

MEMOIR OF JIM POIROT

CH2M HILL

Interviewed February 2006

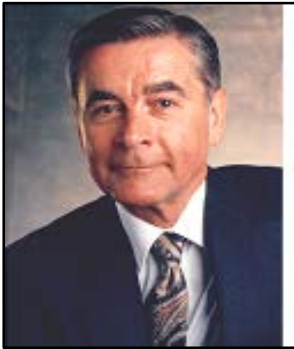
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[Editor's note: The following is a summary of Jim Poirot's original memoir. The summary focuses on key events and issues that impacted CH2M HILL's history as recalled by Jim.]

Memoir of Jim Poirot, former chairman of the board, February 17 & 18, 2006.

EARLY YEARS



Jim Poirot

Could you tell us a little bit about when and where you were born?

I was born on November 24, 1931. Wyoming was my home at the beginning of life and that was true for my mother and father and later my grandfather who came from France at age 17 and ended up finally settling in Douglas, Wyoming.

When I was about five and a half, we moved to Roseburg, Oregon and stayed with some old friends of my parents. And then my father finally heard that they were building military facilities in Alaska in preparation for war in '40 and '41. We lived at the Kodiak Naval Air Station about five miles out of town.

So when he came back, as it turns out, he went to work out at Corvallis at Camp Adair. Then we spent a year in Corvallis my sixth grade year. I went to sixth grade at Roosevelt grade school which, as it turns out, was just across the street from where the main CH2M HILL office was later built on Western Avenue. The school burned down after I attended, but that's where I went to sixth grade, and I also got a paper route and delivered papers. I didn't realize it at the time, but I was delivering papers to Fred Merryfield on Country Club hill. It was a long route, a good route, paid me \$30 a month and I didn't have to collect. I thought that was pretty good.

We stayed there a year, and then we moved to Hillsboro, Oregon. My father worked in the shipyards in Portland. We stayed there when I was in seventh grade, and just before the eighth grade we moved back to Roseburg, seemed like Roseburg was always the magnet.

So you wound up going to high school in Roseburg?

Went to high school here.

EARLY INTEREST IN ENGINEERING, COLLEGE YEARS

A friend of the family by the name of Bob Shoemaker worked for my dad and he was attending Oregon State University in chemical engineering. He invited me to come to Oregon State to spend a weekend. They had a special weekend where Oregon State students could bring high school students to live in the dorms and take in the events. So on that one special weekend Bob Shoemaker asked me to go up with him, and I did, and had a great time, became impressed with Oregon State.

Maybe it was fortunate, the superintendent in high school, a man by the name Erickson, was my counselor. Near the end of high school when I was about to graduate, he asked me what I wanted to do in life. I said I wanted to go to college and be a civil engineer. He looked down at me, and he said, "Aw Jim, you don't want to be an engineer. Those are a dime a dozen. They can't even get jobs." I remember him saying the state highway engineer here in Roseburg only makes \$250 a month, maybe it was \$225 or something. He said, "You don't want to be a civil engineer." Well that made me mad. I said, "Well, I think I do want to be a civil engineer, and that's what I'm going to be." And that kind of ended my counseling session. I was pretty well determined then to show him that there was some value in civil engineering.

At that point in my career, I was thinking more structural engineering. Once I started college, I met Fred Merryfield when I was a freshman. We had kind of an "Introduction to Civil Engineering" class when various people would speak and if my memory's correct, he was one of the speakers, and that's when I met him.



Fred Merryfield

In later years, I had many classes, and it was probably in my junior and especially my senior year when Fred took us on field trips. This would have been 1951/52, so the firm had been well organized by then and had already designed water treatment plants and sewage treatment plants for Eugene and Corvallis and some of the other cities so he took us to some of those CH2M projects. The thing that impressed me a great deal was in one of his lab classes when we went down to the sewage treatment plant, collected some raw sewage, and took it back to the lab and sampled for E-coli. We cultured the samples that we took in the groups, the

E-coli, and it impressed me that you could in fact measure the E-coli and quantify the concentration of pollution in water through these laboratory tests. And I thought, geez, these environmental engineers, at that time sanitary engineers, were very capable people, because they could establish the pollution levels that existed in our rivers and what needed to be done. So that impressed me and got my attention a little directed away from structural engineering, into environmental engineering.

I graduated in 1953, but in probably in about April or May of 1953 during a lab class taught by Fred Merryfield, he called to me and one other student. Fred was kind of a gruff old guy. You didn't know whether he was having fun with you or whether he was going to chew you out, so we didn't know what was happening. As it turns out, when we went to the back of the room he asked the both of us, "Are you two going to go to graduate school, or are you going to come to work at my firm?" There were no other choices in life as far as Fred was concerned, you're either going to do "this", or you're going to do "that". He said, "Jim, let's talk a little bit now."

Fred said, "I'd like you to go over and speak to Jim Howland as soon as you can". To me that meant that day, and I probably did.

Before I went, I said, "You know Fred I'm in ROTC and I've got two years of active duty and I don't know whether they're going to call me up. He said, "Come in my office". He picks up the phone and dials some long distance number he had memorized. He said, "I'd like to speak with Colonel Graham". Well Colonel Graham was a classmate of Jim and Holly in college. He says, "Jack, I've got this young lad here who is going to go to work at CH2M." And he said, "Jim was going to go to work for us and he's got a problem, he's got to go serve his two years." So Jack said, "Well, let's talk it over for a minute."



Jim Howland

By the time they got through their conversation, Fred says, "Let me talk to Jim." So he lays the phone down, he says, "Jim, Jack thinks that he can get you an assignment in EOBC (Engineer Basic Officer College), engineer basic officer training at Fort Belvoir outside of Washington, D.C. starting about December 1st this year, and you can work for us until then and get oriented and understand CH2M and then go to active duty starting basic officer training, and from there he'll work with you to get you some real good experience to be able to come back to CH2M. What do you think of that?" I said, "That's wonderful." Well I went to the summer camp and came

back, called Jim Howland and said I'm back.

As soon as I went back to Washington, D.C., Jack Graham had sent a message as soon as you get in town, call me. He was the Chief of Personnel, Corps of Engineers. Jack said one night, "What kind of experience do you want? I said, "My whole desire would be to go back to Alaska and work in construction and get construction experience if there's anything under construction." He said, "We're rebuilding all the bases in Alaska."

I went up to Eielson AFB and was the assistant resident engineer. Two military officers, me, and a major, and 50 - 60 civilian engineers supervising and inspecting all the private contracts to rebuild the AFB - three mile runway, all the hangars, the power plants, the water plants, all the housing, commissaries, utility systems, ammunition storage, every project was a big project. If it hadn't been for Fred putting me in touch with Jack Graham and having Jack outline that military plan, I've said many times I gained more engineering knowledge during that period in Alaska at that assignment at the Corps of Engineers in that concentrated period than I did for any other two year period in my career.

Did you have an idea that was the sort of experience Fred Merryfield was hoping you would get?

I'm sure it was.

START AT CH2M

So, when I went over to work with CH2M after the ROTC summer camp, I again was lucky. Before that short period was over, I had gotten to know all four of the founders. The first assignment was a survey job in Pasco, Washington and I worked with Bob Adams. Holly Cornell was the partner in charge of the work for Pasco, Washington and he'd obtained a contract to locate and design a new water storage tank for the water supply at Pasco, and our job, Bob Adams' assignment was to go out in a certain region in the town and locate a high site and

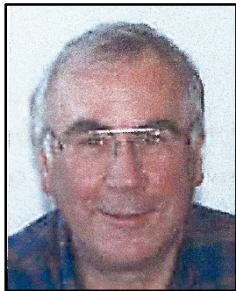


Bob Adams

lay out the location of this water storage tank and do some topography to establish the ground conditions. Ken Stuart and Bob Adams took me along to help them survey. Ken Stuart, an engineering technician had a great career with CH2M HILL. He was a good designer, and over



Holly Cornell



Ken Stuart

the years turned out to be an outstanding project manager. Holly Cornell then came out to the job. We were up there for about 10 days and Holly would come by the job and I was introduced to him and I got to know him. He was the partner in charge - the first time I ever met Mr. Cornell, then as it turns out I spent most of my career with him, a lot with Jim Howland, but probably much closer to Holly Cornell while in Seattle.

So from there I left CH2M in mid-November and drove to Wyoming, and drove across the country, and went back to live in Washington, D.C. We lived actually in Alexandria, Virginia.

And when was this?

This was in November of 1953, December, January, February, and probably into March '54. Then I had a short tour of duty in Fort Lewis. From there I went up to Anchorage to clear my paperwork with the Alaska District Corps of Engineers and from there the Eielson Air Force Base.

And that was the extent of your Corps experience? You were

essentially done with the two years.

I stayed there until November 1955, and I didn't have any written contract to come back with CH2M. The contractors that were doing the work out at Eielson were Peter Kiewit and Morrison/Knudsen as well as about 10 other contractors. I got to know their people very well. An M-K man was the superintendent that I worked the most with. He knew my background, and he started talking to me about coming back to work in Alaska for Morrison/Knudsen. It was tempting. By then I had been out of college two years. They were still talking money; triple what I could get at CH2M HILL. Of course they were long hours and tough assignments and in the brush (remote sites), many things. Jim Howland wrote me a letter realizing my two years was about up and said come back to work and made me an offer.

Raeda, my wife, and I talked it over. From my standpoint, that's what I wanted to do. I thought the consulting business, the people at CH2M that I worked with, the four partners, and Bob Adams, Carl Ryden, Ken Stuart. Those are the ones that I worked closely with that were really enjoyable, fine people. It was an atmosphere that I enjoyed. So I really didn't even talk much further with Morrison/Knudsen.

Though they were offering maybe triple the money?

Yeah.

Describe that atmosphere. What was it about the atmosphere that attracted you at CH2M?

Well, it was a combination of the people, the type of engineering challenges, and the working atmosphere, being in one location. The people, I mentioned a few of them, but it wasn't just those people that I was doing the technical projects with, it was the rest of the people. I'm sure the culture, in hindsight most people give Jim Howland the responsibility and credit for creating an atmosphere where everyone was congenial, even in a difficult situation. There were no angry tantrums, there were no difficult words. If you needed to be criticized, the criticism was explained. If you did something wrong, that was explained to you. In the next breath, you were a very close friend again. I recognized that there were no grudges, no need for revenge, and no justification for creating enemies in the office. That atmosphere was contagious. Once you

have that among the partners, and people like Adams and Ryden and even the secretaries and the technicians, draftsmen, everybody tried to be nice.

So how did it come about that you did ultimately sign on at CH2M?

I got a second letter from Jim about my offer, I forgot what it was. I recall that he said, "We haven't heard from you in a long time and our salaries have increased" or something. I don't remember ever asking for a raise in salary at CH2M, and I didn't ask for this one. At the same time, I was anxious to go back.

So here you were with Jim Howland's second letter in your hand; what was next?

Well the decision's pretty clear. Raeda and I didn't spend much time on it. I just told her my comfort level and said "well let's go try CH2M for 5 years." As we talked earlier here, I moved around a lot and I watched my father go to different jobs and I said, if this isn't comfortable, 5 years from now we'll just go find something else to do.

And it wasn't even CH2M was it, it was but I don't think they called it that.

We called it CH2M about the time I came back or probably earlier. When I worked there out of college it was Cornell, Howland, Hayes, and Merryfield. By the time I was back, it was CH2M.

As you said, back when you were in college, the firm was actually known by the founder's names.

That's right. It became pretty common for everybody to call it CH2M shortly after that.

My first assignment, I had been communicating with Jim so I talked to him on the phone and so he said well come in December 1st and we have a project to do. So he had to go to Reedsport, Oregon that day on December 1st, 1955 and said, "Ride to Reedsport with me." And it was a rainy cold day. So, I went to Reedsport and I think we stayed overnight, in the middle of a wild rainstorm.

The problem the city had was to try to determine how to get water out of a lake. Reedsport is over on the coast at the mouth of this

Umpqua River that goes through here. Their water supply was out of a lake nearby. They had a tunnel through the hillside and then a pipeline to town. Jim was asking what they wanted to do about that pipeline, and as it turns out they needed to run some topography up the pipeline where it came down to the highway and it was about a mile I would say through a swampy area. So, my first assignment, on short notice he said, "Gee, we have time today, let's go out and run a level line up to the mouth of that tunnel." So one of the employees at the city water department came with me and they had a level and we went along walking on the top of that pipeline. It was a wood-stave pipe and was wet and slippery, but we set up a level and ran a level line to determine at what elevation that tunnel came through the mountain. So that was my initiation back with the firm. We drove back and I worked with Jim for probably a good share, maybe a two-year period exclusively on his projects, mostly in coastal cities in Oregon.

What effect did that decency and kindness, respect with which people treated each other in those early years have upon your entire career as an engineer, because certainly not every engineering firm has that culture?

Well it was obviously an impact on me, and if it was an impact on me, it had to be an impact on all others. By that, it was like a domino. There were more senior people than me at that time by quite a bit. I think my employee number was 27, but there were still a lot more senior people, and it had rubbed off on most of them

INDUSTRIAL WORK

And that also gave you the opportunity to be involved in water supply and water treatment which was such a big part of CH2M's business.

That was all industrial. At that time of course my career advanced kind of quickly, as those projects were phasing down. Then I was asked to work with Holly Cornell. Holly was given a geographic area to be responsible for. It was the upper Columbia River from Hood River to The Dalles, up to Pendleton and then on up to Pasco, Kennewick, Richland, Walla Walla, and as it turns out he made some contacts at Yakima and Wenatchee. The US Army Corps of Engineers at Walla Walla was responsible for many dams on the Columbia River, and we did work for on some of them, so all he needed was a sidekick.

It stayed with Holly because it was now considered to be within the province of the Seattle office which was the third office for CH2M, Boise was the second.



Earl Reynolds

That's right. Boise was the second. Earl Reynolds had developed Boise.

So now we're at 1960 and the decision is made to open up an office in Seattle. Holly Cornell has been assigned to the task and you're the sidekick.

My memory of that is that the Boise office was pretty well stabilized. People from Corvallis off and on had been moved to give some support to Earl Reynolds and now there was justification for a third office. There was discussion about Portland and discussion about Seattle.

Seattle had a serious pollution problem in Lake Washington. The Seattle Metropolitan Sewage Agency was created for the purpose of taking the sewage out of Lake Washington and properly treating it and letting it be discharged all the way into Puget Sound. Hearing of this, I don't believe there was any major proposal developed, but our qualifications were submitted I believe by Ralph Roderick to Seattle for CH2M to be given some consideration. That didn't get very far. Instead a proposal by Brown and Caldwell from San Francisco along with two or three other local firms, RW Beck and Hill, Ingman and Chase, and a couple smaller firms were selected to

study and design the project and it was now beginning to be implemented.

That's the time that Holly, I think with Ralph Roderick, strongly urged that if we ever wanted to go to Seattle that the market would not only be that project, which in itself would have some work, but the growth and the needs of the surrounding community would also result in work for a long time. Holly said let's take the eastern Oregon/eastern Washington work with us and since I'm kind of his buddy working that area too, would I be interested in coming along? Right away, I could tell that would be something very challenging and I enthusiastically said yes.

Holly also felt that we should be located right downtown Seattle, that if we were going to go to Seattle we needed to be rubbing shoulders with people that were not just engineering associates, but also attorneys, financial people. Those companies were downtown Seattle and they were the companies that also helped the cities of Pasco and eastern Washington cities. So he searched and found there were two new buildings in Seattle. One was a 20-story Washington building, and the other one was a new 10-story Logan building and he selected the Logan building which was on 5th and Union just a block from the Four Seasons Hotel, used to be the Olympic Hotel, right in the middle of downtown Seattle. We rented some space on the 6th floor. That's where we started.

Holly contacted Manpower, and Manpower searched out a receptionist/secretary/typist.

We had acquired a company called Zinder & Associates. They were made up of a chief electrical engineer and the chief economist of the Bonneville Power Administration who had retired, Saul Schultz, the engineer, Dr. Herschel Jones, the economist, then Hal Mozer, who was an electrical engineer worked with them. We acquired that firm I'll say in about '64; I don't remember the exact date. For a long time, we were known as CH2M, Engineers Planners & Economists because of Herschel Jones and his staff. He hired more economists after we acquired Zinder.



Hal Mozer

Then before 1967 also, I got a call from the Corps of Engineers in Alaska, the people I had worked with when I was an officer in Alaska

in 1964. They wanted to talk to one of the partners. Holly was on vacation, and as it turns out, Warren George, the man that called was the chief engineer for Alaska district, knew me. He said, "Well Jim, we've selected your firm to redesign the town of Valdez, Alaska." It had been destroyed by the 1964 earthquake, which was about two weeks earlier or so. They wanted someone to be in their office the next day in Anchorage to negotiate contracts to start the design. The town was in the process of being sited. The geotechnical engineer was Shannon/Wilson and I knew Bill Shannon well in Seattle, and they wanted us to work closely with them, and could somebody be there tomorrow? So I called Jim Howland and Jim said "If you know those people, why don't you go up?" I did, and I spent the next few days negotiating a contract to design a new water supply system, and water system, a new sewage system, a treatment plant, a storm sewer system, a street snow removal storage area, a power system, a power generating plant and a distribution system into the city.

I lived on the airplane for about a week or two back and forth from Anchorage. Then we assigned a team in Corvallis. Sid Lasswell then was assigned to design the sewage treatment plant, and Norm Ward was assigned to design the water system, and Ed Greely was assigned to estimate the costs and to be responsible for the quantity estimates for bidding. So I was in Anchorage weekly, sometimes twice a week, sometimes up and back the same day because they wanted to have it designed, under construction, and all the underground utilities closed in by freeze-up in the fall.

That was a big job, and that was probably at the beginning of that relationship when the Seattle office was also responsible for Alaska.

It was. We had two other projects before then in the '50s, one was in Juneau. Archie Rice and Ken Bielman; Archie's passed away but Ken's still alive, did a project for the city of Juneau to look for a new water supply and to determine what should be done. As it turns out, Clair A. Hill was also called to come up and work on the railroad. We were not working together and we had no plans for merging at that time.

So this predated Tahoe which was the first major project that CH2M and Clair Hill took?

EARLY SEATTLE JOBS

Not necessarily. Before that, Beale AFB. We did a lot of electrical work and other things on Beale, in '57. I went down to look at the outfall in LA and stopped at Redding to let an electrical engineer do some coordinating on Beale AFB in '57/'58.

So, in other words, '64 when the Alaska work, the Valdez work was going, Clair A. Hill & Associates was also doing a project.

They were doing a project on a railroad between Seward and Anchorage. Clair Hill had opened an office in Anchorage and Juneau prior to the merger. Phil Mather was the manager of the office in Anchorage.

By '67 then I was asked to be the Regional Manager, and Holly took on one of the most important assignments in the history of the firm which is written up I'm sure in various places. That was an assignment to look at the technical design procedures, the data handling systems, the automation of engineering systems, a broad quality and computerization assignment to see how the firm should proceed through the future. That was a full time assignment and out of that came the beginnings of a lot of issues including the beginnings of how to organize our technical organization. We didn't call anything a matrix at that time but out of that came recognition that the technical people in these multiple offices had to be coordinated some way, some central coordination over the technical as well as the managerial work. The other thing that came out of that was our very first CAD experiments, computer-aided drafting, finally became computer-aided design and drafting.

I got to know the chief engineer of the City of Seattle through the ASCE meetings and the assistant chief engineer of the city of Seattle. He suggested that we should bring our qualifications over because we have a big requirement for two or three engineering firms to design the separation of all of our storm sewers from our sanitary sewers in the city of Seattle.

Now about that period, Holly had developed a relationship with a Boeing vice-president by the name of Bob Cole responsible for facilities. The very first Boeing assignment was almost free. They were building some add-ons down at the Boeing Field main plant and having a real tough time on the waterway because of foundation, mud, and piling problems, and they said boy, you got

any ideas how we can stabilize that area. So, Roger Lindquist from Corvallis came up and he and I went out and spent a day thinking of ways to help them.

Carl Ryden, a mechanical engineer who had been brought to Seattle just to help us on mechanical/electrical systems, then developed a real close friendship and a lot of confidence with the Boeing people. That was a good relationship and about that time, Boeing decided to build a 747 airplane. Boeing selected a northeast quadrant for this huge facility. They asked CH2M HILL to do all the design for the external facilities that consisted of a hard stand around the paint buildings. Out under those hard stands we had to put in water supply, domestic sewer, storm sewer, fueling systems, electrical lines, communication lines, plus all the grading, and that all had to be finished on a date when the first airplane rolled out of the hangar.

So that brings us up to end of the '60s.

Pretty soon we decided that we still needed to expand further. It was uneconomical too - we were pursuing the next very large project which was a Seattle region wide water resource study and we'd also pursued some other large projects we lost, but we could tell that we had a base for large projects, large at that time, today they're minor, but at that time, they were very large. So we decided then to move into a new building under construction in downtown Bellevue and to take two full floors. We moved in January 1970. In Bellevue, we then opened up what I think was our first marine biology lab in the firm.

So, we're approaching 1970, merger talks were probably under way now between Mr. Hill and Mr. Howland. You were in Seattle when that was happening, is that right?

How did the merger affect operations in the Seattle office?

I was on the board of directors at that time for a couple years before the merger and was knowledgeable of it becoming a closer reality. The Seattle office was so frantic that in hindsight I can't recall much of an impact one way or another. The fact that Lake Tahoe had come along successfully was an asset for us to use in acquiring work in Seattle. I'm not sure the merger had a benefit to that because CH2M was doing the technical work on the Tahoe project anyway, technical as far as the sewage treatment technical

work. The pump stations and a lot of the other work, technical work, dams, pipelines, were being done by Clair Hill and Associates out of Redding.

And that was going to be a pretty big asset after the merger of the two firms?

Yes, as well as water resource modeling, but other different types of modeling, like water distribution system modeling was probably out of Corvallis. So there were other types of models being developed. The Seattle storm sewer separation project that came along before the merger. It was the first that I know of in the firm that we did computer drafting and design. So, various elements of computerization were coming along in Seattle, Corvallis, and probably Boise, and Portland too.

Since you and Holly Cornell started that office, what was it like to work with him? He was a little bit of a mentor figure for you?

He was a continuous mentor, in fact I've told him many times, thanks for being such a valuable mentor during the time I was working with him and after he retired before he passed away. Holly was an individual that was respected by so many and it's primarily because of his mannerisms, he was not an outgoing individual. He would sit at a one-on-one or in a large meeting, or at a public hearing and just do a lot of listening without speaking much. When he decided it was time to speak or when he was called upon he could wrap up everyone else's conversations in a minimum amount of words that made sense to everybody. That skill is something that I always aspired to have, I don't think I ever achieved it, but he achieved it very well. Therefore, he was admired by all the clients.

THE DISTRICTS

Please discuss the District decision.

In the early '70s about the time the mergers were going on, we were also dabbling in Canada. We'd done some work out at Victoria BC on Vancouver Island, just looking at their outfall. We'd watched some of the major news stories about work in the city of Vancouver BC. We knew that American firms were doing some of the large treatment plants. Steve Lackey was the waste water department manager in Seattle, we asked him to snoop around in Canada and see what work was available.

My assignment as manager for the Seattle office included western Canada but it was more on a project by project basis, not as though we were going to open more offices. All of a sudden though we had the Anchorage office and Juneau office, so I had three offices out of the Seattle office and we could soon have 4 or 5 offices. We asked Steve to leave his assignment in Seattle as waste water department manager and take on the responsibility of the western Canadian operations and headquarter in Calgary. I think the technical discipline really, in my memory, came out of some of the concepts that Holly developed after his study started in 1967, because that included how to maintain technical competency and disseminate data and how to organize and develop organizations, and that was in the '70s so this had been rolling for a while.

Was that the matrix management system or that came later?

Well, the matrix management system came after the district decision. We had regional offices and we had technical disciplines.



Archie Rice

The districts kind of created another level. Some of the districts justified having a discipline director and a sub-discipline director. When I moved to Atlanta we called them Eastern District Discipline Directors and they reported to the Discipline Directors. I'd written a memo to Jim. It was before Harlan Moyer became president in '78. Then Harlan called a meeting for us to talk over the new organization as he became President. He asked Archie Rice to chair a group to look into the District concept.

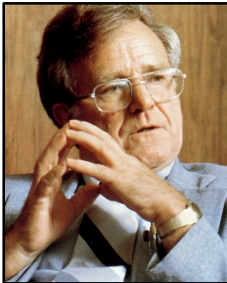
I had taken some of this material that I had previously written to

Jim, and it was saying that I was involved in Canada, Alaska and around Seattle, and I made up some slides that I took to our committee meeting. I showed those to Archie Rice and so our committee of about four talked about whether those slides represented what might be a logical direction, and it included districts and sub-discipline directors in the districts and had some organizational diagrams. Jim Howland said you can make any organization work if you have the right people in the right places. It was decided the next day to present the slides as our report to the other committees, and Archie asked me to present what came out of this regional/district organization concept. I showed those slides and that was the beginning of the confirmation of establishing districts. The Southwest District Manager's area was California, Nevada and Arizona. The Northwest District Manager's area included Washington, Western Canada, Alaska, then Oregon was added to it, and then finally Hawaii was added to it.

Hawaii was added because Les Wierson was the Office Manager in Portland and his sub-office there turned out to be in Maui because they had a big project in Maui, and that grew, and they were proposing elsewhere in Hawaii. So the people in Maui basically reported to Les Wierson in Portland. But all of that was kind of considered within the northwest district.



Les Wierson



Harlan Moyer

In '78, Harlan became president and he asked me if I'd then take on the additional job of Southwest District Manager. So I had both northwest and southwest for a little over two years there. My title was Western Districts Manager.

UPPER OCCOQUAN, BLACK CROW & EIDSNESS

How did the Eastern District develop?

We had an office in the Washington DC area out of Reston because the Occoquan Sewage Authority project was underway and basically managed by Gene Suhr. In about the mid-70s, Holly Cornell received a phone call from Fred Eidsness and he may have also received one from Bill Crow, another partner of the firm of Black Crow & Eidsness (BC&E). It was an engineering firm headquartered in Gainesville, Florida. They had been purchased by Hercules Company and that was a disaster. I knew Bill Crow on my many committees related to the engineering profession. In this case, it was the American Consulting Engineers Council. One of their committees was meeting in Washington DC and Bill Crow and I were on the committee. After the meeting, Bill came up to me and said Holly Cornell may be giving you a call because their firm wants CH2M HILL to buy them away from Hercules Company.



Crow Bill

It had been a disaster for a consulting business to try to function under an industrial firm, the two are not compatible. Bill was a great engineer. Fred Eidsness was a water environmental engineer and also very active in the American Water Works Association. Dr. Black had developed an environmental lab in Gainesville. He was a professor at University of Florida and very well respected, and he was getting older so his son was then involved. So there were three principles that wanted to sell. Holly took on the project, and over some period of a year or so, we decided to acquire them.

What year was this?

I'll say it was 1976. It could've been 1975 or 77 but I'm quite sure it was 1976.

Up to this point, the only office that CH2M had was in the east was where?

Reston, Virginia outside of Washington DC. So the logic was that the acquisition of BC&E would give us a base of operations in the east beyond just trying to build our own operation one office at a time. BC&E had multiple offices in Florida, had an offices in Atlanta,

and one in Montgomery, Alabama with laboratory. They also had a small office in Columbia, South Carolina and as it turns out a small office up in Philadelphia. So, that gave us a base of offices, but then the issue was how we ever merge the operations of a pretty spread out organization.

Joe Worth was sent back to Gainesville to analyze what we had, and try to determine what might be done. One of the issues was who would qualify and become a key employee, at that time key employees were stockholders, so who would qualify from the newly acquired firm in addition to the original owners. So he analyzed people and he used the criteria that we had generally established for the then current CH2M HILL employees. There's a lot of judgment in that criteria. So that was one of Joe's tasks, to determine who should become owners, and also how to then start understanding the culture of the existing offices. Well that lasted for 2-3 years. He found considerable turmoil in our new acquisition. That's why they wanted Hercules to sell them because there was turmoil from Hercules on down. The management style and the marketing style, and a lot of other styles just weren't CH2M HILL's style.

Harlan then had asked me if I would move to the east and be replaced in the west. Lyle Hassebroek replaced me in the Northwest District and Phil Hall replaced me in the Southwest District.

Why do you suppose Harlan asked you?

Well I'd been around for a long time. I had the understanding of the firm history from the early '50s. I had managed districts by then including the last couple years both districts at one time.

Was there any association with the University of Florida?



Dr. Alvin Black

Yes. Dr. Black was a professor like Fred Merryfield. That association had diminished because Dr. Black, by that time, I think he had just recently passed away. Everywhere in that region he was well known, just like Fred Merryfield was well known. I realized we needed to be near a bigger city, near an airport hub to service that area, one that could easily service the northeast as well as the southeast. It was decided that I would move to Atlanta directly from Seattle. There was no opposition to establishing

the District Office in Atlanta.

When you announced you were moving to Atlanta, you were saying at the same time, this was going to be the headquarters?

Yes. And I needed to have one support person, so I asked all the managers at Gainesville, if you have a senior experienced administrative manager secretarial person that has an interest in moving to Atlanta that would be helpful to have someone who knows the BC&E people and system better than I did. At that time, there were a few people, in Atlanta, but the office was quite small and the office was managed by a CH2M HILL person, Ken Bielman, who had transferred there from Denver. Ken moved to Atlanta because that office needed a manager. So we already had a CH2M HILL person in Atlanta, which was a help.



Ken Bielman

We also concluded that Ken Bielman, who was in Atlanta, would serve a real need in Egypt. At that time, we had developed a pretty major contract with Gene Suhr, our then Discipline leader over waste water, as being the expert where key individuals went to Egypt on short term assignments, Alexandria Egypt, to develop a study, then design a sewage treatment facilities for Alexandria. That project needed someone full time, and it turned out that we approved Ken. He had an interest in it. That was a beginning of a lot of international assignments for Ken. He's still alive today and even a few years ago, he was still taking a few assignments in the mid-east.

Was that one of CH2M HILL's first forays in the international area, Alexandria?

BEGINNING OF INTERNATIONAL WORK

The international aspect at the former BC&E was out of Gainesville. We had people that covered the islands, had people from the Virgin Islands and some of the others, Puerto Rico and Cuba. We had projects at various islands that were sewerage, but most of them were water treatment projects and some sewage. We had some people who were very capable. Probably in the mid-70s, we had started to realize there was an opportunity in Trinidad, Port of Spain. Trinidad had a need for some water treatment plants. The proposal effort was done in Washington DC at the World Bank, but in conjunction with people from Trinidad. Part of our proposal was a requirement by the World Bank to develop some local expertise to operate and maintain and understand it. Part of our agreement was to develop a local consulting engineering partnership headed by us in the United States, and half the work was to be done by our team.

In the '60s, my memory of the first international project; I'll call it successful, but at the end of this story it will be highly unsuccessful. About 1964/5, we hired a structural engineering student by the name of Farid from Washington State University from Lahore, Pakistan. He became a good friend. I tried to keep him busy. We agreed to hire him full time after he graduated because his visa allowed 2 years of experience in the United States. He worked in our Seattle office with me.

While he lived in Seattle, a cousin came to visit him. He was putting together a program of grain elevators in the nation of Pakistan, and it was being funded by the federal government to store grain in community elevators so that there would be grain available during poor production years. They were small elevators and they intended for them to be steel. We had recently hired a man from Spokane who was an expert with Cargill-type grain elevators along the railroads, with steel and concrete silo elevators which he designed very well. I took Farid and his cousin to lunch and we talked over the idea of having Bob Hahn, this man we hired from Spokane, to design the first grain elevator, and Farid to help design it, and then when he went back to Pakistan, to take that design with him and then arrange for the construction. Then he would open an office for us in Lahore, Pakistan installing grain elevators throughout that regions of the nation.

That was the vision. Herschel Jones, who came with us from Zinder, had a project in Thailand, an electrical study funded by USAID to

develop electrical transmission systems across Thailand. He'd been there, so we asked him, what he thought about that region of the world. Should we give up quickly or is that something that maybe we should do. Well, he was supportive, thought it was a good idea, offered to go over to help get it established. In the end we decided that Holly Cornell should go with Farid to Pakistan.

So we completed the design. Farid took it with him and they went over to Lahore. They had a site all prepared and went through the process then to determine how it should be constructed. Those processes are entirely different in each country. Right away we realized there was no reasonable way for us to have currency exchanged from Pakistani funds to US funds. The only thing they could offer was to give us bartering goods. As it turns out, we were paid in carpets from that region of the world. So, there were a few of them, I've forgotten 2, 3, maybe 4 carpets that were shipped back, and we concluded quickly unless we could be paid at US dollar rates in US currency that the concept was not possible. So we learned a lesson.

What were the advances being made from other offices in the area of international work?

Les Wierson was the international developer, I don't know that he had a title at that point as president of international, but he was the person responsible for Hawaii and occasionally there were opportunities that came from the Pacific region. Les was the one that spearheaded the work that finally came out of Egypt. This was considerably later than what I'm describing in Pakistan. This was probably in mid to late '70s, but when we started under Les Wierson's leadership proposing on USAID projects as well as World Bank projects, we came to the conclusion that we wanted to be paid by the US Government, rather than be paid in local funds; in carpets.

Was Seattle more or less the office that led the charge on international work or was Corvallis also leading it?

The leadership continually worked out of Portland, Oregon with Les Wierson. Lloyd Anderson started that office as a planner, but Les was the first engineer in the office and became the regional manager, and responsible for not only what was designated around the Portland area and the coast, but also Hawaii, and had the interest in other international work.

After the mergers, Redding became involved in a lot of work. Turned out to be in Africa, like a study in Chad that I remember, was a water resource study to study the nation of Chad to determine what kind of agricultural products could be profitable for the nation. Fred Merryfield's second wife, Anne, who had been a student in microbiology, was on a team to help analyze the various agricultural possibilities from a soil scientist's standpoint.

The big project that came out of the early work, which was in the late '70s, was a USAID project for Egypt. This was the study for Alexandria, Egypt. Many people resided over the years in Alexandria because the project went from a study, to a design of a portion of it, to a treatment plant, to pipelines, to another treatment plant. Fred Harem spent considerable time, Ken Bielman spent considerable time, Les Wierson moved there temporarily and so did Gene Suhr temporarily, trying to study an implementation sequence. Now, that all occurred over quite a long period of time, probably a 10 year period of doing work for Alexandria, Egypt. While that was underway, we were proposing in Cairo, Egypt and obtained projects. Dale King moved to Cairo to implement a design of a pipeline and water storage tanks in Cairo, Egypt.

You said about 10 years out there?

Well, it was late '70s to late '80s; we would have been in Seattle, but probably just moving from Seattle to Atlanta.

You were on it for 3 years?

Seattle to Atlanta, then over in Denver.

DENVER HEADQUARTERS DECISION

You mentioned Denver. What was happening now in the company at large with respect to the contemplation of the Denver move? ... based upon my interview with Harlan, there was a growing momentum for this idea that CH2M HILL really ought to have its international headquarters in a big city, and I believe you supported it.

I supported it, and I was one of the instigators once I realized all of the advantages of living in Seattle, and not just traveling to Seattle but living there, and on a daily basis working with competitors that we learned from. We don't have a corner on all the knowledge at CH2M HILL, even today, and we surely didn't back then, and we learned a lot. We also worked with bankers and attorneys. We'd been around all those people in the atmosphere where they worked, not just where they do their civic duty, but where they worked. There are all kinds of benefits and knowledge that rubs off just by walking down the street with somebody. You can't do that when you're remote from the big city.

Was Seattle considered for a little bit?

I'm sure it was considered. I didn't necessarily say Seattle should be the place, but it's a place I knew so I described it as a candidate. Portland was a candidate. I think San Francisco was a candidate by the time we made the move. But then, a couple things came to light. We were in transition, Holly was spending time in Denver when we obtained a large project, the Foothills Water Treatment Plant. I'm sure it's come to your attention that this was a significant opportunity. It included dams, tunnels, treatment plants and storage tanks.

Was Holly President at that time?

Well, when this first came up, he was president, then he became chairman of the board after he was president. This issue was probably '73/'74. By the time this project came along, it was later in the '70s. Harlan was president during the latter parts of that period. The Denver decision, which I supported totally, had one other element, and that has a one hour time difference. The one hour time difference, we recognized at the time as being of value, but in hindsight, it was an outstanding value. We could communicate by phone much more easily to other time zones.

Because you were chairman of the board and Harlan Moyer was president that was one of the initiatives the two of you had?

Well, it made a statement because we decided we should work together. We shouldn't be separated.

FULL-TIME CHAIRMAN

You became chair when you were in Atlanta, but you became full-time chair when you moved to Denver. Is that how it was? Explain how that came about. How was that decision made for you to become the full time chair?

We should back up a little bit, because the decision to have a full time chairman came out of another issue that I want to get into about this time, but I'll just touch on it, and then go on with this other about how I became full time chairman.

The board formed a committee and I've forgotten the date on this, but I'll say mid to late '70s, probably '77/'78, somewhere in that period. They formed a committee to look at corporate organization and they invited two outside advisors to sit on the committee. Out of that committee came the idea that there should be two full time positions. One of them should be the president and CEO, and the other one should be the chairman of the board. CH2M HILL was growing into a position where we had to devote more time to the outside activities of the business, and that the chairman should be Mr. Outside, and the president should be Mr. Inside. Now that wasn't all black and white, it was kind of beige, but nevertheless the chairman was responsible outside activities, and I was selected.

This was contemporaneous with the Mr. Inside; the idea that there ought to be a president and CEO. And when we say outside activities, your primary responsibility was to be concerned with the place, the position of the firm in the community, nationally, internationally, regionally, the image, the brand, and the face of CH2M HILL to show to the world, right?

That included a different element of marketing. Our marketing up until that point was primarily the proposal effort. But we concluded that there should be some broader marketing. We had multiple avenues, marketing in universities, marketing in other ways when opportunities presented themselves. I was on television in Atlanta and on CNN on a talk show. We became much more visible publicly, which is all in marketing now.

Let's talk a little bit now about how you were chosen for this outside position that was created and why the firm sort of viewed you as the lead candidate.

There were multiple events in the '70s selecting leaders in the firm. A lot of those were written up in the book now being published. At the time Harlan was selected president, there were five candidates for that job, and I was one of them. It was almost a decision by senior management that it should be either Harlan or me to be the chairman, and the question was who should be CEO President. Harlan would be the candidate to continue being the President and CEO. The board as a whole, excluding Harlan and me and discussed the issue. I was always interested in the position of president but I was more interested in the position of chairman.

DIRECTOR OF INTERNATIONAL BUSINESS

We discussed the issues of the advisors to the board of directors and we thought that might parlay into your position as director of international while you were also chair.

We had an international corporation and the position was president of CH2M HILL International.

Were you still chairman of the board?

Yes. I was chairman during all this period. Also, I always had my foot in a project or two of some kind all the time.

RETIRING FROM CHAIRMANSHIP

What year did you retire from the Chairman of the Board?

I retired as chairman in '93. I retired from full time CH2M HILL in January '95. I had said 5 years before that, in fact I'd said at the time I agreed to be chairman, that there should be a tour of duty. By the time I was there 5 years, I said 10 years should almost be a mandatory requirement for senior officers to step aside. So the second president would be Lyle Hassebroek for the domestic engineering business, and Phil Hall would be the next chairman in '93.

ASSOCIATION WORK'S EFFECT ON POIROT'S CAREER

What effect did your participation, your active membership in these organizations (ACEC, ASCE, and others) have on your career as an engineer? What advice or counsel or guidance, if any, would you give to a young engineer or an engineer at any age in terms of their thinking about involvement in these kinds of associations?

There were probably multiple facets that impacted my career, but the impact most important - always strive for quality and strive for doing what's right, and the definition of right can vary, but it should be a definition that's set at a pretty high level. Your striving for quality shouldn't short-cut your recommendations, shouldn't short-cut your commitments because of expedient time constraints or dollar constraints. You should always look at alternative solutions and then decide how to use the word "best." Then recommend the best solution within the constraints that are placed by others on your project because there'll always be constraints by others that you have no control of and some of those are cost constraints and others. Sometimes you have to compromise from the perfect solution to the best solution, but in doing that you should know what you're compromising.

The other aspect of it is the transparency. I think when you're an engineer, in a profession such as ours, you should always assume that you're operating in a transparent activity where everybody will know what you're doing. That transparency adds quality but it also eliminates corruption, or minimizes corruption, and corruption leads to poor quality, and it leads to poor use of public funds or the funds of others that your profession is spending one way or another. So, it affected me, and my hope was that in the process of affecting me, I explained it to others in ways that would benefit not just me but dozens of others.

While I was ASCE president, another evolving, very controversial issue which was a pretty tough load to carry was a requirement for continuing education for maintaining your licensure. I supported it before I was president, and it was part of my platform when I became president, and today that licensing requirement exists. I have letters in my files today telling me what a poor idea that is because of all the difficulties for people in rural areas finding a place to go to get continuing education. Well of course with technology today, that's all history. They can do most of it by mail, and on the internet, through virtual education programs. The state of Oregon

requires, before you can renew your license every year, to submit your continuing education units. Controversial, but I explain to students that adds quality and it'll keep you out of a lot of trouble in life if you're current, and the only way to be current is through a combination of experience and continuing education.

RETIRED LIFE

And you are Raeda traveling, enjoying your motor home? What other activities are you engaged in in your retirement?

We sold the airplane when I retired, and we bought a motor home the same month we sold the airplane. Motor homing is a high priority. We spent 40 years flying all over North America and Central America and Bahamas in an airplane, and have seen the country from a high altitude, and we said all those years, someday I'd like to go back and drive up that valley, go down that canyon, fish on that river, visit some friends in that little village, explore some of the wildlife here, but we never did it. So, that was one of the objectives and we decided now at this stage in life to go motor homing. So, that takes a lot of our time to motor home.

I work a lot on genealogy on our computer. I've served on university boards around the nation, and college engineering advisory boards across the nation, Georgia State, University of Washington, on and on, and I still serve on the board at Oregon State University College of Engineering and I'm quite active. One of these activities, I'm a member of the National Academy of Engineers. There's only today a couple thousand out of two million practicing engineers that are elected to the academy, and it's a very complex process. I didn't realize at the time I was elected how lucky I was.

VALUE OF THE ORAL HISTORIES PROJECT

What are your thoughts about the value of this Oral Histories project? How can an oral history like yours be useful in a firm like CH2M HILL today, February 2006?

Well my first reaction is that it should be a good resource of culture and resource of historical decisions, a resource of a lot of people, in a way I'll someday be embarrassed because there are people who have contributed so much more than I'd thought of during this process to mention. But it'll be a resource for the future. I had wished frankly that I had had such a resource. Not only of CH2M HILL, knowing more about Fred Merryfield before he died would have been a great help to me. And even though I almost lived with Holly Cornell extensively for 20 years in Seattle, I still wish I had known more about him, for instance his military engineering during World War II in Europe.

So, it should serve as a resource and a library of CH2M HILL knowledge that very likely will help the future senior principles of CH2M HILL. They'll want to ask questions like, well what was the culture like on this subject. That's more important than, in a brochure statement, we can all have rhetoric about broad culture statements. We can all read cultural statement documents like the one I had developed, a cultural statement developed in the mid-80s. We wanted to be sure we recognize the value of diversification and the value of various races, the women and their various roles in CH2M HILL. I've used the knowledge that came out of the discussions about why that statement was important. I've used it in speeches along with some of my other activities throughout life, all since we developed that cultural statement. So, in the future, I'm suspicious that CH2M HILL will develop a new cultural statement every ten years or less. There was one developed by Lyle Hassebroek when he became president, after I retired and there was probably I think another one. About every 10 years there'll be a new cultural statement developed trying to capture more valuable elements than the previous statements would recognize because, times change.

I hope that this document serves as a resource to help establish how to bring that culture to potential employees and to other organizations, not just CH2M HILL itself.

How did the culture change at CH2M HILL, in your mind? It's now a

multi-billion dollar company with 16,000 employees, and you were employee number 27. You worked closely with Holly Cornell, you also worked with Harlan Moyer and Jim Howland, and you knew all of them.

Unfortunately, the culture of when I joined in that small organization will never totally exist again. The objective should be to try to carry as much as possible of that early culture on continuously, but in a large firm it has to be disseminated. The culture then depends on not, in my view, not on the senior leaders of the corporation. The senior leaders of the corporation can try to indoctrinate the junior leaders so they'll want to emulate that culture, but the actual culture established by the individual offices will be the resulting culture. So, the senior leaders in those individual offices are the ones that I'd concentrate my time on. It has to be leaders in every office talking.

Today, I would have concerns not knowing the company well at all, but I would surely have concerns also because of the diversification of the organizational cultures that must exist. There are certain principles, technical and moral principles that are pretty easily established through written work and speeches but the daily friendship and kindness and examples of how to blend people together can't come through written work or speeches. It only comes through daily living with people. It won't happen naturally and it will take considerable effort in judging the people that should be there to lead that effort, and expect them to then hire the right people. People should be kind and want to talk it out and be an excellent listener, not just a talker, and help people through their problems and turn into a counselor instead of a supervisor, that's not a normal instinct for an engineer or a scientist or an architect or a lot of other businesses.

And as I said I don't think it'll ever be the culture that I started in, even maintaining the culture when I left was a tremendous challenge. They'll probably rely on the Jim Howland model of going to the offices and giving a speech and showing his slides and try and explain the history in the beginning and hope that it rubs off. There's no question, it has. Jim deserves a lot of credit.

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