The Reminiscences of William Monti

Transcriptionist: Ludmilla Edinger

Interviewer: Michael Conrad

Session Number: 014

Location: Remote

Date: 03/01/2021

Q: This is Michael Conrad with the Indian Point Heritage Project. I'm here with William Monti on a Zoom interview, the date is March 1st, 2021. My first question, if you could say your name and spell it?

Monti: My father worked as a distribution manager for the Upjohn Company, which is a pharmaceutical company. He was a high school graduate and at first, he started working on the docks and my grandfather didn't like that, so he got him a job working for a tailor named [Moskowitz?]. My father did not like working for a tailor, and he found this job with the Upjohn Company, on his own, and that's where he began to work and he retired from there. I have a brother, who's five years my junior, and while we were growing up, my father worked two jobs! He worked his day job at the Upjohn Company and then three nights a week, he worked for the Union News Company at Pennsylvania Station as a retail clerk, behind the counter. And I would go on Sunday afternoons with him after dinner, I'd walk him to the subway, and then I wouldn't see him until Monday night when he came home from work for dinner. And my father always wanted to be an engineer,he always talked about being an engineer and I guess that sunk in with me and I decided early on that I wanted to be an engineer. The interesting thing in my high school yearbook, underneath we had to put down "What do we want to be when we grew up?" under my picture, I said I wanted to become an engineer. And one of my classmates, by the name of Ralph Lifshitz put under his name, he wanted to be a millionaire. And Ralph's a millionaire today and I presume you know who Ralph Lifshitz is, he's no other than Ralph Lauren, so life is a series of self-fulfilling prophecies. I went to school in a New York City public school, from K-12 all in the Bronx, I went to DeWitt Clinton High School, which at the time was an all-male high school. I then applied to several colleges; I applied to City College for engineering and I applied to the maritime college. And I was accepted to both and I decided it would be easier to go to the maritime college because it was a boarding school and I didn't have to ride the subway back and forth and try to do homework on the subway and in our apartment — which was a small apartment; it was a one-bedroom apartment, my brother and I slept in the living room, so you can imagine trying to do engineering drawings on the kitchen table. So, I guess you can say that I'm proud that I went from K through college all in the same county, all part of the same

public education system. That's a little bit of background on me.

Q: Your father was really interested in the construction of Indian Point. Why was that? And when did you visit the site, can you describe it?

Monti: Well, I think his fascination grew out of the fact that he wanted to be an engineer and it was something that you could see, something you could, from a distance, participate in. So, he got interested in that and then during the years of its construction, we went up there a couple of times, we would visit their visitors' center, which was nothing but a small building which eventually we turned into an environmental lab. I guess the building was probably 30 by 50 inside and it was manned by someone from ConEdison who talked about the plant, what it was, what it was going to be, things of that nature. So, it was a place that was of interest to him, again, he wanted to be an engineer, and this was something you could see and, if you will, as a voyeur, participate in from the outside. To go back, an interesting thing is that I have pictures of my mother and father when Indian Point was an amusement park; they would come up on what was called the Hudson River day-liner, it would dock there, and it would be a day of amusement for them, so it had that kind of connection.

Q: You later attended the maritime college at Fort Schuyler. What year was that and what was your major?

Monti: I graduated from high school in '57 and went right there in September in '57. They had two courses of study at the time, there was the Marine Engineering course of study and there was Marine Transportation; I chose Marine Engineering.

Conrad: Did they have you work on turbines or generators or —?

Monti: It was a very interesting school, because you had your academics during the course of the year, September through June, and then you had the summer sea-terms and those were when you really learned how equipment operated. The summer sea-term was three months and a third of each of [unclear] weeks would involve in either standing watch and operations or doing maintenance on the equipment or studying; so it was a combination of things. So, the normal term ended, you prepared the ship [in?] about a week and then you went off sailing and you didn't come back until close to labor day. So, it was a full year, a full calendar year, of academics and then sea-term.

Q: When you graduated, you later served in the U.S. Navy. Could you tell us a bit about that?

Monti: Yeah, one of the advantages of school was that you were offered a commission when you graduated and I accepted and they were reserve. I sailed for a short period of time with the MSTS as it was known then, it was the Military Sea Transportation Services. I sailed on my

merchant marine license, my third assistant engineer's license and I was serving basically as a lieutenant in the engine room, standing watch. We were going back and forth between New York and Germany, bringing troops home, taking troops there; I had one trip where — my wife didn't particularly care for it but — I went from New York in the wintertime, down to the Panama Canal, and we came back through Guantanamo Bay, and San Juan, bringing people back home but also taking people down. That was an interesting trip because coming back from the South, coming North in the middle of winter in February, I was down in the engine room, obviously; I was up against the condenser and this was very hot, and then as we left the Gulf Stream, the water turned cold and you could feel it immediately, your back across the condenser. It was an interesting experience in that sense.

Conrad: Was that a diesel electric ship?

Monti: No, no, it was a steam turbine plant; steam boilers, they ran the steam turbines. The ship I was on was a two propeller ship, so there were two boilers and a turbine and the other engine room was the same thing, so we a couple [steam modems?] to generate the set as well — and the boiler feed pumps that were steam driven. We called it the — the manufacturer was a [unclear] called Coffin, they were Coffin Turbine Pumps, an interesting name for a pump right? [Laughs]

Conrad: In those engine rooms, they had to provide power not just to propel the ship, but it had to make electricity for the whole ship as well?

Monti: Oh yeah, that's what the turbine generator sets were for, they were DC. If I remember right, we had one, small converter from DC to AC to run some of the bridge equipment that was AC [pause] Alternating Current. But, for the most part, the ship was run on DC and then we had, obviously, the steam turbines to propel the ship.

Q: When did you leave the Navy and what were some of the job offers that you received after that?

Monti: Well, when I didn't really leave the Navy, I stayed in the Navy, I [killed?] the commission as a reserve officer, but when I graduated I had several job offers. I had a job offer from the Philadelphia ShipYard, the Boston Naval Shipyard and from Foster Wheeler. — Foster Wheeler was a boiler manufacturer; they've since been incorporated into a Swiss firm. But in any event, I was more interested in taking the job with Foster Wheeler because it piqued my interest, working in the field of nuclear power for the submarine and for the Naval nuclear program. The job entailed not so much design but manufacturing of components for the submarine and the surface Navy; reactor vessels, reactor closure heads, steam generators, vessels of those kinds. So, I got to work at Foster Wheeler in both the design and the manufacture of those components of submarines. And from there, I was like, "Okay, I understood the designs and how they're manufactured." It wasn't something that I was interested in doing the rest of my career. I then took a job at Electric Boat, basically designing systems that connected those

components that I just mentioned together to make a system; make a proportion. I was at Electric Boat when what was known as the S5W project, Submarine Fifth Design Westinghouse, that's what S5W stood for. They were the power plants in the early submarines, the attack boats and the missile boats and I was sort of a test engineer there and then, again, there was this craving, I wanted to do more, I wanted to — I understood how the components were made, I knew how to, if you would, glue them together with the systems, got involved in the system design, all those [ships?] but there was more that I wanted to do. And I guess the thirst was from having been on the training ship, having been in operations, I wanted to get into operations. So, I decided that I really wanted to go to a nuclear power plant and I applied to the Millstone Power Plant in Connecticut, we were living there, and I really didn't hear back from them but I applied to ConEdison, because I knew ConEdison was a company of many firsts; Indian Point was really a first, one of the first in the nation. ConEdison had been in many other things that were firsts, like the history of the company goes back to the fact that the first company that had a central control room; in the past, when plants were built, the control was all diverse. They did that because of asbestos covered cabling, today, everybody would haul up [the crevices?], it's a devil kind of a thing. But that brought forward, I think the first central control room at ConEdison was at the East River plant in New York City, which is 15th Street and East River Drive today.

So, Indian Point was really a first, and I decided I would send my resume in to them. And I did, and I heard back from them, they wanted me to come down for an interview. They said, "Show up here, our office is at Irving Place at 8 o'clock in the morning on such and such day." I was living in New London at that time. My wife was working, she was a teacher, she was pregnant at the time, I wasn't about to take the car. So, early in the morning, I got on a Greyhound bus in New London, Connecticut and came down to New York City, to Irving Place. When I got there, I got sort of a quick shuffle around with people, and got in an interview with someone. After the interview, which was about ten minutes, he said, "We want to take you up to Indian Point." "Okay?"

They had a driver take me up to Indian Point along with someone else from what they called the Production department. The Production department was the operating arm of the power plants of ConEdison; that's when the utilities were vertically integrated, they manufactured the product [bang], they transmitted the product [bang], and they sold the product [bang]. So, I got up there and I got to meet the general superintendent of the plant. Today they call that same person the vice president, the senior vice president. But he was the general superintendent, he was the second general superintendent of the plant, his name was Joe [Postelle?] and we had an interview that lasted about an hour, hour and fifteen minutes, something like that. I thought it was a fairly good grilling. And then, as we were parting company, he said, "What do you think you want to be in fifteen years or so?"

So, brazen me, I said, "I think I'd like your job in fifteen years." It wound up that I had his job in fifteen years, a little more. But I learned an awful lot at Indian Point; I learned a lot about him, I

learned about people. The man who preceded him was a man named Richard [Friberg?], who was just a very interesting, caring person; I would say one of the best people I ever met at ConEdison was Richard [Friberg?], followed by Joe [Postelle?] and there were many others as well, but at that level of management. So, after we finished the interview, the person who took me up there, took me out to lunch and he happened to stop at a place where there was a gathering going on with the people who were on the company's nuclear facility safety committee and the general superintendent was part of that nuclear facility safety committee — they happened to be eating at the same restaurant. And the man who took me up, he just identified who they were and what they were doing; they were having lunch together before going up to the plant to have a meeting.

And then he said, well, we're going to go back down. I said, "Okay," and we went back down to Irving Place, I thought that was going to be it and I would eventually hear from them. They then put me through another series of interviews and then I had what I would call a "murder board." He said, "We have one more interview prospect for you." And they take me into this room, about four o'clock in the afternoon, sit me down and then they march, I don't know, five or six other people, all with very stern looks on their face.

So, "My god, what's going to happen to me now?" And I got technical questions like you wouldn't believe. It just went on and on and on. And they say, "Okay, how come you're asking for so much money?"

So, I go, "alright." I was asking for a thousand dollars more a year than I was making at that time, this was [1957?], January ['57?], I was making $9000 a year. Not a king's ransom, so I was asking for $10,000 a year.

[Unclear] "Why do you want so much money?"

I said, "I didn't think it was that much money, the fact is that I'm going to have to move myself down here, you're not paying for the move," I was a little brazen I guess, "You're not paying for the move, and I'm going to have to bear that expense and it's more expensive to live down here."

They all smiled, they concluded the interview and they said, "You'll be hearing from us."

And then I went back to the Greyhound bus [laughs] to get back home. My wife asked me how it went and I said, "I guess it was alright." I guess a couple of weeks later, I get a letter saying, "We'd like to hire you." — Oh! One of the things that I had mentioned that this murder board if you will was, "I only want to work at Indian Point. I don't want to work at Irving Place, I don't want to sit behind the desk as an engineer. I just want to work at Indian Point, I love operations."

So, they came back with an offer at Indian Point, [unclear] that's fine. So, I decided to accept it. Our son, our eldest son, was born March 10th of that year and I told them I could start with them

on May 1 and they accepted that. And it came down on May 1 that we packed up, moved, the whole thing and we came back down on May 1. I go to work the first day, and I got introduced to the people in the group there, and everybody was in the same big group, the other three engineers, the clerical supervisor, everybody was in the same room and the total number of people in that room was about 10. And the general superintendent had his own office and the assistant general superintendent and three other superintendents had their office. We were all outside in this one room and they had this little private office in there, this was the only private office in there, the assistant general superintendent and the other superintendents all shared a room, it was an open room, what you call "open concept" today [laughs], it had a door that didn't close.

So, I get settled in and I guess somewhere in the morning, he [the general superintendent] calls me and says, "Oh, by the way, AEC is going to be here in September and they're going to be examining everyone for operator licenses, and you'll be going for a senior operating license and [unclear] succeed at it." So, I didn't know what I was in for.

Well, I did know what I was in for, it wasn't going to be easy to learn the plant and perform a job all at the time; so, I said to myself, "Either you do this or else you might as well hang your hat up." So, I put my nose to the grindstone, my wife was very accommodating and they came in September. It was [called?] a hot license because you were able to operate the plant, so you had to prove you could physically bring the reactor to critical, you could then begin to make steam, you could roll the turbine, and all that, so that was a hot license. There was also a walk around portion of it before you did that where you walked around with the inspector and you were quizzed; that followed a written exam, which, if I remember right, was a two-day exam.

So, it was a three-part exam that lasted about a week. Each step, you said to yourself, "Am I going to make this here? I've only been here since May, my other contemporaries have been here at least a year, a year and a half." I depended upon them as well as any written material — there wasn't a lot of formal written material as there is today in many plants. I guess I felt so-so about the results, what was it going to be. And I guess about a month later, each person was paged in order of seniority, so I was the low man on the totem pole of the people who took the test with me and I get called last, I thought, "Oh boy, that's it." I didn't realize they did it on lower and lower man on the totem pole, [unclear] get yourself attuned to that. And the general superintendent calls me up and he says to me, "You did a great job." He says, "You got the license, the AEC people were impressed with you." It was like, phew! You know. [Laughs]

Q: When you did the test was it a book test or was there a component where you had to actually work in the control room and show them how you would do it?

Monti: Yeah, well that was it, there was the written test that lasted about two days, and then there was you walked through the plant with the AEC inspector, he was salt and peppering you with questions, "Did you know this? Where is this? Can you show me this? How do you do this? How

do you do that?" And then the final component was actually manipulating the controls to bring the reactor critical and demonstrate that you could do criticality, that you could do the hand calculation and then go to the board and bring the reactor critical and that your calculations were proved out by the [position?] of the control room that the reactor was critical. And that you could then bring the steam over to the turbine from the steam plant, to roll the turbine, so that was the hands-on part. You have the written test, you had a walk through where you verbalized things and showed things, and then you had the physical part, where you had to show that you could do that. That you knew what was happening every step of the way.

Conrad: And this was on the Unit 1 control room, correct.

Monti: Right, Unit 2 was in the process of being built at the time.

Conrad: I just want to ask about the date. So, was it 1957 or 1967? I had written down 1967 originally, but I don't know if that was right. I know that plant opened in 1962, correct?

Monti: Yes, it was. I joined ConEd in May of '67.

Conrad: Okay.

Q: When you were in this first position, what was your title and where were you assigned?

Monti: The title was called production engineer. It was a very simple title structure in ConEd at time, you were either a production engineer or you were an assistant superintendent, a superintendent, or a general superintendent. There was no elaborate scheme of titles. And as a production engineer, the sky was the limit in terms of what you were asked to do.

Conrad: So, when you got the SRO license, that didn't change your title?

Monti: Not at all, didn't change the title at all. It was just another requirement that I had to achieve when I joined.

Q: Can you tell us a bit about what it was like operating Unit 1 and maybe how that was different from Unit 2 or Unit 3?

Monti: Unit 1 was, in my view, one of the better designed units out there, for the time. For example, the last year of operation for Unit 1 — [when] I happened to be operating superintendent, that was my title at that time — we operated at full power on three loops. It was a four loop plant; we had had some difficulties with one of the boilers, steam generator 14, with two leaks, we decided that we could operate the Unit at full power on three loops, that was the designed strength of that plant. It had loop isolation valves, so you could isolate a steam generator; that's not something you could do on Unit 2 or Unit 3, or some of the subsequent plants. So, in that sense the plant was very sturdy. It was very sturdy in terms of the capacities

that were built into the plant, the multiple layers of backup, if you will, ordinary backup. We had a number of waste collection tanks, as compared to Unit number 2 and Unit number 3. In fact, if it weren't for the capacity of the waste collection tanks in Unit number 1, Unit 2 and Unit number 3 would have shut down at the drop of a hat based on some of the problems we encountered with them. It had the capacity to recycle water — we had evaporators built in Unit 1 where you could take any of the reactor coolant water and add boric acid in it and you could evaporate it and return it as reusable water!

Things of that nature didn't exist in Unit 2 and Unit 3. We had, for example, in Unit 1, there were two pumps per loop, so if you had a pump that wasn't operable for some reason, you could still have a higher capacity output at the plant than shutting the reactor down completely if you lost a reactor coolant pump. The reactor coolant pumps Unit 1 used were Cam Rotor pumps, so you never had to really worry about changing the reactor coolant pumps' seals, it was all built in; the pumps were very, very reliable. In fact, the Yankee Rowe plant in Massachusetts, when it was operating, needed a Cam Rotor pump and we had shut down Unit 1 by that time, and they came down and we gave them a Cam Rotor pump, which was the same exact pump that we had and they took it back and they used it.

So, there was a lot of versatility in the plant. The most difficult thing with Unit number 1, it produced saturated steam, a reactor plant produces saturated steam coming out of the steam generator, what we were able to do with Unit 1 was boost the output by putting a super heater in. So, the saturated steam coming out of the reactor plant, through the super heater, we got the throttle temperature up to a thousand degrees. The turbine generator plant was a, if you want to call it a "chopped" version of a Westinghouse, but it didn't have a high pressure turbine, it had an intermediate pressure turbine, which we called the high pressure turbine, and a low pressure turbine. Now, the intermediate pressure turbine would be in the reheat plant, where the exhaust steam from the high pressure plant would go back in, get reheated and go back into the intermediate pressure turbine. So, we didn't have a high pressure turbine, we had an IP and a LP, and that drove the generator; so we got about another 150 megawatts out of the plant with that super heater, otherwise you'd be running the plant at about maybe 140, because there's only saturated steam. So, that differential in temperature gave the plant a higher output.

Q: Did the super heater — was that fueled by oil or?

Monti: Oh yeah, yeah. That was one interesting thing, every two weeks, we'd bring a barge alongside, unload I don't remember how many [gallons?] of oil into the oil tanks we have up the hill. You know you had that interesting thing going on, you had a barge come alongside, whether it was the summer, winter, or fall, and then, at time, when it was winter, there was a lot of ice in the river in our area because you had the fleet that was there from the second world war. It was staged along the west back of the river; so it was ice and you would come through, and the barge would come in, and you'd have to unload the barge, pump it up the hill.

Conrad: And you would just store it in big oil tanks that are around the site?

Monti: Yes, big oil tanks, big oil [unclear], draw the oil down to where — just a very interesting plant to operate, it had challenges, but it was a plant that would, if you will, obey you. [That] is the way of putting it.

Q: What were the controls like? Were they pretty different from the other plants'?

Monti: Well, the interesting thing with the controls, I think I mentioned this once before; when you go to start a pump or something, you usually go to a clockwise position. That's what convention is — this was a one of a kind, first of a kind plant. The designers decided that you actually had to really think about what you were doing, so if you started a pump, you turned the switch to the [emphasis] left. So, if you turned it to the right, you'd be tripping it, that's the tripping motion, you turned it so you had to [emphasis] think about what you were doing, it forced you to think, "Okay, I'm going to start this pump, I'm going to start this fan," you turn it to the left.

Conrad: So, later, everyone had to realize that there was a difference, they were moving between Unit 1 and, say Unit 2, they had to remember that in their head [laughs] which pumps they were working with.

Monti: Yes, exactly.

Q: Can you tell us a bit about how refueling outages worked on Unit 1 in the 1960s?

Monti: Unit 1 was interesting, because the design, you didn't have an open pit — well, there was an open pit but when you started refueling, most of it was covered by floor. You didn't have the opportunity to fall in the way you did at Unit 2 and Unit 3, Unit 2 and Unit 3 were designed differently and had a large pit, if you will, filled with water to transfer your fuel in. In Unit 1, the fuel transfer and the refueling was done through, I don't want to call them channels, but they were like channels in the floor, you didn't have the same opportunity to fall in. In Unit 1, the fuel was put into baskets, there were four elements that you put into a basket and then you transferred the basket over to the fuel storage building and then you put [in another empty?] basket there. On Unit number 2 and Unit number 3, the fuel was taken out of the core, one element at a time, put into a transfer car, and then sent over to the building, so you're doing a single core element at a time as opposed to doing four core elements at one time.

And the interesting thing with Unit 1 was, Core A, the first core was a thorium based core. It made more fuel, obviously, than what it could consume, and that Core A was totally sent up to West Valley, New York for fuel separation, for recycling if you will. The government owned the fuel. So, all the fuel from Unit number 1, Core A, went up to West Valley, New York, the W. R. Grace Company at that time was operating that facility. Unit number 1, the first core, had

hafnium rods, as opposed to the silver-indium-cadmium rods today that are used in plants — I presume that's what's still used today. [Pause] The fuel elements were such that the control rods were a 90˚ blade between the fuel elements, whereas today's fuel elements, the control rods are now fingers that [unclear] each individual into the fuel element itself.

Q: How long did an outage take, generally speaking?

Monti: Well, it really depended. An outage could last a month or two, on Unit number 1, we tried to minimize the amount of outage time we had. Unit number 2, the outages took longer at the outset.

Conrad: Did they bring in outside workers like they did later for Units 2 and 3 or was in mainly in house?

Monti: Most of it was in-house. In-house Maintenance people, and we had something called "Major Maintenance" or "Power Generation Maintenance" at that time, come in and do a lot of the heavy, overhauling work for us — if we had to turn down a turbine or something like that. But the work inside containment, for the most part, was done by our own maintenance people. We would hire Health Physics people, to supplement the people that we had, and —[pause.] Obviously, we [got?] some technical advice from Westinghouse. Westinghouse did our eddy testing on our steam generators for us at the time, and then we later on turned around and all the chemistry people decided that they could do that — this was central chemistry people — and we bought our own equipment and were doing our own, in fact, we had built a complete mock-up of the lower half of the steam generator along with the structures around it so that they could practice in a non-radiation environment. That was one of the many simulators that we built for actual things that we built.

And I think I had mentioned to you that when we were building Unit 2, we talked with our Engineering people, our own people, our own Operating people, our own management, about assimilating. Because we knew if you were going to be licensing people in the future, it was going to cost you money, you were going to have to take the unit offline so that you could have your people demonstrate that they could operate the plant to the licensing authority, which was the AEC, which ultimately became the NRC, Nuclear Regulatory Commission. And I forget the exact amount, but it was like, every time we took the plant off line, it was I think about half a million dollars a day in extra cost. So, we, the company, decided that having our own plant specific simulator would be as good, if not better than having people actually manipulate the plant. So, [unclear] off the line, you could demonstrate a person's ability to manipulate the plant from the simulator.

That proved to be very valuable to us, to have that simulator because one of the things we were able to do then was we were able to create scenarios that were beyond anything an ordinary loss of power, loss of this. You could build in some very tricky things to see how well versed an

operator was in dealing with problems. For example, Three Mile Island had their problem, they lost their valve control for their pressure relief valve off the pressurizer; they weren't aware of that. Well, we had been teaching that at our plant, at our plant simulator. We didn't have the same kind [valve?] range, we had a different kind of [valve] range, but the instructors who were all licensed operators could create a scenario where that valve opened and what would that operator do? That was recognized, in fact, after Three Mile Island, there was a big confab, if you will, with the NRC and a couple of our people were down there and somebody said, "Hey, ConEd told us that, up at their simulator, what happened at Three Mile Island," and people were a little taken aback by that, that we taught that. Well, that was one of the scenarios, that because we had the simulator, the simulator instructors who are all licensed operators, could create that kind of scenario with software and with the instrumentation all responding the way the plant would respond. So, that was a real benefit in that sense. And it was a benefit too in the sense that you brought people back for recertification, you could put them through some of these [hard nut?] scenarios.

Q: When was the simulator installed?

Monti: Oh, we built the simulator shortly after the plant went into service. That was back in the '70s.

Conrad: And you were saying that that was pretty rare then, in the industry over all, for these companies to have a simulator?

Monti: Well, yeah, Westinghouse and GE had their generic simulators, it was a generic simulator of a boiling water reactor or pressurized water reactor. But ours was plant specific, it was Indian Point Unit 2, Indian Point Unit 3, the same simulator. The software was designed against the plant, the actual plant itself, it wasn't a generic plant.

Q: Was there a strike early in your career? What happened with that?

Monti: Yeah. [Laughs.] It was interesting because I'd never been through a strike on an operating plant. The general superintendent assigned us to different positions and I was assigned as a reactor operator, working for a chap named Max Hughes and Max Hughes was one of the delightful people that I've ever worked with and I was working for him. He would know things that only a person of his caliber would know. And Max was not a college graduate, Max was a very well-seasoned person, he knew the plant, he knew operations, in fact, he was sitting there talking one day, in the plant during the strike and he had his back to one of the control boards, and he says to me, "Pressurizer Heater's just kicked in."

I looked at him, and I saw the [unclear] meter go up, it was over his shoulder, I said, "How did you know that?"

He said, “You’ve gotta listen, you can hear the relay pull in.”

And I knew at that point, this man was a gem. And all through my career there, if Max was there — and this wasn’t just during the strike, the strike was a short lived event — [or] another chap named Jim Mooney, they were just delightful people to work with or work for or whatever you want to call it. They were just delightful people, smart, really smart, had native intelligence far beyond mine, far beyond many, many people. Jim Mooney, for example, was in I&C, and he could hold his own with master’s degree electrical engineers from ConEdison. Just a smart man. [There were?] a lot of delightful people like that during my career. People who — sometimes people say, “Oh, well, he doesn’t have a college degree.” So, what? It doesn’t mean that the man is not smart! Some of our best operators were not college degreed operators, a guy named Ed Tagliamonte was another guy, just — he knew what was going on, he could anticipate, he could look at things and look at the instrumentation and know what was going to happen and how to avoid what was going to happen. He’s the kind of people [that are] just delightful to work with.

Conrad: It always seemed like so much of learning to work at the plant was apprenticed based, that you would learn from someone else that you were working with and then you gained the skills from talking with them. And that some of these folks had already worked in other ConEdison plants for many other plants and brought in all that knowledge from those plants as well.

Monti: Yeah, exactly. It’s not something that you can teach, it’s something that you learn by working with people — and I saw that when I was at the waterside plant as well. There’s people who knew, how they knew [was] years of being there, being part of it, and just learning.

Conrad: It sounds like, what you were saying with Max, as well, that, somehow, you gain the ability to really understand the equipment, in the way you can hear something before the instrument even reads it.

Monti: Yeah, exactly. [Laughs.] Exactly. I’ll tell you, I miss him. He’s obviously passed away but I miss him, I miss that kind of a person, who’s got — I call it a native intelligence, it’s just there. You don’t have to have a college degree to be smart, to understand how to do things. Max [laughs] he had an expression; years later, he was a general watch supervisor and I happened to go into the general watch supervisor’s office one day and he was talking with some of the plant operators, the field operators, and he said, “Okay, guys! It’s time for a work break! Let’s go!” [Laughs.] Just little expressions like that. Max came from Kentucky, his brother was a plant superintendent on a coal fire plant down there; he said you could eat off the floor in that coal fire plant. Just a delightful person. And, like I said, there were other delightful people there, like Jim Mooney and Ed Tagliamonte, and others.

Conrad: In another interview, I heard that some folks were called the “grey beards.” Did these guys classify as grey beards?

Monti: Oh yeah, they were more than grey beards. [Laughs.] They sat high. And there were many other people there too that earned the same kind of respect; they didn't earn it by being officious or looking down on you, they earned it by being part [of the group.] I don't know if that's a good way of putting it, but that's how I felt.

Q: Later, you worked as a test engineer, while Unit 2 was being constructed. What type of problems did you run into and what were some of the solutions?

Monti: There were individual equipment which were easy to take care of, but the one thing that really broke my heart was that we had one operator who set a fire and he burned out two motor control centers that were vital motor control centers. This was before the plant ever operated and all the work that we had done in all of the test group, related to all the equipment of those two motor control centers had to be done again; we had to [write?] individual test protocols for each of those. And that was just — I don't know. Debilitating. Mentally debilitating at initially but once you got over this loss, you said, "Okay, now we can get into this thing and make it work," and we did. But it set us back six months? But just ordinary testing, that's the idea of running a test program, to see what's out there that you did not anticipate that you can correct before you ever go into real life operation.

Q: Were you also involved in the start-up physics testing? How did that work?

Monti: Yes. Once the plant, once fuel was loaded and the plant went through the hot testing — the high functional testing, as you will — we were all put on a watch, myself and the other three engineers. I got out of my role as test engineer and became just another shift supervisor overseeing the start-up test program. And myself and three other engineers were on twelve hour shifts and we took the plant through all of its functional tests and then did a physics test program; into initial criticality after the program.

One of the more interesting tests that we did, that we had to do — and we didn't design the test, the physics people at Westinghouse and our own physics people designed the test — all rods were in, and we had one rod out, and you were [deboronating?] to bring the reactor critical and then you had to prove that with all rods in, one rod out, you could then put that one rod in and shut the reactor down. So, you kind of had to test your faith in what the physics people say [laughs.] Because, you're there, you say, "Okay, I believe you, I believe the numbers," but you've got to be Missouri, show me. That kind of a thing. But, we were ready, part of that protocol was to make sure you could quickly charge for a [gas set?] back into the reactor coolant system if that didn't work, the reactor's [unclear] maintain criticality once the rod's back in.

So, of all the physics tests, that was the one that I happened to be on watch the day we were doing and it could be disconcerting; you know it's going to work but you need to see it happen, you've got to be from Missouri in that sense. And the physics test program went very well, in fact, one of the things that, as you went up in power, we found out you really did need — we had

three types of control rods; we had regular control rods, we had part-length rods which were designed to [shape?] the cylindrical core, the neutron leakage if you will, and then we had x-y rods, which if you had to, you could [shape?] the top and bottom of the core [unclear.] Those were all designed by Westinghouse because they weren't sure how a core this size — which is a first, this was another first in the industry at that time, 1000 megawatt plant, 27058 thermal core, what was it going to look like? So, we had these part-length rods, x-y rods, and regular control rods. Fortunately, we didn't have to use any of those; you pull out the part-length rods and you [pumps?] the x-y rods and that was it. But, again, that was part of the design precautions [in] a first of a kind plant.

And the interesting thing there, I think I may have mentioned this to you, it had three control handles [and] they were all the same. And [laughs] you had to look down and say, "What am I going to move?" So, the operators, very cleverly, they decided, [unclear] object to it, put beer handles that had different feelings so you knew what was there. And I guess, I forget who it was, somebody complained, "Why do you [have] beer handles there, it's not a bar?" Once we explained it to them, they understood what it was for; you had to tactile — you're looking up at a board and you're trying to control something with a handle that's sat on a bench board section type of thing. It made it worthwhile doing.

Conrad: And when you have a split-second decision and you don't have time to sit there and look at a knob, you need to be able to know what's doing what.

Monti: You've got to grab the right one, right.

Q: Were you working the day that Unit 2 first became critical?

Monti: Yes. I was there for initial criticality. You know, that's a great feeling too; you and your contemporaries put an awful lot to get it to that point and it was like the birth of a child, if you would.

Conrad: Was there like a celebration in the control room when it went active or later, the day after? How did that work?

Monti: There was happy, there was, "It took us long enough to get here," you know. There was all those things, it was joy, it was relief in that sense.

Q: You mentioned once that plant security changed in the 1970s. How did that impact your work and what were the reasons for that?

Monti: Well, it went from industrial type of security — we had a fence, a single entry point, the guards knew you — to very structured if you will, where you wound up with armed guards, you wound up with key cards that disallowed you from going to certain areas of the plant. So, it lost a casual nature and I don't think it was a casual nature before that but it was something that the

authorities figured, “Well, this is what it has to be.”

Now, we argued, “Why should we create another police force, another armed force? If you want this kind of security that requires having armed guards, then you, the Government, should provide for that so there’s a uniformity across the nation, a uniformity across other power plants.” But it was not to be, it was that you, the utility, had to create this police force, if you will. And it’s only grown from there; it’s grown from guards having pistols, to now they have shotguns, and there’s all sorts of weaponry around the plant. Some plants have guard towers, and you say, “What are we into here?”

And it even turned worse, I guess, after 9/11. I’m not quite sure what goes on there today but I probably would not be very happy with it, having your own private police force. Because these guys are not police officers, so if they draw their weapons from their holster and they shoot and kill somebody or they harm somebody, that leaves you, as a company, in a vulnerable position. Not that they’re untrained people, don’t get me wrong, these people in these private guard services are very well trained, they’re very caring people. But there’s always the possibility of an unintended consequence, and if you’re going to demand this kind of protection, then I think you, as the government, should provide it. That’s my take; you should provide protection — call them peace officers, fine. That’s it.

Conrad: So, they weren’t law enforcement or military, so it was the NRC that was requiring this or was [unclear]?

Monti: Yeah, it was the NRC, prompted from Congress, I don’t know where it all came from. But you’re in the business of producing electricity, that’s your goal, to produce electricity reliably, consistently, at the best cost. And now you’re here, you’ve got a militarized zone if you want to call it that. And the operators, at first, did not feel comfortable having someone come into the control room with a weapon at their side. So, one of the things I did while I was there, I said to the guard force, “Don’t go in the control room. Period. You can send an unarmed man in, but that’s it.” And that was to, I don’t want to say assuage, but let the operators know that I understood what they were saying because many of the operators themselves were hunters, and they understood weaponry. I don’t, I don’t own guns, it’s not that I’m not a second amendment person but I am and just because I don’t own a gun doesn’t mean I don’t understand what it means to somebody.

Q: Why did ConEdison decommission Unit 1 and how did you feel at the time?

Monti: The decommissioning of Unit 1 was a very sad day. The reason why they did it was there was this pressure, “If you want the license for Unit 2, you really got to do something with Unit 1. You really can’t operate Unit 1, it’s not up to the then standards of the day.” I think one of the things that they were afraid of, the NRC was afraid of, [was that] in Unit 1, the reactor coolant went in the bottom of the vessel, went through the fuel, and out the top. So, the inlet nozzle is at

the bottom of the vessel, the outlets at the top. And, I guess the argument was, "Well, if you had a break there, you wouldn't be able to keep up with it." You wouldn't be able to pump enough water to overcome the effects of the break. And that was the same, the plant [by the?] shipping port that the Navy ran, it was the same kind of design; it was a Babcock & Wilcox design, under. [Pause.]

So, yielding to pressure, they shut down Unit 1 after its last year of operation, which I think I said, we operated at 100% power on three loops. And it was a sad day, to me it was a sad day because it was a unique plant; it was one of the first commercially operated plants, we didn't have a permanent license with that, we had a provisional license that we had to renew every eighteen months. And I'm not quite sure why we went through the provisional process as opposed to a permanent license but in a way, I suppose it was good because the provisional license was easier to come by at that time.

Conrad: From that point, did Unit 1 become more for storage? I mean, there were other pumps and other systems that ran through there for Unit 2, correct?

Monti: Yeah, we ran all of the secondary water cleanup, the contaminated waste cleanup would run through Unit 1, the fresh water provisions for the steam generators came from Unit 1.

Conrad: And then, at a later point, the superheater room became offices, I believe, after they cut the superheater out.

Monti: We dismantled both of the superheaters, yeah. And then they became office space.

Q: Can you tell us about what promotions or shifts led you to become the general manager of nuclear power in 1979?

Monti: Well, I guess I worked through the Operating end, Operations in Unit 1 and Unit 2, I was then promoted to plant engineer — at the time, plant engineer was responsible for plant maintenance, was responsible for Instrumentation and Control, I had the Training department, and I had the Waste Management department under me, and we also did outage planning. And I went from there to become the general superintendent, or the general manager of the nuclear power at the time. [Which kind of?] encompassed everything.

Conrad: Did you apply for that job or did somebody approach you about it?

Monti: I didn't apply for it, there was no application, my boss called me and when I answered, he said, "You're going to be—" And I said, "Okay, yes sir." That kind of a thing.

Conrad: Did the previous superintendent, did they stay on in a role or did they move somewhere else within ConEdision [or]?

Monti: The prior general manager moved back to Irving Place and he was placed in charge of [emphasis] all of ConEd's generation, both fossil power and nuclear power. So, he became the VP of production — or power generation as I think it was called at the time.

Conrad: When you took on that role, what was your managing strategy and how was it different than your predecessor's?

Monti: Well, my managing style was, "You have a job to do, my expectation is that you do your job. If you have problems, if you need help, I'm for you." We set goals, the goals have to be goals that you can accept and work to achieve. And I always believed that a goal was something far beyond the normal expectation of doing your job and doing it well, it was a reach item. Maybe you'd never get there, but you had to reach out for it, you had to strive to get to that point. That was my style. I did not like peering over someone's shoulder and saying, "Do this versus that." If you had a choice, the choice is yours, argue it and make it so. And I carried that style, I think, when I went to Waterside and other positions too, "I can't do your job and my job at the same time."

Q: Did you have certain managers that would report to you on a daily basis or did you have a general staff meeting with some of the directors or?

Monti: Yeah, there'd be a morning meeting with the Operations superintendent, the Maintenance people — we'd get together and decide what were the problems of the day, what had to be corrected and who had to play what role in them. And they weren't long meetings, they were short meetings; in fact, when I was Operations superintendent of Unit 1, I had a ten-minute meeting and the meeting went: I had a monologue, the operators who were part of that meeting had their monologue, and then we had a dialogue, and we accomplished all that in ten minutes. [Laughs] And my monologue was, "What are the problems of the day?" their monologue was, "Here are the problems, boss," and then the third thing was, "How are we going to solve these problems?" And the shorter the meeting, the better. And then when I was running outage management, at some point, because I had so many people involved in that, I took the chairs out of the room because sitting in a chair, you get too comfortable. You come in, you make your report, "You need help?" "No," and away you go. And I did the same thing at Waterside, there was always a morning meeting. I didn't conduct the morning meeting; the morning meeting was conducted by the plant engineer, [they] were the one who had Operations and Maintenance and I&C and all of that.

Q: Where was your office when you were superintendent?

Monti: It was a building in the original administrative building, which overlooked the river and overlooked the intake structures. It was the original office building for the plant, built with Unit 1.

Conrad: Did you have a lot of opportunities to still walk through the plant and visit the different departments at work?

Monti: Oh yeah, the way you find out what's really happening is by going out and talking to people. You don't learn by sitting in an office. In fact, an interesting thing, because I knew Indian Point well, when I got to Waterside after the first few morning meetings, I said to my plant engineer, "I'm going out in the plant."

I don't know the plant, I said, "If I get lost, you can come look for me. If I get lost, you can say, 'Thank god he's gone,'" Because they all looked at me like this monster coming from Indian Point, "It's going to be the procedures and everything else and the rest of that!" I said, "You have a choice; you come find me or I'll someway find my way back. And if you don't want me, to fire me, that's good too."

But I can tell you, the interesting thing at Waterside, I got to meet people where they worked and understood what they were doing. Because at Waterside it was not as easy a job as it was at Indian Point, because you're dealing with older equipment at Waterside. But you were dealing with people who were just as dedicated. In fact, in one of the Water Treatment plant rooms, I went in one day and there was one of my operators, he was on the floor, he was praying, he was on the rug praying, and I came in, and I didn't say anything. When he finished, he got up and he apologized.

I said, "What are you apologizing for? My only goal here is to assure that you can achieve the job. And if you can achieve the job and do that at the same time, I have no problem with that." And I didn't, I mean he did his job and he did it well, so he prayed — I forget what time this was, it was after lunch sometime and I happened to wander in there. Well, by the time I got back to my office at Riverside, which overlooked East River [drive?], everybody was apologizing to me.

I was like, "What are you apologizing for? There's no reason to apologize, the man was doing his job. He has a religious requirement. If that fits with doing the job, what am I to say anything?" And we left it at that, because they were all surprised. So, that's a little bit of me in that sense; if you do your job you're getting paid for and supporting everyone else in the plant, your coworkers, [unclear] and you go home.

Q: How did that job impact your home life?

Monti: Indian Point [makes 'Ugh' noise.]

Conrad: The superintendent role.

Monti: It was 365, 24/7. In fact, the first night, we were asleep at I don't know what time in the middle of the night, and the phone rang and the phone was one my wife's side of the bed, and the

person on the other side [of the phone] said, “Is Bill there?”

So, she said, “Where else would he be?” [Laughs.]

And she hands the phone to me on my chest and the guy had a problem. I helped him solve the problem, and I gave her back the phone. I come home and the next afternoon, the phone’s on my side of the bed [laughs.] And it became a 24/7 365 job and — would I do it again? I guess so. It takes a lot out of you [and] it takes a lot of your family too. I remember during emergency planning days; we were being put upon by so many aspects of people and government. In fact, the then Lieutenant Governor had my home phone number. And he called the house a few times at inopportune times, you know during supper or whatever. One day, he called and my younger son got to the phone and screamed, “You’ve got to stop bothering my father!” and slammed the phone down on him. He never called again. I won’t mention the Lieutenant Governor at the time’s name but it got to be one of those things. And it takes a lot out of you and your family has to support you, and my wife did support me, she always supports me. It was a job that I loved and then there were times that you did not love it, you’d say, “My god, what’s this doing to us?”

Conrad: Were you able to take vacations at certain times and if you did, did someone watch the plant while you were gone?

Monti: Yeah, I did, yeah. Well, I had people that you could put in charge. I did. Not as many as I would have liked to go on, but [laughs.]

Q: So, by this point, when you became superintendent, Unit 3 had already been taken over by NYPA [New York Power Authority], right?

Monti: Yeah, we had put it in service.

Conrad: So, you’re managing Unit 1 and Unit 2? Who was your counterpart on the NYPA side? Did you meet them fairly often or was it [unclear]?

Monti: We didn’t meet fairly often; we would talk on the phone. It was more a matter of, “Are we giving you, NYPA, the kind of service that you wanted?” And there were times where they didn’t get as much water and as much capacity as they wanted. But, see, that was a problem having two separate owners at the same site; it didn’t really work out that well. You lost the ability to have flexibility with people too; if you need an extra I&C tech, for example, you didn’t have it there, he belongs to the other guy, he didn’t belong to you and he felt the same way. So, that was, I think, a bad move on the part of the Power Authority to take it over and operate it itself. From my way of thinking, ConEdison should have continued to operate it that way we’d have the flexibility with people. And having [them?], they have to have their own security force — also the advantage of using the same pieces of test equipment. So, it was like a whole other world had to be created.

Conrad: I'm guessing there had to be lots of redundancy between the two sides because you had to have one of everything for each side of the plant?

Monti: Yeah! Correct. And, you know, it didn't make either side happy in that sense.

Q: Did the transmission lines to take the electricity on the NYPA side or were they on the ConEdison side or did they both equally have it?

Monti: Yeah, there [were] lines going out from both sides of the plant, up to the substation, which then ConEd ran, [because] the system operator ran the station. [Pause.] There was the 345 going out, there was the 138 coming back in.

Q: What were some major projects that you worked on in your tenure as superintendent?

Monti: At Indian Point? [Laughs.] One of the most interesting ones; Westinghouse was having their steam generators; they were having a problem. The [tube?] support plates, there was a crust — I call it that — corrosion building up between the hull and the tube support plate and the steam generator tubes, it was squeezing them in. And one of our engineers, who I have a great deal of respect for, his name is Sam Rothstein, said, "We would like to get a piece out of the steam generator of the tubes and the support plate."

Sounds simple enough, right? Except, they're dealing with a ASME pressure vessel, an American Society of Mechanical Engineers certified pressure vessel. There's a lot of things that go along with that, you can't just cut a hole in that and patch it back up and say all's good in river city. We had to go in above and below the plate in order to cut the tubes and then take out this section of plate. Needless to say, there was a lot of [consummation?] about doing that. But we did it and it took a lot of effort on the part of the engineering department, a lot of effort on the part of our major maintenance department to get it done. What [we] had to do was we had to build up a pad on the outside of the steam generator on this pressure vessel and you had to then drill a hole big enough through it that you could reach in with tooling and cut the tubes and cut the plate and then get this sample out [unclear] without having it all fall apart on you. And then, because you've now welded on this pressure vessel, you added these giant reinforcing pads for that hole and you had to then heat treat the vessel, stress relieve it. And we did all of that in an operating plant, it was a plant that was in service, and it had to be done in a radiation environment and that was a challenge — and you had to make sure that the tubes that you cut had to be sealed up.

So there was another chap, by the name Harry [Barenberg?], of the [unclear] engineering group, another [unclear] of mine, who devised this plugging device, multiple layer plugging device, mechanically because you couldn't get in there and weld anything. So, between Harry, and Sam, and another chap who did the stress calculations named Sherman [Unclear], put the whole thing together and then with our major maintenance, the Power Generation Maintenance department,

we were able to wrap the vessel and stress relieve the vessel back to code standards. So, that was an interesting challenge in that sense. That was a very, very interesting job.

Conrad: When was that job worked on? Do you remember the years?

Monti: You're challenging my brain here! [Laughs] It was somewhere in the late 70s or so, I don't remember the years now. To be honest, when you reach my age, you can't remember all the years.

Q: When you were working as superintendent, who did you report to back at ConEdison? Who was your manager?

Monti: I report[ed] to the vice president of power generation, who I seceded as the general superintendent.

Conrad: How often did you have to meet with him? Was it on a weekly basis or did he let you work on your own?

Monti: Work on my own. We would speak on the phone frequently and then we would have what you call monthly plant managers' meetings where the plant managers from all of his domain, if you will, the city plants and Indian Point would meet with him on a monthly basis. And he would go over things like what his long-term goals were and budgetary items and things of that nature.

Conrad: Were those meetings always at Irving Place or did they have it at a specific plant and move around?

Monti: Who I worked for used to have them at Irving Place, and then when I went to Waterside, the man who was then in that position would have them at each of the plants, monthly. A little different style.

Q: In the '70s or '80s, did you notice big shifts in community feelings towards the plant and what did you do to promote a healthy image with the community?

Monti: Well, there was an organization called "Westpac" who always objected to the plant, "It was the worst thing since whatever you want to call it." And they always had some [gripe] with the plant — Not that we did anything to them or they did anything to us, but "It was the wrong place for the plant," "It shouldn't be here," that kind of stuff. I had very little dealings with them; we had corporate-public relations that dealt with them for the most part. From time to time, they'd demonstrate outside the plant, how bad it was, stuff like that. They weren't looking towards the benefits of the plant.

Q: Did the plant have its own marketing department at that time? Was there a director of

communications?

Monti: No.

Conrad: That didn't exist?

Monti: No, in fact [laughs] it was interesting. When Three Mile Island occurred, back in '79, earlier that week, I had been sent down to corporate for a three-day course in communications. Okay. I come back on a [pause] Wednesday or Thursday afternoon, I forget what day it was, and Three Mile Island hadn't happened yet — and I think Three Mile Island happened on a Thursday or something like that — and I get a call Friday morning from our corporate communications department that, "Someone from one of TV stations was coming up and we'd like you to deal with them."

I had never dealt with TV, radio, anything like that. So, I said, "Okay. When are they coming?" They're coming at 4:30. Okay.

So, I call my wife up, I said, "I'm not going to be home at the usual time—" 5:30, 6 o'clock, "— I'll be late because of such and such."

She's like, "Do you want me to come over with a clean shirt and tie?"

I said, [Laughs] "No! I'm fine!" My shirt and tie that I had on were fine.

And they [the TV person] came up and I had to deal with them! And after it was all settled, and the person who called me up said, "Well, you just got through taking this course in public relations!"

I said, "Okay." Here I am, fresh out of a course in PR, never having dealt with anybody on the other side of the fence. It was quick and dirty kind of a thing and after that, I got calls from known [from the electric boat {unclear}?], "Hey, we saw you on television, you look pretty good." [Laughs] I said, "Okay."

There was one other person who came up who had a lot of respect for, this again after Three Mile Island; the guy's name was Jim Jenson, I don't remember names but I think he was from CBS, and they said he was coming up, I said, "Okay. So, he called me and I said to him, "I'd like to meet you up at the simulator." He said, "Okay."

So, we went up to the simulator and no cameras were rolling, he had his camera crew and his producer there and the sound people, and he said, "Let's just talk." So, we talked probably for three hours. And I had him talk to the operators in the simulator and I forget who else he wanted to talk to. And he said to me, "Can we turn the cameras on now and I'll ask you some questions?" I said, "Sure, why not."

That interview, the questions were the same kind of questions he was asking during those four hours he spent with us and with our people. And I considered that one of the best experiences I had with people in public relations because he was interested in learning, he was interested in the people and what they did and how they did it, and he asked questions along those lines. And I think we wound up with like two, two and a half minutes of air time. But I considered that to be the best. The worst experience we had was from a reporter from the New York Times. He was interested in specifics on emergency planning. So, I said, "Sure, you're more than welcome to come up; I will put you with my directors of emergency planning." So, I get him a hold of the director of emergency planning and he spent like three or four hours with him and George went over everything with him, took him through chapter and [unclear] with the plants. He goes back and he writes an article saying, in essence, that there was no communication between the state and the power plants during the emergency, in the middle of the night. Because the number he called up was the daytime number in the plant. The operators had that number but the operators did not call that number because that was an office number, the operator plant called the state police control headquarters up in Albany to get things moving here if it was 3 o'clock in the morning and you needed something done. They refused to correct that, they said, "No, that's what the plant says."

That was the worst experience we had with someone, I can't remember the guy's name but it was a terrible experience; we had someone like Jim Jenson on this side who's interested to talk to the people — and I wasn't afraid to let him talk to the people, to my operators and my instructors — and I figured the same thing would work with the New York Times wanting to know about our emergency planning, put them with the people in charge of it, who manages the plant on a daily basis and [unclear] give them a fair [unclear]. It didn't work out that way.

Conrad: So, you're saying that even when they found out about it, they distorted it later? Misinterpreted what had happened.

Monti: Yeah. "I'm coming up; I have an agenda. And no matter what you tell me, I'm going to make my agenda work for me. And, to me, that's a disservice you do to the people who spent their life at this — whether it's the state people or the ConEd people, whoever.

Q: Can you walk us through a day on the job or a memory that particularly stands out during that time period?

Monti: [Laughs] Lots of memories stand out. [Long pause.] I guess I was always happiest when you come in — whether it's at Waterside or at Indian Point — and you could just talk with the operators, get a sense of how things are going at the plant, what the plant feels like, how the field supervisors feel about things, what fears they may have had over the — You know, things like that. Well, I remember one day, at Waterside, walking in and the general watch supervisor had this glum look on his face. "What's the matter, what happened?"

[Gilly?] said, “We’ve got oil in the basement next door.”

“What do you mean? In our basement?”

“No, down the street from us.”

“What happened?”

“We got a leak in the oil line coming up from Kip’s Bay.”

So, he walks me down to this private building and we go down into the basement which happens to be a doctor’s office and there’s about three inches of number six oil in the basement. We had a leak in the line, the line is underground in the street, it came in through — That was a different kind of a day. And he said, “We had to shut down the fuel oil line.” We’re burning fuel oil, so he said, “We had to swap over to gas and the system operator’s all upset that we had to switch over to gas, they want us to hurry and fix the line.” So, we had to get the people in there to open up the street and fix the line and the rest of that, and then clean out the person’s basement too. So, you had those kinds of interesting days.

Q: When did you stand down as site superintendent? And was that when you went to Waterside or did you stay at Indian Point before you left?

Monti: When I left that position, I went down and became the executive assistant to the vice president of production, power plant production. And from there, — I was in that [executive assistant] job several months — and I was then sent over to Waterside because they were moving people around, there were retirements and — So, I went to Waterside after that.

Conrad: What year was that?

Monti: [Sighs] I hate these questions. [Laughs] That was probably in the early ’90s, something like that. I don’t remember specific dates; it was the early ’90s. [Pause] Let me look at something quick here. [Mumbles] Okay, it was 19[84?], to answer your question about when I went to Waterside.

Conrad: Was that move, was that something that came from above or did you seek that out to move to Waterside?

Monti: Yeah, I was asked to go over there because one of the things we were doing was upgrading the plant from all the old controls to a new control system, to computer control. And having had the experience at Indian Point, they thought that might be helpful to the people doing the job and the people there. I guess when I first got there, they thought, “Here comes this maniac from nuclear power, he’s going to drown us in procedures and the rest of that.”

And I said to them, "You know, a very wise man who worked for ConEd by the name of Frank [Pagano?]—" who I knew for many, many years, he was the plant manager over at the Astoria plant, "— his take on procedures, he said, 'Procedures are the history of our failures.'" And when you think about it, you have a procedure and it tells you what to do and how to do it because somebody before that didn't have a procedure and they failed. So, I took that as a very sage comment. So, I told the guys, "Also, it gives you the opportunity to help train someone else without having to carry all of that baggage in your head about the thing, it's written down!" So, you can pass on 100% of the information, because if you do it by word of mouth, I'll learn 90% of what you know, but you're only giving me 90% of what someone else gave you, by the time you get down the end of the string, you're down to 5%. You keep cutting this thing down, so if you have stuff written down — I said, "They don't have to be very elaborate," and I finally got them to begin to think that way because it had always been what I call "father and son" training, it wasn't that it was unsuccessful, but there were so much that was omitted that if you got into a problem, how do you get out of that problem. You know? Whereas, if you had a procedure, you didn't have that problem — you got into some other kind of problem that you didn't anticipate, and that's fine too.

Q: You said earlier, when you first started at ConEdison, that you always wanted to just work at a nuclear plant and be at Indian Point and then you're at a conventional plant. How did that feel different in between your early career and your later career?

Monti: It felt, in a way, nice, because I was going back to oil and gas fire which I had started with at the maritime college with the oil fire plants propelling ships, you had oil fire plant propelling the steam generators making electricity and to send steam out to the street, things of that nature. So, it was almost like a return to the beginning, if you will.

Conrad: Did you have to commute down there or did you end up getting a place near the plant so that you could stay there during the week?

Monti: No, I would drive down there every morning and I would be down there for the beginning of the shift at 7. Yeah, I would leave here [at] 5 or 6 in the morning, get down there in time, there was no one on the road at that time.

Q: Can you give us some background about the Waterside plant; where is it, how old is it, what made it unique?

Monti: Well, what made it unique was, again, it was one of ConEdison's original plants, it was between 40th and 41st and 39th Street, if I remember the streets right. It was adjacent to what was a frequency changer house and there's a giant frequency changer there because the railroad ran on 50 cycles and you had to provide them 50 cycles, so we had 60 cycle motors turning 50 cycle generators that you could send electricity out to the transportation system, the train system. And then there was the old building which housed units 4, 5, 6, and 7, and that was Waterside 2, and

then there was Waterside 1 which had units 8 and 9 and low pressure units 10 and 11. Oh! And we also had sub-stations in there on 40th Street, which then fed into the system; that was another interesting thing, there was an aluminum BUS board, big heavy BUS board. —You asked the question and I lost track.

Conrad: Just what made it unique. I think you mentioned cabling that you couldn't find anywhere else.

Monti: Like I said, it goes back to the early 1900s, and then the plant was rebuilt in the '30s and then at the end of the second world war, it was rebuilt again because of the aging equipment, and then we were rebuilding it again in the '80s. So many things made it unique, like I mentioned earlier, just the instrumentation wiring, just the way it was perfectly hand laid out, the sweeps, the bends were perfect. The wiring was tied together with cord with perfect square knots, the ends were cut evenly, and they were spaced perfectly. Having frequency changers, these [emphasis] huge dynamos — that's what we called them in the old days, dynamos — where you took 60-cycle electricity and put it running a 50-cycle generator on the other end. Just sitting there quietly after running hour, after hour, after hour. It had steam turbines that were pushing steam out to the street as opposed to into a condenser, so it was a once through system where you create the steam in a boiler, and then you send it to the turbines, and then the exhaust of that turbine goes out to the street; that water never to come back to you again. So, it was a totally open system. And then on the other side, where units 8 and 9 where, you had a couple of turbines that had condensers associated with them, so that when you ran them at night, you would run those turbine generators to create electricity and condense that steam and send it back into the system — that was not the open portion of it. They had all these varieties of equipment and we were right across the street from — I forget what those apartments are called, across 1st Avenue. We had an old lady there who always complained about the noise coming from the plant, she couldn't help it! She'd say, "Why did you have to do this, and why do you have to do that?" She had the telephone number of the plant and she'd call and the general watch supervisors tried to be as nice to her as they possibly could, but after a while, it drove them a little crazy. When you were changing load, if the transformer fans came on, that represented a noise, because they have all [these] alleys in the city, they have all these hard surfaces that sound bounces off of. So, she wanted to know, "Why do we need to turn the fans on and off on the transformer at that time?" Well, because you had to keep the transformer oil cool! [Laughs.] That kind of stuff, so.

Q: How did it work with water intake? If you took in water that had salt, wouldn't that destroy some of the pumps? And —

Monti: The water is all fresh water that came from the New York City water system, it came either from the Croton system or the Catskill system and we always knew when they swapped over to the Croton system from the Catskill system because our water softeners were depleted sooner. And we ask them, "Could you let us know ahead of time?" They would never let us

know ahead of time. I guess they had their operating reasons for that but that was — And you had to keep that water treatment plant up and running properly all the time because you had to have a feedstock for your boilers because, like I said, it was a once through system. Run it through the boilers, heat it up to run the turbines which then run generators, and the exhaust of the turbines went out to the street, never to come back. It was designed as an open system. Why? I guess when the plant was originally designed, water was looked at as being infinitely available, and we know that's not necessarily the case. And there were times, when I was there, where we didn't have enough rain and the reservoirs were low and if you remember some of the expressions of Mayor Koch, "If it's yellow, let it mellow," trying to keep people from flushing, and it is kind of a crude statement but that's what he would say. And, you know, we have to be very careful with the water now.

Q: [Regarding] the steam, was it just used, generally, to heat buildings, public spaces? And if so, was there a difference between summer and winter use?

Monti: Oh yeah, it was used for heating and many of these buildings had turbine driven fans for their air conditioning system, so it was that kind of use. The wintertime was demand; you knew it was the highest demand because that's when everything was running top of its capacity.

Conrad: In the summer, if the demand had lessened, could you turn off some of the units or did they have to stay on regardless?

Monti: You backed them down; if you turned a unit off, it was that much more to get them back up and running again, so it was more effective to keep them running. The highest demand was like 12 million pounds an hour, we were the largest steam producing plant for the street in the country, if not the world.

Q: Can you tell us a bit about the upgrades the plant needed in the late 1980s, both with computer controls and feed pumps and how you went about doing those upgrades?

Monti: The whole thing was that we updated a couple of boilers, and then we put in new instrumentation, which was computer controlled, we got new boiler feed pumps — in fact, the boiler feed pumps were an interesting thing, we bought them, I forget through who, but the pumps were made in one place, the motors were made somewhere else, all went into the Netherlands to be shipped to the United States, along with some other equipment. And I asked why, and they said, "Because of the way tax laws are, we get the pumps for the best price that way, we contract with a pump manufacturer who did that." And the interesting thing with those pumps, I may have mentioned this once before, you could pump oil running full out and you could take a nickel and stand it up on top of the bearing housing and it was just the quality of it, incredible.

Q: How many people worked at that plant while you were there?

Monti: Maybe three hundred at most?

Conrad: So, a significantly smaller operation?

Monti: Yeah, that's covering all shifts, you have shift workers and you had to cover all the shifts.

Conrad: When you were at Indian Point, did you have something around 1,300 employees, just for Unit 2 and Unit 1?

Monti: No, we had about 6 or 7 hundred people; when you take the whole site, it probably [would] be that many.

Q: I had shared a photograph with you, you had mentioned a plaque and that there was a story about it. What is the story about it?

Monti: That was my predecessor, number seven main unit, that's our name, he [had to do?] overhaul. And the power generation maintenance department was supposed to do that work. Well, they, for some reason, could not do the work, they were off on another task or whatever. So, my predecessor took his plant engineer, they sat down with the maintenance and asked, "Can we do the overhaul?" Because the overhaul needed to be done. And they brought the union people in and the union people said, "We're going to try and do it." And they did it and they were very successful at doing it. And that's what that sign shows, that they did it and were very successful. In fact, I sent that to him — his name is Stan [Marks?] — I said, "Stan, fill me in on this, this was before my time there." So, he filled me in on what it was and he said I brought back some very interesting memories. I'll read it to you, he says, "Hi, Bill. Wow, this is a super memory test. But if I recall correctly, this is what happened, the scheduled overhaul of 7 was temporarily postponed because [Van Ness?] personnel were redirected somewhere else with higher priority. The union reps and house maintenance supervisor approached Dave [Geddres?] who was a plant engineer, and indicated that they would be willing to take on the task. Dave and I thought about it and agreed with the proposal [that it was] a good task for the in house people. Whether we completed the overhaul on time or under budget, [laughs] I can't recall. But I know that the union reps were delighted to see that the Waterside people got their overtime and bragging rights." So, it was a beneficial thing for both the plant and the people at the plant.

Q: What were some of the biggest differences you noticed between managing Indian Point and Waterside? I'm assuming in some sense, it was a little bit easier because you didn't have to deal with as many regulators and with procedures. But what were some of the biggest differences that you noticed?

Monti: One of the biggest differences was that you didn't have someone breathing over your shoulder the whole time from the NRC; right after Three Mile Island, they permanently assigned inspectors to plants, so they were always there. At Waterside, yeah, you had regulatory

authorities that you had to deal with but they weren't there all the time, breathing down your neck day in and day out, which is a difference. And not that we ran the plant in any lax way or way that defied any kind of regulations, it's just that it was easier, as you suggested, because you didn't have this constant helicopter mother over you. If you made a mistake, it was on your shoulders.

Q: When did you retire?

Monti: I stopped working in 1997, because my oldest son became a victim of ALS, Lou Gehrig's disease, otherwise I would have continued working. So, I stopped working so that I could help take care of him, and he stayed at home. And then between myself and his wife, and my wife, and his in-laws, we took care of him. I was with him during daylight hours, my daughter-in-law went to work and my wife would come later on in the afternoon and bring dinner for them. So, that was one of the hardest things to see, your own son stricken with a disease of which there's no cure. And he outlived the — usually you die in two, three years, he survived for five years because he was a healthy person, he didn't smoke, he didn't drink more than other people drink like a beer or two. And I stopped working because of that, I would have kept working, I was 57 at the time when I stopped.

Q: When you retired in between 1997 and today, 2021, were you ever called for advice or for contracting, or have you been pretty separate from the energy industry since that point?

Monti: I did a little bit of work, but not much. I guess I devoted myself more to taking care of his children. Because after he died, his children were bigger; he actually left behind a year and a half year old son and six-month old daughter. So, we just jumped right into the fray, because my wife was still teaching at the time and I was home and I took care of the kids during the daytime hours and became grandpa.

Q: Did you run for political office at any time?

Monti: Yeah, I did. I was on the town council here in North Salam for a while and then I ran and was not reelected. I said, "That's okay." So, I volunteer now, I'm on the town planning board, I was on the zoning board for a period of time but I'm on the planning board now. I'm a member of the town housing committee, that's an appointing position, and I'm on the board of [unclear].

Q: You've written some articles that advocate for nuclear power and that you wrote articles encouraging people to keep the plant open. Could you tell us a bit about the articles and where you had them published?

Monti: Well, I've written to people about it, I've written to politicians about it. My belief, and it's always been my belief, is that nuclear power is not the end of the road, it's not the be all/end

all, it has a place. It offsets carbon dioxide, which if you argue carbon dioxide is the cause of climate change, it goes a long way in offsetting that. And it [emphasis] is a safe means of producing electricity, it is a non-hostile way of producing electricity to the atmosphere. I say to people, and I said this before, a fossil fire plant produces continuous emissions; to get the coal, the oil, or the gas to the plant takes a certain amount of energy, which produces emissions. You can refuel a nuclear power plant with six tractor trailers worth of fuel; it doesn't have a continuous emissions process. Is solar something? Yes, solar's something, it has its applications. Is wind something? Yes, it has its applications. Are they reliable sources of power? No. Is there something beyond fission power, if you will, atomic power from fission? Yeah, there is. What it is, I'm not quite sure. Is it fusion; will we ever get fusion to work? I'm sure we can, at some point in time, we will. You look at small, modular reactors, you can put it in your backyard, if you will. I say that euphemistically but you can put small, modular reactors around the country and they're as safe, if not safer, than other means of electric production. I don't know if that answers your question or not.

Q: Yeah! Do you think in nuclear, that there can be a new renaissance? I know there's been a lot of investment in these startup companies with, like you mentioned, these modular reactors and then there's also been talk about making molten [salt] reactors and that there's still a lot of interest in that. I know in other countries, say like China, they're ordering these things kind of quickly. And what kind of place would these things have in contrast to the bigger nuclear plants of the previous decades?

Monti: I still think that you're going to need large plants for base load, for system stability. But I really believe that small, modular reactors are going to be more acceptable than the larger plants. You'll still have the plant [moguls?] down in Georgia; there's two being built down there now, they're being [put into] service in the next couple of years, and they're the Westinghouse AP1000, they're the advanced design, [laughs] which advanced reactor design goes back to the early '90s, when we first started. But there's been improvements in the design. But I think small, modular ones are, at least, the immediate future. And, put it this way, if you don't start producing more electricity from things like smaller reactors or just reactor plants, you're [emphasis] not going to be able to power the electric cars. Because people — How are you going to charge the car? "Oh, I'm going to plug it in!" Well, what's at the other end of that plug? Where does it come from? It's not all hidden in the wall and you're draining it out of the wall. It's got to be produced somewhere. And I've yet to sit down, I should do this one of these days, and figure out how many billions of BTU in gasoline versus the billions of BTU of electricity that we're going to need, how are we going to get it? Because every time you convert from A to B, you lose something, there's a loss, there's a line loss. And the longer the line, the larger the loss and you pay that conversion charge; and I'm not talking about money, I'm talking about fact, you have a conversion charge. And then with batteries, I'm not saying that we shouldn't strive for batteries but how big of a hole do you have to dig to get enough material to get batteries? And what's the life of batteries? And again, what does it take to charge? And do you have the infrastructure, do

you have the distribution system to bring to my house, enough electricity for me to charge a car overnight?

Q: I've heard it said that sometimes one of the issues when the plants were built in the '60s and '70s was that each one, even though they were similar, they were all uniquely constructed and they were all made by local power companies and there some theories put around that if you could — somehow — mass produce plant infrastructure so that every single power plant had the exact same design and the exact same systems that that would drastically reduce the cost of building and operating the units. What are your thoughts on that?

Monti: Well, Westinghouse and GE proposed standardized plants. Utilities bought the standardized plant but, "Look, I want pump manufacturer B," "No, I want pump manufacturer C because I've had better experiences with them." So, the fundamentals are the same, but your equipment provider was something different. Now, if you could get the plant that you and I agree that we're going to use this pump manufacturer A and we're going to use fan manufacturer D and go from — that would reduce the cost. But then, when you look at the fact, just the difference between Indian Point 2 and 3. We had an Indian Point 1, a single cable tunnel. Indian Point 3 was forced into two separate cable tunnels, the NRC changed the rules of the game. So, you keep upping the rules of game and plants [emphasis] do change; I mean, from what I remember, GE wanted to build a recycling plant in [Marissa?], Illinois, so they took the current standing for [AE and RC? Unclear] and built the plant to that. Well, when they go to license the plant, the rules have changed. So, they go back and rebuild the plant or reconstruct it, and they get to the licensing and the rules changed again! And they said, "Thank you very much, that's it for us. We're finished." So, you're going to have a set of rules. Now, can you have a perfect set of rules that they want? Of course not. A perfect design from day one? Of course not. But you have to, at some point, stop with the upgrades because you're not dealing with building a new airplane [where] you're having, "I'm now going to be able to put 16000 horsepower engines under each wing and fly with only two engines across the ocean." That's a little easier to do because you're not talking about the kind of massive stuff that you're dealing with in a baseload power plant.

Conrad: So, every time they make a change, that drastically increases the cost? Because you're constantly trying to keep up with the regulations that — you might be fixing something that's already brand new and never been used, but you have to replace it because the standards change.

Monti: Yeah, and again, go back to my example of the two cable tunnels; Indian Point 2, we had a single cable tunnel, Indian Point 3 we had to have two. So, how do we compensate for Unit 2? Well, the design called for cable trays to be separated from each other with fire barriers. Now, why did that duel cable tunnel requirement come out? Browns Ferry. What happened to Brown's Ferry? Well, Browns Ferry was a boiling water plant, and I'm not quite sure what they were

doing, but they were looking for leaks with a candle, and started a fire, the Browns Ferry fire. So, you're saying, "My god! With a candle?" In a power plant, right? So, it started a fire. And from that comes all these other regulations. Now, if you look at Indian Point Unit 1, because of the overkill, if you want to call it, at ConEdison, all the cable trays were not open cable trays but closed cable trays; all heavy, metal enclosed cable trays. So, then you say, "Why didn't we do that at Unit 2?" Well, Unit 2 was a fixed price, turnkey plant; the initial contract on Unit 2 was a 98-million-dollar plant. Think about that, when I said 98 million dollars, right? By the time we got through, we wound up negotiating with Westinghouse, I think the plant wound up costing about 128 or 130 million dollars. You couldn't get arrested for that kind of money today and try to build a turnkey plant for 100 million dollars. But we had a fixed price contract with Westinghouse; it took them to the cleaners but we got this fixed price plant. Now, in that fixed price plant, the leadership in the company, the nuclear leadership, recognized that there were things that were going to need to be done. And I think I may have mentioned this to you before, this man named Bill [Cahill], who was in charge of nuclear at this time, said to us — because we [were against?] — "We will get you"— He told us, "A million dollars a year," the equivalent in 1972 or 1974 money, every day for five years after the plant goes into service. Because it wasn't going to be a straight million, with inflation and the rest of that. Well, that was great, we were all happy as a pig in swill, if you will. But what happened? Bill Cahill decided that he was going to greener pastures and he went down to Entergy in Louisiana, I forget what they were called at the time [pause] [Unclear. P Light?] There was no follow through with that from the people behind us. So, we suffered through a lot of problems that otherwise would have been avoided. [Laughs] We had circulating water pumps that I'd come in in the morning and ask one of the engineers, "How many circulators do we have operating today?" Do we have eight? Do we have two? A circulating water pump would fall apart. A [emphasis] huge pumps pumping 120 thousand gallons a minute, right? Didn't hold up. Our service water pumps, we had to replace those. The strainers for the service water pumps, we had to replace those. These were all things that during the life of the plant had to be replaced, some much sooner than others. Some we had to rebuild. We had problems with the condensate pumps, we had problems with the valves.

Q: How do you feel about Indian Point closing and do you feel the same as you did when Waterside closed?

Monti: Absolutely. I'm going to use a word, we euthanized that plant. That plant had at [emphasis] least forty more years of life in it; for the [emphasis] benefit of the public, in terms of non-atmospheric emissions. That's the benefit to the public, but we euthanized that plant, there was [emphasis] no reason for that plant to shut down. The reason why it shut down is because Entergy gave up. They were going for life extension, they spent, I don't know, 150 million dollars in trying to get the license renewed and at every turn, New York State stepped in the way, causing it to spend more and more money. At some point, you say uncle and you leave and shut the plant down. The governor did not think about the consequences; if you shut that plant down, where are you going to replace it? Well, people say, "Oh, you replace it with electricity from

Canada." How's that getting down here? You have the capacity to bring that down? You're talking about putting a power line under the Hudson River, coming down from [Hydro?] Quebec coming down to a couple substations.

Are you really prepared for what you're going to have to do to put that cable in the river? Where's it going to emerge into a substation? The public service commission has a rate structure, if I remember correctly, that says, "You should be generating enough electricity in your area, otherwise you're going to pay a penalty for that." They're paying a penalty for that. Why is it any better for the state to force you and I to pay for the five plants up on Lake Ontario to stay in service and you take Indian Point out? 2200 megawatts. Right now, in California, I forget if it was Greenpeace people, somebody out there are fighting to keep the Ottawa Canyon in service because Pacific Gas and Electric's going to take them out of service and they're going to retire it. They're saying, "You're taking away 2200 megawatts of electricity that doesn't produce atmospheric emissions." If you look at Commonwealth Edison, the [Byron?] and Braidwood plants, there's four of them there, Commonwealth Edison said they're going to take them out of service. This year, you'll wind up in the next year or so with something like 5 or 7 thousand megawatts of non-CO_2 producing electricity production taken out of service.

Conrad: When they go out, they tend to be replaced by natural gas as well, right?

Monti: Exactly, exactly. Transmitted from somewhere else! You've got to get it here; you know? [Laugh.]

[Long pause.] You know, one of the things we talked about earlier, about firsts, I think I mentioned the [unclear]. When I look at Indian Point, we did a full reactor coolant system decontamination, on Indian Point 2, the first full system decontamination done. We did that ourselves [laughs.] You know, with the help of a design crew, we built this outfit — I forget the name of the outfit — built all the equipment, put it all together, assembled it all in Washington state, not too far from Hanford, got the system up and running and took it all apart, took it to Indian Point and put it back together in a small space and we did full system decom. It was an unheard of thing to do.

And I don't know how many other firsts you can say we did [laughs.] I mean, when I look at ConEdison, they were the first company to have a thousand megawatt electric plant and that was at Ravenswood, Ravenswood 3. So, it was a company I'm proud to have the ability to work for and be a part of. I mean, I had made small contributions, nothing [like] the legends, I call them legends of ConEd who did things. [Their?] names are not heard, but they're there. I guess I can say it, it's a vital industry, to all of us. And when I say the people — I didn't produce electricity, the company didn't produce electricity, what the company produced was comfort, the ability to read at night, the ability to stay cool in the summertime, the ability to have fresh food, you know? All those kind of things, when you think about the benefit of electricity. And if you can make it without interfering with nature, I think nuclear power's one of the ways of doing it. One

of the ways, not the only way.

Q: Thank you, Bill, for your contribution to the Indian Point Heritage Project.

Monti: You're most welcome. I'm glad to have had the opportunity to do it.