a lot of the items in that area by truck. The truck activities came up, we expanded our truck inspection lot, and handled the additional method of handling this material by truck instead of trying to get it by rail. The rail was too slow. Just a truck load here and a truck load there. There was quite a bit of truck work going on and they improved the system. They couldn't do anything in that area, because of the rail system that went in there. The only thing that we could do is extend the docks out. And we decided to build some structures or magazines, the warehouse type magazines with the dock extension plus the railroad. That was because we started handling some small missiles for the Air Force. I don't know just what caliber they are, but they were not the big Polaris missiles. They were relatively smaller rocket missiles, or rockets I should say. And there are actually stored in temperature control conditions.

Eaton: Which means that you would have to upgrade some of the igloos?

Dellamonica: Right, and with power.

Eaton: Put power in there and do climate control in there.

Dellamonica: Yes, and the loading and unloading of those magazines required them coming in by truck and they couldn't get in there because of the railroad track, so we put extension docks on those. There are not too many of those magazines down there, probably 15 or 20 in all.

Eaton: So, at that point in time, were they bringing the commercial trucks and right into the magazines and loading them there.

Dellamonica: Yes. Now they can take those trucks down there, back into the dock area and then they'll take them on out on the truck and they got a handling system to take them and put them into the magazine.

Eaton: So, during the Korean War Conflict, 1950 to 1953, this place was primarily just ramped up to load more and to issue more. So, it was just basically stepping up what they had continued to do.

Dellamonica: Yes, they did a lot more testing on rockets. We had environmental testing, we had some of them on ambient, some cold temperatures, and some of them high temperatures. So, they had two refrigeration units for the low temperature storage, and we had a high temperature steam system for heating up another section for the high temperature. And of course, the ambient temperature was just the normal temperature. They were trying those rockets at different temperatures and then we had to run the tests that determine acceleration and velocity, frontal velocity, and when the body started getting burned out and all of that on our test range. So I had to set up a string of cameras with the timers on it, so that they photographed it when it went by with the timing wheel on it. So, that was one of my projects.

Eaton: So, throughout that period, Hawthorne really had a totally integrated research, development, and production capacity.

Dellamonica: Yes. We were always building something in the shops with a special piece of something.

Eaton: Did they bring in special engineers who'd design the rocket and then work with you guys to do the rails and the launcher and that sort of thing?

Dellamonica: It was all done here.

Eaton: It was 100% done here?

Dellamonica: It was done right here. We had a couple of mechanical people. It was mostly mechanical engineering and the welding. You know it was all welded up. Welding design, but mostly just working off the plans for the item.

Eaton: So, who developed the plans for the item?

Dellamonica: Well, that was part of the Engineering section as well.

Eaton: So, when you moved into the Engineering department finally, how big was that department?

Dellamonica: Well, we had two mechanicals, two electricals, three civils, and about one, two, three, or four draftsmen. We had quite a number over there in Building 39.

Eaton: So what else did you do besides the rocket work? Was there anything else that you were working on? Did you do any design work on any shells or mines?

Dellamonica: Well let's see, I don't remember anything on the mines, except test equipment. I was involved a little bit in some of the test equipment. Our mechanisms for the mines were still tube types and we had to make some modifications to the tube types systems. We changed clock mechanisms and things like that. And so, I had to design some test equipment because I was familiar with tubes.

And, let's see, we designed and built some automatic downloading equipment, which was all more or less all mechanical engineering. We had some good mechanical people. But the Ordnance Department had an Engineering Division also. A small one. And just a couple of mechanical engineers and I worked with them on the electrical part.

Eaton: A collaboration type of thing?

Dellamonica: Yes, so I worked with them on some of their projects. And then of course we built the equipment in our shops.

Eaton: So, you had worker bees that were doing the welding and the electrical work and all those things for you and you were designing them?

Dellamonica: Yes.

COMMUNITY RELATIONS AND DEVELOPMENT

Eaton: How was the town of Hawthorne and the other local areas reacting-- you're firing rockets off into the mountainside; you're leveling off tops of mountains and things like that. What sort of reaction did the civilian community have?

Dellamonica: Well, it was just work for the people who stayed here. We had to move some of our demolition work, because we were doing it at what we called Old Bomb, which is only 10 miles out and it was knocking out the windows in Hawthorne. We had to move it out to 20 miles out, you know, things like that.

Eaton: But was Hawthorne pretty much a company town at that?

Dellamonica: Yes, between Hawthorne and Babbitt.

Eaton: You were still living in Babbitt?

Dellamonica: Yes, I was still living in Babbitt, but they were beginning to get rid of some of the units and Babbitt was on the other end, you know. I had some of the temporary structures removed. We used to do some work with the Seabee's and they would come in ahead of time and we had to work with them on some of their projects. Of course, a lot of their work was mechanical and building golf courses. (Laugh)

Eaton: Of course, you had to have a golf course and figure out how to irrigate so that they stayed green.

Dellamonica: (Laugh) Some of that work is still going on. The greens are still being greened.

Eaton: So, it's still being utilized. I was just trying to figure out, how did Hawthorne and Babbitt, those two communities, how were they collaborating with the depot to make sure things were being developed together? Or did the Navy just do what they wanted to do?

Dellamonica: The Navy was doing it internally you know. Hawthorne wasn't involved except they finally made it around, I forget what year it was, we cleaned out the south end of Babbitt and we have a number of empty structures. Empty housing structures, you know, vacated housing. Later on, in that area, we installed part of a radar bomb scoring system. The B-52's would come by and make their electronic drops. You know what I mean-- simulating. Sometimes they would open up their bomb-bay doors and some of their duffels would fly out. (Laughs)

Eaton: (Laughs) They bombed Babbitt housing area with duffle bags.

Dellamonica: And, of course, the radar systems had to look out across the road, because the bombers would come over Luning and Mina and get down low to make their pass and they had to make their turn up high and they had to know after they went past, whether they missed or had to make another run again. So, we were involved in the design of some of the radar setups and things like that. I was involved in that. Of course, we had security. For a while we had to adjust the stops on the radar. We didn't dare bring the radar down too low, because of the traffic on the highway. The first system that they brought in here was on rail cars and they tried to operate off of a railroad spur in the area and it didn't work out, so they moved it into Babbitt.

Eaton: So all the kids are watching thru the fence when you guys are running the radars.

Dellamonica: That's right. But, of course, that was all Navy operated.

Eaton: At that point, Babbitt had an elementary school?

Dellamonica: Yes.

Eaton: Where did the kids go to junior high school and high school?

Dellamonica: The schools didn't get upgraded until fairly recently. And then of course later on, I would say recently, Hawthorne built those other facilities up there and new courthouses and sheriff offices.

Eaton: In Hawthorne itself?

Dellamonica: Yeah. During the period when they were still in the old courthouse, I used to maintain all of their communications equipment for the county on the weekends and all that. I was running around the mountainsides installing equipment, repeaters and things like that. I took my tests and had a commercial license so that I could work on radar and things like that.

Eaton: So, you stayed connected with the county government the whole time you were here?

Dellamonica: Yes. Later on televisions started to show up. On one of my trips to China Lake, I noticed that they had repeaters down at China Lake to bring in certain signals from Los Angeles. And so, I went in and talked to the people that were involved in it and they took me out to their site where they had their repeaters. I looked at it and looked at it and then came back home, went on the surplus list, and got a bunch of little excess radar dishes shipped in here and I started bringing television in.

Eaton: Did you share that with Hawthorne or was that just for Babbitt?

Dellamonica: It was for Babbitt mainly and Hawthorne both, because the site where the city signals were coming in up there, did not take care of Babbitt. It was because there was a ridge there that was interfering with the line of sight signals. So, I had to put some additional repeaters down just to handle Babbitt.

Eaton: You must have been a hero to all of the kids after you brought in TV for them.

Dellamonica: (Laugh) I finally gave that up and let the TV district have it. During those years I was also doing some flying, so I was involved in Civil Air Patrol. I flew for about 42 years and I was a Lieutenant Colonel in the CAP.

Eaton: So what kind of work did you do in the Civil Air Patrol? Search and rescue?

Dellamonica: Search and rescue, yes.

Eaton: So, you'd get a call that somebody was missing or there was an accident with some aircraft?

Dellamonica: An aircraft down some place and I'd go look for it, in California, Nevada, Utah. Our main headquarters was in Reno and they had two liaison officers there. We were at our airport. We had a separate building for the hanger. We had about 15 aircraft out there.

Eaton: Did the CAP use private airplanes or was it a government owned airplane?

Dellamonica: They were Civil Air Patrol planes, donated by the Air Force. L15, L16, L19, L5s, all of those were excess to the Air Force and all tail draggers. I was flying those all the time.

Eaton: Is the Civil Air Patrol active in this area now at all?

Dellamonica: No. No, the only active squadron now, I think, is in Las Vegas. I think they still have one in Reno.

Eaton: So, did you ever do any real search and rescue work for them? Finding aircraft down and things like that?

Dellamonica: Oh yeah. I've been flying around all over this country. We were looking for a U2. They lost a U2 between here and Tonopah. We searched a couple of days for that and we found him. He tried to land on one of those dry lake beds out there. And he got it down and he was coming to a stop, then he got ejected. We're always looking for lost hikers and crashed aircraft and things like that. Yeah, I was mission coordinator on a lot of occasions.

Eaton: So, what other things did you do in the county. You helped to keep their communications up. You were in CAP. You brought in television. What else were you doing in the local area?

Dellamonica: Yeah, I brought in television.

Eaton: When did you move out of Babbitt into... you live in Hawthorne now don't you?

Dellamonica: Yes

Eaton: So, that was early 70's you moved?

Dellamonica: 25 years ago, I moved into Hawthorne and built the home. When I built my home in Hawthorne, it was sagebrush; now it's houses all around.

Eaton: So, when did they really start closing down the Babbitt area? Was that not until the early 70s?

Dellamonica: Yes. Early 70s. 1969 that's when I got involved in this project that ended up as the Western Area Demil Facility.

KOREA TO VIETNAM

Eaton: If Korea ended in '53 and we didn't really start ramping up for till Vietnam till about '63, what happened in those ten years in between. Between '53 and '63? What was Hawthorne doing? What was the depot doing in those ten years?

Dellamonica: It was still active, but we were doing quite a bit of demil work.

Eaton: Demiling World War II stuff at that point?

Dellamonica: Yes. You know we were doing demil work at three different locations and of course we had to design the equipment for the demil work and build it. So, that was going on and that period there, most of that work was demil work under the Navy.

Eaton: You were designing things, so it was more than this open burn open detonation then.

Dellamonica: Yes.

Eaton: So, you were doing wash out?

Dellamonica: Yes. We had high pressure and wash melt out and break down and automatic break down and all that, we were trying to make production equipment.

Eaton: To do the demil?

Dellamonica: Yes.

Eaton: So, all through the late 50's and early 60's then, you were just moving forward doing demil, designing that sort of stuff?

Dellamonica: Yes

Eaton: I found this chart yesterday. [Discussing employment level chart] This chart is kind of interesting, because here's the high of 1952 at over 2000 employees, but they really dropped the

work force pretty slowly down in the 1950's and they just barely got down to where they wanted to before they ramped up with Vietnam again. Here's 1941—boom, immediately up then in 1945 almost immediately back down to a thousand. But, here's the big ramp up for Korea right there again. So it's interesting unlike some of the other plants, they didn't just shut down, like they did at other places. That's probably because the storage mission that was the primary function.

Dellamonica: Yes, we were trying to get rid of some of the old stuff that was out there. We recognized it as being obsolete and we were designing and installing equipment doing demil work in three or four different locations.

Eaton: So, you were doing mechanical reclamation of TNT?

Dellamonica: Yes, well mostly TNT.

Eaton: You weren't blowing all that, were you sending that back to storage for future use.

Dellamonica: No, it was going back into the magazines for storage. I can recall putting a lot of that wet, not completely dry, TNT and other materials back in storage and then trying to bring it back out for reloading and it came out as a dry solid block and we had to design the crushers to break it up for reloading.

Eaton: Let me go through what I've seen on the demil washout. However you are getting the component out of the shell, it goes down into the conveyor belt where it dries off into kind of a thin wide layer and that breaks off and that's what we call flakes?

Dellamonica: Yes, flakes.

Eaton: And then you put the flakes in the boxes that's supposed to keep some of the humidity out and then those boxes are sent to the magazines for storage.

Dellamonica: Yes.

Eaton: So, as they are sitting in there in the magazines that are not humidity controlled and are not temperature controlled it was all just solidifying again?

Dellamonica: No, this was before the flakers came along. We had a flaker early in the game in '44, that I brought in from a warehouse down at Hill Air Force Base in Utah. But it was a little narrow one, only 18 inches wide and we set it up in there and we ran it for quite a while. The product was not as good as they would like to have it and some of that did set up. But before that we were trying to use something called kernelling machine.

Eaton: A kernelling machine?

Dellamonica: At Building 101-42 the washout product would go across a kernelling machine. The outcome of the kernelling machine was wet and there was no way of drying it without

putting it out in the sun or heating it so we went ahead and placed it in boxes. The boxes then were sent to magazines for storage. It eventually dried in a form of a block and later on, we had to bring some of that material out of storage for loading and had to build crushers to break it up and place in the melt kettles for the production operations. We had to break them into small chunks so that they can get them inside the kettle and get them molten.

Eaton: So this is sort of the opposite of utilizing a flaker to dry the material. It's a little more effort to dry the material before placing it in storage.

Dellamonica: Yes, I think all of that went on during those years when we were trying different ways of demiling. And of course, we were getting rid of a lot of that material at the demolition range. But that was the old demolition range, which had to be closed because of breaking glass in Hawthorne.

Eaton: If they're washing out shells, what did they do with the scrap metal from the shells? Were they selling it or reusing the shells or...?

Dellamonica: Well, at 101-44 the projectiles then went through a high pressure wash cycle and cleaned up as well as possible and sold as scrap metal.

Eaton: Did they flash them or anything like that to try and burn anything off?

Dellamonica: No, the flashing process did not come into use until utilized at the WADF. They tried to improve on the high pressure wash, but way back in those days they had problems with obtaining equipment that would build up the pressures we liked to be able to utilize on a production basis. I'm just trying to remember some of those processes that we tried. Of course, some of the processes, we ended up with items that had to be put back into storage waiting some other method of decontamination. Some of the product from the washing out ended up out in ponds in the storage area and we're now cleaning that up.

Eaton: Ponds. They just sent the dirty water out into those holding areas?

Dellamonica: Then we'd burn it off in some areas.

Eaton: Oh, then actually light it up and burn it?

Dellamonica: Yes, we burned it off. The first of the ponds were adjacent to buildings and could not be burned.

Eaton: That's a little close.

Dellamonica: We couldn't burn it so we drained it across the desert to some other ponds and when they get dry enough to ignite them we would burn them on week ends.

Eaton: Oh okay, I understand. So, the wet stuff will go through there with a lot of water.

Dellamonica: Yes. We've got an area that contains a lot of buried material. They decided well it's not worth saving it and trying to sell it, so let's just bury it. So it's buried. Now they're opening up a lot of those buried area to try and clean them up.

Eaton: Did you guys know back then when you did it, that there was going to be a problem? Did you think it was going to be a problem eventually? Environmentally?

Dellamonica: Well, there were no environmental regulations against it, you know. And it was demiling and yellow D. We would keep the yellow D people at work for about a week and they would have to be rotated to a shop. Yes, we just wanted to get rid of that, the yellow D.

Eaton: A yellow D is just a byproduct right, from the washout?

Dellamonica: Yes. And then of course we started unloading some heavier projectiles, so we had a major caliber defuser and we designed and built the original one and they used it for a number of years. And when we built WADF, we had a company build one since they could make the right castings and improve it a lot and so we were involved in that. We built two of those major caliber defusers on board that we designed.

But there was always something going on, you know, in the design area. We had production lines down in the 103 area, container repair work, just cleaning up cans and things like that. Painting and re-blasting and inert loading. We had built up a facility down there for filling bombs and mines with inert material.

Eaton: For test runs?

Dellamonica: For test runs and blue bombs and things like that. But it was all kinds of things like that. Sort of kept everybody busy. I shouldn't say but we were in low production era.

Eaton: So, when Vietnam started, say in '63 or so, do you remember any sudden changes in how things were going on here to ramp up for the Vietnam Era?

Dellamonica: Well, there was an increase in production of course.

Eaton: Any big change over lines, because they were using different kinds of weapons that they didn't expect?

Dellamonica: Well, let's see, Vietnam. It seems like we produced a lot of low drag bombs.

Eaton: How are those different?

Dellamonica: They're a more slender bomb with three sizes 250, 500, and they were preparing to go to the 2000 pounders.

Eaton: So, they're longer and skinnier, so they're more like a knife point going down.

Dellamonica: Yes. I think that was Vietnam. Yes, so we had to design a coating facility, because every one of those rounds has to have a liner of asphalt. Yeah, and that was one of my design projects and it was mostly mechanical as I recall. They didn't have a Mechanical Engineer around for some reason, and I did most of the mechanical design work on that. It was mostly monorail systems and switches, and things like that. And then there was a lot of electrical work, because the melt kettles were electric, electrically heated and all the pumps. The liner pumps and all that were all electric driven. I had paint booths with automatic painting equipment in it.

Eaton: I read a little about that asphalt sealant. They were actually pouring asphalt into the shell cases and then dumping it back out again, so it just left a film inside?

Dellamonica: Yes, but you are supposed to leave six pounds in there somehow or another. That was the goal. You pour it in there and fill it and you hold it in there for so long and then you dump it. And you hope to get 6 pounds in there.

Eaton: So you had to try and figure out a cooling process so that it would stick to the walls?

Dellamonica: Yes, you had to hesitate enough, you know, to cool that far down. Of course it depends on the weather and the temperature of the item starting out on how much would come out. But, that wasn't really that critical. As I remember they tried to hold six pounds. We produced a lot of those.

Eaton: What was the reason behind that asphalt film inside? Would it cause less spark?

Dellamonica: No, they went ahead from there, after they were film coated, they went right out to the filling plants and they filled them and then they were shipped out. It was just a requirement that was added. The Naval Production Engineering Center (NAPEC) was the one that developed that round and they're the ones that had the specifications on producing it. So we had to put in the plant to produce that item with the certain requirements on it. I know I can remember they sent us a couple of pictures of their prototype and pilot line that they had accomplished at NAPEC in Crane, Indiana. They wanted that facility to produce it, but they sent us these pictures of some of the tanks to melt the asphalt down and maintain it at the right temperature for the pour. Then the rounds had to get filled and dumped, and then they went back and were put on the cart to go get filled up with the explosives.

And that whole system, I had sensors for detecting the level in these kettles, so we could keep the level of the material in the right position. And then we had these pumps, pumping up material in there. I had a lot of problems with the pumping and with the controlling of the temperature.

Eaton: It seems the specifications were getting tighter as you went along. Was your quality control getting harder?

Dellamonica: Not so much. See there was no way we could check for cavities because of the thickness of the material and the lining and all that. Besides that, they wanted bombs.

Eaton: In a hurry?

Dellamonica: In a hurry, yes.

Eaton: So you had x-ray machines then, but they weren't strong enough to look all the way through?

Dellamonica: Yes, they weren't high voltage x-rays, they were just level indicators and things like that. They were low level, but they all had to be certificated and all of that and shielded and all that kind of stuff.

About that time the environmental people got involved and we had to go ahead and put in scrubbers and all that in all of the production areas.

Eaton: So, about late 60's you're having to worry about all those other area things as well?

Dellamonica: Yes.

Eaton: Were you getting new equipment from the Navy at that point in time? Were you getting new x-ray machines or did you still had to scrounge it?

Dellamonica: I was still scrounging. I think that trip to Naval Gun Factory back East was the last trip that I made looking for x-ray equipment. I went to three different locations of plants that had used x-ray equipment. One of them was a production plant for a three inch round or a five inch round at Decatur, no I forgot where that plant was.

Eaton: If it was in Illinois, it could've been Decatur.

Dellamonica: Yes, Decatur, Illinois. They actually formed the projectile and they had a lot of induction heating equipment there. And I wanted to get some of the induction equipment and try to use it for demil.

Eaton: But you couldn't get it?

Dellamonica: Well, I got a lot of other equipment, all other kinds of other machines, tools, and equipment, but the people at NAPEC did a lot of decision making. I wanted to try induction heating, but they wouldn't let me try it.

Eaton: So, it sounds like Hawthorne was starting to lose a little bit of its autonomy then as well.

Dellamonica: Yes, but then we lost all of our autonomy when we started designing the Western Area Demil Facility in 1969 and '70.

Eaton: Did I see on a map that there use to be a chemical storage area here too? Did they store chemical munitions here at some point in time?

Dellamonica: Well, we had mustard gas. It's now in the south area. There was no power way out there, naturally, and I had some generators out there for power and a water storage tank. And they were just monitoring what was in the magazines. And they finally shipped all of that away except some mustard. And they buried some of the mustard out there and that area is still fenced off.

Eaton: So, was that Naval shells? I mean was it 12 inch size shells of gas or was it smaller bombs? Do you remember what it was?

Dellamonica: No, I don't recall exactly what kind of round. I think it was a smaller round, because they were stored in regular standard made igloos, you know. It couldn't of been a real large item. I don't know how they were supposed to deploy that item.

Eaton: So, they shipped most of it off, and they buried some of the mustard out there?

Dellamonica: Yes, there was some mustard left over and we had a problem with that. They dug up that area several times trying to go deeper and deeper and deeper and finally got most of it. But I don't know if they're still intending to go back in there and go down further or not.

Eaton: I was going to ask you one question I forgot to ask you just to confirm something. It seems like the mine work in the county was relatively stable and so was the Hawthorne workforce most of the time. Was there ever any fighting for employees between the mines and the Ammunition Depot?

Dellamonica: No, the only time that I ran into that was after WADF was turned over from the Navy to the Army, Lester B. Knight Company, who was in charge of all of the overall engineering, came in and gave the operating contractor personnel a training session on each building... the equipment that was in it and how to operate it. And then they left and the operating contractor at that time decided, well, I've got to write a bunch of SOPs and so they went out around the county and picked up some of the engineering talent from the mines and hired them to do that.

Well, they didn't know what a SOP was and so they all walked in to see me. I went out there and took some of the girls, at least two of them, under my wing, more or less, and guided them through an SOP along with the operating manual, which we had furnished, and went out there and said this is the system right here. And you'll start right here and put all this down, all this down, and that's it.

So at that time I was just wondering, you know, what had gone on and whether or not they had picked up these fellows off of the street more or less.

Eaton: So they raided the mines and it still didn't help them any.

Dellamonica: And the fellows apparently came to work for DZHC (Day And Zimmerman/Hawthorne Corporation]. I think I still have some of their original SOPs that they

tried to work up on their own. Apparently, for some reason or another, the fellows that came in to write the SOPs were not the same people that had received their training from Lester B. Knight. That was kind of strange, also, because they were supposed to have picked their own local people that were writing SOPs at the time, to continue on in order to become familiar with the new equipment. And I never did find out exactly what happened.

That's the only time that I know of that personnel who were actually working for some of the mines were hired here. Maybe the one over at Gabbs and the one over here on the other side of Lucky Boy. There were two mines here that were sort of close enough to this facility to possibly have a competition with Hawthorne.

Eaton: Everything else was further out though.

Dellamonica: Yes. I don't recall now what the names were but as I recall they didn't stay with DZHC that I know of. When the Army decided not to operate WADF and it was laid away, I think that's when they left. In the meantime none of those WADF facilities they were writing SOPs for have ever been operated. One of them may have been partially operating. One building which has two facilities in it, that's the only one that I know of right now that could be operating at the 117-6 North and South Towers. Right now they're working those and 104-8 is the other one. I think that I recall those other three that I worked with, they're both in the same building and they were confused. They didn't know the difference between high pressure wash and autoclave steam model systems. Those were add-ons and so they didn't know where to start.

Western Area Demilitarization Facility (WADF)

Eaton: Well let me go back to '69 I guess, I thought the WADF was much newer than that so I was kind of surprised when you said you started working on it in '69. Is that when you said you started working on the WADF?

Dellamonica: Yes I wrote the first 1391. I wrote it for one building. I was trying to consolidate everything that was going on in 101-44, 103-16, and 103-41, they are the three that were washing out yellow D, and high pressure wash, and the other one was a breakdown. Those are three different buildings. And I was trying to get one building that would consolidate all of those three functions in order to have plenty of room for expansion and things like that. And that was what our first 1391 that was submitted for approval covered.

Eaton: That was in 1969?

Dellamonica: That was in 1969. And, lo and behold, I went back to a meeting at NAPEC and they handed me their expanded version of my proposal. I looked at it and noted that Silas Mason & Hanger had prepared the expanded scope of work for NAPEC.

Eaton: That was a design company?

Dellamonica: Yes. I thought well how come they've got their name on it and your name isn't on

it, you know NAPEC. And they said, "Oh we've gone to, we went to Silas Mason [or Mason & Hanger]." And so I looked at it and it looked okay to me and so they said, "But we're going to expand on it." And they indicated that they were going to go to not one building, but a whole bunch of buildings. I thought at that time they were only indicating that they were going to go to three or four more buildings.

And so I came back here and shortly after that, I don't know exactly how long, maybe just a week or so after that, I got a call to go back to Crane, Indiana and I thought, well we'll be talking about the layout for this one building. When I got back there they had gone ahead and decided to enlarge the scope of work to include all of these other structures that are in there now, but they did not stay with the Mason & Hangar layout of each one of the structures or their basic floor plans. So, I said, well then it's just a matter of working with Mason & Hangar to get the individual floor plans worked out.

And so I came back and I hardly got home when I got a call saying that they had decided that NAPEC didn't have the personnel to put on this job to go forward with it. That they had contacted Keller & Gannon in San Francisco to do the design of the structures. I had worked with Keller & Gannon during World War II because they were one of the construction groups that was out here designing locations of all our groups of magazines. And included in their plans was the design of the two additional structures, the Boiler Plant and the Off Loading Dock.

At that time we had a Base Commander (Captain Kirshkey) and he said, "We want structures big enough to handle Polaris missiles." I thought, "Well wait a minute now." And so I



Mr. Dellamonic ca 1980 when working on the WADF project

went back to NAPEC and I asked them, I said, "Hey, what's this idea of handling Polaris missiles?" And they went back and forth and back and forth and lo and behold ended up with 45-foot tall structures with 15-ton capacity bridge cranes, which are not required. And did not fit any design of the equipment to go in there. It was just a structure, not knowing what equipment was going to go into it for Polaris missiles.

Eaton: Designed for the biggest things they might ever have?

Dellamonica: Yes. So I looked at the whole plan to see what the other buildings were for. And I looked at all of them and every building had kind of took my eye. I looked at one of the buildings and we were doing contour drilling in 101-44. And I looked at the layout that they had and it was quite a bit different than the one we had in 101-44, but I thought well, you know, perhaps we'll have to look at it a little more closely.

A couple of weeks later Keller & Gannon came back and said, "Well we've done some preliminary designs and we want you to take a look at them." And I noticed 45-foot tower buildings in there. And at that time there two 45-foot buildings and no structure for high

pressure wash. And so, it went back and forth and the final concept that went out to the contractor to construct the buildings and put in the utilities, the electrical, the roads, and the water, and all of that system which has to be underground. I looked at it and sure enough there was all the buildings on there and it also indicated what some of the requirements were and, lo and behold, they were talking about handling Polaris missiles in it. And I could never get them talked out of that for some reason or another.

The people back in NAPEC decided, well, maybe we are going to get a bunch of Polaris missiles to work on and so that's the way they went out on the street. We actually built the structure without knowing what equipment was going to go into it.

Eaton: I'm assuming that you were going to work on this thing vertically?

Dellamonica: Yes.

Eaton: So, you are going to have high pressure or hot water go up to the top and then inside the missile?

Dellamonica: Well, no. But, we never did handle one, so we don't know exactly how they were going to do it. But, as near as I can tell, the work had to be from the bottom. As near as I can tell, because I don't know what you would do to one of those missiles to clean it out or what they would do to download a big missile like that.

Eaton: So, basically, just build a frame big enough and if they actually brought some in, you can figure it out from there.

Dellamonica: I guess so. That means then we were already looking at the designs for equipment, you know, to go into these structures. We found out that if we're going to put in this system in this building now, we are going to have to put in a whole bunch of levels of steel framing for all the different floors, you know. Instead of having it all horizontal. And then we worked the rest of that project and after that they also asked me to write two more 1391s to cover the additional structure that they had put in.

Eaton: They added it in, but you didn't think they needed it.

Dellamonica: Yes. And then after we had finished building all of those structures, they came out with another contract, a separate one for another structure, which is the one that has received the most utilization to date. That is building 117-5, which uses autoclaves. The new building that they had proposed was for autoclaves where the steam did not come directly in contact with the explosives. The steam only contacts the outside surface of the items being processed. This facility has eight (8) of these type of melt out autoclaves.

Eaton: Would you take this moment here to describe those different processes: the autoclave, the steam out, the high- pressure washout processes?

Dellamonica: Well, the so called hot melt facility (117-5) was originally designated as a

refining building and I do not know why they camped on that word 'refining.' They were basing it on the type of autoclave being utilized which would produce a product with a lower moisture content. "A refined material". I thought that they should have initially called it "autoclave melt out" or "melt out." The autoclaves in the melt out building, which is 117-5, there are eight of those autoclaves. They are medium sized, about four feet across, and the items that go into those autoclaves are heated from the outside. They all have the outside element or outside jacket of the item that's contacted with the steam.

Eaton: So, they had to put a plug in or something to keep the explosive from running out of it?

Dellamonica: No, the fixtures that go down into those autoclaves have an adapter to retain the explosive at the bottom without it mixing with the steam condensate going down around the outside of it. There are additional seals to prevent steam from coming in contact with the explosive. And whereas in the other building, 117-6, which has only four autoclaves is just like a pressure cooker; you put the item in and the steam goes all the way around it. It goes up inside and it goes down the outside and so your condensate then goes back out contaminated with the explosives. And instead of using a flaker then, they went to which is called a "kernelling machine."

And the kernelling machine right from the start was designed too small. We had experience with this equipment in another structure, which we used for a washout, at 101-41, where we had two large kernelling machines. And I wanted to use those two kernelling machines in down at that building. They said no, no, we want new equipment. Well, the new equipment that they designed, the one kernelling machine that they designed for these four autoclaves is too small and besides that the drive is on top and is subjected to explosive contamination.

It just didn't work and it still doesn't work.

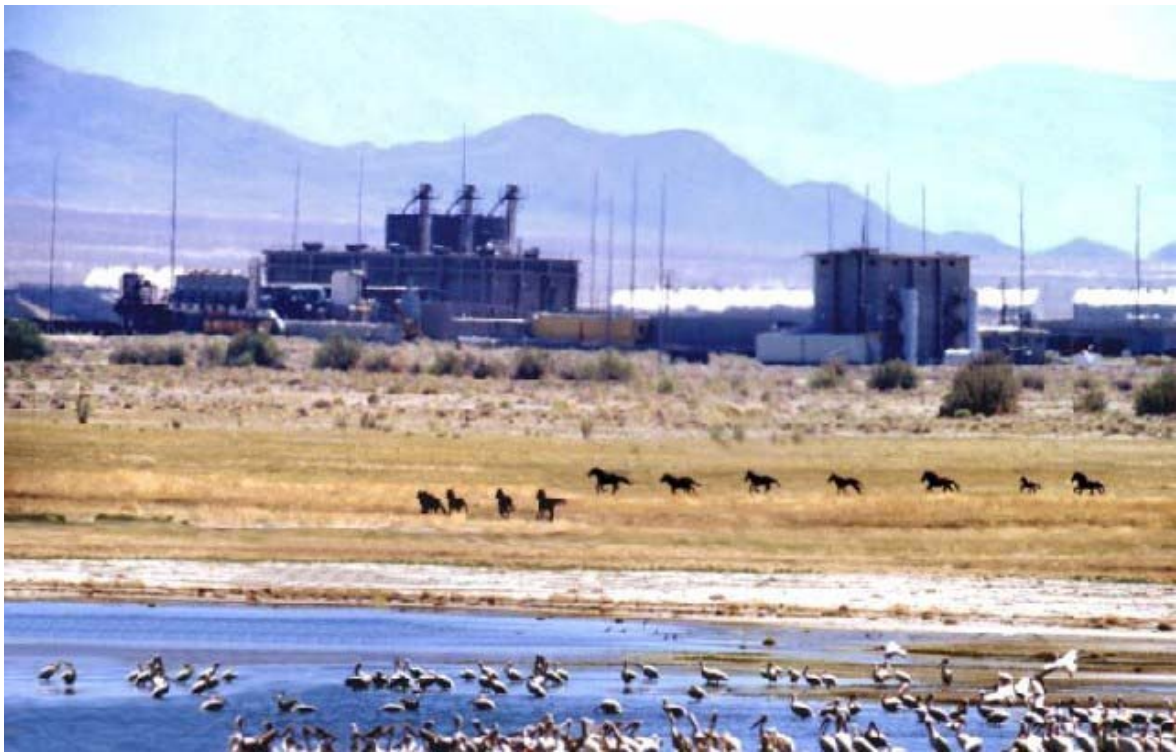
And so, here again we've got an engineering group that started out on this project and then dropped it after they have made some commitments and we could never reverse that trend. So we then continued on with the design to fit the structures, the 45-foot structures. We never did change the bridge cranes except for one thing. The original bridge cranes that they had designed for those buildings were completely automatic. They were supposed to pick up an item and position it automatically over a specific autoclave where they had one inch each way. The designer or the provider for that system went to a contractor that did not have the experience to come up with a proper design for that system. His experience was the design of steering systems for ships, which did not relate to our requirements.

So, you know, we had lots and lots of troubles and they finally just discarded the automatic mode and right now the operators pick up their item and manually place it in position.

But anyway, there is a difference between the two types of autoclaves. The one type in 117-5, which is called the melt out facility, we call it melt out and they still call it refining on all the drawings, and the one in the north tower, which is 117-6, is called the washout building, and



WADF under construction



Completed WADF

has autoclaves, four of them. They're larger autoclaves, but the steam goes all the way around and is not confined to the outside surface of the items.

Eaton: So, does the melt out system leave more residue inside the shell? Because you're liquefying it and then you're pouring it out.

Dellamonica: Yes, you're just letting gravity let it fall out.

Eaton: So there must be more residue inside.

Dellamonica: There's a little bit more residue. You know you have to let it set a little longer because you don't have any steam going up inside.

Eaton: So, was this the first big project that you did here, where you were getting all this outside help from NAPEC?

Dellamonica: Yes. NAPEC was involved in increasing from one building to the more than fifteen buildings that constituted the WADF.

Eaton: And all you were trying to do was get all your processes into one building?

Dellamonica: That was my original 1391. And the 1391 only covered the offloading dock, what they call the preparation building, and the washout building. Yes, three buildings. They had it in three buildings and in my original 1391s I intended to consolidate those three operations more or less into one structure. But then when they went to Mason & Hanger, they separated them out. Apparently they were instructed to do that or maybe they misinterpreted the 1391. I can't remember. I still had the Mason & Hanger Study in there, I hung onto it.

Eaton: So how much was your original 1391 for? Do you remember?

Dellamonica: It was for \$31 million. It was less than that for the building I had envisioned, one building. I think it was around 7 or 8 million dollars and they had 31 million for the bigger project. Then they requested the other two 1391s that I had to write for the rest of the buildings, except for the refining building, which was a separate contract. That went in while we had a lot of the other construction underway already.

Eaton: So, how long did it take from the time that you submitted your first 1391s, till the time they actually started working on the construction of the project?

Dellamonica: Let's see, that was in 1973 or '74. Three years I guess or something like that. As I said, they started out with Mason & Hanger and then they decided to do it in house, NAPEC. Then they decided, well we don't have enough people. They wanted a new building to work out of and they didn't even have a building to work out of. When we went there on their first meeting they just had a more or less temporary structure out there on sort of a mud flat. I can remember driving up to it and we had to walk across a mud field to get into the front door.

Eaton: That's at Crane, right?

Dellamonica: At Crane, yes. I think increment one was around 31 million. We ended up with 90 million, with the three increments, I mean with the three 1391s. Then the fourth one of course was another 6 million. We ended up around 90 million plus the design or a little over 90, and that design included the work done by the Battelle Columbus Laboratories and Lester B. Knight.

Eaton: So, it was over 90 million by the time you had the other charges still on top of that?

Dellamonica: Well, yes. And that goes up until now. Just now the existing contractor is proposing putting something in those other rooms down there, which were designed specifically for contour drilling. He had a project that he was working on and I'm not sure that they were going to go ahead and put that equipment in there. This new operating contract is a fixed cost and they don't have anything in that scope-of-work that includes doing any extensive design. They have to propose something well enough to get a change in their scope-of-work and all that. And they are an operator rather than a builder and so they were supposed to be operating the facility as it was built the day it was built. So, every new change up to today is a new cost.

Eaton: What is contour drilling?

Dellamonica: Contour drilling, it's like when you operate a lathe, if you chuck up an item in a lathe and then you bring a drill up to go inside of it, that's what you do in contour drilling. It's mostly for projectiles. You clamp the projectile into the head stock and then a boring bar goes in and bores out the explosive. The boring bar is guided to follow the inside of the projectile to remove most of the material. It is a remote type of operation due to the possible hazard.

As it cuts explosives it draws it back out by a vacuum system and is separated from the air and it falls out in hoppers and then put in boxes. It's all dry. It comes out as it is drilled. And the tooling is such that it's contoured so that as the boring bar goes in, it moves back and forth to fit the inside shapes, within reason, you know they try to get within an eighth of an inch or something like that.

Eaton: So, do they still have to wash out the projectile when they are done doing that?

Dellamonica: Yes, and then you have to take the projectile out then and give it a high pressure wash to get the rest of the explosive out. And that's what we were doing in 101-44.

Eaton: So, you have less of the explosive that you have to worry about drying than you would have in a straight washout process.

Dellamonica: Yes, that's contour drilling. And there were a lot of different processes that they proposed to utilize down there and then when they found out that we had all these structures and they didn't quite fit the process, they just dropped them. Contour drilling was one of them and the other one was the high pressure washout building. Both the refining building and the washout building have autoclaves, but the melt out building has the flaker. The high pressure

wash building has that kernelling machine. There was no flaker in there to start with, so we had to design and put a flaker in there. But the flaker was only to be utilized with another system that removed most of the water in a holding tank, and the holding tank has two melt kettles ahead of the flaker to get rid of the water, so that was a change in the design of the equipment.

Eaton: So, once they started building on this thing, did it go relatively smoothly once they started building?

Dellamonica: Well, the building and the equipment was something else. We had to get an idea of what to start with. Like on the autoclaves we didn't know how much time it would take to melt out a Mark 25, say, using the straight autoclaves that only projects steam on the outside, versus an autoclave where the steam could go all the way around. In order to determine which system we should adopt for the WADF facility we had to run some tests.

We had Yorktown, I think it was Yorktown, put out a contract to build an autoclave that utilized the principle where only the steam would contact the outer surface of the item. And they shipped it out here and I that took that one autoclave up to a building that was being utilized for washout, 101-41, and I set it up and set it in position and brought in a Mark 25 mine and stuck it down in there, turned on the steam. Now, I went up there and started monitoring it. I had a rod I would stick in to see how far it went into the explosive and kept prodding and prodding and prodding and prodding. All of a sudden one day someone, I forget who it was now, one of the Chiefs out there or the Director, (Don Cavin), I forget what his title was at the time, come running up there and he said, "We have a report to stop this operation immediately." I said, "What happened?" You know I couldn't figure out, I hadn't done anything. And there's a letter that came out from a doctor, I forget what his name was, saying that if you melted explosives over a certain length of time it will start to decompose and it might take off. So, I shut it down and I thought, well I have to do something with this molten thing, and I asked him, I said, "What do you want me to do with this thing. It's all molten, about ready to pour out." "Oh, just let it go and we'll take it out and blow it." So, they hauled it out to New Bomb I guess and destroyed it. I shipped the autoclave that they had sent me back to Yorktown. I think it was Yorktown, the Navy place.

Eaton: Uh huh. I think there is a Yorktown Naval Weapons Station in Virginia.

Dellamonica: I think it was Yorktown, because I remember going back there later when we were designing the x-ray facility. Yorktown had an x-ray facility I went out there to take a look and see what they had.

And that's when I also went to the Naval Gun Factory and I went to this other place, some place in Illinois for seeing another place that had a similar x-ray machine. They were x-raying smaller rounds, 6 inch rounds I think they were, every one of them were being x-rayed. At the Naval Gun Factory their x-raying machine was for anything that came along, if they wanted to check a weld, or check this or check that. And they were about ready to close that one down and get a new one. So I ended up getting that one shipped out here and I installed it in one of our cooling sheds. (101-11)

After we were through utilizing it there, we reinstalled it into another building out there, which was originally designed for 12-inch rockets, the Tiny Tims, that were never produced. And there was another item that was never produced in there that the Army was going to produce. And right now they're using that facility for downloading a round with no x-raying requirements.

Eaton: So how long did it take them to actually build and get the WADF up to where it was ready to start some operations?

Dellamonica: About 1976, we were just about finished when they started talking about going over to the Army.

Eaton: So, did they build part of it and try to bring parts of it online, with the different kinds of processes or did they build the whole complex and then tried to test it out.

Dellamonica: No the Navy was planning on doing demilitarization work on material in the inventory. We had gone out and looked at our inventory and when a piece of equipment was designed we actually tooled it up for that particular item. The minute the equipment was operationa we were going to start operating. Well, it never happened, because the Army came in and said. "It's too costly to operate, lay it away."

Eaton: So it never ran?

Dellamonica: No, it never ran.

Eaton: A few test runs and that was it?

Dellamonica: Did test runs, they ran the test runs initially because they were funded to run the test runs because all the test runs ahead of that time were all inert. And they were funded to run the test runs. They ran the test runs and naturally we found some bugs in some of the test runs that required replacing or modifying and we were prepared to do that and that never happened. The equipment just sat there.

Eaton: It just sat there?

Dellamonica: Yeah. Then the only thing that sort of reactivated the facility and utilized one, two, three more buildings, was that treaty round. Which was a break down only a part of the round. There was a round that had to go together you know to create this weapon...

Eaton: Oh, the binary chemical round.

Dellamonica: The binary round, yeah. What happened was, after they took all the components out of it and all of that, they went down to the melt out. And from the melt out over to the flashing furnace and then out to sell the scrap.

Eaton: So, what did you think when the Army came in and decided not to use it?

Dellamonica: Well, there was one person back then we thought was the bottleneck on it, and we just waited until he retired and then we went to work with the rest of the Department back there and they finally found someone that would start considering maybe operating a part of it. And then in 1990 we finally got an okay to go ahead and demilled a number of magazines full of those TNT loaded underwater depth charges. The ones that roll...

Eaton: Over the top and have timers on them for how deep they go.

Dellamonica: Uh hmm, those.

Eaton: So, you washed some of those out.

Dellamonica: Washed those out, they were pure TNT. And they needed that TNT to load something.

Eaton: By that time they probably didn't have enough TNT anymore, so they were trying to reutilize it.

Dellamonica: Yes. And then, we kind of hung on to other jobs, like the one that's going on now. Now what they're doing is sawing the Mark 25 mines apart in one of those structures. The one that's designed to withstand 3,000 pounds of explosives. They're sawing it there and they're taking the sections and taking them out and taking them down there and putting them in the autoclave and melt out the explosive. Then they're taking those bare sections over to the flashing furnace and burn off the rest of it.

Eaton: Those are still some of those big round mines?

Dellamonica: No, this is Mark 25. It's the long one that has about 1,800 pounds of explosive in it. It has a lot of cavities in it for mechanisms and all that and it's hard to clean out right. So you had to saw it, several places to be able to get all of the TNT out.

Eaton: So, did it frustrate you that they buildings were not used as planned?

Dellamonica: Oh, yes. Ever since I finished building it, you know, I've been hoping that somebody would come up with enough runs to really operate it, you know. That treaty thing...

Eaton: The binary treaty?

Dellamonica: They installed, instead of going ahead with our standard equipment for high pressure wash or melt out, they put in a high pressure cutting system, utilizing abrasive water pressure and it...

Eaton: It didn't work?

Dellamonica: Oh it worked, but problems, problems, problems, you know. Separating the water that's being used. The water was supposed to re-circulate and the grit that they had to employ

with the water for cutting would take the bearings out of the return pumps or the seals on the return pumps. That was one of the first things. We had to change all of those out and back and around and around. They had a lot of hold ups.

Eaton: Did the water also get contaminated eventually with the explosives?

Dellamonica: Oh yes, that was the other thing. The cuts were not supposed to be through the explosives.

Eaton: Just the metal.

Dellamonica: Just the metal, and it didn't turn out that way and then the water would get contaminated. Most of that equipment is still out there.

Eaton: With the ending of the open burn open detonate (OBOD) up in Sierra, do you think they are going to push us towards using the WADF?

Dellamonica: No. See we were shipping 750 pound bombs up there, up to Sierra and they were blowing them up. For a while there was some talk that we were going to run the 750 pound bombs out here and we would just saw into them and knock them out. And no, they decided that it's going to cost too much money. So, ship them up to Sierra. So, I guess Sierra got most of them.

Eaton: But they can't burn anymore up there, so they have to do something with them.

Dellamonica: That's right....

Eaton: We're pushed more and more towards recycling, so maybe the WADFs time haven't come yet.

Dellamonica: Not yet. Well, I don't know if I can wait any longer.

Eaton: It's been 25 years now, since you guys built it. It's going to take a while to refurbish it and make sure it works right.

Dellamonica: Well, they've taken some of that equipment out like the automatic diffusing equipment for the 5-inch and 6- inch and installed some new straight band saws. And now, let's see, there were two sets of band saws and what else was put in there for that treaty job. There was, let's see, two band saws and this high pressure wash using abrasive, and some other equipment in 117-10 that went along with that project. There was some other work along with one of the fuses had to have some preparatory work before they could take it out and dispose of it, and I think it was a classified area. They had inspectors out there, treaty inspectors and they had to put in a special trailer for them and close circuit TV's so they could watch the operation and everything.

But those are all short range things. That job was short, if they had a couple more million, then

it would run. But now all that equipment is more or less mostly sitting there waiting for something else to happen to it.

Eaton: We've got millions of bombs that we can't OBOD anymore.

Dellamonica: Yeah, maybe they'll be coming this way. Well, maybe the contractor or a new contractor will show that this stuff will work and then it will get funded.

Eaton: Now, back when they were building the WADF, Hawthorne was still a Navy operation, still Government Owned Government Operated (GOGO), but you mentioned Day & Zimmerman a couple of times in there. Were they here as a contractor doing things for us at that time?

Dellamonica: The contractor was working here, was operating the rest of the facility, shipping and receiving.

Eaton: Oh, they were around for all that?

Dellamonica: Uh huh.

Eaton: I thought up until '80 it was a completely GOGO facility? I thought it was in 1980 when we changed it over.

Dellamonica: Yes, then DZ wasn't here until after 1980.

[Note: The interview continued on 10 September 2002 with more discussion of the WADF.]

Eaton: Where were we yesterday? We talked about the WADF for a while. We didn't really talk too much about Vietnam, I don't think. You started the WADF in 1969 didn't you? That's when you put in the first paperwork on the WADF?

Dellamonica: Yes, 1969. That was when I submitted a 1391. [Note: DD Form 1391, Military Construction Project Data] And it went on in, went up to NAPEC. And in those days the Navy seemed to be fairly liberal on funding. And they felt, well, I had the justification for it. I had three facilities doing the demil work. And they were not suitable for demil work because they had been made for production. We were trying to install equipment in them for demil work and it didn't fit. So I just wanted one building with enough space in it to install equipment and all that just for demil. OK, put in a 1391, we'll see what we can do for you. And so, I put it in, and it went through all the departments, and got up there to NAPEC. That was the Naval Ammunition Production Engineering Center and they had to pass on everything. And they looked at it and said: "Okay, we'll approve it." And a little bit later I got a call from them that indicated they wanted to expand on it. And so that's where it got started. They started expanding on it. That was one building at first. Then, they changed it to three buildings.

And then after we got the paperwork approved on those three, and the drawings, they decided

that they would go for the big complex. And so then that's when they wanted me to write two more 1391's. And later on I was tasked to do another one for the fourth increment.

Eaton: And all the other engineers got involved, and the other design companies got involved, and the Polaris got involved?

Dellamonica: Yes, and NAPEC got involved, and then they decided that they couldn't handle it, so it was passed off to Lester B. Knight and Keller & Gannon. Lester B. Knight was for management and design and Keller & Gannon was for the structures. And for about almost ten years it was back and forth, and all over the country looking at other facilities, and looking at equipment. And then, of course, when the companies were building the equipment, we would visit to see what their progress was. Some of them wanted to run inert items, you know to check their construction to see if it would fit the chucks and everything with the handling of the rounds and all those kinds of details.

And then the driverless tractor system; the Navy awarded a contract to a company that had an office in Washington for a driverless tractor. I thought, well, if they are going to go in for a driverless tractor we have to have someone give us an idea of what's going to be required for the controls and everything else. And so, finally, we got a call saying well, we have a prototype up here, we want you to look. So, we went back there. I forget where it was now. In a building near Washington DC. I thought, this is kind of strange for a manufacturer of driverless tractors. It was a fairly small building. I went inside, and found they had gone to a company that was building driverless tractors and covered up all the controls that it had on it. And on the floor, they had just a metal strip that was supposed to be the guide path for it.

And the tractor went around this building and stopped at the doors and this kind of action and that was it. And I said, well hey; we can't approve anything like this. We have to have more details on the construction, what it will do, and all this and that. We found out that the company had been building some kind of elevators. We never did get anything out of them.

Eaton: Did they have them?

Dellamonica: No. They had to finally default them, and they lost about, oh, I think, around \$400,000.

Eaton: Was it all electronically run? Was it a magnetic path, or was it a mechanical running through a track?

Dellamonica: Yes, well it was a mechanical thing. It wasn't what Mason and Hammer had specified. And so the Navy then had to go back and get another company and they produced a good system. And we installed it, but it was never used.

Eaton: Never used.

Dellamonica: No, the paths are all down there. We have runways into all the buildings. And all of the turn around areas, and the control devices, and the driverless tractor would come up there

and stop, sound its horn. They would run the door up, and run out there, put it on manual, take it in the room, and drive it around, unhook the trailers. You could hook as many as six trailers on each one. And it really worked. There was only one problem we had on one building. The grade going up to the building. The building had a dock that was a little bit higher than the others, and with the six trailers on it with a full capacity on each trailer, it didn't have traction. The wheels would spin. And so they had to make a modification on that slope. They ended up they had to extend the ramp down. Cut it down a few degrees to get up there. But we worked out all the bugs and everything. We had a central control panel down in Building 117-10, with a control system. You could see where all the driverless tractors were. And you could control them from there. And it never was operated. And they're still stored in a warehouse somewhere. The batteries are all dead now, and probably junk.

Eaton: So could be the controls and everything else.

Dellamonica: Ah, so much waste. Yes.

Eaton: You mentioned yesterday that there were sixty different changes and mods that were required out there if they want to bring the plant up to speed.

Dellamonica: Well, at that time, yes. Right now, there's probably more than that, because they've taken some of that equipment out, and stored it in an inert storage area out in, the 102 area. It's just inert storage. They've taken a lot of our defusing equipment out, and installed saws for the treaty job. And of course, now the environmental things have changed. So there's a lot of things that have to be considered, because of the environmental aspects.

Eaton: Do you think there is any chance that with us losing our open burn, open detonation licenses that they'll start wanting to use more of the WADF facilities?

Dellamonica: Well, they're keeping their fingers crossed about our detonation area, New Bomb. We have an Old Bomb detonation ground, and a New Bomb. The New Bomb is out twenty some odd miles. The Old Bomb area was too close to Hawthorne and when they were trying to detonate large items up to four or five thousand pounds it knocked the windows out. But right now out there at New Bomb we have a limit of four thousand pounds per shot that's with the donor and the round.

Eaton: I've been to the Old Bomb area and watched them blow off. I just haven't been to the New Bomb area.

Dellamonica: Oh, you've seen our Old Bomb area?

Eaton: Um, hmmm.

Dellamonica: Oh, golly.

Eaton: I was out there, saw them do some detonations out there, I can't remember what... They took me out there to show me the process step by step. They walked me through the process, so,

I got to see some things blow off. It was two years ago.

VIETNAM ERA

Eaton: Let's turn to the Vietnam Years. Hawthorne got busy again. Was there anything different in those years? I know the general scenario. We had fewer plants, so the plants that were available were probably doing more work. Was there any difference from in Vietnam than there was in Korea, and World War II?

Dellamonica: No, I think I had increased the capacity of one of the filling plants. During that period I think is when I got bigger kettles. I went from 180 gallon kettles to 300 gallon kettles in that one building. And I bought 300 gallon kettles to be put in the other three plants, but it was never done.

And finally, those kettles, when they came in we put them in storage, pending for the time to put them in the buildings. and everything got shut down. The Army decided that they would not do anymore filling in this filling plant area, and all those kettles went to McAlester.

Eaton: That was around 1977 when the Army decided that this was just going to be a depot and a demil maintenance, and no more production here.

Dellamonica: And they took all the scrubbers off of the plants that we had, and they also went to McAlester and I don't know what McAlester has done with them.

Eaton: Well they're still making bombs there...

Dellamonica: Yes, but I wonder if they used those 300 gallon kettles. They were really looking for larger kettles.

Eaton: They were looking for even bigger than that?

Dellamonica: And I had three, two more sets of those kettles you know. Then they come along and even pulled the kettles out of the one plant that I had already converted.

Eaton: In those years this is a twenty-four hour a day operation, seven days a week as they were pushing bombs out to Vietnam?

Dellamonica: Yes.

Eaton: Were they running all four lines?

Dellamonica: We had three lines. No, they had all four lines, but we couldn't handle the two thousand pounders.

Eaton: The two thousands?

Dellamonica: Yes. Then I went ahead and put the four kettles in Filling Plant Four, and we enlarged the cooling shed, 101-16, also. But it never was operated. And finally, when McAlester got looking for kettles, large kettles, because they knew we had these old kettles out here. I had gone back to McAlester two or three times and talked to other people back there. And finally, in the late 1970's the Army decided they were not going to do anything with our facility up here, they were going to scrap it. So all that equipment that I had stored in the inert magazines down in the 106 area, that's where I had all the new kettles, and all the motors, drives and everything, they all went back to McAlester. And I don't know if they had a chance to install all those or not.

Eaton: It seems to me like you would have had a problem. If you were running at full speed, it's kind of hard to shut a line down to make it more efficient when the Navy is demanding bombs.

Dellamonica: Yeah. Sure. Yeah, but we still had to upgrade. I made changes to the existing lines down there. We put hydraulic motors on some of them, and there were the electrical drives to provide the additional torque to increase the capacity. The kettles generally had 180-gallon capacity, but the original motors in filling plant 101-2 were some of the older ones that had been installed before World War II. And all they did to those two filling plants was to work on the kettles themselves and we finally changed the motors to heavier motors with the reduction gears. The other side had two new plants and they were a little bit larger, but still they weren't 300-gallon kettles. They were still 180's.

Eaton: So they were still loading the same things that they always loaded. They were loading mines and small bombs.

Dellamonica: Mostly bombs and then of course we had our rocket lines going. We may have loaded some torpedo warheads, but not very many of those I don't think either.

Eaton: Well, somebody told me that during the Vietnam years, you guys were going so fast that once again you were shipping stuff out of here still hot.

Dellamonica: Yes.

Eaton: You told me about an incident in World War II where a bomb fell out. I read somewhere that you had a similar incident during Vietnam?

Dellamonica: Roseville.

Eaton: What happened at Roseville?

Dellamonica: That's where they had the detonation in a boxcar.

Eaton: Do they know how that happened?

Dellamonica: Well, we are not really sure. We brought some of those bombs back here and we

saw them to see if we could find out what caused it. And I don't think there was ever anything determined exactly what happened.

HAWTHORNE BECOMES AN ARMY FACILITY

Eaton: Well, let's move a little bit ahead then. Let's talk about the transfer from the Navy to the Army.

[NOTE: In 1977 the Department of Defense instituted the Single Manager for Conventional Ammunition (SMCA). The Army became the producer and manager of most conventional ammunition for all the Services. As part of the implementation, Hawthorne and two other Navy ammunition plants were transferred to the Army.]

Dellamonica: Yes, the transfer of the facility to the Army. We heard about single management, of course always through the grapevine. They were talking about single management. An Admiral that came out here assured us that there would be no changes in Hawthorne, and blah blah this and blah blah that. But then first thing you know, we hear that we are going to SMCA and the Army. We went to the Army and we had a lot of people move on. There were some problems with people leaving.

Eaton: All of the Marine guards would have left right away, right?

Dellamonica: Yes, the Marine guards left.

Eaton: And who did security when the Marines left? Did the Army hire security guards then?

Dellamonica: They, let's see, yes, they formed a security group. Yes. And things were sort of in turmoil. We kept hearing all kinds of things about the SMCA. Of course, I was involved in WADF and we were trying to finish building it, and then we heard that they were thinking of going to a private contractor operation.

Eaton: That was about 1980 wasn't it? Wasn't it a couple of years after the conversion from Navy to Army when they did that?

Dellamonica: Yes. And again, we had another General, and I can't remember his name, either, come out and say oh, no, that's not going to happen. But it did.

Eaton: I read some of the stuff from that period and General Raan was one of the folks involved in that. In 1976 they did tell Congress they had no intention of going from GOGO to GOCO. Did you hear much here about the single manager for conventional ammunition, before they finally announced it was going to happen?

Dellamonica: No.

Eaton: When you guys moved from Navy to Army, you would've changed from working with the Navy engineers at Crane to other engineering groups. Were there any big problems with

those kinds of changes?

Dellamonica: Well, it didn't really, we had just finished up WADF. Well, I've been working all this time; all the WADF was supposed to be utilized when it was completed.

Eaton: But the Army didn't want to do it?

Dellamonica: Yes, so they fell by the wayside. Now the Army was involved in some of the design. And once in a while somebody from Tooele would show up for some of our meetings.

Eaton: So, it was really the APE guys who were involved.

Dellamonica: To a small extent

Eaton: So, you haven't had a whole lot of work with ARDEC.

Dellamonica: That's right, that's right, yes. But now all of a sudden we have TVA and ARDEC.

Eaton: All kinds of people now want to play?

Dellamonica: Yes

Eaton: So are they okay to work with? Do they listen to you?

Dellamonica: I get along with the engineers and let them stick to their ideas and it's chopped off sometimes... I just try to head them in the right direction.

Eaton: That's kind of you to do that. You said earlier, we were talking about the WADF, that the Navy was kind of generous with the money that they had. I know that when the Navy transferred over Crane, Hawthorne, and McAlester they gave the Army a \$500 million unfunded modernization bill as well. Were you seeing modernization dollars come through?

Dellamonica: Yes. There was Army money that came down not for modernization, but for training. You know, they said well look, this WADF is a new facility. You know the operating contractor said he didn't have any people that were trained to operate it and so the Army came up with a couple million dollars to train all of the personnel to operate it. And Lester B. Knight went ahead and prepared all the training manuals, and set up the schools down there. And they went through everything; all of the operating manuals for every building. And had supposedly people were dedicated for that particular building and job and work.

THE ARMY AND WADF

Dellamonica: Of course, here I had all this list of things that we had accumulated during the construction, little odd and ends you know that didn't get done right, and small modifications, small modifications, as I say around 55 or 60 different items. We knew that some of the returns

lines and some of the hydraulic systems weren't the right size and things like that; minor modifications here, and there, and everywhere. We had some problems with our ground fault systems in some of the buildings, the electrical. They would trip without us knowing why and things like that.

And there were a few little environmental things. You have the boilers, for instance, the boiler plant for this facility was originally included in the 1391. For the first phase, we needed a boiler plant to operate the facility. Well, we had a boiler designed to operate off the diesel, DF2, and of course when they expanded the WADF plan, we had to go a larger boiler plant. So we just said well, we'll just increase the capacity of our boilers. We advertised a contract.

The first thing you know we got a message saying, hey, anything over 50 thousand pounds, you have to go to burning coal and oil. So, we pulled it off the street, and we went out for a new design. We had to redesign the building because the boilers were larger, and everything, and Keller & Gannon weren't really up to speed, you might say, in the design of coal fired boiler plants. So they went to another company, Boeing Aircraft. And they come up with these 50 thousand pound boilers, three of them. They installed them and we ran the tests on one. The other two we never even fired up. We ran the test on boiler number one, and we actually ran it at 60 thousand pounds. We had a pipe going out the back of the building. You couldn't go into a lot of the area without earplugs because of the noise of that steam exiting. And with the low turn-down ratio, we couldn't get it down, we couldn't turn it back down below 5000 pounds/hr.

Eaton: That's been a problem we've had with a lot of the plants over the years. We can't run them at low capacity. They were all designed to go flat out.

Dellamonica: That's right.

Eaton: And to pull them back, you just can't do it.

Dellamonica: So, that meant then we had to bring in some smaller boilers. We started out with a smaller boiler on a trailer, actually. Sitting out there in the parking lot until we could get another boiler installed over in the boiler building, which had three compressors. When the boiler building went in, we also put in all the air compressors. And of course, everything in there was sized for the 50 thousand pound boiler. And they put this small boiler in there, and tried to operate with the large boilers in place. And then about that time they laid the facility away.

Eaton: Perhaps they'll come back and try to start using it now. They're being forced into more environmentally conscious recovery methods.

Dellamonica: Well, right now we're using three buildings. We're doing the sawing at Building 9 and, of course, the controls for the sawing operation in Building 9 are over in Building 8. Workers load the tables on the saws and then they go back to Building 8, close all the doors and everything. With Building 8 we had to redesign some of the environmental portions of it to take care of the additional blast pressure that we anticipated for that operation. And then we had to go through with a separate contractor to make modifications to the preparation building, which

was close enough to Building 9 that the blast pressure exceeded the two and a half psi for ear damage.

Eaton: Now if the Navy was putting money into WADF, did they have a specific item in mind to demil?

Dellamonica: During the construction of the equipment, we actually had already selected what we were going to run in that building. So we actually tooled it up for that item. We put the right size jaws in the defusing machines, and etc.

Eaton: And then you never ran it for those items?

Dellamonica: That was about it. And those machines just stayed, laid dormant. We put them through an inert test, naturally. And then we went and put them through a lot of live item tests. The Army funded the live test also, for the operating contractor. And that's when the operating contractor went out and hired these guys off the street to write SOP's and I had to train them how to write SOP's.

Eaton: So the construction of WADF, was that Lester B. Knight?

Dellamonica: The structures were built by Santa Fe. All the structures were built by Santa Fe. Lester B. Knight was just the equipment design and installation.

Eaton: OK. So then Santa Fe was conducting the inert items tests?

Dellamonica: Yes

CONVERSION ISSUES

Eaton: I heard that during the Navy to Army conversion there was an inventory problem. Were you involved in any of that?

Dellamonica: Yes. I had to go out and identify equipment, and costs and all that, and try to segregate it into categories where it belonged. And the spare parts also.

Eaton: So you were looking at equipment and spare parts? Had the Navy not kept good track of that stuff, or was that not something that you guys were worried about?

Dellamonica: Well, the Navy had, as I said, had identified all that equipment, but it was specifically made for a particular item, you know. And we knew what we had, but we had to, when they started inventorying all those buildings, we had to include some of that equipment. We had equipment and tooling in some of the magazines out there in the 116 group-- 116-40. A lot of that was in those triple arch magazines. And we had to get that all identified so that it could be transferred.

Eaton: From one service to the other.

Dellamonica: Yes. I still have copies of some of the transfer documents. In my desk over here.

Eaton: I'd heard there was an inventory problem with the actual bombs in the igloos. I didn't realize there had been an inventory problem with equipment as well.

Dellamonica: Oh, well sure. That was the B5A accounts. Oh yes. I didn't really get involved in that.

Eaton: So did the Navy just have a different attitude than the Army about those sort of things, or was this the mistakes that had happened over time?

Dellamonica: Well, they were things that hadn't been corrected. The Navy hadn't corrected them. They had those Y- sites out there in open storage. And they didn't really have a good count on some of that material out there. Mainly, they were trying to turn it over so fast.

Eaton: That's true. They did it in less than a year from the time they decided to do it.

Dellamonica: Yes. And then, of course, there were people who were leaving. The people who left had the knowledge and knew where it was.

Eaton: When the Army took over from the Navy, were there any layoffs?

Dellamonica: Yes, there were some then. I don't know why. I know in some of the shops there were people laid off. At that time the Naval Air Station up at Fallon was expanding and they just moved there.

Eaton: They probably wanted to stay with the Navy. But there were no mass layoffs done or anything like that? Those happened later on.

Dellamonica: I can remember there was two or three fellows that I knew out in the machine shop, things like that. And I think there was one electrician or two, one of the linemen, and I can't remember now. You know, sporadic, people just taking off, deciding they didn't want to go with the Army, they wanted to stay with the Navy.

Eaton: How was the workforce feeling? Were they worried about the change to the Army?

Dellamonica: No. Of course, I was dedicated full time with WADF. I thought, what's the Army going to do with me?

CAREER PROGRESSION

Eaton: Let's talk about you for a couple more seconds. You started off as an electrician. How had your job title and position progressed? Eventually, you ended up in charge of the engineering department.

Dellamonica: Yes

Eaton: So you started off as an electrician, and then the Navy put in an engineering department after World War II.

Were converted to be an electrical engineer then?

Dellamonica: Yes.

Eaton: Then what happened? What was your next progression or career change after that?

Dellamonica: Well, I was still holding a GS-13 over in Building 39, over in the engineering department. Then, while I was in there, I ended up in WADF, and another fellow became the head of the department over there, and he was a civil engineer. And then when that all finished up at WADF, there I was, so I dropped back to a twelve.

Eaton: So this other guy remained in charge of the engineering department, and you came back.

Dellamonica: Yes. Then instead of being electrical, they said they just wanted somebody that was involved in all the different entities, and so they called it a General Engineer.

Eaton: General Engineer. So, that would have been in 1978 or so. And then you eventually became the head of the engineering department again?

Dellamonica: For a while, yes.

Eaton: Now you're the head of the engineering department again.

Dellamonica: Not much of an engineering department anymore.

Eaton: So, when you left WADF, you came back here, they converted you to a General Engineer, and put you back into the department you used to head?

Dellamonica: Yes. And then when the department head left, they reorganized again, and so now I'm over here, and well they've got a environmental group and we are more or less separated. And then they have two people in safety, and one of the safety people left, so it dropped back to just one person in safety. There's been a general, you know, downgrading of personnel. And then QASAS (Quality Assurance Specialist Ammunition Surveillance) people are reduced to a group, which are still Civil Service. And I think they've been reduced as well.

Eaton: So how many engineers are left on the government staff?

Dellamonica: There isn't anyone else now.

Eaton: Just you.

Dellamonica: Just me. The contractor has one, two. I think they have three over there that have

engineering degrees. I know Greg West and another have degrees in mechanical engineering. Well, yeah they're both mechanical. I'm not sure about the civil engineer. I think he went to some technical school or something. And then there's another engineer that, well, he's in the engineering department, but I don't think he has a degree.

And let's see. They've got one fellow over there that's, well, he came up through the shops and he's been trying to get familiar with programming work for the industrial equipment systems. He's over there, but he doesn't have an engineering degree. And they have one fellow that does most of the CAD work over there, and he just grew up with CAD work. He doesn't have an engineering degree. The only CAD systems are over there. I tried to get a CAD system on mine in here, but I guess they don't feel that I should have access to CAD. I am not supposed to do the drawings.

Eaton: They just want you to review the plans somebody else comes up with?

Dellamonica: Yes. I was working with Tooele when they starting dumping equipment back in our lap. I worked with the fellow that controlled the drafting at Tooele, and, of course they had CAD. He sent a lot of that stuff to me, and then I couldn't look at it. I could just take the disk over to our contractor and go see the CAD person and say, let's see what it looks like.

They sent all the drawings back and a lot of them were incomplete. The CAD work hadn't been completed on them, and the modifications hadn't been kept up. See, when Tooele took over, some of our equipment they had the APE 1236's under their wing. But the detonating item furnaces that we built under the Navy program were a larger version of the APE 1236. And had one more retort sections and the trunnions were larger, and the whole unit was heavier. And, we had worked with the Battelle Columbus Laboratories to come up with real modern controls for that one unit; solid state and all that. And when the Tooele people came out and looked at it, they said, "[o]h, tear it all out."

[Note: Tooele Army Depot had a mission to design and manage Ammunition Peculiar Equipment (APE), to include detonating item furnaces.]

Eaton: Didn't they put the new dust collectors on it, and they changed all sorts of things on it?

Dellamonica: Yes. We had a system that we had worked with the Battelle Columbus Laboratories, an automatic detonation location system. On the control panel there's a string of lights that flashed where the detonation went off in the retort. You could tell whether you were feeding too fast or too slow and you could control it so that all of your detonations were in that center section. And the center section was designed and constructed to handle the detonations.

Eaton: Right.

Dellamonica: And they tore that off. I still have the plans and the specs, and I think I still have the panel hid out there in a magazine. But I don't think I'll ever be able to put it back in place. Because, all that equipment has upgraded, you know the computers have been upgraded. In fact,

they've changed the computers in that one unit out three times, and its never been operated. And they keep coming out with brand new computers.

Eaton: Well, at least some maintenance dollars are going into it, isn't it?

Dellamonica: You know, things like that... And now, they've decided that the high temperature coolers and the low temperature coolers, might plug up and they're going to a different system. And so now we're waiting for funding to upgrade that one unit. And the second unit out there will not be considered for upgrading. Right now if somebody was to come in and try to upgrade everything that we have out there, and make it operational, I'd have more than sixty items.

Eaton: It might cost less to just gut it and restart over again.

Dellamonica: Yes, that's right. Well, actually they're waiting for funding to try to upgrade the one unit. So far the funding hasn't come through.

Eaton: Money's tight, so it may not come through for a while. Well, they're going to get squeezed eventually because the loss of the open burn at Sierra is going to spread to other places. So, I think you are going to see that they're forced into more and more of the high technology demil.

Dellamonica: The group that does the SOP writing in the ordnance area that operate the facilities, keep me in touch with SOP's. The person that writes the SOP's sends me a copy, and I make comments on it and I go down through it and sit down with them and discuss the changes.

Eaton: So, you use your expertise there.

Dellamonica: Well, you know, several of those facilities haven't been operated, so they have no idea. They read the manual and the manuals got strange titles and things. And they look, this goes before this, and this goes before that. And then, of course, we have to be cognizant of all the newer environmental requirements.

I'm always in touch with the environmental group because I worked with them for years. Herman Millsap has worked with me a long time. He was one of the original fellows that operated equipment when we were filling bombs. But he's about the only one of them that's left now, outside of myself.

Eaton: Lets see, Tiny's been here for thirty-five years, hasn't he?

[NOTE: Tiny Cardenas is the Civilian Executive Agent for the government staff]

Dellamonica: Yes, Tiny was here. He was out in the field, I think. Later he got into management.

CONVERSION GOGO TO GOCO AND CONTRACTORS

[Note: In 1980 Hawthorne was converted from GOGO to GOCO. Day & Zimmerman won the operating contract.]

Eaton: Well let's talk a little bit about the conversion from GOGO to GOCO. That was around 1980?

Dellamonica: Yes. The first contractor, of course then it was not fixed priced. So we still had quite a bit of control over what he was doing. And he was submitting all the plans and specifications and everything for modernization or new construction and all that. And we would work with his engineering people. And then when we went to fixed price and some problems started.

Eaton: Back in 1980 when they did the conversion to the first cost plus contract? Was it under A76, so the government competed against the contractors? Were you involved in setting up the organization or help them determine how the costing would work?

Dellamonica: The only thing that I was involved in was the reviewing their design work. Well, as I say, I came back into and stayed with the government group you know as the engineer because I was so familiar with WADF out there. And I was busy and all, even though there was an operating contractor. We went through all the SOP's, and safety, and everybody went through all those SOP's. The changes come through on SOP's; new SOP's eventually come through. All the changes come through and they just put them on the email, come out here. And I go ahead and I usually, if there are quite a few things that I have to explain to them I go out there, and sit down with them and say hey, this and this and this. Yes. You push this and that and that's how we go to make it work.

Well, of course they were making changes before the fixed price contract came in. We were making changes to the WADF facility. We modified the hot gas system from its original construction and that was one of the items that we had on our list to modify because it didn't work out as a reasonable design. And we tried to make it operational and we finally converted it to a hot gas system. But before that, we had people in here conducting all kinds of tests to take care of demil work in some of those facilities out there. The TVA people, Weston, and some other companies came in here and ran tests using some of our facilities. Just for a short period of time. They wanted the place to try some new technology and some funding to do it and we took care of the engineering in conjunction with the other people and set up SOP's and all that, just like the treaty job. And of course, five years ago, I guess, ARDEC came in with this plasma arc. And now, TVA's come in with a carbottom, which is based on TVA's work that they had done in 117-15, which was the original flashing chamber at WADF where we had some problems. We recognized that. The Navy had planned to make changes, but they never occurred until they decided that they needed a better facility and then somehow or another it ended up under TVA.

And the same thing happened when we had the little excursion over there in 1991 to try to get rid of the problems they had in Southwest Asia. They decided that they needed more shipping and receiving facilities so we put in three container pads, container loading pads. The container loading pads meant that the Army was going to start going into the containerization for all their shipping. Then that resulted in putting in the pads to handle that type of work at three different

locations. And we were involved in the design and construction of that.

And then, of course, that brought up the problems, hey look, you're going to have all these containers, you're going to have to maintain them, so now we had the design, but that turned out to be a design-build type of contract. And that's the one we're having some problems with.

Eaton: That's just to do maintenance on the containers, right? Inspecting and maintenance.

Dellamonica: Yes, just to do maintenance on the containers. And when TVA came in and looked at this hot gas facility that we have out there, they decided that well, we're going to upgrade it and they put it on paper and it didn't fit at all. So they said, well we'll have to find a spot for a new facility. So that's what's happened. We abandoned the existing flashing chamber and went to a vacant spot out there in the WADF area, and we're going to put in a new hot gas facility there with a higher capacity. The construction of the main structure and all the roadwork and railroad work and power work and water work and electrical work are being under one contract. The equipment was contracted by TVA to Epcon to construct the equipment. The equipment is in storage out here waiting for the building to be constructed and installed later.

Eaton: Let me drag you back to 1980 for a little while longer.

Dellamonica: Yes

Eaton: When everybody knew that the government had lost the competition and that a contractor had won, were there morale problems? Did people quit? As Day & Zimmerman started to do the transition were there any big problems here with the workforce? They all knew they were getting laid off.

Dellamonica: There was some people naturally looking to see where they could go to finish, you know, to finish their longevity. People were short a few years, you know, the [?unintelligible??] and things like that and it's still going on.

Eaton: Right.

Dellamonica: You know, there's people now that got to hang around just because they've set a goal that they're going to have their 40 years in or 42, 45 or whatever they want.

Eaton: Did we lose any significant expertise when that happened? Day & Zimmerman obviously would've wanted those people who were experienced to come right across.

Dellamonica: They did lose some of them and had to fall back on some of the other people that didn't have some of the expertise. They had to retrain them, send them to school.

Eaton: Or bring in folks from other places...

Dellamonica: Yes, that's right and sub-contracting some of it, you know. They're doing quite a bit of some spot contracting work.

Eaton: Did we lose any quality because of all that?

Dellamonica: Well, no, we've been trying to stay on top of that. It isn't really clear. They're doing a lot of things out there that I am not aware of, you know, because I can't do a lot of driving around and looking at everything that they're doing. But if it has to do with the working of WADF or the pods or the hot gas, we're involved in that.

Eaton: Right.

Dellamonica: Yes, and any new construction.

DEMIL PROCESS—HOT GAS PROCESS AND CAR BOTTOM

Eaton: You mentioned the hot gas process a couple of times. What is hot gas?

Dellamonica: Hot gas is a facility where you take an item and you put it in the chamber and you just force hot gas past it and the heat is transferred from the gas to the item. They just heat it up with hot air. It's not a direct flame against the item, you heat up a lot of air and you inject it at a high velocity against the item.

Eaton: And that causes it to melt and pour out.

Dellamonica: Yes, it causes it to heat up and do whatever you want to do with it.

Eaton: Okay, so what kind of gas do they use?

Dellamonica: Air.

Eaton: Just regular air?

Dellamonica: Just air, yes. In the hot gas unit, we're taking ambient air, we're running the temperature around 2000 and then we're controlling it down to 1800 or so, up and down. Those are the controls. And I can show you some of the pictures of the system.

Eaton: Sure, okay.

Dellamonica: Yes, I got them in there on my desk.

Eaton: Let's take a look at them.

[NOTE: Mr. Dellamonica returned with photos and drawings of the hot gas system.]

Dellamonica: This a picture of the oxidizer. It's the facility that heats up the ambient air right in here. This is what they set up at the shop down there to run their tests on, so it's not going to look like that after it's installed.

But this is what you call the oxidizer. And that's the one that heats up the ambient air and puts it into the chamber and the chamber will contain all these demil items oriented so that the hot gas goes past them and heats them up.

Eaton: So, this is sucking the air in here and it heats up and this is to the stack, so it's actually going to go back to where it forces it over the items?

Dellamonica: [Changes to drawings] Well, yes, actually this is a flow diagram. This is the chamber here and you have to look at the drawings to really see what it's really going to look like. But this is the chamber that is on the flat car, that's loaded and put into this space in here

and the hot gas comes in the top here. And then it goes down through it. And then it comes back out over here and goes back to the oxidizer and all it does, all that hot air does, is heat up all that metal and the explosives that's left in the items and it volatilizes it. There is no direct flame against the explosive or the item either. It's just hot air going past it and it picks up the fumes coming off of the explosive and they're going on through here and actually burn in this area in here.

Eaton: Oh, okay, so they've been washed out once, somehow.

Dellamonica: Yes.

Eaton: And this is just another way of flashing it, basically.

Dellamonica: That's right, yes, but you don't actually flash them by putting a flame against it. See we have a flashing furnace out there now in one of our buildings where the item goes in on a tray and you've got burners with a flame shooting right against it.

Eaton: Shooting right into them, just burns it off.

Dellamonica: That's right and so if there's any explosives in there that flame hits that explosive and sets it off. What you're doing here, we're keeping the flame away from there and putting this hot air in it and these are all the controls that it goes through.

Eaton: Right. So, you said it volatilizes the chemical left and then that gas is what burns off basically as it goes through.

Dellamonica: Yes, that's right. And this is just a flow diagram and the drawings are over here. This is the WADF area and 117-2 is the old steam boiler plant. And we had a space up here, here is the fence going across here and we're going to go around here with the new fence and this is where it's going to go. And this is the new building which is going to go in there, and this is the new railroad track in there for supply. Now these tracks are to take the material away, to take it to the PDO yard where they sell it. So this is outgoing material that's been processed at WADF. The incoming material comes in here and then goes through this way.

Eaton: They just have to bring it in by road and then take it out by rail.

Dellamonica: Yes, you're going to bring it in by road, process it, and it goes out by rail. Now see here's some of the electrical work, and the water work, and the road. And we are meeting with TVA people on design, details, railroads, and etc.

Eaton: This TVA, this is Tennessee Valley Authority?

Dellamonica: Yes. These are just some of the details. They are in a spot that has to be filled five feet, so they had to bring in materials. To build it up and put a floor in and all that, so that's what this is.

Eaton: Septic tanks?

Dellamonica: Yes, it's totally remote out there so everything has to be provided.

This is the elevation, this is your water line that goes around there. That goes under the railroad track here. That goes under the railroad track here. This is the detail of where the water line goes under the tracks. It goes under the tracks here and it goes under the tracks here. These are details of fire protection. ---

Okay, pretty soon you'll get a picture of it. And this oxidizer is oil fired. So, this is a location for the fuel area tank.

Eaton: Above ground, right?

Dellamonica: Above ground. Here they are.

Eaton: Here we go. It looks like a steel shed to me. This is the lightening control here.

Dellamonica: Yes, the lightening protection. Here's the floor diagram again. This is what they called a carbottom. This is a flat car that actually is loaded with this scrap, I won't say scrap it's a product that's been demiled, washed out or steamed out, and it's loaded onto that and it goes into the chamber here. Then it seals it off in here. The hot gas goes in there and when it's done, it goes out and it's unloaded and this goes to the outgoing rail.

Eaton: So, the reason they call this a carbottom is simply because they're using a rail car, which moves back and forth in and out of the chamber.

Dellamonica: Yes. Now, I'll show you a railcar. Now the TVA contracted for the equipment. This is the equipment. This is that oxidizer, see.

Eaton: Right.

Dellamonica: That's that picture right there, see.

Eaton: Right.

Dellamonica: And it's pretty hard to follow this, but this is the ambient air that's heated up and it goes in here and this is your burner right here, a 6 million BTU burner, hot, and the air goes in here and comes out here.

Eaton: It's like big fins, like a radiator.

Dellamonica: This is a heating system. This hot air heats this air coming off of this burner, heats up all of this ambient air without contaminating it and then this goes into the chamber. And then it comes back out here and down here and this is where the high temperature, 1800, and then back and around here and then out into the atmosphere.

Eaton: Okay. And then the air is scrubbed a little bit on the way out?

Dellamonica: There's no scrubbers on it. This is all. When it goes around it's deflected around these units here, goes around here past this burner, and it's burned in this area, and then they dilute it with ambient air here again, and then it comes back out here, and it goes on up the stack, and the stack is the control. See this flat car in here and goes in there and there's the oxidizer out there

Eaton: Basically, it burns off in the stack.

Dellamonica: Yes. Here's the chamber and this is the oxidizer here and this is that side view of the chamber with the flat car in it and this is the standard of the building. I have some other pictures.... This shows the hot air coming in here and that shows it going back out. This dump stack actually goes in and connects to the main stack. There's your chamber and your flat car in the chamber. And this is the chamber that goes around this whole thing.

Eaton: Concrete or steel?

Dellamonica: No, it's mostly insulation. I think six or seven inches of insulation and metal on the outside and then stainless steel inside.

Now, there's the top view. There's the view of the flat car and this is the door that comes up to seal off the chamber. And the thing that we're having problems with right now is back here. Right here and here is a sand seal, and they were having a problem with trying to explain it to the safety people back in Rock Island how this system is supposed to work with this sand seal. This sand seal is supposed to control, it's supposed to hold a negative pressure of only a tenth to a quarter of an inch water gauge and they were concerned that there wouldn't have enough venting capacity in the event that they get a detonation in the chamber. So they're going around and around and out and so, we're having lots of fun with this one right now.

Eaton: Interesting.

Dellamonica: But this has been built and it's out there.

Eaton: So how much longer do they think till it's ready to go?

Dellamonica: Well, they're going to have the pre-bid some time this month for the building. And the contractors that built our container maintenance facility got the contract. So, we're familiar with the contractor.

There are still some issues. We had some conversations yesterday morning with the people back there in Rock Island. We got everybody together back there and had a conference set up on the telephone to talk to all those people and try to explain to them how this operated. They had an idea that somehow we were going to put five pound chunks of explosive in here, because we indicated the total capacity as 5 lbs.

Eaton: The total of all the projectiles in there, total residue might be up to five pounds.

Dellamonica: That's right and that's the thing that they couldn't understand about that but we finally sent them some of these pictures to show how thick the walls were and all this and that, because they were talking back there about making a remote operation and have to put in a big heavy concrete blast wall in there.

Eaton: I wonder if it's because they're thinking about the blast facilities that they put out at Blue Grass, so the guy was just putting in chunks of explosive and blowing it up inside of the building.

Dellamonica: Oh. Well, somehow or another, there was someone back there that, you know, just... concerned??

Eaton: Couldn't get it.

Dellamonica: Just couldn't get it and we sat there yesterday morning on the telephone conference call. It was everybody sitting around talking on the telephone back there, all the safety people. And we went down it step by step by step and pointed out that this five pounds was distributed over as high as a thousand items. And they said, well how do you know it's five pounds. Well, we don't, I mean, those items come out of a process, a steam out or wash out, and it's residue. It's just a thin film of material that's left on there and it varies up and down a little bit, you know. And we were just estimating that it is five pounds. Besides that, TVA came in, four or five years ago, and ran some tests and they spiked a bunch of rounds. They know how much they had to put in a round to more or less duplicate what was happening when it was coming out of the production line, utilizing a five inch round and a six inch round. And then when they went to a 155mm which is a larger size round, they doubled the spike size. So, we had lots of fun with this.

Eaton: With this one in particular.

Dellamonica: Golly, so that's just it, an example of what we've gone through, you know. Now the plasma arc.

DEMIL PROCESS—PLASMA ARC PROCESS

Eaton: Yes, tell me about the plasma arc, too. Tell me what the concept is.

Dellamonica: The plasma arc is just a big retort with a couple of arcs, electric arcs in it. One operating at 1335 kilowatt hours loop and the other was 675 kilowatt hour loop. It was just a big arc, just like an arc welder. I mean, when it strikes an arc it runs around and it deposits the metal, right? In this case, that article falls into the high temperature plasma from the arc and goes onto the material that is being injected into that chamber by a couple of feeders down through the top of the retort and it melts.

In the original chamber that was designed up in Butte, Montana, the chamber rotated and the arcs were stationary. Now, on this one, the chamber is stationary, but the arc oscillates around and there are two arcs. The one arc that starts the melt out and goes around slowly and gets the initial meltdown and then the other arc takes over and keeps it going.

Eaton: So, does the plasma arc do only one round at a time?

Dellamonica: No, it's meant to be utilized for fuses and pyrotechnics and things like that.

Eaton: Oh.

Dellamonica: So the largest piece of material that could go in there is about four inches in diameter and maybe six inches long and most of the feed is sand. The sand is molten and the material falls into this molten sand. You end up with the explosive burnt out of the item and all of the remaining material is encapsulated in this sand and it comes out, it's drained out in the bottom of the retort in the form of slag into barrels.

Eaton: So this basically melts everything down.

Dellamonica: Yes, it melts everything down.

Eaton: So, explosives burn off and everything else melts.

Dellamonica: Everything else is melted and it goes down into the slag and pours out the slag into a barrel and it's allowed to cool and you can use that barrel of slag for anything. It's inert material.

Eaton: It's inert. It doesn't have any explosives in it or anything.

Dellamonica: That's right. It's all encapsulated more or less, right.

Eaton: So, how far along are we on that one?

Dellamonica: Well, we are building. The facilitization has been done on the structure. The fire alarm system, the fire protection system, the lightening protection systems, and the water to operate the facility, and the increase in the power required for the arcs and all of the motors and everything else is done. And the design has been going on now for five years or more.

Eaton: So, how many more high tech projects are you working?

Dellamonica: Well, that's about it, right now. I haven't heard of anything else that has come up. All we heard about a few rumors, but nothing has developed. They're reaching out trying to well, take care of things that they're having problems with. I don't know what they're going to do with the 750 pound bombs and things like that.

That's just... We went through quite a time trying to find a location for the plasma arc facility (PODS). They were actually thinking of maybe building a new building for it and then they found out that we had a plant down that was dormant and would never be utilized, because the boilers were too large to handle any of the steam load. They wouldn't turn down.

Eaton: You couldn't reduce the capacity?

Dellamonica: Yes, and so they said well, I think we can install it in there and they looked at it and decided okay that's where we'll put it. We took them up in the 101 area and showed them some of those buildings that were slated for demolishing or excessing, but it just wouldn't fit. And they went around looking. So, that took a little while to get resolved. And then of course there was already design work for the facilitization of the boiler plant. They had to take the large boilers out. And of course, to take the boilers out, you had to put big door in the wall. All that equipment that was in here just went to salvage.

Eaton: It was cut up and sold off?

Dellamonica: It was never utilized. And some of the equipment that's still in there is oversized now for the smaller boilers. The big tanks and the condensate return pumps and all those systems were made for the 50 thousand pound boilers. The storage facilities for the fuel oil-- a hundred thousand gallons of underground storage. All those tanks had to be tested for leaks.

And now we have PODS coming on --- and that's going to take people. It's going to take a number of people who will have to be trained to operate and maintain the facility. It's real expensive to run. It's going to more than double the power bill and cost for some of the other ingredients that go in there, the oxygen and the nitrogen, and etc. may be substantial.

Eaton: Carbottom might be a cheaper way to run the business then.

Dellamonica: Yes. I don't know. The decisions to put those facilities in here really didn't generate from here. There was no 1391's submitted by us here. They came from different departments.

Eaton: Were there any other demil projects you worked on?

Dellamonica: Well, I say the demil things have kind of kept me busy. Projects like the TVA Hot Gas, the PODS, Sewer Line, and of course the container maintenance. I don't know what might come up. The only thing that I can see is if they get some work for WADF, you know to activate some of those facilities down there. And to activate some of those facilities and to upgrade them, because of environmental requirements changing.

We have one facility down there in 117-4. It is an incineration facility that was built to dispose of explosives, umm, propellant. And we built that in the early 1970's and at that time all you had to do is feed the material in it and exhaust it to air.

Eaton: Right.

Dellamonica: No more.

Eaton: Now you have scrub it and clean it and recirculate it?

Dellamonica: That's right. And so, Dames and Moore came in and started to design and upgrade it, to put in all required equipment and the Army, let's see... I don't know what happened, but they were going along with the design and we were working with Picatinny Arsenal, because Picatinny had upgraded one of their incinerators. I still have all the Picatinny literature with me. Anyway, we were going along, Dames and Moore, working on the upgrade. We still had about \$2 million in the pot to work with, and they shut it down. And I think the reason they shut it down is because they didn't see any workload for that facility. We grabbed that \$2 million and used it for environmental cleanup work.

Eaton: Things that you are going to have to do anyway.

Dellamonica: That's right. So, that facility now is dormant. There were two experimental things. Well, one was the treaty work. We had to modify it for that and modify some of the equipment inside of it to handle that project. Before that, there was one incident where the Army wanted to run some test to convert TNT to a fuel, so you could inject it into a boiler, to fire a boiler.

Eaton: A coal substitute?

Dellamonica: Yes, that's right. And they came in and built an explosion proof boiler.

Eaton: Interesting.

Dellamonica: It was not a successful project.

Eaton: And that's sitting out there still?

Dellamonica: Yes. And then let's see, what else. There was another short project where they were going to convert some explosive to a fertilizer. And, they played around with it and they modified it and put it in equipment and fired it up and they ran a small batch and then they had problems with it and they went to a little larger batch, a hundred gallons or so. First they started with 55 and then they went to a 100 and that didn't pan out, apparently. They produced a little bit of the fertilizer but the fertilizer cost was too high.

Eaton: You buy regular fertilizer for \$5 a bag, why would you buy this for \$10 a bag?

Dellamonica: That's right. So that fell through and that's about all it's been good for. The Navy up at Keyport wanted to get rid of some auto fuel. They shipped 2500 gallons of it down here and we ran it through one of those incinerators.

CONTINUING EDUCATION

Eaton: Does it ever surprise people that, here's Louie Dellamonica with his 1934 engineering degree who stays up on top of modern things like this?

Dellamonica: Well, you know I still have my old slide rule.

Eaton: Oh, do you? You still know how to use it? (Laugh) I mean, do you ever walk in a room and these guys from TVA or somewhere else, they just sort of stare at you like they don't believe that you are really here working on this thing?

Dellamonica: Oh yes, they come up to me, you know, and ask me for my calculator and I say here. What's that? That's a slide rule. Have you seen one?

Eaton: And they probably haven't. You told me before that you never went back to school, so you just sort of keep up on things as they come along.

Dellamonica: Yes

Eaton: Did you read journals or have them explain to you what's going on?

Dellamonica: During the Navy days, earlier when we were having the Cold War in Russia, we were expecting them to fire those, ...

Eaton: ICBMs?

Dellamonica: ICBM's. We had a program, the Navy had a program to provide any kind of protection against fallout and all of that. I went to a six weeks course at Treasure Island on calibration and dosimeters and fall out effects and protection. When I came back, I had classes for everyone and finally that all went away and all the equipment went with it. And now we're not being attacked anymore. And we're working with hot gas.

Eaton: Things you would've never thought of back in 1945 when you started demil work here.

Dellamonica: I didn't know I was going to be in ammunition in 1934 when I graduated.

Eaton: No idea.

Dellamonica: I was going to a mining camp, you know, and drilling holes in hard rock and blasting them with dynamite.

Eaton: And then hooking up the generators for them.

Dellamonica: That's right, exactly. And no environmental problems.

Eaton: We didn't know back then.

Dellamonica: Don't stand at the bottom of the canyon; you're likely to get washed out with some cloud burst. Build everything up on the side of the hill. That was environmental. That's what I did, you know. I had to look at the canyons and went down in there and said where are we going to put this mill? Down here? Oh no, up there.

Eaton: A little bit higher up, please.

Dellamonica: A little bit higher up.

BABBITT HOUSING AND HAWTHORNE CITY

Eaton: When did they close down the Babbitt housing area?

Dellamonica: They started that, it went down in increments, right after World War II. Actually there was a big drop-off at the end of World War II, we had 1100 duplex units up there and out of the 1100, we knocked about half of them off.

Eaton: You told me they put radar down at one end of them too.

Dellamonica: Yes, and in that area we tried to find other things to put in there; finally they just went ahead and removed the houses. Now those units were not demolished, because they had concrete floors and there was a contractor that came in and they would raise the unit up and put a floor under it and then moved it to any place you wanted to in the state. They went to Fallon and every place around, Yerington, up the side of the mountains up here, all over.

Eaton: What kind of construction were they, were they wood frame construction?

Dellamonica: They were wood frame, but full sized lumber. The only problem they had was there was a shingle on there that contained some asbestos in it.

Eaton: That was the siding shingles?

Dellamonica: Yes, and so that had to go into a fill, sanitary fill.

Eaton: Right. I drove out there yesterday, and I didn't see any paths. I saw where the roads were, but I didn't see any concrete paths and I was expecting to see some paths.

Dellamonica: No, they're up there.

Eaton: They're just covered up with sand now and brush growing on them?

Dellamonica: Uh huh. Later on as the attrition went down and down and down, they went to get rid of the units that had foundations and wood floors. And those foundations are all caved in and covered up and they're on this end, this side of the bowling alley...

Eaton: That's where I could still see sidewalks yesterday.

Dellamonica: Yes, but on the other side, there's still some of the slabs. Yes, but they're covered up with sand. Up there by that tank, there might be a few exposed up there yet. And that tank up there of course was part of the Babbitt system. It was the water... the water pressure. And also, up front in Babbitt, we had big alfalfa fields all the way up and we had that big one million gallon reservoir up back of Hawthorne, that big white tank was the reservoir for the water for the irrigation system.

Eaton: For the alfalfa.

Dellamonica: Right. And the well that's up there now, that the county has, was the well that filled that tank. I don't know what the county is going to do with the tank, but they're using the well. They're selling the water back to the Army.

Eaton: Of course.

Dellamonica: Yes, we had to drill a new well. But we haven't got it operational yet.

Eaton: So now we're having to buy it from our own old well?

Dellamonica: Yes.

Eaton: So how did the town of Hawthorne deal with these last changes? I mean was there construction in Hawthorne to build housing that had been in Babbitt?

Dellamonica: Housing, there was lots of housing in Hawthorne for sale after this.

Eaton: Is there?

Dellamonica: Yes. And apartments and things like that, you know, that were built.

Eaton: They just can't keep it full?

Dellamonica: That's right.

Eaton: Government employees and contract employees are living here in the brick; paying rent here on post?

Dellamonica: Yes, and we have one complex up here with 25 units, it's going to be demolished.

Eaton: It's all empty?

Dellamonica: Yes.

Eaton: So, how are relations between the county and the city and the Army?

Dellamonica: Well they're working together pretty well, I think, actually.

Eaton: Does the city ever blame the Army for reducing the size?

Dellamonica: Oh, well sure, that's sort of, you know, they're looking for somebody to bring in some work.

Eaton: The mines never did take off again?

Dellamonica: No, the mines never took off. There's a little bit of mining work, but very little and I think it's going to be shut down with the last of the ongoing operations. The only mining work anymore, well there isn't any right now, that I know of. There's someone over there in the vicinity of Gabbs, I think they're doing something. And another place, but it's just a small operation.

DESERT STORM

Eaton: Was there anything significant from Desert Storm in that time period here in 1990-91, that you remember that was any different than earlier?

Dellamonica: Well, we had a lot of shipping of course. Yes, shipping around the clock.

Eaton: And they had to bring people on to do that?

Dellamonica: Yes, and we enlarged the truck inspection lot because of the influx of all the truck work.

Eaton: They used trucks for smaller loads. But, when you're doing huge out loads like Desert Storm, wouldn't they just use the rail?

Dellamonica: Well, yes, they were shipping, and in fact because the mining work dropped way off over in Luning and Mina, the Southern Pacific abandoned the line all the way over there. So, the Army bought the line from Thorne to Wabuska where the Southern Pacific was going to terminate their line and they had to buy that line and upgrade it so they could have a completely usable facility.

Eaton: And then maintain it?

Dellamonica: And maintain it, exactly, yes.

Eaton: Southern Pacific didn't have any compunction about getting rid of something that wasn't making any money did they?

Dellamonica: No, they closed up their old tracks all the way to Mina and left the roadbed down and that's about it.

Eaton: The Army had to come back and lay track down again on top of the roadbed?

Dellamonica: From Thorne back. Well there is a short piece, yes, going down there about half a mile or so, kind of a spur. A dead end spur was left in there.

Eaton: And that's it.

Dellamonica: Yes. At one time there was some people up there that had propane tanks storage up there and things like that which they pulled out. Then there was actually a building up there for the end of the railroad line which was removed.



New loadout area

WALKER LAKE AND WATER

Eaton: Walker Lake's been receding for the past several years.

Dellamonica: Oh yes, ever since...let's see...

Eaton: Ever since they started building this place and irrigating?

Dellamonica: Yes

Eaton: So, did that cause any problems for the operations here? Was Walker Lake inside the Hawthorne fence line?

Dellamonica: Oh, there's a part of it, still in there.

Eaton: Still is. So do you have to maintain that?

Dellamonica: Well, they've got buoys out there. They're supposed to keep people out of this end of the lake because we fired so many rockets in there, and now the lake has gone down and they have become exposed. We're going out there and retrieving them and making sure that they're inert and if they're not inert then they blow them up.

Eaton: Right in place.

Dellamonica: Right in place, yes. That's ongoing.

Eaton: That's ongoing. So, do the Navy guys do that?

Dellamonica: Well, not anymore. It used to be Navy guys. The EOD people used to come in, or Army EOD or Navy EOD's, but now this is a part of the contract.

Eaton: Day & Zimmerman does it themselves?

Dellamonica: Yes, they've got an EOD for that. He's been with them a long time. He does the shooting. We try to keep an eye on it. The environmental people of course have been involved with most of that, as the lake went down you had to follow it down and sweep the shore line for exposed rockets.

Eaton: So, why is the lake going down? Do they know?

Dellamonica: The climate has changed. I can remember when I was growing up over in Yerington, we used to have a foot of snow every year in the valley and that's gone. And I can remember when I was first here up on Mount Grant and some of these other mountains were getting two and three feet of snow all over. All we get now is six inches maybe or three inches or four inches per year. Have to rely on these wells.

Eaton: If they go dry you're in trouble.

Dellamonica: Yes, well a lot of them have gone down the drain. I say a lot of them, we had to replace two of them recently. The latest one, of course, is well number one, which was one of the last wells that had potable water. They had got it redrilled, but now they've got a little bit of a problem permitting it. A little glitch in the specs.

Eaton: Not clean enough or...?

Dellamonica: Somehow or another everything was approved by the driller except that there was an addition to a clause relating to the thickness of the casing. You read that article and it says up to a certain thickness, 1/4 inch, but 450 pages further down the line, there's another line relating to thickness they didn't catch. They should have gone to 5/16" so the engineer for the state is

not going to put an approval stamp on the well. The original casing was one quarter of an inch and it was drilled in 1942 and I can remember the problem I had putting it down in 1942 because they had encountered a big boulder down there. And it had an offset in it. We always had trouble with it trying to maintain that pump all these years. But now the new well is nice and straight all the way down, and it's got the right quality in the water and everything, but the thickness of that casing is off 1/16 of an inch.

Eaton: Can you put a sleeve down there?

Dellamonica: Yes, we're telling DZHC to put a sleeve in it all the way down.

Eaton: All the way down. How deep is it?

Dellamonica: Oh, 600 or more feet.

Eaton: That's not very much.

Dellamonica: No, that's not very far.

Eaton: So, the pump's in the bottom?

Dellamonica: Yes, they're going to put a pump down the well. The pump is a submersible type and it goes down to the bottom of the well.

Eaton: And it pushes it up.

Dellamonica: Yes.

HAWTHORNE'S FUTURE

Eaton: Is Hawthorne ready for its mission for the next couple of years? Is it still ready to do everything it needs to do?

Dellamonica: Well, I haven't any idea now what they're going to do with the PODS facility. They're going to have to improve the DZHC scope of work, so it's a little bit more maintenance involved. The electrical distribution system has been let go and not been maintained properly and that's the same for some of the other systems. A lot of our housing area condensate return systems are in poor condition.

Eaton: In family housing?

Dellamonica: Well, we had a maintenance project. The Corps of Engineers took that project and they put it out on the street and didn't realize that they didn't have enough money to complete the work. So when the contractor stopped working on it, we only ended up with it partially completed.

Eaton: Do you start to wonder if we've lost our expertise in how to do engineering work in the Army, because that's that sort of thing that an engineer should've figured out a long time ago and get a better estimate. I do wonder sometimes if our workforce isn't retiring on us so fast, and we're not hiring anybody new.

Dellamonica: Yes, that's what happened down in the Corps of Engineers in Sacramento. A lot of the old timers that were there are gone. I don't even know anybody at Keller & Gannon anymore; they're all gone, they either passed away or retired. I don't even know what Keller and Gannon are doing now these days. I think they were pretty well involved in that BART Transit system. I think they're still in there.

Eaton: But the explosives work, nobody does explosives work anymore.

Dellamonica: No.

Eaton: We really do rely on contractors out there that we hope they're giving you the best.

Dellamonica: Yes. And of course right now most of the money's going into the environmental projects. But that keeps a few --- people busy. I still get involved a little bit with it. Some of the older people that used to be working on environmental projects are also out. They're retiring and are unavailable to do some of this. Some of the new people, like the safety group back there that we are talking to, have a rule book that says rule, rule, rule, but they don't look at the drawings.

We had to fax some plans to them, but we realized that they did not use them. And so we started marking up some of the plans here and making copies and sending them up and getting on the phone, trying to explain to them and I think they finally understood what we were trying to convey.

Eaton: Those are the folks at Rock Island ---?

Dellamonica: Yes. And the old fellows that we had up there were knowledgeable. They came out here, back and forth and we were talking to them practically everyday; they're gone.

Eaton: Right. And the new folks they don't know what Hawthorne looks like.

Dellamonica: That's right and some of those have just been moved there too.

Eaton: Right.

Dellamonica: They've been reducing, haven't they?

Eaton: Yes, shifting people around. It makes it hard.

Dellamonica: Yes, we were talking to somebody one day and he's gone the next day. He went

somewhere else.

Eaton: And they do the best they can, but they don't have experience.

Dellamonica: That's right. But at the least, they should come out here and take a look. I think there's only one or two that came out here. That's ever been out here. Glenn Leach is one of them and he was trying to push it through, but, you know... They just sit there and when they don't know, then they go back to the rulebook.

And then their travel funds get cut. Yes, I noticed that from this side though it's kind of hard to get to travel.

At least you're talking about something that you're knowledgeable about.

Eaton: I've got a little familiarity. I have been there a few times.

Dellamonica: That's right. But, you've been around and watching. You've been around to other places and all that and you've been out here.

Now we've got the geothermal people interested in this area. The people from China Lake came out and I spent two weeks with them on the initial surveys with those people and so I'm hoping that that turns around. And if that comes around, then I'll probably keep watching that project a little bit, but of course, it's still in the concept stage. They got to go ahead. They got the initial survey and it's had some problems. Now they've got to go further and detail it down, get a little more specific and then sink some money into it to run some more tests. And they're doing the same thing up in Fallon and Fallon is ahead of us, actually. They got one of their test wells on the way and they're talking about going down to 7,000 or 8,000 feet.

Eaton: Hmm, that's a good distance.

Dellamonica: Yes. So, you can see what that means, some funding.

Eaton: That means some funding and some more studies to do that.

Dellamonica: That's right, some more studies. Actually the deep well, 8,000 foot well, is going cost about \$1 million. Ahead of that, we've got a three hundred fifty thousand dollar project to pinpoint its location a little more closely. All this data has to be gathered. I escorted the first survey team that obtained data that indicated the possible area location.

Eaton: Hot spots?

Dellamonica: Hot spots, now we've got to take those hot spots and refine the location of it. And then they're going to run a test on it with that spot, which I think is going to be an 8,000 foot well. And then, of course, they're going to have to put down a deep well you know in order to get the source, then they've got to get somebody to come in and build the plant in order to generate the power.

Eaton: So, they'll generate power off these thermal hot spots?

Dellamonica: Yes. That's right. So, now we're getting involved in connections to the power company. We're looking at all this and that. And some of that is beginning to build up...

Eaton: Is that a Naval project? Is that a Navy project from China Lake?

Dellamonica: We are working with China Lake, but the Army now is beginning to finally get interested in it a little bit. China Lake is making money off of theirs. They're making millions of dollars out of it.

Eaton: Just generating power.

Dellamonica: Generating power and selling it.

Eaton: At cheap rates to California?

Dellamonica: That's right.

Eaton: That's a good plan.

Dellamonica: Well, see this is what we're looking at now. In fact, we have a meeting tomorrow with one of the fellows that was involved in the original testing down here. They made the original testing on some of their funding. They've got that much money in the pot down there.

Eaton: The town of Hawthorne ought to be interested in that too, because that might make jobs. So, they're going to be involved and lobbying their Congressman and things like that.

Dellamonica: Yes.

CONCLUSIONS

Eaton: You must be very proud of this place. You've spent 60 years here.

Dellamonica: I sort of watched it grow up when I was working on Mount Grant processing sand and gravel and getting the gold out of it. The Marine patrols would come by every Friday. There was sage hens all over the place. And now there's no sage hen left. And then after watching it from Yerington I worked in all these mining camps around here, Masonic, Pine Grove and Laughlin and Lucky Boy installing equipment and operating it and messing around with it and flying... and trying to keep busy.

Eaton: You were a key part in all the developments down here for years with all the different work you did and all the different experiences you had.

Eaton: Do you ever think about retiring?

Dellamonica: Well, what will I do? Retire, go get an ultralight, and go fly around?

Eaton: Go fly around the countryside and see things.

Dellamonica: Fly back to Rock Island.

Eaton: Uh huh, probably a long flight for you. (Laugh) So, you're happy with what you're doing?

Dellamonica: Well you know, it keeps me kind of busy. My kids are scattered around the country more or less. I got one daughter that's a librarian here in Hawthorne and that's the closest one. And a son in Salt Lake City and a daughter over in Minden and she was working for one of the banks. She retired from one of the casinos. And the other daughter is a specialist in restaurant work, you know, in culinary work, down in the bay area. She's working for a big restaurant down there. She decides what to do and what not and how to mix this and that, culinary work.

Eaton: That's a science. That's engineering.

Dellamonica: Engineering, yes.

Eaton: Doesn't it seem kind of funny to have a daughter retired and you're still working?

Dellamonica: Yes, my daughter in Minden that's retired is a golf enthusiast.

Eaton: So, she's busy.

Dellamonica: Well when I go, there's always some projects around the house to keep me busy.

Eaton: Is there anything else that you want to add on?

Dellamonica: Well, I do have some. When they shipped in the HOT GAS project equipment in, they damaged it a little bit, so there's going to be a little bit of work to be done on that equipment. But we got some time, because it's going to take them a while to put the structure in place. And I'm trying to support the safety people and I'm trying to support the environmental people. Anytime they want some help, I'll jump in. On the thermal, I went around with a GPS system and tried to locate spots.



Mr. Dellamonica ca 2001



Mr. Dellamonica receiving an award recognizing over 60 years of service

Eaton: You're up in all the modern technology, aren't You?

Dellamonica: Yes, it's modern technology all right...

Eaton: I think that one thing that you have, I was thinking when we publish this thing, it would be nice to put some maps of the way Hawthorne developed. So a map of the way it was built in 1930 and a map of the way it was added on in '45 and '50. Do you have any?

Dellamonica: Well, we have photographs and things like that, yes.

Eaton: Oh, photographs?

Dellamonica: Yes, they're sort of... Well at that time, there was --- cameras you know. They got out here in the sand and took pictures of the construction.

Eaton: I was thinking about drawings, map drawings, but photos are great.

Dellamonica: Well, we have the original drawings, yes. The housing was originally built right here. They started with the housing actually and this building here was the Marine Mess Hall at that time.

And then we had an ice plant in here where the Communication section is now. The Ice Plant produced large blocks of ice and I saw them coming out of there.

Eaton: You'd never seen that before, have you?

Dellamonica: Yes. When I was up on top of the hill and I came down to visit some of the Marines that I knew.

Eaton: And they had ice and ice cream probably too.

Dellamonica: That's right. And they showed me their Building 3 which was their theater.

Eaton: I assume that somewhere in all the drawings and maps and stuff, they still have some drawings from 1932 and some from '45?

Dellamonica: Oh yes, they're old sepias you know but you can still make copies and there's some photographs around here. Yes, you know, we had a lot of photographs and data in our lab and at one time. I had the photo lab. That's when I was doing all the test work and we had a lot of data in our lab, and when the contractor came in, he started dumping files out of some of those buildings. And they got rid of a lot of the equipment and photos and data that was over in the lab.

Eaton: And those are the things that are supposed to be saved.

Dellamonica: That's right.

Eaton: That's what people want to see.

Dellamonica: And that's what I miss. I miss all that. Not being able to go over there and pull a four by five out, blowing it up.

I can remember one of our magazines went up in smoke (110-67). I was in Babbitt with one of the photographers and I had climbed up on that elevated storage tank and took some pictures of the inside of the bottom to put out a contract to do some repair work on it. I came down and I was in a Jeep going back to the office and I looked out and I saw the smoke coming up and we headed right on out there. Stopped to pick up the cameras and went out there and watched that building go up in smoke. Full of smokeless powder. And all that's left out there now is the concrete.

Eaton: You haven't had that many accidents here though?

Dellamonica: That's right. But that day, smokeless powder was falling out of the sky. Marines were trying to run us out of there because they were the fire department. I said, "I'm the photographer. I got to get a picture of this."

Oh, Lordy, there were lots of things that happened in the 60 years. Like I said, I should have completed a diary. Complete with photographs.

Eaton: You know, more and more people having been writing their memoirs and things like that and just trying to keep track of stuff.

Dellamonica: Well, yes, it's kind of, you know, it's hard to remember everything that happened. Unless you go back and kind of refresh your memory, like all this work I did when I was getting the TV in here, I got all kinds of pictures up there on Cory Peak when we put up framework and all that kind of structures and built roads and power lines.

Eaton: They say you helped this place grow up.

Dellamonica: Oh yes, I tried to help it grow up. But there's not too many of them around left.

Eaton: All the more reason for you to write things down. To remind them of what you did.

Eaton: I appreciate you taking a day and a half with me. And thank you for everything you have done for Hawthorne, the Navy, and the Army

GLOSSARY

AFB	Air Force Base
APE	Ammunition Peculiar Equipment
ARDEC	Army Research, Development, and Engineering Command
CAP	Civil Air Patrol
CCC	Civilian Conservation Corps
CW	Continuous Wave
DZHC	Day & Zimmerman/Hawthorne Corporation
EOD	Explosive Ordnance Disposal
GOCO	Government Owned Contractor Operated
GOGO	Government Owned Government Operated
ICBM	Intercontinental Ballistic Missile
NAPEC	Naval Ammunition Production Engineering Center
OBOD	Open Burn Open Detonation
PDO	Property Disposal Office
SOP	Standard Operating Procedure
TVA	Tennessee Valley Authority
WADF	Western Area Demilitarization Facility
Yellow D 1391	Demil By-Product DoD Form 1391, Military Construction Project

AMSJM-PA (History)

MEMORANDUM FOR THE AFSC/JMC COMMAND HISTORIAN

SUBJECT: Access to Oral History Materials

1. I, Louis Dellamonica, participated in an oral history interview conducted by George Eaton, for the AFSC/JMC History Office, on 9-10 September 2002.
2. I understand that the tape(s) and the transcript resulting from this interview will belong to the U.S. Government to be used in any manner deemed in the best interests of the U.S. Army as determined by the AFSC/JMC Command Historian, AMC Command Historian or Center for Military History. I also understand that, subject to classification restrictions, I have been given an opportunity to edit the resulting transcript in order to clarify and expand my original thoughts. The AFSC/JMC Command Historian will provide me copies of the edited transcript for my own use subject to classification restrictions.
3. I hereby expressly and voluntarily relinquish all rights and interests in the tape and transcript to the AFSC/JMC and other Army History offices with only the following caveat: (Please initial one)
 x None
 Other _____
4. I understand that the recording and transcript resulting from the interview may be subject to the Freedom of Information Act, and therefore may be releasable to the public contrary to my wishes. I further understand that, within the limits of the law, the U.S. Army Field Support Command and Joint Munitions Command will attempt to honor the restrictions I have requested be placed on these materials.

Louis Dellamonica
(Signature of Interviewee)

8/14/03
(Date)

Accepted on
Behalf of AFSC/JMC by: [Signature] on 8/14 2003

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