

William R. Dickson Oral History Project  
Interviewer: Charles Vest  
January 19, 2005

X: Wednesday, January 19th, and this is an oral history session with Chuck Vest [president emeritus] and William R. Dickson, former senior vice president of MIT.

INT: Bill, one of the things I wanted to ask you about is the origin of the cogeneration plant on campus which, of course, proudly bears your name today -- if you could talk a little bit about that.

WD: Well, we thought about building a cogeneration plant for many years. We actually had the preliminary design of a coal burning plant. And the reason, of course, for that was that in the first throes of the energy crisis in the early '70s, there were predictions of no more natural gas by the end of the century and, of course, oil was a big problem as far as supply at the time and, of course, cost. We did a fairly extensive piece of work on building a coal burning plant. And, of course, the obvious problems are that we're right in the middle of Cambridge. And you have to get the coal to the site, which, of course, we have the railroad. And you have to store it rather than an old pile that you would many years. You had to store it really undercover. So, we had to design silos and everything else. But as time went on, it just seemed impractical with all the problems that seemed to come to pass to build the coal burning plant. So I think we let it lay dormant for a year or two. And then finally decided that it was crazy not to build some kind of cogeneration plant. The original power plant built in 1914 for the main group was, basically, a cogeneration plant. It generated steam and then it generated electricity from steam. So that it used to heat and generate electricity from the main group. I think that's where the old 2300 [inaudible] lines that may not all be gone. But they were certainly present over the years -- because that was the voltage that they used to generate. There were two or three people that were instrumental in this. One was certainly Tom Shepherd. The other was Dick McKay. Since it was a project that I supported, I spent a lot of time on it. To make a long story short, it gradually seemed like the right thing to do. There were a lot of regulatory issues, and gradually over the period of a year or two or three, the regulatory issues were overcome. Professor Beer was a great help in this work. And

we finally elected to build the gas turbine plant looking at GE -- really wanted to install their equipment -- and the people from Sweden whose equipment was finally used. And I think one of the questions was -- if you build the plant, how reliable will it be? And frankly when we first commissioned it, we had some problems, and it probably raised, again, the question in many people's minds how reliable it was. But those gradually got shaken out and, I think, for the most part the plant runs for long periods of time without having to shut down. It doesn't produce electricity for the whole Institute. Its capacity is such that I think we could, depending on the weather, we could produce probably 20 kilowatts or so -- maybe that's the wrong term -- 20,000 kilowatts, maybe. And our load at the time peaked -- was 25,000 so that we always intended to generate and then purchase from Cambridge when our demands got above what we could generate; however, for long periods of time during the year and certainly at night, we could generate without purchasing anything from Cambridge. And I believe that it finally worked out that when we were using less than the capacity of the plant, we would sell the residue back to the City of Cambridge -- or not the city, but Cambridge Electric, which is now, I guess, part of NSTAR or something. So, it worked out in the long term fairly good. Like many other things, it cost more than we initially predicted. But I think when you look at what's happened to the price of oil over the past few years, even though gas sort of goes up and mirrors the price of oil, we're much better off economically. And I believe if someone doesn't or hasn't, they ought to perhaps think of either putting in another unit so that we could produce basically all of our electricity. The capacity that's required now must be -- I don't know -- must have increased by eight or ten since then. The investment may be up as high as 35,000. So, I think, all in all, it proved to be a very successful venture. And it also, because of its byproduct production of steam, it also permitted us not to expand the boiler plant, which was in the cards at the time, because we always tried to run on a firm capacity that would serve our needs considering our biggest boiler was out of commission for some reason. I'm not sure that's ever happened that we had one down when we really needed it, but it's always possible. And you read about in the paper every once in a

- while -- that the utilities get units down and all of a sudden have a peak period where they can't meet their commitments. And the worst of those leads to the blackouts.
- INT: At the time you decided to move ahead with the co-gen plant -- the real controversy was the economic analysis really more than the technical. And I know among our trustees there was a lot of concern because some other universities had jumped into the cogeneration business at times and in ways that proved not to be cost effective but predictions that you and your team put together appeared to have been pretty close to the mark. Who worked on that? How did you think that through?
- WD: Well, there were several, again, several people involved, but the principal person was Tom Shepherd. Tom was a graduate of MIT as was Dick McKay. But I think Tom was sort of in his career before coming to MIT -- was a utility rate specialist. He was an electrical engineer, but he had never practiced pure electrical engineering -- designed power systems and stuff. But was more a rate economist. And I think the great thing that I enjoyed about working with Tom was that he was willing to make a statement and did it with a lot of thought. So much so that when he did, I really had no trouble believing him. And that's not always the case. Sometimes people look through the sunny side of things and try to promote their cause by making analyses that look better than they actually are. I think we lucked out a little bit because the whole utility business got so messed up over the years. But, in general, I think much of the credit goes to Tom Shepherd.
- INT: I remember when I asked you to come to make a presentation about the proposal for the co-gen plant to the Executive Committee of the Corporation. You told me that you hoped to go through your whole career without ever having to talk to the trustees, and you almost made it. And the reason I bring that up, Bill, is that one thing that I think all of us who have been privileged to work with you think a lot about was your whole management style. Because, of course, during the years that I had the pleasure of working with you, you had a very broad set of responsibilities beyond just being physical properties of the Institute. And you had a very particular approach to things and approach to working with people. I think it would be of great value if you could just comment a little bit on how you thought about playing your management role and the kind of philosophy and approach behind it.

WD: Well, I think much of it came naturally by just the way I lived. I always thought that people ought to do things right to the best of their ability; that everyone deserved the chance to make a mistake since we're not all perfect. And that as long as the mistake made was sort of an honest mistake -- that it was done in their thinking of the best interest of whatever it was that they were doing, I could live with that and would not chastise them for that. Now, if we had someone who continuously made mistakes and was -- because they principally weren't dealing with what it was that they were supposed to deal with -- that was another question and over time I had to discharge a few people. But I always let them know why -- gave them an opportunity to defend their position and, then, made the judgment. A little of my philosophy probably stems from my first boss. His name was Carl Magnus [F?] Peterson. And Carl Peterson was a member of the mechanical engineering staff. He wasn't a professor. I don't believe he ever got the doctor's degree. But in 1938, I believe it was, the physical plant director, then called I think, buildings and power, hung himself perhaps even in our drafting room. I have never seen that in writing. So I don't know that it's actually true. But there's no question that he hung himself. And the Institute needed a buildings and power director for a short time until they could search for one and locate one. So, they asked Peterson to fill in. It so happened that Carl's father was the chief engineer of the power plant so that Carl was familiar with a lot of the operation of the buildings and power. When I first went to MIT and got involved with some of the major projects, I once said to him, Carl, do you want me to check everything with you before I do it? You know I'm only 25 or so, and I don't have the experience that you do. And he said if I wanted you in my office checking everything with me, I would have hired a chimpanzee. And that, actually, turned out to be an important statement because I said, well, I understand. It's agreeable with me that I will try and act on my own where I know or I have a feeling that I'm doing the right thing. But if I get involved in subjects that I don't know anything about, I surely am still going to come and talk with you about them. And we made that agreement. And I talked with Mr. Peterson for a very few times other than socially for the next -- well, it was ten years before he retired -- and I think that led a little bit to the management style of letting people do what they could do and expecting that when they ran into a

situation that they weren't sure of what they could do, then we ought to sit down and talk about it. I tried not to be confrontational unless absolutely necessary. And I think got along very well with the majority of the faculty, which is an important thing when you're working at the Institute or a place like it. I think they had considerable trust that I would look after their interest if they had a particular question -- not always coming out on their side -- but that I would at least think about it for enough time to make sure that their position had a good airing. And a couple of other tricks - - not tricks, but things that I used maybe considered by some a little sneaky, but I had some committees. I had the Campus Security Committee for years. That consisted of me, Bill Coombs, who I think you met while you were earlier there. And, if necessary, Phil Stoddard, who was the vice president at the time. And this was when I was director of physical plant and Chief Oliveri of the police. And this committee basically never met -- I would say it met maybe once a year so that we could only say that we've met. But the kinds of things that it helped, Chuck, was -- I remember there was quite a few thefts one year over in the math department. And they were worried that somebody had the submaster for math key. And we talked about it for a while, and they were fairly persistent. And we finally said, well, this is probably important enough that the Campus Security Committee ought to consider it. And I'm not sure whether we met or not. But at least one or two of us decided that it would be just throwing good money after bad to do this. And so we went back and reported to him that the Campus Security Committee felt it was unwise to do this at the present time. They said thank you and thanked us so much for taking it to the committee, and that was the last we ever heard about it. Well, little tricks like that helped rather than just say to the head of the math department -- no way are we going to do that. People like to think that they're considered. And for the most part, they should be. But it's the flip answers where you say I'm not going to do that. And say it right at the first time you ever talk about a subject. There are a few times when that's probably right. But other than that, you ought to give everybody their voice and listen, and I guess listening is the principle thing. So I think those were the tenets. I never was management trained or anything else. It just seemed to me the ability to get along with people -- while they don't think they can step on you is an important thing.

INT: Bill, I often thought that time in which there is a lot of concern about women facing glass ceilings in big organizations and so forth that with this kind of open people-oriented approach you had, you actually appointed women to two of the highest positions that reported to you -- one to run the plant department and one to serve as police chief. How did that come down? How did you think about that?

WD: Well, I guess in plain terms I always thought about it -- you ought to put forward what you think is the best person for the job. And I never cared whether it was a man or a woman, black or white, or anything else. So I decided that in these cases -- I think the first one was Ann Glavin -- when I looked at all the offices that were in the department when the chief finally retired -- Chief Oliveri -- that she was the best. So, it was not with much trouble that I appointed her the chief. It didn't go over too well with many of the campus patrolmen who -- well, some of them didn't like Chief Glavin. And that stemmed from when she was coming up through the ranks. I think she probably started as patrolman and then a sergeant and then a lieutenant or something before she was chief. And I always thought it was a pretty good decision -- Ann's fault was that she didn't always practice what I had just preached after she got to be chief, and that is that a little tolerance and a little working with people that she believes had made a mistake. She would fire from the hip occasionally. And it got her in trouble. I spent a lot of time working with some of the patrolmen to try and get them to understand her point of view. But I still think it was the correct decision at the time. And she did a lot for the department. Much the same goes for Vicky -- when I looked at all the people. I mean we had some good engineers, some excellent engineers. And I would have preferred probably to promote an engineer rather than an architect, although she really isn't an architect either, to the job. But I couldn't promote any of the people that I still had working for me. I felt that I couldn't because I knew their characteristics, and I had promoted a couple of them before I promoted Vicky to the job since I had been out of there for so long. Then, I think a guy like Barrett, who was probably before Vicky, was an excellent person for the most part. He wasn't well liked by everybody, but they had to agree they respected him because he knew what he was doing. I was so young when I came to the plant that for a long time I was still the youngest person around. Anyone that I would

promote would be quite a bit older. So that the senior vice president's role, when it came to pick someone for the plant, it seemed that Vicky had more of the characteristics, and she did a terrific job in general. She was probably my best performer -- maybe because when I said that I wanted to do something, she figured that was instruction, and she better go out and figure out a way to do it. And she clearly was a leader in that area. She did well in the construction area, although she was not as skilled in that area as one might be. But she still did a good job as evidenced by a couple of the Taj Mahals that are standing there today and the start of building them -- Simmons Hall -- two very different but very difficult projects. As you know, I was head of an advisory committee for a few years after retiring and was intimately involved in Simmons Hall and I have to tell you that Simmons Hall was probably the most difficult construction job of all the buildings that have been built at MIT since Kresge Auditorium. And it was just a very difficult job. And I know it cost a lot more than we had hoped, but I think people don't underestimate the time and effort that a guy like Dennis Fitzpatrick spent on that job where he's running a whole company. He spent much time on that particular job because of its difficulty and because he wanted to deliver for his alma mater.

INT: Well, from my vantage point without the two of you, you and Dennis, we wouldn't have gotten through that. We're proud of the product.

WD: Well, Dennis is an outstanding individual. Dennis used to come to meetings out here in my living room to talk about some of the problems. He didn't come looking for solutions. I think he was quite able to come up with his own solutions. But being a stranger so to speak to the job, you could see what was dragging or going wrong, and so we tried to feed this information to Dennis for his benefit. And in the end it worked out okay. It turned out to be something -- a building which I don't particularly care for as far as a piece of architecture. But I understand from all reports, quite well received by the students, which is the important thing.

INT: You know the one major construction project that I got to work with you and observe you was the biology building. Of course, that was largely designed and planned before I came to MIT. But then the whole construction was done after I came. And I remember the day you came to me -- and this reflects back to what you said about

your management philosophy -- and said I'll tell you who we need to manage this project -- and you don't want to know what it is going to cost, but we're going to go get him. And that building, also, was not without its difficulties in construction. Can you chat a little bit about that?

WD: Well, there was some trouble in managing the construction of that building within the plant. At the time, I believe Brammer might have been the director of plants, and even though it wasn't my business so to speak, I decided that I would take over the oversight of that job, and I hired or used Frank Lawton, a person who had worked all of his career at Harvard and to come up here after he retired. And Frank was a very unusual guy. So Frank was in the field on that job. And Frank would come and visit, and we would chat about problems, and I can honestly tell you there was no problem on that building during construction that went unsolved within 20 minutes of Frank coming and talking to me because we decided what the problem was. We decided what the solution should be, and we went back and implemented it, obviously with the willingness of the contractor. But the job had some difficulties. The first difficulty appeared in the foundation, which was a deep foundation, two stories and of course we get into water. Also, we had a lot of contaminated soil because of the backfill that was once put in there. I think that was probably part of the marsh edge. And so, there was a lot of cinder fill and stuff, which eventually had to be disposed of in a certain way -- so that we excavated and had an enormous pile of dirt on site that was to be eventually carted away. And we also had some movement of the bracing. Those were the days when you had to brace a hole that deep with the clay and the water, and we used steel sheet piling. And then you have to brace it either cross lot so to speak where you run from one side to the other side or diagonal, and I think on that we used mainly cross lot bracing. We had more movement than we thought we should have. For a while we were a little concerned about what was happening behind the bracing. But it worked out eventually. And the building was constructed. It was not the easiest, again, building, but it was not too difficult. The siding of the building was a big issue, though. And what I mean by that is most of our buildings, you know, on most of the properties we bought, come right out to the sidewalk. I'm thinking particularly of the Ford Building, where actually the property line is the side

of the building. And we wanted to open up a vista down Main Street. So, that meant that the building had to be sided back from the property line. And we had quite a discussion and many sessions where I believe it was the planners -- wanted it closer to the property line because they didn't want to interfere with the site behind it. And the architects wanted it in my opinion too far from the property line. So we had many decisions and finally a big meeting with Joan Goody and her staff. I sat down that night and wrote my opinion of what we ought to do. And it didn't leave too much room for further discussion. It basically said where we ought to site the building. And I know I put some line that's famous to this day except I can't remember it, but I'm sure Joan Goody does because she often recited it to me. Something about as I sit here and contemplate it, I'm not sure -- it wasn't my navel but something --

INT: Now these are the big exciting obvious things -- building new buildings -- biology, Simmons -- but you also cared a lot about taking care of the buildings that were already in place. I know as we did projects like Building 16 and 56 you had a particular philosophy about how to deal with long-term stewardship of buildings in a very pragmatic but good way in my view -- and then also, kind of a different perspective -- you were a great advocate for working properly to steward our architectural treasure of Baker House. I wonder if you might say a little bit about the broad views of maintaining campus buildings and a little bit specifically about Baker.

WD: Well, Baker is a one of a kind building. If you sat down and drew Baker House on a plan, and plotted it in Nebraska, it would be pretty strange. But I think, take advantage with the river, and it was just very cleverly done by Alvar Aalto. It's strange that some of our best buildings were done by Finnish architects. And I felt that Baker was in need of restoration. It wasn't in need of renovation. Baker House in itself was a fine, well thought out structure. And it got tired being 50 years old and the wear and tear of the dormitories. So it was easy for me to see what we ought to do with Baker House -- costly -- but we have restored Baker House to a place where it will serve generations of students in the future. It had, for instance, furniture in it that was designed by Aalto, but it was superior furnishings in that building. And over time, as we did have some breakage, we would replace it with similar items rather than just say, hey, we can buy a chair that's a lot cheaper than this. Let's go out and

do it. And similarly with the windows -- they had not much energy efficiency. So they were replaced with basically thermal pane windows but of the same basic nature -- because they were pretty plain. So, to the passerby who looks at the building, it's been the way it is since it was erected.

INT: It was a typical Bill Dickson statement. I remember the day you came to my office and said, well, I want to propose that we restore Baker House rather than renovate it. And the bad news is that means it's going to be expensive. But the good news is it means we don't have to pay for air conditioning.

WD: That was a big decision -- whether to try to air condition it or not. And I'm a little ambivalent, but I think we made the right decision not to -- and to restore it. As far as the main group of buildings -- well 56 and 16 -- they, again, 16 had just been built when I went to school -- so, it was around 1950. So, when we did that, it was close to 50 years old. Whittaker was built in '63 or so -- so that was probably only in its -- close to 40 years. But biology had changed so much over the time. I'm sure you know, we didn't even have a biology except for a couple of rooms in Building 4 before the Dorrance Building was built. Although they abutted and looked quite the same -- they were done by the same architect, Anderson Beckwith -- they had a different set of problems. We had a couple of studies made on them. And I had some of my former instructors -- Simpson, Gumpertz & Hager to make recommendations on how we ought to treat the window walls. And, of course, in typical fashion, they were all for basically tearing them off and building something different in their place. That was not, I think, called for. And I'm not sure why they made that recommendation. It wasn't an architectural recommendation. It was because of the physical condition. Well, we chose to go otherwise. And I think we came out with something that will stand another 50 years. We had a clever architect in Harry Ellenzweig -- someone who really ought to do more work at the Institute. And Harry had adopted my philosophy that we were trying to give good homes for the people who were going to go in the buildings -- take some of the austerity away -- because they were very austere buildings. But, on the other hand, do it by cleverness and some use of interior materials as opposed to try to redo the structure of the buildings.

INT: Well, you did a great job, and I have to say that all three of these buildings -- 16, 56 and the biology building -- the people who work there really like them, and that's most important. Let me finish with just two quick questions, Bill. One is, I think it's important to get your thoughts down, while we're talking about the campus, on the selection of Frank O. Gehry to do the Stata Center.

WD: Well, as you know, we had this committee, as you've said many times --

END OF SIDE ONE

SIDE TWO

-- It was an interesting process and, of course, it was split. That last meeting in the Simonides Conference Room was exactly split. I think the two architects under consideration -- down from the list that started probably at 25 or 30 -- were Frank Gehry and Pei Cobb. Pei Cobb was on there probably because I insisted throughout the selection process, although I didn't attend all the meetings, that we have somebody on there that we knew could produce a product. And, of course, we knew that because we were familiar with Pei's work and Cobb's work. And so I think that's probably why they were there -- because I was unsure of Frank. I know he could produce a product, but I wasn't sure that product was something we wanted. As we went along, however, and looked at them, I could picture in my own mind a couple of blocks over there that would look far different from the Skidmore & Owing's buildings -- but there would still be blocks, and we'd add it to a whole bunch of other blocks. And it didn't seem to me that it would take advantage of the opportunity in the site which was actually quite large when you consider Building 20 being on -- and the East Parking Garage coming down either then or later -- in a space between it and Biology -- it just seemed to me that I wasn't sure the block was right. It wouldn't have taken much for me to tip that way, but in the end when you and I met afterwards when we talked about it, it seemed to me that somebody once took a chance when they built a grapefruit for an auditorium and a beer can for a chapel that both turned out fairly well. I think it's a tossup whether Baker or chapel is considered the best piece of architecture on campus. I think the chapel might win, however.

Thinking back to that, it said to me, what do you ever get if you don't want blocks, if you don't take a chance. So I think that's why I eventually -- I don't know whether I recommended or agreed that we should probably hire Frank Gehry, and it was doubtful we'd get a block. And that we didn't get.

INT: The last thing, Bill, a little bit out of sequence, but I think it would be worth your saying how you became senior vice president at MIT.

WD: Well, for the second time in my career, I promoted myself. I don't know whether you've ever heard the story. But when Paul Gray became president, he had his heart set on having either an executive vice president or something like that, which the Institute, I think it never had. And he made overtures to the fellow who was formerly head of Lincoln Lab --

INT: Jerry Dineen.

WD: Jerry Dineen. It seemed to me -- he told us all about it. And it seemed to me that thing was pretty well done. And then Dineen said he had been thinking about it. He had decided to go into private industry. And so he turned it down. I think he went with Honeywell. I took a piece of paper -- sometime after that -- it wasn't right then. And I wrote to Paul. And I said I was vice president for operations then and had been for less than a year. And I wrote to him and I said -- I know you're disappointed about Jerry's not coming. If I can help you coordinate anything amongst the vice presidents or anyone else, I'd be happy to do it if you would like me to. And he came back and said he thought that was a good idea. For a short time I was called -- I don't know -- something that had the coordinating name in it. And after I guess less than a year, when it came time for salary increases, promotions and stuff, he promoted me to senior vice president with the idea that I would indeed coordinate these things, be responsible for the getting together of the administrative budget, working with Culliton and Constantine and Stu Cowan, and to some degree Sam. And it worked out fairly well. Once again, I didn't approach the job that -- hey, you guys work for me -- you do what I tell you. We had a very cooperative enterprise. We had a few disagreements which were not without merit on their part. And the tragedy of the whole thing is that it came to a close so shortly -- I was working at my desk on a Sunday afternoon at MIT -- 7-206 -- when I got the telephone call that Constantine

had passed away playing tennis that morning. I couldn't believe it. Then, of course, in a few years, Culliton was overcome by the cancer and died. In the meantime, of course, Stuart had left. Stuart, I must say, was a great person and one of my staunchest supporters -- rather than say what the hell does this young guy know -- I've been around for a long time -- he was absolutely my staunchest supporter. And then, over the years, I came to work a lot with Sam. And, of course, Sam turned out to be one of my best friends. Not too much for fund raising but just in general. To answer your question in brief, I promoted myself and Paul accepted.

INT: I, for one, am glad that you promoted yourself, Bill, and I think the Institute has been all the better for it, and I thank you for taking a few minutes to share these thoughts.

WD: Well, I thank you for being willing to do it.

[End of interview]