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## **Chapter 19b EG&G Idaho Falls 1988-1995**

### **The New Job**

The Technology Transfer Office mission was to transfer INEL patented technology under a licensing agreement to the private sector. The inventor of the technology would get a percentage of the royalties.

Initially it was Jane Welch, me, and our secretary Carla. Jane was about 30, had a PhD in Physics, knew what she was doing, and great to work for. Her husband was also a PhD scientist with EG&G.

Carla and Jane both had PC's which were still a relatively new tool at EG&G. An order was put in for my PC. When it was installed it was the latest and newest IBM PS2. Carla remarked that I must know somebody. In fact, I did. The PC was installed by the people that had worked for me in the computer center.

I never wanted a PC at home. Christmas 1988 LaRue splurged and bought me a Packard Bell 500. It consisted of a small black and white monitor, the computer, and a dot matrix printer. The software was MS-DOS and a compiler called BASIC. The speed was 16MHZ. If it didn't work correctly it was switchable to 8MHZ. The cost was \$2,500.

### **Technology Transfer**

There were over 50 technologies submitted to our office for evaluation and potential licensing. Most were a long shot.

We were a small office, so we prioritized a list of 10 with the most potential. We worked with graphics design to come up with a poster presentation of each technology. They were designed for display in a booth at tradeshow and technology transfer meetings with industry.

Bryant Hafen was hired straight from serving in the Air Force as a 1Lt. He was a

graduate of BYU in chemical engineering. He met and married a girl while at BYU who was from Salmon. It turns out she was the daughter of my high school classmate, Dean Stokes . Bryant and I became good friends and worked well together.

The first trade show I worked was at the Jacob Javits Center in New York. I sat up the booth and manned it by myself for a week. I also gave a talk in the auditorium to a large audience. New York was scary in those days with a lot of crime.

I would walk from my hotel near Times Square to the Jacob Javits Center. The hotel bellman warned me about walking alone.

One of the first mornings I was up early for a run and headed to Central Park about four or five blocks away. I was enjoying the run in Central Park when I realized I was all alone in a deserted area. I got out of there fast and back to where there were people.

In October, 1989 there was a Technology Transfer symposium for DOE labs in Mystic, Connecticut. Jane and I would represent the INEL. She was from New Haven, Connecticut and was taking her young daughter along to visit grandma and grandpa. We flew to New Haven and I got a rental car to drive to Mystic. Jane would stay with her folks and go back and forth to Mystic.

It was World Series time and the Oakland A's were playing the San Francisco Giants. It was October 17 and the fourth game was in San Francisco. I found a nice sports bar and was all excited for the game to start as I was a huge A's fan. The TV went funny and there was no picture. Then we discovered there was a major earthquake in the Bay Area.

The Navy was the host one evening at the Groton nuclear submarine base. We were given a guided tour of the first nuclear submarine, the Nautilus. It was especially interesting as I knew Frank Fogarty at EG&G. He was a retired Navy Captain and the commander of the Nautilus for several years. There was a bronze plaque on the bulkhead with his name on it.

On our return flight I was reading the book, "The Hunt for Red October". We landed in Salt Lake and I had plenty of time to get to the gate for the flight to Idaho Falls. I was into the book and sat down to keep reading after we deplaned.

Jane and her daughter continued on to the next gate. I read for a while and

proceeded to the next concourse for my flight. I got there and there was nobody there. I had missed my flight. LaRue was meeting our flight in Idaho Falls and there was no Harry. She talked to Jane and she said I got off the plane behind her in Salt Lake and didn't know where I was. I had to get a hotel room for the night.

It was embarrassing Monday morning explaining to Jane what happened. I was the seasoned traveler and the one to mess up while traveling with my new boss.

Two of the inventions I liked the most were the centrifugal contactor and the device that turned organic garbage into fuel pellets.

The inventor of the garbage device had a prototype installed on a trial basis with the garbage company in Thief River Falls, Minnesota. It had been there for several months. He asked me to accompany him on a visit to talk about their experience and a possible license agreement. He would be on another trip, and we would meet in Minneapolis, and drive up to Thief River Falls.

I arranged to arrive Sunday night so I could visit ETA Systems and old friends before I picked him up.

### **Shutdown of ETA Systems**

Monday morning April 17, 1989 I arrived at the ETA Systems parking lot. There were no cars in the lot,

I could see a sign posted on the front door. It directed all employees to go to a meeting at an auditorium.

I found a phone and called the home phone of a friend that worked at ETA. He was home and said the meeting announced the closure of ETA Systems. All employees were terminated. It was as a complete surprise.

What a shock that was and what a coincidence that I was in town the day it happened. It was about nine months after I departed.

### **Turning Garbage Into Fuel Pellets**

I met my travel companion and we drove north to Thief River Falls. It was a small town. The best place to eat was the bowling alley next to our hotel.

We watched garbage being separated and fed on a conveyor to the pellet making machine. My coat smelled like garbage the rest of the trip.

The machine worked well and produced fuel pellets for the furnace at a school.

They wanted more time to evaluate the machine and we put the license agreement on hold.

### **Cleaning Up Oil Spills**

The centrifugal contactor was my favorite. It had huge potential for cleaning up oil spills in the ocean.

It utilized centrifugal force to separate oil from water and was about the size of a 50 gallon drum. It sucked in contaminated water, spun it at high speed, pumped clean water out, and pumped oil to the tender. It was small and relatively affordable so that any number could be utilized to clean an oil spill.

Charles Taggart was an investor and businessman in Salt Lake. He was with the large construction company, Taggart Construction and wanted an exclusive license for the technology.

First, we had to determine if it could be built in quantity. We found a company in Ogden with expertise in stainless steel fabrication who NASA contracts for special projects. They determined they could build it.

I negotiated an exclusive license with a performance guarantee that Taggart had to meet in one year. He didn't live up to the terms of the contract and it was back on the market for licensing.

I read years later that an environmental group fronted by the actor, Kevin Costner, was promoting it. However, the centrifugal contactor never found acceptance.

### **Family Life**

Kathleen, Brian, and Julie were all married in 1988. Nearly three years had gone by and there were no grandchildren. Then in early 1991 Julie announced she was expecting and then Tina announced she was expecting also. The due dates were early November.

We went to Puerto Vallarta the last week of October for a week in our timeshare at Villa del Mar. We flew home on November 2 and had a stopover in Los Angeles. LaRue made a quick phone call between flights in Los Angeles to see if there was any news. She reached Tina and she said nothing was happening there.

### **Grandchildren At Last**

We landed in Salt Lake and as we taxied to the gate we could see people with banners in the concourse.

In those days greeters could be at the gate. It was common to see people with banners meeting returned missionaries.

We were in the first row of first class and the first off the plane. We saw banners with, "it's a boy". Then we saw Matt, Kathleen and Gary. The people behind us could barely get by us.

We found out later that Tina knew that Jake had been born but withheld telling us as she didn't want to ruin the surprise.

We didn't board our flight to Idaho Falls . We went to Logan to see the new baby Jake born on November 2, 1991.

Brian and Tina moved to Portland and Haley was born November 15, 1991.

Christopher Slette was born in Twin Falls on May 31, 1991. Caitlin Slette was born in Twin Falls on April 24, 1994.

On July 1, 1993 Taylor Redd was born in Logan, Utah. We towed the trailer down and parked in front of Matt and Julie's trailer in the USU trailer park. LaRue stayed for a week, and I went back to Idaho Falls to work.

### **Lake Powell**

Our friends, Kay and Layman Lott, had a timeshare week on a houseboat on Lake Powell. It was a large houseboat and expensive to operate. We were invited to share gas expense.

A week on a houseboat on Lake Powell is a great experience that we enjoyed on

four different trips.

We got on the houseboat at Bullfrog Marina and had our favorite canyons to overnight in.

One memory is getting overrun with mice. It was just Kay and Layman and us. We anchored for the night and had our gangplank out. After dinner we went up on top to look at the stars and watch for satellites going over.

When we went down there were mice running around everywhere. We grabbed brooms and whacked away. We learned a lesson. Always pull the gangplank in the evening.

### **Management Changes**

I worked for Jane Welch about a year. Then she was promoted to a higher level position.

As soon as she was gone a new hire was brought in. He was Jack Peterson, the former President of the Idaho Mining Association. He knew nothing about technology transfer, but supposedly had high level contacts in industry.

I tried to talk to him about mining, but he didn't have much to say.

He was always traveling. He was supposed to move to Idaho Falls, but he figured since he traveled all the time, it was just as easy to fly out of Boise.

He called from Boise and said he needed to get to Idaho Falls in a hurry to pick up travel advance money and plane tickets for his next trip. He would be speeding and asked me to call the Idaho State Police for a police escort! That was too much to believe. I let it go in one ear and out the other.

We hardly ever saw Jack and there was no management direction from him. He even missed giving our performance reviews.

I had enough of Jack after six months and went to Jim Zane. Apparently, Jim Zane had enough also and fired Jack.

I was made acting manager of Technology Transfer. However, we were to report to Dick Rice in Engineering Services.

I viewed it as out of sight out of mind. I knew Dick and didn't think much of him. We went back to 1973 when we all arrived in Idaho Falls and socialized in Newcomers Club. Kathleen babysat for Dick and his wife. Dick divorced his wife and hooked up with a gal on the fast track up the ladder at EG&G.

Dick was the mysterious type. You never knew what he was thinking. We both reported to Dick French a few years back and mostly disagreed on things.

His idea of a weekly staff meeting was to go through his stack of mail and read it to us.

Three or four months went by. Dick Rice called a meeting to announce the new manager of the Technology Transfer Office. I was the acting manager and might be in the running. I figured it would be a PHd scientist, like Jane Welch.

He named a young guy who was a friend and golf buddy. He had no degree or technical experience. I was stunned and so was Carla and Bryant.

The new guy brought in his buddy that didn't have a degree or experience. Also, a secretary to replace Carla. Carla was a big loss as she had been in the Technology Transfer Office since the beginning and new the ropes. Bryant and I were the outcasts in the office.

### **Job Change - 1990**

I began to look around EG&G for an alternative. The DOE had recently asked the weapons labs to design a facility for producing tritium for nuclear weapons, as it was in short supply. It was called the New Production Reactor, and the labs would compete for it.

The EG&G design was for small modular high temperature gas cooled reactors (MHTGR). Our desert was the space to build as many small reactors as needed.

A few large gas cooled reactors were in operation and could provide valuable data on the reliability of components. A job was posted for a technology transfer person to facilitate technology transfer from the existing reactors. I interviewed and was accepted since I had technology transfer experience as well as computer skills. I joined the NPR Program in June, 1990.

Soon after I left the Technology Transfer Office Bryant Hafen also departed. He opened a State Farm Insurance office on North Broadway. It was a strange switch in occupation. His father-in-law, Dean Stokes in Salmon was with State Farm, and his motivation. We remained in touch for several years and Bryant did very well.

The EG&G NPR Program consisted of about 80 nuclear reactor experts. They were a pleasure to be associated with. My boss was a former Navy officer in charge of the nuclear reactor on submarines. He had great stories about life on a nuclear submarine.

We visited General Atomic in La Jolla, California a couple of times. They designed and constructed gas cooled reactors and were a wealth of knowledge. La Jolla was a nice place to visit also.

### **Visiting Nuclear Reactors**

We visited reactors in South Carolina and Colorado. The South Carolina reactor was on the southern border with Georgia.

We flew to Atlanta then to Augusta on a small plane. We got a treat in Augusta as we circled low over the Augusta golf course, the site of the Masters. We stayed in Augusta and drove to the reactor site and meetings with the operators.

We had dinner one evening at the Green Jacket restaurant located outside the main entrance of the golf course. There was a treasure trove of golf memorabilia on display.

The Colorado reactor was about 30 miles north of Denver. We arrived in the morning and found the road blocked. People in black were running around with guns..

We thought we might be in the middle of a gun fight. It turned out to be a surprise drill for a terrorist attack. We had to watch and wait for the exercise to end.

We checked in and met with our hosts. Then we all proceeded through rigid screening and security to enter the reactor area.

The reactor was shut down for decommissioning, so we were allowed access to formerly closed and restricted areas. It was confining and spooky. When we went through exit screening we set off alarms. We registered radioactive and couldn't



exit.

We were escorted to a room for more checks and to sit and wait. The health physics people explained that suits with polyester attract radiation. After an hour or so the reading should be normal, and it was. We were glad to get out of there. I can't say I liked the place.

### **Gathering Reactor Failure Data**

My job was to look at component failures so that mistakes would not be repeated in our design.

Every failure in a nuclear reactor had to be reported to the Nuclear Regulatory Commission (NRC). It was done on paper and the volume was such that it was transferred to rolls of microfilm. It was impossible to gather and compare failure data.

I talked to the person in charge of the microfilm and discovered there was a way to scan and digitize it. It could then be transferred to media that a computer could read.

I asked for a few rolls to be transferred to diskettes. I would figure out a way to read them and do something with it.

Maybe I could write a program for PC's . There was BASIC, but it was not on my work PC. I didn't know BASIC, but it looked sort of like FORTRAN. My Packard Bell PC had BASIC installed. I copied it and brought it to work along with the programming manual.

I hadn't written a program in about fifteen years. The task at hand was similar to what I had done in the past. I would read in a line of the failure report from the diskette and string characters together looking for key identifiers. When a match was found I would write the pertinent data to a file for processing later.

The program was complicated. Through trial and error I eventually got what I was looking for.

Now the data had to go into a database, but I had no database software. There was new database software called ORACLE that ran on mainframes as well as PC's. It was expensive and I couldn't justify the cost for an experiment. I knew a scientist

in the next building that had acquired ORACLE for his project. I talked to him to see how he liked it.

It turns out his project fell through and he was not using it. I could borrow it and give it a try. I learned ORACLE and was able to load my data into a database

Now I could type in a simple query of the database and get all occurrences of any pump, switch, component, or any key word. It was just what we needed. Now I had to get all the failure data pertaining to gas cooled reactors. I got boxes of diskettes from the NRC with the data. It took about eight hours to process a single diskette. That wiped out my PC for the day. I took diskettes home and let my PC crank away. It was against the rules to do company work on home PC's, but I did it anyway. I got the job done and we had a fantastic tool.

As time progressed it looked more and more favorable that we would win the NPR contract. We were feeling confident when it rolled around to Christmas 1991.

Our boss was called to DOE Headquarters for a meeting. We speculated that it was the announcement we were looking for.

He came back and called a meeting the afternoon of the last working day before the Christmas break. The announcement was that the NPR Program was cancelled.

Then we were told that when we return from the holiday we could expect termination notices. It made for a tough Christmas.

### **My NPR Job Ends**

We returned to work and were given 30 day notice. We were free to look for jobs within EG&G. Too many engineers and scientists were looking for jobs.

My only hope was to go back to the computer center and work for Bob Scott. He replaced me when I went to Floating Point Systems.

However, Bob was under the gun. He was overstaffed, over budget, and the user community was drifting away from using the Cray. There was a move underway to get rid of it and use small department size mini computers.

Mom and Dad at this same stage in life bought the Motel Deluxe in Salmon. It worked well for them. I began to look at motels as an option.

They had spent some winters in Overton, Nevada and liked the area. We liked the area also when we lived in Las Vegas. I called a realtor to see if anything was available in the area. His mother owned and operated the Overton Motel and due to her age she was thinking of selling.

I took a couple of days off and drove down. The Overton Motel had 22 units, decent curb appeal, large living quarters, and there was only one other small hotel in town. The rooms needed a lot of work. It was something I could handle.

The old gal wanted to sell and her asking price was reasonable. However, she could not face up to it. So much for that. If she would have agreed we would have been in the motel business.

I was down to the last week of the 30 day notice and I would be out of work on February 1, 1992.

### **New Job at EG&G**

Bob Scott dropped by and said he had gotten approval to bring me on board in the computer center if I was interested.

My job would be to work with the user community and save the Cray-1 from being declared surplus and removed. It was a job and I accepted.

### **Change in RV's – 1992**

Mom and Dad had an older Prowler 5<sup>th</sup> wheel. They sold it and bought a new high end 1987 26ft Alpenlite 5<sup>th</sup> wheel in 1987. They towed it to Overton/Logandale, Nevada a couple of winters and to Parker, Arizona a couple of winters.

They couldn't go anymore due to Dad's health. It sat idle in Salmon for about a year. They decided to sell the Alpenlite and the 1978 Ford F250 extended cab. They would give us a great deal at \$7,500 for the Alpenlite, and \$2,500 for the truck.

We were happy with our 1978 Security trailer and 1986 Suburban and really didn't want a 5<sup>th</sup> wheel and a 14 year old truck. However, the price was too good to pass up. We listed the Security trailer for sale, and it sold quickly for \$5,200.

We went to Salmon and o andhooked up the 5<sup>th</sup> wheel and truck to head home to Idaho Falls. Dad wanted to make sure I knew how to put gas in the truck and how to check the tires before we departed.

Then he decided he should ride as far as Leadore with me. Mom followed in their car and LaRue in our car.

There was a head wind and I could see the gas gauge going down as I drove. The truck had dual gas tanks and I was barely halfway to Idaho Falls and had to switch tanks.

Dad had always bragged about the great gas mileage he got with the truck. I wasn't seeing it. The engine was a big 460 cubic inch V8 and it was really going through the gas. When I filled up in Idaho Falls the average was 5.9 mpg from Salmon to Idaho Falls.

On May 21 we hooked up and went to Island Park for the Memorial Day weekend. Gary, Kathleen, and Christopher joined us. Then on May 29 we went to Stoddard Creek Campground near Spencer, Idaho. I decided the 1978 truck was too old for reliable towing.

I listed the truck for \$3,700 in the Idaho Falls paper and it sold within a week. The guy that bought it was Butch Claunch from Salmon and owned the rv park. LaRue remembered him in high school.

He didn't dicker on the price and wrote a check that was good. I saw the truck around Salmon for years. Mom and Dad was not too happy about me selling the truck so quickly, and at a \$1,200 profit. I then listed our 1986 Suburban and sold it for \$9,700 to a guy that worked at EG&G.

I looked at new trucks and settled on a white 1992 ¾ ton Chevrolet extended cab with the 454 V8 engine. The price was \$21,750.

### **Dad's Health and Death - 1993**

For the 1993 Memorial Day holiday we went to Downata Hot Springs south of Downey, Idaho.

Gary, Kathleen, and Christopher were already there with their new trailer, and we parked next to them. Matt, Julie, and Jake came and set up their tent in the grass

area behind us.

The next morning I was paged over the loudspeaker that I had a phone call. I ran to the office fearing what it might be. It was Roy Bisson on the phone. Dad had a cardiac arrest that morning in Missoula. They had gone to Missoula for doctor's appointments and were having breakfast before returning to Salmon. Dad keeled over and luckily two football coaches were in the restaurant. They gave him cpr. until paramedics arrived and took him to St Patricks hospital.

LaRue and I packed up and departed via Idaho Falls to Butte and across to Missoula. We knew the hospital well as Mom had colon surgery and Dad had a heart valve replaced there.

We went straight to the front desk fearing the worst news possible. Dad was ok for the time being. The pig heart valve that was put in two or three years before had calcified and quit working. It could not be replaced and could quit at any time.

The hospital let us park the trailer for two nights in the back parking lot,. Gary and Gladys, and Beverly and Tom arrived.

We had a mini reunion and BBQ the next evening in the parking lot. We returned to Idaho Falls on May 31, 1993.

I was at work the morning of August 27, 1993 and I got a call from Bumpy. She had gone on a morning walk with Mom. When they got back Dad was dead in his chair.

We took off for Salmon and arrived in the early afternoon. They didn't have burial plots, so Mom sent us to City Hall to purchase two plots. After we purchased them the clerk said the price would be going up. We purchased two adjacent plots for ourselves at \$200 per plot.

I gave a talk at Dad's funeral. I was relating stories and started on the one about Dad and Bus Miller winning the Patterson Rod and Gun Club prize for the largest trout in the 1950's. Nobody knew that the fish was obtained illegally.

They were fishing in the Boulder Chain Lakes in the White Clouds They saw this huge trout that wouldn't bite anything. They shot it in the back of the head with a 22. The bullet hole was not visible. It weighed eight pounds, so they entered it in the contest and won.

I started telling the story and Bus Miller blurted out, “You can’t tell that story”. I said the statute of limitations has expired and went on with it. His reaction was funny after all those years.

After Dad passed away Mom didn’t want to stay in the duplex they had been renting. Ray and Little Ray were building duplex townhouses further up the bar. Mom bought the one at 714 Taft Avenue.

The duplexes are on the property that LaRue’s parents had owned. Mom’s living room window looked across the driveway to where LaRue’s bedroom window was. A huge willow tree was still there. We remember it when it was a small willow tree. The concrete front porch and steps were all that remained of their old house. They were removed later.

### **New Job 1992-1995**

Saving the Cray computer would not be an easy job. The users wanted it gone and replaced with small computers that they could control. It was also obsolete and expensive to maintain. I needed to look at newer technology to replace it.

The Cray salesman was my old friend, Chuck Breckinridge, who I worked with in Livermore when I joined Control Data. He was based in southern California and would come to Idaho Falls a couple of times a year. LaRue and I would have dinner with him.

In late 1994 I got a call from Chuck. He had left Cray Research and had gone with Seymore Cray and his new company, Cray Computing, in Colorado Springs. Chuck was the VP of Sales and he invited me for a preview of Seymore’s latest design, the Cray-4.

In my job I needed to be aware of new computer development and had recently been to IBM in New York, Cray Research in Minnesota, and Convex in Texas. I set up a trip to Cray Computer in Colorado Springs.

I met Chuck for dinner when I got to Colorado Spring. Bob Cox was with him. I knew Bob as I worked for him at EG&G in 1979 after I transferred into the computer center. He had joined EG&G from Colorado and then went back to Colorado. He was now in sales and marketing at Cray Computer. What a surprise that was.

Chuck and Bob toured me through the facility the next morning and introduced me to people. It was impressive and state of the art. The Cray-4 was coming along nicely.

A catered box lunch was delivered and we sat around to visit and have lunch. To my surprise Seymore Cray joined us. This was totally out of character for Seymore.

I had worked in his Chippewa Falls lab back in the 1970's and knew him to be reclusive and not one to visit. We visited a while and he excused himself as he had an obligation that he needed to drive to. We walked him to his jeep and he departed.

Before the day was over Chuck offered me a job with Cray Computing. I was stunned. It was a job offer but it was contingent upon a new round of financing that was in the works. He didn't know how long it would take and it was a standing offer.

### **Major Change at the INEL**

The end date for the EG&G five year contract for operating the INEL was the end of the fiscal year October 31, 1994. The Department of Energy had automatically renewed the contract four times previously, but not this time. It would be open for competitive bids.

Late summer 1994 it was announced that Lockheed Martin would be the new operating contractor. It was ironic that EG&G had replaced Lockheed Martin at Cape Canaveral a few years earlier.

Key Lockheed Martin managers arrived in September 1994 to begin the transition.

On November 1 nearly all EG&G managers were replaced with Lockheed Martin managers that were transferred from other locations. It appeared to me they were not the cream of the crop. I now worked in something called network computing under a manager of dubious qualifications.

My orders were to get rid of the Cray. Any work now being run on the Cray must be directed to the Lockheed Martin owned Cray computer in Denver. It didn't look

legal to me, but that is the way it was.

There were too many former EG&G managers around with little to do. An early retirement option was announced near the end of the year. It offered severance pay based on years worked and five years added to your age for retirement benefit with six months compensation.

I opted for early retirement effective January 25, 1995. I was hoping the round of financing for Cray Computing would come through and I could go there. It never happened.

*(Note\* Seymore Cray's round of financing did not come through. He was killed in a car accident about a year after I retired. That spelled the end of Cray Computing.*

*Lockheed Martin did not do well operating the INEL. They were replaced at the end of their five year contract by Battelle Northwest.)*

End of chapter 19b