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Occupation: College professor

INTERVIEWER: Can you remember when you first heard about the Three Mile Island incident?

NARRATOR: I believe that I heard... I was thinking about that the other day, and I'm not quite sure, but I believe I heard about it from someone... I'm trying to think of the time it occurred... I know I heard it from a source, but I can't even remember that, that's all lost in the blur of events that followed. I did not pick up a newspaper and see it or hear about it. I heard it from somebody, yes.

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

NAR: Yes.

INT: How far is TMI from us, can you judge?

NAR: Oh, about 23 miles.

INT: When you first heard about it?

NAR: But I didn't know exactly what it was at the time. I would've said, well I've seen it many times driving to the airport so I would've guessed around 20 miles since Harrisburg, I think. I didn't realize it was quite 3 miles.

INT: Your estimate has been refined?

NAR: Yes.

INT: When you first heard about it, what did you think about it?

NAR: Well, my first reaction was one of relative unconcern because it wasn't spoken of in a highly sensational way, it was as if there was a sort of accident that could happen in any industrial plant, and that I just supposed in the back of my mind I thought, well, the technicians were in control of it after a few hours. It was that sort of initial reaction.

INT: That was at first?

NAR: I remember I discussed it in class the next day, and I think it was the next day, it was, we talked about it Wednesday and then Thursday was my class, my American Government class, so I didn't say anything in my morning class, in the afternoon class, I did say something. I think at that point, although things were a little bit more uncertain, that I said something to the effect that you can't rely upon explicitly or exactly upon what was coming out of the company in terms of their own motives for giving minimal

information. Although that was true, I still didn't have any great concern at that point. I felt that it would be controlled without any problem at all. And I suppose that was due to my falling for a line and I was cautioning them against it. In one sense, that is the assumption is that there is an accident, that the technology is such that the ways of coping with the accident successfully, that these are part of the strategies that exist. In terms of those who run mechanisms and that sort.

INT: Well, then can you remember what point, you imply, that your mind changed?

NAR: Friday.

INT: Can you remember what provoked that?

NAR: Well that was that emission, that uncontrolled emission. That the company first, tended to downgrade as being particularly significant but which state government, you know, state officials tended to upgrade in terms of the perhaps momentous significance. And at that point I found some of my earlier feelings reversed. The thing is that I just didn't think about it that much until Friday. I assumed that while there's a potential hazard here because I had been sensitized to that in some extent by people who warned about nuclear accidents but my own inclination was not to take these, that point of view too seriously at the time. Although I had read about accidents occurring in other places. It seemed to me that in terms of actual control over events, that even in the worst case, which I somehow had Alabama in the back of my mind, one of the reactors in Alabama, even in the worst case, that not much serious damage was done, not much injury to health as suffered by employees although there might have been more than I was aware of, but I just did not see that as a likely occurrence, even though in my mind I can see that it is possible. But I tended to minimize the dangers of the nuclear accident in contrast with friends that I'd argued with previously, who I had felt maximized the dangers.

INT: This was during the period between Wednesday and Friday, and you'd been talking with friends?

NAR: This is really before.

INT: Oh, I see.

NAR: I had a long conversation with Bob Entman about a year ago driving back from Washington, and he was one of those who at that point was advancing the argument that there was a really serious danger in using nuclear energy. And he made specific reference to Three Mile Island. And, he argued about the absence of, the ability to control developments, developments that might get underway and he also stressed the question of dumping waste, the fact that they hadn't developed the technology to handle it. They kept saying that they would, and that they were going to be able to do this, the government, but nothing had yet, possibly emerged. But I guess I had a greater faith in nuclear technology than he did and the capability of the, those running the technology, to work out solutions.

INT: Mmhmm.

NAR: And so, I didn't argue really strongly with him, I tended to downgrade the significance. There was one other event in advance. I ran into an old friend of mine from Syracuse University, who was bringing his son up for an interview, it must have been January or February, or some time around the early winter, I guess it was February, and he had... Well, he's involved in international nuclear energy, he writes about it and he's worked in Washington government agencies, and he's a consultant now. And he talked to me about a visit he had had to Three Mile Island, which there appeared to him certain irregularities or there were. There were questions in his mind that he felt that those who were showing him through didn't answer satisfactorily. Now this was before Three Mile Island. In his case I tended to, knowing, well you have to know his personality again to judge my response, but I tended to concede his point but still I thought that perhaps he was exaggerating the problem which he may not have been at all.

INT: After that- I guess you had a heightened awareness- is what your saying after the emission?

NAR: That's right. This led me to believe that my earlier reactions had been much too optimistic.

INT: Well, then at this point did you seek further information?

NAR: Well, yes, then I began to listen much more frequently to broadcasts. I found that broadcasts particularly from the plant for the next few days, that were being, but the MET ED officials, by Denton, by state government officials, those three sources in particular, state government, nuclear regulatory agency, and the company. But of course, the company's credibility in my mind was destroyed as a result of what they said about it.

INT: What did?

NAR: Well, that not, first of all, telling the company that, well alright, they said that later that the emission was planned but they didn't notify state government in advance. I wondered whether it was planned at all but then, adding whether it was planned or not it was surely their duty to let them know immediately which they didn't do. They delayed notification. In either case, this, I felt this was absolutely irresponsible on their part. And in general, their statements I think their statements on Friday were to the effect that things are under control, there's no danger. Herine was saying things like of that sort. And I just felt that they were completely unreliable. But I enjoyed listening to their comments later on as a way of contrasting them with what I felt were the more straighter accounts that were coming out of the NRC through Denton for the most part.

INT: So you felt, that the company was not trustworthy or behaving well?

NAR: No. No.

INT: But in contrast the government was?

NAR: I felt the NRC, I felt that Denton's statements represented the judicious mixture of cautions explaining what conceivably might happen with an absence of sensationalism. In other words, he, I felt it was very difficult to strike an appropriate balance between coming up with horrifying stories of what conceivably could happen and being a genuine alarmist on the one hand, and on the other hand doing what the company was doing implying that there was no problem at all, that everything could be controlled. And I felt he developed a very sensible, what one might call a high, what's the word I wanted, a, well balance is the best word I guess to describe that, between those two alternative directions which other sections of the media and other spokesman independently pursued.

INT: You might go on with that because I was gonna ask you how you felt the media handled the situation?

NAR: Well, I found that a really interesting mixture in the media. I felt first of all that the television broadcasts particularly in the titles that they assigned to particular, certain episodes were sensationalized. And tended to generate higher levels of anxiety.

INT: Do you remember any examples?

NAR: Well, I'm thinking, trying to think of the CBS broadcast at night. Denton, it was worse than danger at Three Mile Island or something like that. Maybe you can remember or recall it. It was a title that suggested perhaps, I think well my feeling was more than it should have. Although I conceded the existence that it was dangerous. I felt that there was a tendency in other words on the part of the national media to sensationalize the event, although obviously not without some cause. I felt secondly, that the Harrisburg Patriot, which I read with the greatest care, was quite fair in its handling of the event. I have no great love for the Harrisburg Patriot, I think it's deteriorated, as a newspaper over the last decade in terms of the quality of its coverage, particularly its emphasis on local affairs and so forth. But I felt they did a very good job in playing the, these events in a straight way. They weren't trying to cover up, yet on the other hand they were trying to probe beneath the technological problems to the realities. Giving people a sense of what the dangers actually were. And I felt the Sentinel's coverage was fairly good. I'm not trying to depreciate all the national media's coverage. I think some of their individual stories were quite good, but there's always a tendency on the part of the media to pick up the sensational, the circus kind of atmosphere, the hoopla and so forth and play that for all its worth. It's in some ways comparable to what they do in politics, which is to emphasize certain dimensions at the expense of others. Another aspect of media treatment I felt was the contradictory nature of some of the stories. I think of the Sunday papers, the New York Times, and the Washington Post, the headlines were almost, not diametrically opposed to one another, they struck rather different tones. The Post headlines spoke of the possibility of an explosion whereas the Times headline spoke of things basically being under control although there was some danger nonetheless. And I suspect that that Sunday headline had a strong effect, might conceivably have quite a

strong effect on parents of students living in the Washington area, who would almost certainly have responded to that in terms of calling up their sons, daughters, and so forth, saying get home immediately. And so, to some extent, editors could pull out of the copy that was coming out, that was being generated, could pull out stories they chose in terms of their own predispositions, or their own interests in building sales and so forth. I'm not saying that the Post was absolutely irresponsible, but all I'm saying is that in general, they tended to sensationalize more than the Times. If you argue that sensationalism is justified in terms of the dangers, than you could say that the Post treatment was socially responsible, partly that depends upon your values, and the way you see the whole affair.

INT: You spoke of the Post headline about control. Do you think they were in control over there?

NAR: No, the New York Times. Well they spoke about not as it absolutely being in control, but that the dangers were decreasing which I felt that they actually were at the time even though some danger, possibly even an explosion, remained. In other words, in retrospect, I felt that the Times dealt with the story on that Sunday morning, in a way that more correctly represented reality than the Post, that's what it really comes down to. My view, not so much a question of writing stories to appease the populous, to pacify them, or keep them from becoming irrational and fleeing and so forth. That is a consideration that editors have to have. But I don't see that as the main consideration. The main consideration is to tell it like it is. That is get the balance out of all these, this incredible range of potential perspectives. And find the balance closest to reality. Of course, I can see the opposite may be possible in return but that's what editors, good editors, have to try to do. I think the Times came closest, although I would concede that this is in line with the Times traditional way of handling stories. And if there had been a nuclear explosion, than obviously the Times would have been seen as minimizing the dangers. It turns out that the Times was right.

INT: I'm going to move you to that content. Do you think they were in control over there?

NAR: Well, I'd read something subsequently that had indicated that they were perhaps in less control than Denton himself implied. Because there were uncertainties, but let me put it like this, I felt that their hypotheses as far as what was happening, internally, were a substantial chance of being validated. That doesn't mean that there wasn't a chance of something else wouldn't happen. But they brought the best knowledge they had to bear on the problem and made some projections of how to decrease the bubble size and the dangers in general and it seems to me that these projections turned out to have been validated by advance although that doesn't mean that one at that time could completely rely upon their projections. And I, this is the main element of danger, in my mind, because I felt that since it was a new, anytime someone gets up there and says this has never happened before so we don't know exactly what's gonna occur. Then you're a fool if you don't sense the potential for danger. So, even those who felt the necessity of evacuating immediately even from this area, I could sympathize with them even though we didn't take that route ourselves.

INT: Did you make plans different from what you ordinarily would have?

NAR: Well, we did make some plans- we called six friends in different directions, including well as far south, well our parents, that is Marge's parents called from Florida and urged us to come down there, which we said at that early on was impossible, because school was going on. That was one possibility, the farthest away. Then we chose another, other people who have a place up on the Jersey shore. We thought we could go to and than Binghamton, New York and the Westchester area, I think there was one other place. And all these people said they'd be glad if we could come in fact the people in Binghamton which is where we would've gone, Marge, and I. We would've sent the kids to Florida, and gone to Binghamton, called us shortly after that said they had heard some other, well, let me see what was that? They wanted to reassure us that we could come any time, day or night, if we had to evacuate immediately, don't bother to call, just get in your car and come, you know. But what we finally decided to do was to send Mary-Margaret and Caroline down to Florida if there was a twenty mile evacuation. WE didn't feel that the twenty miles was enough of a margin for safety. Our intention was to put them on a plane. In fact we made the reservations, and if they called for that evacuation, my recollection was that Tuesday was going to be the day which Thornburg was going to make the announcement, of a substantial evacuation. So, yeah we did make some plans. We did make some plans.

INT: Did you change any of your ordinary routines?

NAR: Well, of course, my working routine was substantially changed by the fact that classes were called off. And I was able to catch up on... Marge was still working, although there was some tension over there on Monday particularly and Tuesday as well as there was around here. But as far as and then that one day, the kids were off, no the school systems in Carlisle were not off, most of the school systems, west of here I guess to the river did let their kids off but not Carlisle, the boundary was the Carlisle school district. So, their routines didn't change too much. And I remember some irresponsible comments on the part of one of our children that they didn't care if the damn thing exploded as long as school was off. (chuckles) At any rate, I can't say we changed our routines much, overall aside from the work shift that I underwent and that gave us an opportunity to talk a lot as far as the faculty, and so we exchanged a lot more opinions I remember than we otherwise did. And whether that process tended to minimize or accentuate the anxiety I can't say. I never, I felt the most concern, I think, Sunday and Monday, Saturday, Sunday and Monday, I guess, those three days.

INT: If the worst had happened over there what do you think would've happened?

NAR: Well, I, all I could only think of what I read that was a possibility of a melt down, I have subsequently read arguments by people who said that the whole notion is absurd that the stuff would have never gone through the concrete floor and done all that damage and that was mass hysteria and so forth. But at the time they, the media, the television media, and some knowledgeable physicists particularly the anti-nuclear ones were

speaking as though a melt down was a possibility that would have been the worst of all possible events, and presumably that would have contaminated the soil and the water and I guess in the long run, maybe the air, I'm not sure, although the potential repercussions from a meltdown, but it would have made life uninhabitable, or substantial area around the site and so that was in the back of my mind.

INT: Did you have any mental images of it?

NAR: Mental images? Uh, I must admit I really did not except that I think I envisioned the possibility a couple of times that if there were something like that, either an explosion on the one hand or a meltdown on the other, which were the two most feared possibilities, uh, that there might be an area desolation around this sector for quite a while, until things were cleaned up or until the worst effects were neutralized. So I did, yeah I did, I thought about that a couple of times, but not consistently. In other words, that wasn't constantly preying on my mind. I did think about that as a possibility.

INT: Did you think about the effects of radiation on life?

NAR: Oh, yes, sure that would be, my assumption is that in the event of a meltdown, the possibility of a meltdown, or the possibility of an explosion, that everybody would be moved, that presumably was the purpose of the evacuation. And therefore the uh, the human, the loss of human life, would be kept to a minimum. I didn't see that was really a major factor because I felt that the, if anything the state, and justifiably so, that is Thornburg would be airing inside a caution. And that was good in my perspective. So, I didn't foresee the likelihood of any great loss of human life. Let's say there had been an explosion, people, they had evacuated everybody if there had been an explosion, there probably would have been some people who would have refused to go, I'm sure that's true. And they might have been killed, and that sort of thing, but what I saw more than anything else was a mass chaos in the case of an evacuation, even from an area that is not as populated as this, is relatively sparsely populated as this, that plus perhaps a period of during which no human habitation could exist within a sector around the plant, would be, people would be forbidden to go.

INT: Did you have images of this chaos?

NAR: Not very many. No, I, a couple of times I heard broadcasts about evacuation plans and the fact that they, what they were going to do, I guess this was a little bit later after they had said they were not going, obviously it was after Tuesday, and the fact that the traffic was going to be one way on the turnpike for a while and another was on the interstate. And then all of this business about getting the prisoners out and elderly people, nursing home people and so forth. Which would be obviously present a lot of logistic problems, so I could see, you know, a few tremendous, for a short period of time tremendous traffic tie ups. But if anything like that were to be instigated, well 600,000, about 600,000 people in this area, you should be able to get all of them out in a relatively short period of time. I mean you would have a lot of chaos for twenty-four maybe even forty-eight hours but then I should think you could get people out. So I did really.

INT: Did you think about your own death?

NAR: No, I really didn't think about that.

INT: You had decided all along that you would survive?

NAR: Yeah, no, I wasn't, I never really felt that we were that close to catastrophe... Well, let me just take that back. During that three day stretch, yeah I thought of the possibility that an accident, if there's an accident than anything could happen, but I was comforted and I'm sure this would not have been true for the people who lived five miles away, particularly on the lee side of the wind, I was comforted by the fact that we were on the west side of the plant therefore the prevailing wind would normally carry things in the other direction. So, I felt that actually we were much safer than say Lancaster which is twenty-five miles away or even an area forty or fifty miles east of the plant. So, I think I would have been much more nervous if we had lived, I know I would have been much more nervous if we lived twenty miles on the other side. Because then I would have thought that all these emissions even excess emissions which perhaps weren't even being reported might be having some cumulative effect particularly with regard to the children.

INT: Do you think that anything that happened there harmed your health in any way?

NAR: Well, I think it's unlikely primarily because of the prevailing wind that I'm expressing now. But I wouldn't if I lived in Lancaster, I don't think I could make that statement. If you're talking about the introduction of radiation that has a long range cumulative effect in twenty years, well then, you know by that time I'd be over seventy and who knows. I did hear elderly people speaking after the event on the media as a matter of fact, say, well so what, someone who is eighty isn't going to be effected by a minimal dose, but I was particularly conscious of it as far as the children because I don't think we know the long cumulative effects of radiation are.

INT: Do you have any ideas about that, what they might be?

NAR: I think that this is an area that is still in dispute, from what I've read. And so I haven't come to clear conclusions. I think a lot of it has to do with individual variations, and with social as well as psychological stress that has evolved over a period of time. I don't know enough about the factors that would contribute to excess radiation in a single point in time or for an extended period of let's say a week, having some openly damaging impact on human organisms. But I definitely recognize that possibility, and so I know that if I'd been on, I will say, I can't emphasize this too much, that the fact that we were on this, even though the wind for a few days came in an easterly direction, and on those days I was more nervous, very much so. I listen to the weather of sorts anyway, and oh, yeah the weather broadcasts indicated the wind was coming from the southeast, I was a little concerned.

INT: Did you have any concern about the food or the milk from the area?

NAR: Yes, we did talk about that. We were going to, I remember saying something to Marge about checking with the A&P to find out where they got their milk from. And I don't know whether she ever did or not, but I tended to be reassured perhaps foolishly so, by articles in the paper that most of the milk in this area comes from Perry County, Cumberland County, well, wait a minute, I read something, I don't remember the counties, but it indicated that most of the milk did not come from... That might have been, let me just add, I didn't follow as closely as I should have in retrospect, where the milk came from. We were concerned about it. The water, no, knowing where our water comes from, essentially from the Northwest, that is the stream comes from the Northwest, so we weren't worried about the water.

INT: Did you have any mental pictures of what was going on over there?

NAR: In Three Mile Island... My mental pictures came basically only from television. And they, that had to do with technicians I suppose, who frantically tried to work out solutions. You know people working at a safe distance, but then there was the image of bringing in the additional equipment and buttressing the whatever they brought in, the cork and other things that they brought in to try to neutralize the effects of the radiation. I just had a picture of high level around the clock activity in attempt to control what was going on. How realistic though, they might have been all sitting around drinking coffee for all I know. (chuckles) For a while at any rate, so I don't really know what they were doing.

INT: Did you think about God during the incident?

NAR: No.

INT: Did you pray?

NAR: No.

INT: Did you feel that you had certain responsibilities during this time?

NAR: Well, I guess primarily family responsibilities, yeah, we were talking a little bit before to be sure that the kids were safe. We did worry about Steve too to some extent. He's in Penn State, again on a good side from where we are. We called him once and I think we talked to him twice. We would've of course kept him informed of where we were going although we felt there was no danger leaving him where he was, but yeah, we were most concerned for the kids, and of course I was concerned for Marge, obviously for myself as well. But, that was, there was a sense also, in which another time at which I felt some concern about the students, because I just had a feeling right after getting through Wednesday, Thursday was fine, you know no one was really uptight although there were a few who were beginning to, but on Friday, and I had no classes on Friday, things were beginning to change clearly after the emission. You could sense the change

with talking with the students, some of the changes. I guess I was concerned what would happen to some of them, particularly those who lived in the area.

INT: Did you feel any conflict in the various responsibilities you had?

NAR: Well... No, I guess that I didn't. I really events didn't reach a point that forced that kind of a conflict. I felt that what I was doing basically was consistent. I didn't feel any, I didn't feel for example, the necessity of staying here and pushing everybody out, my family out of town or anything like that, no, I didn't really feel that. I didn't really feel that, although again, we did make certain plan and the ultimate validity of those plans is dependent upon the reliability of the information we were getting. Basically, from Denton and the Nuclear Regulatory Commission.

INT: Did you have any ethical ideas, ideas about what the ethical thing to do in the situation was or any code of behavior in mind?

NAR: As far as what?

INT: In terms of your own behavior and so forth?

NAR: Well, everyone in a crisis tends to think for themselves which is about themselves which is always a source of socially questionable activities in terms of the cumulative effect, the gas shortage demonstrates that very clearly. I guess I was concerned about what might have happened in the case of an evacuation or let alone an explosion, what my reaction, I suppose mine in any relation to others, you would try to save your own skin, and obviously those closest to you. But again, I never was so sensitized that was I was never sufficiently concerned about the likelihood of a real disaster occurring that I wasn't forced to confront those things, even in my mind.

INT: Did this event bring anything to your mind any past experiences of yours?

NAR: Well, the nearest thing to that kind of sustained anxiety, over a few days period, was the missile crisis, the Cuban missile crisis. In which, that is as a threat to personal safety.

INT: Did that come to your mind during the crisis?

NAR: Yes. And the reasons was, well I can think if I mentioned (mumbles) But whatever it was, I remember that clearly because we were supposed to go visit friends in Philadelphia that weekend and as the cab down there achieved a point of perhaps no return, why, we debated whether to go thinking that Philadelphia might be more likely a nuclear target than this area but we ultimately concluded that that was absurd and with the nuclear strike who would give us shelter. (chuckles) Uh, so we went but that was the same kind of feeling.

INT: Any... any...

NAR: In fact in some ways even more so, because in a, if you compare the potential for irrational actions on the part of the elites, let's say saturated with notions of their own power potential and so forth with the capability of technologists to try to bring a situation like this under control, you have to be more fearful of the elites than competition and that I think what generated, for me a higher level of anxiety than a national crisis, than this.

INT: Can you think of any other past events?

NAR: Well, not comparable to this, I mean, I can think of events in which we were more upset, we were both, Marge and I were both more upset clearly at the time of the Kennedy assassination.

INT: I'm asking out of date, did that occur to you then, or....

NAR: No, because there didn't seem to be any comparability, that was just a national disaster and we felt it was a personal disaster because we identified with him at that time pretty closely. I'll always remember that there was a dance at Dickinson College, the students, they didn't even call off the dance that night. Well most of the faculty felt outraged that they hadn't. And we had friends that were giving a cocktail party that night. I called up one of them and said well we can't go to that, he said, life must go on, which of course it must, but we didn't feel it quite the same way. But no, those three events... and then I was, and then the assassinations of, of course Robert Kennedy and Martin Luther King, but I don't feel, I don't think I felt quite as distraught about those two as President Kennedy. No personal disaster, no natural, no earthquake, Agnes was nothing compared to this.

INT: That's what I was going to say, did you judge this incident as more or less frightening than say a flood or a hurricane?

NAR: Well, no, Agnes we were never, despite our concern about Harrisburg itself and uh, which was definitely important in view of the flood level was so high during Agnes, what was happening in Carlisle was simply flooding due to increase in the water table, and for the most part at least, and there was some, there was considerable damage there, we had water two feet in our home next door was three, the house further down was five but still it was nothing like this, really nothing at all.

INT: Did any kind of TV shows or movies come to mind? During the events?

NAR: During the events? Well I heard of course a lot about the China Syndrome but neither of us had seen that. We know a couple of friends had seen it and said that we must see it when this started to happen. Now, I still intend to see it but that, that was the main thing. Now, I must admit that in terms of disaster and panic, I talked about this with you once, War with H.G. Wells, Orson Wells, broadcast, did come to mind in terms of panic stricken reactions, War of the Worlds right, panic stricken reactions of people

within the Princeton, New Jersey, well the New York, Philadelphia metropolitan area. And particularly throughout the country but that's about it.

INT: Books, stories?

NAR: I haven't read that much fiction in the nuclear power area and in fact I don't read much fiction in general, and as far as the...

INT: Okay you were speaking of non-fiction,...

NAR: So I say, in the non-fiction area I just haven't absorbed myself in that material.

INT: Did you have any daydreams that you remember?

NAR: Well, I'm sure I did, but I don't remember, I must confess. I don't remember, so I won't try to invent something that I can't recall.

INT: Good. Did you have any sleeping dreams that you remember?

NAR: No. I will say this, Marge is into dreams much more than I am. Has gone through periods trying to recall but I just don't do that. I dream, sometimes I wake up and recall things, but this was no different. I think one morning I did wake up a little bit early during those periods and was thinking about things so there was some level of unconscious concern. But, I didn't have any dreams that I...

INT: And your sleep wasn't trouble anymore than the one...

NAR: No, not apparently, no.

INT: What changes happened to the people around you during the incident?

(mumbled conversation)

INT: For example, students started exhibiting certain levels of concern and that sort of thing...

NAR: Well at level on Friday, I just, I remember talking to some who were more concerned. And as a matter of fact on the end of my class period on Thursday, this was before the emission, somebody did come up and in effect seek reassurance which I tried to provide, which in a sense turned out to be a mistake considering what happened on Friday. But on Friday, it was clear that there was a level of, if not panic, at least anxiety. It was not there on Thursday, just talking among students. Some I guess started to go away that weekend.

INT: And your family?

NAR: Okay, that was the next thing, the, I don't believe either Mary-Margaret or Caroline, exhibited what I would call an undue level of anxiety. I don't think in other words, Mary-Margaret being the older one would have picked this up more in school. They just didn't have that feeling of panic and disasters about to strike. She clearly respected that all she was interested in as I suggested was getting more time off from school, she was really annoyed when everything else West of here was called off on Monday and theirs' continued. Carol, and as far as Marge and I, I think we were fairly close together in terms of our level of anxiety and concern. Initially, more so, building up, escalating to some extent, she was the one at one point who suggested getting the reservations. So she had maybe reached a point maybe than I

INT: For the most part you were in agreement in letting ...

NAR: Yeah, we did not argue over what we ought to do. And we did have the kids who were trying to pull us strongly in one direction or the other. Oh, Caroline was bitterly disappointed when she had found out that Marge had cancelled the reservations on Tuesday, she really wanted to go to Florida, but that was to go to Florida. And we tried to explain that unless school was called off she couldn't go to Florida.

INT: When you made those plans to go, since we're talking about that again, I missed one earlier, did you plan what to take with you?

NAR: No. Wait, wait a minute... To a degree we did, we got the suitcases out of the attic. We didn't go through this systematically, but yes we made some kind....

INT: What were you going to take along?

NAR: Well, just very limited, if we were going to, it would have probably been one bag a piece.

INT: Anything in particular that you wanted in them?

NAR: In the bags?

INT: Wanted with you, wanted to take along?

NAR: Well I'm not thinking about mace or anything like that. (chuckles) No, you know, I didn't foresee in the event anything aside from a normal trip. But we hadn't gotten to the point of actually packing. So something might have surfaced.

INT: Did you keep your gas tank full?

NAR: Yes, it was. I did that, in one of the cars, I think twice. We have our car and then the use of my mother's car, and in that the gas goes better, so I think that one in particular, no, I guess both cars, during that stretch there, we did gas, fairly full.

INT: Did you hear any joking about the incident?

NAR: Oh, over the media, and around here to some extent, but not as much. I forget what night that was but somebody who made a crack over Johnny Carson about renaming Pennsylvania, capital city or choosing a new capital city or something like that. Which by that time seemed humorous. I laughed, I thought it was funny.

INT: Have you developed an opinion about nuclear energy?

NAR: Well, I guess my opinion now is that an effort should be made to limit its use in the sense that I would not go with the Nader groups who want to close them all down in the next several years. I would like assuming the appropriate safety checks and controls, retraining of employees and that sort of thing. Looking at a particular... of problems, allowing them to continue for the life of the plant, even those that are well under way and then assume that new energy sources could be developed, that is there is still a big future I think in coal conversion. Of course purification process will have to be worked out to make it less prone to produce pollution and that sort of thing. Solar energy, thermal energy, all kinds of sources, I don't think the government has really done enough there. I think they're doing more now and will continue to do more in the future. I do see those who talk a lot that oil will give out in twenty years, I think that's nonsense, but oil is certainly not inexhaustible, and the long term curve, it will go down clearly if current use levels stay the same and they will be. So we are going to have to, I see nuclear energy in other words as a transition to other safer forms. But I think that an attempt to eliminate nuclear energy within a few years would produce chaos as far as rising electrical prices. It would require a drastic change in the standard of living for large numbers of people, which society as a whole simply at this point is not prepared to tolerate. In terms of the cost of energy, not only gas, electricity the whole manufacturing sector which promotes the use of electrical gadgets and so forth, I mean that will all be off kilter with what would happen under those conditions. So I don't think it is feasible at this point. It would be feasible if I felt the danger obviously is as great as do some of these other people. It would be necessity, I don't see the danger this way. Despite the potential for disaster, it is still true that whether, let us say one or two people might die within the next five years as a result, say ten or twenty, we would not know about now. Compared to coal, coal mines, it is still true that nuclear power is at least, not demonstrated itself as being destructive as the use of coal. Of course, nobody ever cares about the coal mines, except during that brief period when there is a disaster and then the media zeros in and then they forget all about the problems. They don't sensitize the public to the large number of deaths that continuously occur in the industry as they well might considering the refusal to enforce safety regulations and so forth. But I am persuaded that particularly because of the potential dangers in the use of nuclear energy, if the entire society were to run on nothing but nuclear energy earthquakes, what is frightening to me is that they build some of these damn things on faults and what is going to happen under those conditions, this sort of thing. I see this as a dangerous source of energy which over time should be done away with and I suspect that a lot of people in the nuclear power field, a lot of utility magnates are reaching the same conclusion. Although they will never concede that in the immediate future.

INT: Do you think this changed people in any lasting way?

NAR: Well the polls suggest that the incident did not, although I haven't seen in depth polling about the desirability of phasing out nuclear power over a long range period of time. The material I have seen suggests that the most people are prepared to continue with added safety provisions. Nuclear power in that region in the foreseeable future... I don't know. It's really hard to say, I guess my feeling is that for a large section, I can't estimate the numbers, for a large selection of the mass public who would take a disaster in which hundreds if not thousands of people were killed or disabled before that sector reached relatively no conclusion about nuclear power. I guess I feel that way. That there is not adequate foresight in the thinking of large numbers of people. I would hesitate to say that was a majority, but a lot of people rely upon faith, technology, what have you, what will be, will be. So I don't think we can rely upon mass opinion as a guide to what to do in the energy sector.

INT: Do you think, as general now not just in relation to opinions about the use of nuclear energy, but in general do you think this changed you in any lasting way?

NAR: Well, it did in the sense that I reached the conclusion that nuclear power over time should be phased out where as before I wasn't prepared to argue that. So that did have a lasting effect. It led me to read more about nuclear power and I am still very concerned about the problems of nuclear waste. I see nothing to indicate an adequate solution to that problem. I'm still curious as to what they are going to do with those thousands upon thousands of gallons of water. (chuckles) In fact I was, amused is the wrong word but I was not surprised to see one official of one of the companies argue that if they released the water in small quantities into the Susquehanna, over time no one would be damaged, no one would be hurt. And that was just within the last month.

INT: That's what they're probably doing. Do you have anything else you would like to say about all this?

NAR: No, since I have got to get to the airport.