

July 6, 1979

Occupation: College Professor at Dickinson College

Interviewer: When did you first hear about this incident, do you remember?

Narrator: That was interesting because I had heard about it, I believe on the Thursday, now I don't have the date. You probably do.

INT: The day after the first information at all was released about it?

NAR: I suppose, yes. I heard just incidentally. I really learned about it that Friday afternoon when the College had its large gathering over in the Holland Union. Before that, I was really not well informed. I didn't pay much attention to it.

INT: Did you know the reactor was there before the incident occurred?

NAR: I doubt it.

INT: Did you know how far Three Mile Island was from us?

NAR: As soon as I found out about the problem, I heard that it was near Harrisburg.

INT: Okay. What did you think about or talk about at that time?

NAR: At which time, precisely?

INT: When you first found out about it.

NAR: Again, when I first found out about it, it was rather incidentally, and I was in the middle of going to do something – I really wasn't even concerned with it. The fellow who mentioned it to me said that he had taken off work because of the nuclear reaction problem there, and I had really not paid any attention to it at all. Just didn't. I had other things on my mind. And again, my real awareness of it, of the dimensions of the problem wasn't until that meeting on Friday.

INT: So, you didn't think it was anything serious or a crisis of any kind?

NAR: No, not until Friday and then when I heard more information it was of a different form.

INT: Did you start seeking out information?

NAR: Not really. You mean after Friday?

INT: Yes.

NAR: No, we were very well briefed at the session on Friday. Which included the Professors Wolf and Laws and a number of other people who were certainly much more, abreast of the information but also professionally more competent to handle and evaluate it than I was. I thought the briefing was very good. And then, of course, that evening the, we did watch television news. That we normally don't do. We did that evening. So seeking out information, well, I guess we did some things – like watching television news. I don't know that we did anymore than that.

INT: Did you talk about it with friends or co-workers or your family at all?

NAR: Oh, sure.

INT: What kinds of things did you talk about?

NAR: Well, what our perceptions of what exactly was occurring. We explained it to the kids. Now, that was rather interesting because one of the kids, the one who's 5, didn't really have any understanding of what the problem was. All he knew was that we had asked him and his sister to stay inside. This was on Friday, I think. There had been some, I guess around noon on Friday, there had been some radio announcements asking people to keep their kids in. So after my daughter got home from school, my wife then brought my son in right away, I guess about noon. My daughter got home from school. She asked her to stay inside, too. Now my daughter, being 9 and was able to understand as much as anyone I suppose what was going on. She could easily see the reasons why. My son, he just didn't agree with the decision to stay inside. We tried to explain to him rather simply, that it was dangerous. He sort of took that, but he was restless about it. He didn't see any problem, after all. So, yes, in terms of talking about it as a family we tried to explain it to the kids. We had on the television going that evening. As much as we were getting information from it. We talked about what was on the television. I think that would be it. We talked to some neighbors before we had gone in for dinner.

INT: You said that you didn't think it was serious at first. Did your attitude change?

NAR: At first, again, this is when I found out about it Thursday. It certainly changed after getting together Friday when I saw it was obviously much more serious than I thought.

INT: So, it was basically Friday that your ideas changed?

NAR: Friday, yeah.

INT: And what made you change your mind?

NAR: Well, the information. The fact first off of people around the college having radios going. In the afternoon, which is not customary. And then of course the radios asking people to stay inside. And the secondly the all-college meeting.

INT: How did you feel about other people's reactions to this?

NAR: On Friday or during the week or what?

INT: In general. On Friday and then throughout the week.

NAR: Well, there were a lot of people who were awfully agitated about it all. I suspect they had followed it more closely than I had. That struck me that there were so many people there who were really visibly shaken.

INT: Did you think they were overreacting, or not reacting enough to the situation?

NAR: No, each to his or her own reaction. What they had heard obviously was enough to set them shaking. I didn't think they were reacting enough or too little. It depends on what you think of the situation, I suppose. So, no. I didn't make any value judgments there. There were... a lot of things happened at the same time. Physically there is a danger, there's no question. You can cut me off in my elaborations if you want.

INT: No, that's okay.

NAR: I might go on at greater length than you want to hear. So, there is a physical problem. You have to create a uniform reaction somehow or other when a uniform reaction isn't necessarily called for. Every individual has his or her own context within which to react. For example, pregnant women and people with very young children. You have other people who must be able to carry on normal functions. Public authorities of various sorts. And you have people who are, can do one, leave or stay. Students, on the most part. Now, amongst all those possible individual reactions, which when accumulated, can become collective reactions, one have to make sure that no further harm comes from it. So, for example, the public authorities of the college-administration-and so forth, was very concerned about jamming the roadways with people deserting Carlisle and the area. Concerned with the obvious havoc that can result from very unsettled situations. And their fears were born out in many ways. The looting that occurred right at the same time. You had people who were rightfully so, had to make individual decisions. Pregnant women, for example. And those who had to be concerned not with just individual decisions but with decisions made by groups of people. I thought, do you want me to maybe name some groups or something?

INT: Just other people you encountered during this situation. Either students, or perhaps students in the classes on Friday or people at the meetings or that type of thing.

NAR: Well, there are a number of interesting observations to be made. Some people surprised me.

INT: In what way?

NAR: Some people whom I knew to be fairly steady thoughtful people, now I have some of this information second-hand, acted in ways that I thought weren't so much bazaar, but what they did belied the image I had of them that I had. Very, very uncharacteristic. Now, the problem of the observer of course is not to immediately pass judgment. People have different reasons for acting in a certain way. But we knew several people very well, who flew from Carlisle, almost literally. Their haste. It was their reasoning for doing that, not so much the haste but the reasoning behind it, that took us by surprise. And I guess it's primarily because of their reaction being very different from what I would have expected. Not that I would have not expected them to leave, in given circumstances, people will do that very legitimately. But that their reasons.... In one case, for example, a woman we know had dreamt catastrophe, and on the basis only of that dream – not only her family but other families left. On the basis of that dream. I would rather describe that as an observer than one who is mocking their decision. People are made differently, and have different reactions to very surprising things. That was one of the most... that incident was one I will never forget. Because people who were ordinarily will think through all facets before making a decision; and are normally always right in the decision they make. They don't do it because it's a fetish or anything. They do it because it's the correct thing to do. In this case, they simply left on the basis of some such dream. Now, I was surprised by that. The students left in large large numbers. How did I react to that? Well, I didn't really... there was really no reason why they shouldn't. The ties to the College really aren't that strong when it comes to a matter of perhaps extreme danger to yourself. What I observed about that of course is the enormous difference between students and their environment and the rest of Carlisle and its environment. Now all you need to do is take the same people and put them in different situations and they are going to react different. But students didn't have to take vacation leave in order to leave Carlisle. They didn't have to pack up family and friends and elderly grandparents and things like that, and had no real reasons to stay, outside of their own personal reasons to stay, finishing off some research, or whatever had to be done. So, they did. Took off. Now that of course was not characteristic of the rest of Carlisle. We had some people in our development that did leave. In one case the woman was eight months pregnant, I guess couldn't see any reason to stay. Very few other people did. Now whether it's because of a lot of them feared looting. Now students don't have to worry about looting for the most part. Whether it's that they, their own environment which was largely their work place was filled with people who were staying because it costs something to leave. To take off for a week, might be your week's vacation. Well, now you are going to think twice about hazard before doing that kind of thing. Another case which might be very difficult to take that week off. If you are there on the job and you've got something happening this week and it's gonna be done this week one week or another pressures against you leaving are very, very strong. So, there are a number of reasons and I think it struck not only me but also the students as well. That people are at various times in their life able to do things that they're not able to do under, well they operate under different constraints. So then again I don't, not to say that students should have stayed. Most

likely if more people had options like that they also would have left. They didn't have the options.

INT: Did you have any option to leave?

NAR: Sure, we could have left, too, at really rather little cost. The College was clearly closing down, and the work I do teaching and the work with the internship program depends on students. No students no work, effectively. Now you have class to prepare for, exams to grade. I stayed and did research all week long. All of that was "postponeable."

INT: Did you think about leaving?

NAR: Oh, we did. We even had a suitcase packed that if it really came to that we would leave. We just didn't think at any time that it would come to that point.

INT: What made you stay? What made you decide to stay?

NAR: Well, we as being part of the College were in a very favored position because good friends of ours Priscilla and Neil and others were working daily on the situation. John Luetschelswab lives so close and they were all here and they were doing their research and getting back to the community on what they had found. They were making their observations and they were staying. Well, people generally don't have that kind of environment to work in and, but people at the College did so we just acted really on their, on the basis of what they were saying or doing. If they would have left, we wouldn't have been far behind, but they didn't so I had things to do and the other parts of the area were not reacting "precipitatively" either. For example, my daughter still had school, school district didn't close sessions and I was fairly sure that if the school district would close down for snow, won't close down for this, then even though they might be hearing the same information that I'm hearing from the same sources, I took that into account.

INT: Did you change any of your ordinary routines? Other than maybe not having classes?

NAR: I did research all week long.

INT: Which is something you normally wouldn't be able to do.

NAR: Right.

INT: You said you packed. What kinds of things, did you have anything that you wanted to take, that you didn't actually take with you or you didn't pack?

NAR: Well, I didn't do the packing. My wife did. So, I really don't know what was in the suitcase. She did take fresh water, but we normally take that on a trip anyway. See both of us have families in Washington, D.C. So, again it wasn't very hard for us to pack

up and leave because they were so close. On the other hand, it wouldn't have done much good if the China Syndrome occurred because the Washington area would have been affected, too, I'm sure. I don't know, I think she just packed clothes.

INT: Was there someone who you were watching to help you decide when or if you should leave?

NAR: The people here. That is the people in the Physics department mainly. So I was relying heavily on... I think I understood what the problem was that was explained time and time again so that I finally ingested it, but yeah, I was looking very heavily to what people in the physics department here said. Probably I thought them to be a more reliable source than any other.

INT: What did you think about the news media and how they handled it?

NAR: Well, I thought the local news – not bad. Now I don't normally watch the TV news because I don't like TV news. So you've got to understand that in my answer. I think it's basically showmanship and so I carry that bias with me whenever I watch TV.

INT: What about newspaper in this since?

NAR: I thought the reporting, well, I also get the Washington Post virtually everyday and I thought the news reporting in the Post and also in the Sentinel which were the two papers we would follow was fairly good. The Post seemed to have more extended discussions of the technical apparatus. In fact, I followed that more than I followed the Sentinel, truthfully. The TV media, I thought the local TV was not bad. I thought they did a fairly straightforward presentation of what was happening. I thought the national news media wasn't too impressive. They seemed to be closer to the histrionics to the event than the local news media so I thought that local news handled it better than the national news.

INT: So, you were watching television and keeping track of newspapers and everything in general?

NAR: Yeah.

INT: How about the government handling of the situation? How do you think they handled the situation?

NAR: I don't have any problems with that. I try to think myself in their position, the County authorities seem to have the right idea of how to react to it. They didn't have an emergency plan and they knew they had to have one. So they went to work with other people to create one. I don't recall any specifics or features of it nor do I know as much as was given out to public information. The National government authorities, well, Harold Denton was there representing the NRC. He seemed to me a very credible person.

INT: Why?

NAR: I guess because he seemed to understand the engineering. I don't know that he did, but he seemed to.

INT: How about Met Ed? What do you think about their ideas on the situation? And the way they handled it?

NAR: Well, I thought about that, because again I try to put myself into whoever's position. You have a situation as I recall it now, events might prove my recollections false, but as I recall it, when it did take some time before anybody really had an idea of what was going on, they had the large dimensions of it, but they really didn't have any operational sets of what was going on for a while. Again, as I remember it. Met Ed and the NRC would sometime conflict on what they said. Met Ed, for example, said the hydrogen bubble was of a certain size smaller and the NRC would say it was of a certain size much larger. Well, that kind of contradiction doesn't really bother me very much because people are trying to figure out what's going on and in the process when asked questions will try to give an answer, not really feeling terribly confident in that answer. I didn't think, for example, when the fellow from Met Ed got on, he never gave me the impression of being so firmly convinced that the bubble was disappearing. For him to have said it would identify him closely with that position. He seemed fairly tentative about it. And this is roughly true of the NRC. Now I think that that was made into a lot stronger, I think it was made into a series of flat contradictions, which I don't think at all appropriate. When I read about it in the appear or saw reportage of that on TV, it didn't quite square with the way I had seen it, because I didn't think that the guy from Met Ed was out there lying. He didn't know enough to lie. I mean he didn't know that the situation was one way and then lie about it. He really didn't know about the situation was and the guy from the NRC he really didn't know either. They are operating on different pieces of information coming in and I guess you would naturally be inclined to believe that which seems most favorable to you. But there wasn't any one gem of truth around which people made up stories, at least as people saw it. I thought that was made into more of the difference of opinions between the NRC and Met Ed was made into a greater issue I thought than it actually was.

INT: So, you said earlier that you were listening to the Physics Department here at Dickinson. Do you think they were the ones you particularly trusted or felt the most reliable?

NAR: Sure, I was closest to them. I know them all personally. I know that they have expertise in the area and I haven't talked to all of them about nuclear reactors but I certainly talked to Neil Wolf over the past four years and I know Priscilla's background, and I've talked to John Luetzelschwab and he's supervised internships in radiation physics in the students over at the hospital so that I know their work and have seen it firsthand their confidence in the area and I know it is greater than mine. I didn't need to be convinced of that but I have some working relationships with them that way. So I

would say yeah, I took their estimates more, I felt them more reliable than others without say that they others were unreliable, but I did look to our Physics Department.

INT: Was there anyone who you generally mistrusted the information?

NAR: No, because I don't think, I mean you have varying degrees of trust you are willing to put into an individual and, for example, I suppose the TV news reporters, well, you don't expect them to know what's happening. They are there primarily, they have nice faces, and they saw what they are told to say or what they know the situation and if one of them were to come out and say everything is safe or everything is catastrophic on his or her own, of course you wouldn't believe that. So there wasn't anybody, given varying degree of confidence that you put into people that there wasn't anybody's word that I mistrusted.

INT: Did you feel that at the time of the situation that the people in charge were in control?

NAR: Oh, nobody was in control of it. It depends on which situation you are referring to.

INT: I mean basically what was going on at the planet.

NAR: Physically?

INT: Yes.

NAR: No, I didn't think anyone controlled it. They might have understood it but early on, later on say around mid-week, I suppose, as the situation was obviously winding, then I thought that people had control over events. Until that time, I was fairly sure that events controlled the people and they were just trying to find out what went wrong and what to do about it.

INT: Okay, so you still feel that they weren't really in control of the situation?

NAR: Not control in the sense of being able to react to something predictably with success.

INT: Do you think they are in control now?

NAR: Oh, I suppose. It's not something that I worry about.

INT: Were you worried then?

NAR: Worry is kind of a strange word. Let's see. I guess by nature I'm very much an observer of things. Maybe it's because I'm trained largely as a Historian, an Economic Historian, where you watch your evidence a lot. If we were that worried we would have



left...first of all. Now what's the spectrum between not being worried at all which wasn't the case and being worried enough that you are ready to leave but you don't leave? I don't know, I guess somewhere in between. I didn't lose any sleep over it. But I wouldn't pass it off and say that I wasn't concerned. Three people I'm directly responsible for.

INT: So, you were basically worried about your family?

NAR: Well, my own skin, too. But I don't think that if I would have been that... I'm talking as though I had made all the decisions which is not true. If we had agreed as a family that it was time to go, then I'm pretty sure we would have gone.

INT: You said that you didn't lose any sleep over it. Did you have any kinds of daydreams about it?

NAR: Well, let's see... I was not really concerned about the air that is the... because I'm lead to understand that that really wasn't the issue. That if the thing blew up which it wasn't supposed to blow up, I guess that was it. That what could happen would have been some of the radiation would be emitted and there you are at fate's hands because if the wind blows in your direction it's bad, but if it blows away from you, it's good for you at least. That didn't seem to me the real problem as it did the possibility of the whole thing melting down and ground water being contaminated and I thought that problem was really the catastrophe. As for dreams about that, I can't really say that I did. I wondered what we would do if it had been the air pollution, the radiation coming out through the air seemed to me that there were contingencies that meant that we wouldn't be affected by it. That is the fact that the College is 23 miles away, I mean I didn't put too much faith in that. You can't believe precision here if you are off by a factor. You should expect to be off by a factor of two at least, which means that you need to be 40 or 60 miles away rather than 22, if you are 19 you are safe if you are 22.... I mean the other way around. I didn't have that kind of confidence in those projections but there seemed to be lesser danger than if the thing melted down and ground water got contaminated and I really didn't know what we would do.

INT: Did you have any sleeping dreams about it?

NAR: Not that I can recall.

INT: What kind of mental picture did you have of what was going on?

NAR: You mean the physical technology?

INT: Yeah, basically what did you have in your mind or ideas of the activities?

NAR: A leaking box within a box, I suppose. That is you have the small box and then things start to leak out and if it goes through the big box, then you are in trouble.

INT: Do you think that anything that happened at TMI may have affected your health? Either now or in the future?

NAR: No, I don't... well, again it's not something, I haven't noticed anything and I guess you wouldn't anyway in years. I don't think I was affected or my family was affected by the radiation and again it's because I'm told that radiation measurements in Carlisle were not above what they would ordinarily be. So I have no reason to think that we've been affected by it.

INT: What aspects of your life do you think may have been affected by it?

NAR: Well, the simple role of catastrophe. Things are a lot more contingent than you believe they are. That... it seems almost a greater likelihood that widespread damage could occur because of some technological disaster. It wasn't... I wouldn't be surprised by another TMI that caused a lot of damage. I think I have a greater respect for the importance of catastrophe on world history from having lived so close to it. One always has those suspicions anyway. But so many of our catastrophes have been social or political. Arab-Israeli War, Northern Ireland, all the wars in the 20<sup>th</sup> Century and they are all social, economically, political collapse. Human beings created them. And those are our great disasters of the 20<sup>th</sup> Century really. The San Francisco earthquake didn't lay low answer near as many fair size battle in Vietnam or Korea or wherever. So, physical catastrophe has not really led to widespread damage outside of epidemics, lets say, in my thinking. However inaccurate that may be. Whereas something like TMI gave me a much healthier respect for the possibility of true technological, of something happening that is fundamentally a technological problem rather than a social, political or economic.

INT: Do you think it has affected the community itself?

NAR: I guess a lot more people think that way. I think that way like a lot more people if you want to phrase it that way.

INT: If the worst had happened, what do you think might have happened?

NAR: Well, my understanding of the worst is that it would have contaminated the ground water and the ground itself. I have no idea of the physical extent of that damage but nor had I really thought what would happen if that occurred. My thinking had not gone beyond imagining that it would occur.

INT: Do you think it would have had any kind of effect on your health if the worst had happened?

NAR: Oh, sure.

INT: What kinds of effects?

NAR: I don't imagine my lifespan would have been much more than the next 3-5 years.

INT: Why?

NAR: Again, as I understand the effects of that kind of nuclear radiation saturation especially with the intensity that presumably would have occurred, it works, when it's that intense very quickly.

INT: Did you have any kinds of concerns about the food or the milk from that area?

NAR: Let's see, we had... I do recall that we bought milk from Allen Dairy for awhile rather than going to the store. I don't know why, or whether it was because we didn't trust the milk coming in from there or whether the stores wouldn't have been closed. I don't recall why but we did and we don't usually do that.

INT: Did you picture in your mind any effects of the radiation on life around you? The environment?

NAR: No, because as I understand it, it wouldn't reach a physical structure in the environment but it would have its impact on organic matter and that if we were exposed to intensive doses of radiation, I would simply imagine that we would be dying off a lot faster, but I didn't imagine bodies in the streets. As my understanding was the kind of situation TMI was very unlike a nuclear explosion or bomb or whatever, and that the effects would be longer term and that wouldn't change the physical surroundings. The appearance of the physical surroundings wouldn't make it poison to live in but it wouldn't change their looks.

INT: Did you think of your own death?

NAR: I'm sure that I did. I'm trying to think of what I did or whether that was something unique. Sure I thought that if something happened that as I said before my lifespan would be considerably shorter and the rest of my family as well.

INT: Did you think you would survive?

NAR: Do you mean survive being saturated?

INT: Just survive the incident?

NAR: You mean if something would have happened or...

INT: No, as it occurred, did you think you would survive everything that was happening at Three Mile Island?

NAR: When do you think I would survive? You mean like on Friday afternoon after the College meeting or whatever?

INT: Or even through the whole thing, did you basically feel that you would survive the incident or were there times when you started thinking I really might die from this?

NAR: I don't think I thought that. I don't know why I didn't because the chances were probably pretty good and that is if something had gone wrong and caused real damage to any of my family. But, I guess there seemed to be too many options we could have exercised. Getting out of Carlisle or somehow what would occur would not be serious but would not be fatally serious that perhaps there would be some problem within three or five mile area but out this far there wouldn't be much of a problem and we did have gas in the car at that time so... yeah... I thought we would... if I had had any real doubts for my wife and either of the kids, I'm sure we would have left.

INT: Did you think about God during the incident?

NAR: Again, I suppose that I did. Exactly what, I'm not sure. But, I can't recall the instance but I probably did.

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NAR: I have spend most of my life enjoying investigating religions. I like that a lot. I enjoy discussing theology and religion in... so it has given me a rather diverse group of ways of looking at God. Now, how does that come down to Three Mile Island?

INT: Did you have any Biblical images or anything like that?

NAR: No. It didn't seem to me that the problem would be resolved if I used a formula. That is if I only prayed an hour and a half a day that this thing would go away. That then and doesn't now make any sense to me. But one must think of the ultimate. There are lots of ultimate possible in the TMI so I'm then again I don't recall conversations or don't recall prayer per se but I'm fairly sure that I thought about God.

INT: Did you think anything like God was trying to punish man or disciplining him in anyway?

NAR: No. My God is... lets the game be played in many ways.

INT: Did you feel that you had any responsibilities during the incident?

NAR: Oh yes, definitely responsibility toward my family. A problem here is that you are only getting my view and I hope you can balance it off with what my daughter said when she was interviewed. Unfortunately, you won't be talking to my wife and it is sounding as though I made all the decisions and all the rest which is not at all true. We just don't operate that way. We felt, the members of our family felt a keen the responsibility to ourselves. That primarily.

INT: Did you yourself find any conflicts in the responsibility you may have had toward the school or toward your family or job in general?

NAR: Oh, no. I even manned the telephones one night. I think it was Sunday night. Rick Pfau and I and a few others were among the faculty and staff who were working the phones, over in the Holland Union. Responsibility beyond my family? I thought there were a number of ways I could have been very irresponsible. Suddenly, on Friday afternoon, I had started loading up the car. Showing, that is before I had thought it through, if I had acted before I had thought it through, from my point of view, I would have acted irresponsibly. Now if I had really thought it through, discussed it with my family, and then I had started packing the car Friday night, then I wouldn't have felt as bad. But if I had acted without thinking, I would have felt that I would have been irresponsible towards my family and also towards my community.

INT: So you felt that that was the way not to behave in the situation. What did you think was the way to behave?

NAR: One is always inclined to say the way I did behave. Again it's a hard question for me to answer in general terms, because what I did might not have been right for someone else.

INT: But for yourself, you thought it was appropriate?

NAR: Yes.

INT: Did you have any ethical, moral, or religious ideas of how you should behave?

NAR: I thought it was very important to maintain a commitment to that which I personally have a commitment to. Here this is thinking things through.

INT: So you feel you managed to stick to that belief?

NAR: Yes. Of course, in retrospect, you're always much more thoughtful and determined, a much wiser person after the problem has gone away. But I'm teaching at an institution of higher education, I think puts an added burden on you if you don't already have it: to think things through. If a college is not thinking things through, then it's not good for anything. It's not much good then, and you've made pretty much a mockery of your work at the college or in higher education. And so if I did anything I had to do that.

INT: Do you think there was anything that made it difficult for you to behave in the manner you thought you should?

NAR: At the time, it didn't seem particularly difficult. Again, because I have such easy access to what I thought the most reliable information.

INT: At the time, did this incident at Three Mile Island bring to mind any past events in your life?

NAR: Yes. The Cuba Missile Crisis in the 60's and a movie I had seen – "On the Beach". Which is the obvious. But definitely the analogy with the missile crisis was very strong.

INT: Why?

NAR: Well, At that time, I was in high school, in Washington, D.C. which would have been on somebody's hit list – no question to that. And I had been through, I don't know how many times, a lot of air raid practices as a kid. I grew up in a city that was very susceptible to the possibility of being demolished during the Cold War. So from kindergarten on up, we used to have air raid drills. I mean moving to protected areas, and taking various positions, and going to whatever corner of the room, and we did that possibly every year I was in elementary school. Just as often as fire drills, I think. So, there was that. And then there was also the Cuban Missile Crisis. That was the first time I remember being so close to pretentiously very perilous situation. And it wasn't because of the nuclear element, having the Russians drop bombs on us, but just a radical wrenching of lifestyle. The possibility of that, of course. But that image came to my mind very quickly, because it also lasted for sometime. And events seemed to be almost beyond control of the individuals for a certain portion of it, like the Three Mile Island incident.

INT: Do you think anything like this has ever happened before, like this incident?

NAR: Technologically?

INT: Yeah.

NAR: Oh, probably so.

INT: Do you see this as similar to anything in your own personal life other than the Cuban Missile Crisis?

NAR: What? Do you mean as symbolizing something or what?

INT: Just similar. Was there anything that perhaps caused you the same kind of stress and tension that the crisis may have caused?

NAR: I don't view the crisis as being the worst one in my life.

INT: Okay, what kinds of things do you find worse?

NAR: Well, shortly before this. And shortly I would say within, I think it was two years ago, my wife's mother died. She had cancer that came up very quickly, almost overnight

she was debilitated. It was actually over about a month or so's time. And then she had an operation and then it, there was no hope after the operation. Within about 4 months after the operation she had died. And as I say that was only two years before the Three Mile Island incident. And in terms of that being a crisis for my family, and for me because she was a wonderful woman, really. I am very fortunate that both of my parents are alive. That to me was vastly worse than Three Mile Island. Vastly worse in that we had experienced it over a long period of time, the end was known. Just, it was a matter of when she would die. There was no question that she wouldn't. And the, it was such a shock. The family, suddenly the woman was ill, permanently ill. So, I think that probably is, there have probably other things that you experience as a kid. I mean in your mind that are close to the end, but from your point of view aren't. So, I would say in terms of shock to my family, to me and my family, that my mother-in law's death was worse than Three Mile Island. I don't rank it as being tops on my list.

INT: Do you find it more frightening than perhaps a flood, or hurricane, or a war even?

NAR: No, well, I should not say that so flatly. It depends. Depends on the dimensions of the flood or war or whatever. In the long run, of course, we'd have done ourselves far more damage by a war, than in a technological disaster. I think that unless I had some more concrete comparisons...Johnstown Flood, didn't affect me any, so my reaction to the Johnstown flood would be very different from my reaction to this. Now on the other hand, in our neighborhood we have two or three Vietnamese families, each one of them they're in the U.S. because they fled Vietnam. They fled at the time when feeling was the appropriate word. On leap to the boat. They were luckier than these unfortunates now who are boat people, just being sent off. I often wondered how they were reacting to this, because they had come so close to personal catastrophe. They have come closer here than I ever hope to be. I'd often wondered how they were, I never could speak to them about it, how they were taking Three Mile Island. Another in a series of things. It was probably much less threatening to them than the actual gun fire that they had seen or heard. I don't know if that answers your question.

INT: Yes. Did any TV shows or movies come to mind?

NAR: Well, "On the Beach".

INT: Nothing else?

NAR: Not that I can remember.

INT: What made you think of it?

NAR: The situation was so similar. "On the Beach" was, of course, a nuclear... Have you seen the film?

INT: I don't know that I've ever seen it, but I've heard a lot of it.

NAR: Well, things just go bezerk. The world is suddenly infected by, if that's the proper word ... a nuclear cloud that will ultimately do in the whole human race. There's no question to that. The movie is about how people reacted to it. So that was so similar to the possible effects of Three Mile Island. I'd be interested in knowing how other people reacted to that. That is, whether they thought of other things. I haven't talked to anyone about it.

INT: How about books or stories, any of the things you might have read come to mind?

NAR: I probably, and I say probably because I'm not sure, recalled a book by a fella named Lamont, I believe. On the Los Alamos, testing. He's a reporter that wrote, I thought, a rather fine book on the A-Bomb. It certainly wasn't as strong as the movie "On the Beach". I can't remember now if I thought of it at the time, while I know perfectly well I thought of the movie.

INT: Did you find yourself singing any songs.

NAR: I can't remember if I did. I think if I did, it was, perhaps sort of ironic things.... There was one, that kept going through my mind... but it might have been the theme song to the Poseidon Adventure.

INT: [Giggle] Disaster movies.

NAR: Yeah, I was looking for...not looking.... I didn't notice a whole set of black humor coming up. In fact, the only thing I had heard that was at all amusing was about grilled cheese sandwiches as meltdowns. Other than that... I thought we had a good possibility for great black humor. Even afterwards, people weren't generating the kinds of things that help you through the situation.

INT: Did you hear any jokes?

NAR: No, that's just it. None at all.

INT: You didn't see any posters or graffiti or anything like that?

NAR: Well, Bob Cavanaugh had these shirts made up. I thought that was rather clever. That was helpful. But I don't recall... but it seems to me that it should have been a lot bigger than it was. Maybe I was not hunting in the right spots.

INT: Did you hear any new words or funny little phrases?

NAR: Outside of the references to the grilled cheese sandwich being a meltdown, I'm afraid no. I knew that painfully because I think there should have been.

INT: Where did you hear about the meltdown?



NAR: I think it was on a road show. I forget who said it, maybe Larry Mench or someone, when we went up to... see we went on a road show a week or so after the Three Mile Island incident. I forget the exact dates, but it was soon enough that people were wondering how we should talk this over with prospective students. I don't even recall it coming up either. We went to New York and Philadelphia. That's where I heard about it, within a couple of weeks after.

INT: Did people find it funny?

NAR: Yes.

INT: Did you know of any changes or notice any changes in people around you during the incident?

NAR: Outside some people acting in ways that surprised me. The incident that I mentioned to you before. Which I may not even be relaying to you accurately, because I heard it second hand. There's no principles involved. Outside of that, no. Would you restate your question?

INT: Okay. What kind of changes did you notice that happened to people around you, during the incident?

NAR: Most every one I thought acted as I would have expected.

INT: Do you think they changed in any way because of the incident?

NAR: They might be more skeptical about nuclear reactors. That is a natural, I feel.

INT: Do you think it changed them in any lasting way?

NAR: They will probably be everlastingly skeptical of nuclear reactors.

INT: And yourself as well?

NAR: Yes, indeed.

INT: Have you developed an opinion about nuclear power?

NAR: I think even less of it than I thought at the time. I have not marched or demonstrated, or written letters to my Congressman or whatever. I've never been too comfortable with it. Because I thought a lot of it an enormous waste of money and it added an incredible hazard. Billions in public funds for very marginal results. It's been 30 years now or maybe 20 years. We haven't gotten that much out of the investment. And it seems to me that there are many alternatives that have not even seriously been explored. Like solar energy. I think in economic terms a real white elephant. And, of course, in terms of hazard. I'm very much against it from that point of view, too. I

simply don't have 100% faith in technology. And I would need it, really to want nuclear reactors. I think that having 99.8% probability, from my point of view – which might change, isn't enough. And since we'll never get 100%. I would feel much more comfortable if we wrote it off as a bad experiment and started working with other energy sources.

INT: Is there anything else that you might want to say on this, something that I may have forgotten?

NAR: Outside of complimenting you and Lana and a lot of the others for engaging in this, obviously being done very thoroughly, I don't really have anything else. I wouldn't... I'm not saying that merely to be complimentary in a flippant sense. Because this will have been an even worse, it's not really a tragedy fortunately because no one was hurt, but it will become a very serious problem if people don't study it. We need not only to study the technology of it but how people reacted. And why they reacted as they did. Hopefully, this kind of thing won't happen again. Though I suppose it will. By jumping in right away with the interviews, and designing the questionnaires. With taking it seriously as a scholarly exercise, I give a great deal of credit to every one that was involved. I thought of this at that first meeting on Friday. That this is an excellent chance to study social reaction to a catastrophe like this. I'm thoroughly delighted that somebody really started to do it.

INT: Well, thank you. Is there anything else?

NAR: I will undoubtedly think of a lots more in about three hours.

INT: Well, if you do let us know.

NAR: Okay, fine.

NAR: Good luck