Thornburgh: One of our signal accomplishments in Pennsylvania this year was the process of turning a predicted third-straight deficit into a slight surplus. A small wager made between the governor of Pennsylvania and the governor of Texas on the Super Bowl added to that process. And I think Bill Clements deserves the thanks of many Pennsylvanians for the contribution made by our football teams, neither of which fared very well yesterday, I'm afraid to say. I'd like to compliment, as well, Lamar Alexander and the participating governors on a very enlightening discussion on energy problems. It's a breath of fresh air to get down to specifics.

The title of my remarks is "How to Handle the Psychology Resulting from a Nuclear Emergency." I think the best way is to avoid the nuclear emergency in the first place, something that the recommendations of the Kemeny Commission and other committees that are Monday-morning-quarterbacking that unfortunate incident at Three Mile Island are, I think, making a real contribution toward accomplishing. Avoidance of any kind of an emergency is always the prime concern of anyone in an executive capacity, and governors with responsibility for the health and safety, environment of their states are certainly no exception. A little tough to handle psychological questions when you're obviously not a psychologist, and even tougher to deal with questions about nuclear energy when you are obviously not an expert in the technology of that very strange and largely, in many respects, unknown field to most of us. I thought that I would talk about, from a lay point of view, the psychological problems of a governor created by an event like this -- to which I am not indifferent -- as well as the psychological impact on the populace of an area that must deal with an unforeseen incident of the type that happened at Three Mile Island, and finally the psychological aspects of the future of nuclear energy as affected by failures of reactor plants throughout the nation.

Nuclear emergency poses a management problem for a governor. That's our business, to manage whatever happens within our respective states as best we can. The principal frustration in dealing with a nuclear emergency is that there was no precedent, no manual that could be pulled down with definitive instructions upon how to proceed, no opportunity, of course, to convene a panel of experts to advise you on the best course to follow. In short, very little opportunity to enrich your own capabilities to perform
on the basis of what others might have done before you. There was always overhanging the responsibility during the Three Mile Island incident one big decision that had to be dealt with on a 24-hour-a-day basis. And that was whether and to what extent to order or recommend an evacuation of human beings from an area surrounding the facility. And that is not a decision that can be made lightly. Witness the fact that just a couple of months ago in Florida during the evacuation of some 300,000 people in the face of an impending hurricane, there were six lives lost in traffic accidents or due to heart attacks. And when you factor into that the necessity to undertake the evacuation of the aged and infirm, babies in incubators, persons in intensive-care units in hospitals, there is a known risk in ordering an evacuation precipitously. And that makes all the more important the constant monitoring and evaluation of the situation to determine whether you have, at any time, crossed that point where an evacuation's unknown risks can be factored into the decision to proceed.

Facts are the coin of the realm, of course, in that decision as in anything that we have to do as governors. They are the basis for any decision we make. And the very best decision maker in the world -- certainly not the one speaking to you today, but even the best -- will fall short of success if that decision is based on facts that simply are uncertain or unknown. The major frustration experienced during this incident was the inability to get at hard facts. Difficulty to determine from personnel of the utility, from the Nuclear Regulatory Commission, from our own state people precisely what levels of radiation were in the atmosphere, what potential threat was involved to residents of the area, what kind of lead times were available in the event that some catastrophic event might occur. All of this was in the realm of uncertainty, particularly during the first couple days of the event. That kind of psychological stress on a governor is something that I don't wish for any of us again. Ironically, however, there was a silver lining even to this radioactive cloud for an administration that was new. Testing your top advisors and staff under stress in this kind of operation gave you some clues as to how they would perform in the normal carrying out of governmental responsibilities. And in an ironic way, I count myself fortunate in being able to make those kinds of judgments based on a very stressful time.

Far beyond the concern of individual governors, however, is the concern about our constituency, the populace of an area that may be affected by an emergency such as we had at Three Mile Island. There's no question but what those in the immediate area underwent great psychological stress. Part of it was due to the uncertainty of factual data and information that I mentioned previously, for
if a governor, who has the responsibility to make decisions, is perplexed by an uncertain picture, those who will be affected by those decisions will be equally distressed by their lack of knowledge as to what the next hour or the next day may bring. There was a very difficult choice forced on our administration as well as members of the news media in dealing with this factual uncertainty. There was the temptation, of course, to give a running commentary to the public about the latest indication of what may have been wrong or what the latest prognosis was for the reactor facility itself. We chose not to do that and ran the risk, of course, of being accused of managing the news or not being as communicative as we might have been. What we eventually settled upon were regular briefings about the technology at the site by Mr. Harold Denton of the Nuclear Regulatory Commission and discussions by myself about the status of emergency planning and the need for any prospective action on the part of the populace. I would choose that route, recognizing that it does involve some attempt at controlling the flow of information, because of the tremendous potential for panic that an undifferentiated fallout of inaccurate or even half-accurate information had in a situation where so many were uncertain, including those in government and in the news media themselves. That stress impacted immediately. What the long-term psychological stress on the people in the area may be will depend upon careful research and monitoring carried out over a period we plan in Pennsylvania that may run as much as 20 years. But the hope is that out of that kind of an examination, we will make a determination as to how to deal with the problems of the populace during a time of such uncertainty and stress.

Finally, I think the major psychological impact of the Three Mile Island incident is on the future of nuclear energy itself. I think most of us, in moments of repose, would come to a conclusion that the technological problems, the safety problems, of actually running a nuclear reactor are soluble, are manageable, that eventually using lessons learned at Three Mile Island and elsewhere, the industry and the regulatory agencies could mechanically solve those problems that would create a safer nuclear industry. But I suggest to you that the major problems during the 1980s of the industry itself and for the future will not be technological but will indeed be psychological. There has been an enormous credibility gap created between the industry and those who regulate it and the man on the street about the integrity of statements made concerning the safety of nuclear facilities. And to this day, I am distressed to find that in both quarters there remains some residual lack of acknowledgment of this credibility gap's existence. For example, this past week, I spoke with members of the management of the utility at Three Mile
Island, who spoke in terms of the need to release radioactive gas to the atmosphere on a controlled basis and to release radioactive water in the containment at Three Mile Island into the Susquehanna River almost exclusively in terms of what schedule "X" to regulation 700 promulgated by the Department of Environmental Protection or the Department of Energy or the NRC compel, with very little appreciation of the fact that there is a populace in this area once-bruised, twice-shy about any kind of release to the environment without a very careful path being laid and a substantial groundwork being created. That, it seems to me, is one of the major keys to the future of nuclear energy -- not the work done by the scientists or the bureaucrats, but the job done by people who believe the nuclear option is viable in getting across to the public a fair and concise appraisal of precisely what happened at Three Mile Island and what the problems remaining with the nuclear industry are.

The fact of the matter is that we came to this event on March 28, 1979, living in somewhat of a fool's paradise about where the risks might lay with regard to nuclear energy. The genie is out of the bottle. It is clear that there is going to be no national sentiment for shutting down nuclear plants across this nation, which supply in many states, such as Jim Thompson's, a considerable part of the electric energy that's used. But I suggest to you that there will indeed be a de facto moratorium on the construction of new nuclear facilities for some time to come unless this credibility problem, unless the psychology of the American citizen is turned around in a more positive direction. Poll after poll taken across the nation shows in particular that there is a favorable disposition toward including the nuclear option in our energy arsenal. But when it comes down to locating facilities in the county or the municipality next door to those being questioned, that predictable kind of reluctance sinks in when there's a realization that siting decisions are made sometimes on a wholly irrational basis and certainly without the necessary input of the communities involved, and more frighteningly, that we have not yet begun to even attack effectively the very vexing problem of nuclear-waste disposal.

I would suggest that, as far as the psychology of the 1980s toward the problems of nuclear energy is concerned, that a large dose of candor on the part of those who seek to have the nuclear option continue to be part of our energy menu is going to be in order. It begins in some part with the reactions to the Kemeny Commission report, but I think all of you who, as governors, have nuclear facilities within your borders will want to work with environmental groups, with energy groups, with utilities, with the
federal responsibility, which may or may not continue to be the Nuclear Regulatory Commission, and ensure that the process of education and forthcoming discussion about nuclear energy take place within your communities. Otherwise, it will be very hard to break through that psychological barrier which we know full well in Pennsylvania was created by the wholly unexpected incident of March 28th.

I hope that gives you some kind of feeling of what lessons are beginning to be learned by those of us who had to grapple with this particular problem. As I say, being neither psychologist nor nuclear engineer, I am offering you observations that I think relate to your vantage point -- that of managers of large governmental operations -- and some of the things that, both by way of opportunity and by way of challenge, are implicit in that event that took place last spring. I thank you, Doc, for the chance to share these views with my fellow governors, and I'd be glad -- to the extent we have time -- to answer any questions you may have. Otherwise, we will all join, I'm sure, in welcoming President Ford.

>> Moderator: If you could stay at the podium to save time...

>> Thornburgh: Sure.

>> Moderator: About seven minutes of --

>> Thornburgh: Seven minutes it is. Al?

>> Question: The question we ran into with the problem up there in our nuclear plant was how soon we told the press. And what we did is to wait till we found out ourselves something. We didn't know at first. And I finally -- Afterwards I came to the conclusion that we couldn't even wait that long to tell the press. We had to tell them immediately something was up. And now my concern is, are you gonna be working with your press to get them not to sensationalize? You know, they got to sensationalize everything.

>> Thornburgh: Well, I think -- Let me address the first question, because I agree with you. You have got to -- if there is an incident that appears to be of any proportion -- immediately notify the press. But at the same time, what we did was to immediately come back to the press if there had been any inaccuracy in our original assessment. We had to do that two times on the first day following the Three Mile Island incident. We had gotten bum information, frankly, from the utility, and we were -- immediately went to the public and said that that was the case.
The most troublesome problem, as I indicated, for us was deciding when to tell people what. There was never 100% assurance that we were being accurate. But as you worked your way up from zero assurance of being accurate, you did cross a line when there was a necessity to make some public statement. I don't know -- I'm not the best judge of whether the press sensationalized the Three Mile Island incident. The Kemeny Commission gave the press pretty high marks. I tend to go along with that. There were, to be sure, a couple of events that were blown completely out of proportion, but that could be traced back to inaccurate information that came not from Three Mile Island but from Washington and Bethesda, where some of the masterminds who had never visited that site felt a compelling need to expertize about something that they didn't know anything about and posit conclusions on facts that were nowhere in evidence. Those were the principal -- the existence of the so-called hydrogen bubble and the meltdown potential, which was almost nonexistent. Both of those stories came out on the wires from Washington, based on, at least misleading, stories that came from NRC people down there. By and large, the treatment was cautious, in my mind, but again, I really am not in the best position to judge that. Bill?

>> Question: Dick, first of all, I want to congratulate you on what I consider to be an excellent presentation. I think it's been very helpful to me and, I think, to all of us here. Secondly, I tend to agree with you that one of the major stumbling blocks, as we look ahead to the further sound development of nuclear energy in the country, is this basic issue of the nuclear waste disposal problem. Do you have any thoughts about how that question needs to be dealt with? I think every one of us in our states recognizes that we are producing nuclear waste, and we are concerned about where we dispose of it. It is easy to say that we produce it in our state and we'd like to dispose of it elsewhere outside of our state borders, but we know that that is not realistic. What do you think we must do from the point of view of a national policy and the development of that policy to deal with that question?

>> Thornburgh: Well, clearly, we need a national policy. The idea of fingerling three states as disposal sites for all of us is not one that's going to survive and, in fact, is very much in jeopardy at this moment. I don't know what the answer is, Bill. I don't know what the state of the art is with regard to a lot of the more exotic suggestions about disposing of low-level nuclear waste which are produced by our nuclear energy plants. But I suggest that that is the kind of thing that ought to be attacked on a national basis which does not involve a crossfire between Dick Thornburgh and Dixy Lee Ray and Bob List and Dick Riley about what
they're gonna do with the waste that we have historically shipped to their states. And I think, perhaps, out of the restructuring of the whole regulatory apparatus that's contemplated by the presidential commission, there will be a specific responsibility lodged to develop that kind of a policy. The difficulty clearly is that, again -- not next door. You don't want to digest your own nuclear waste if you can send them somewhere else. But it may well be the single biggest limiting factor in the 1980s in the further development of commercial nuclear energy. If that problem is not solved, I think it will have an extremely limiting effect on any future nuclear initiatives.

>> Thornburgh: Vic.

>> Question: Couple of questions. I indicated to you we ran an exercise in Oregon and went through this whole process as if something had gone wrong. And that's why I wanted to ask you --

>> Thornburgh: I hope it proves totally unnecessary, Vic.

>> Question: Well, the exercise was necessary, but I hope we don't have to do it again. Question -- you spoke about information in terms of measurement of data upon which to make a decision. In our process of evacuation, we went through the whole bit. It was a matter of measuring how far downwind and all this other. Did you have, actually, trouble in getting out and getting measurements? We have a Board of Health that does that. Do you have a similar agency? That would be then the question of actually field-testing radioactivity and the problem you had with it. Second, it's occurred to me several times that with the redundant system and just reading -- flying in yesterday -- a hundred lights went off in this plant, and how do you know which button to push? Did this redundant safety feature -- did that complicate the process of making a decision?

>> Thornburgh: With respect to the technology of measuring radiation at an event like the Three Mile Island thing, I am confident that much more was learned out of that accident about the need to monitor and the need to correlate the monitoring that's done by different agencies than was known beforehand. I don't think that there had been anywhere near sufficient thought given to the fact-gathering processes in general and the radiation levels in specific. And I think that's one area where we are doing a lot more at the state level. A lot more sophistication is built into the process at the federal level. The question of -- I'm sorry, what?
>> Question: That was redundant --

>> Thornburgh: Oh, yeah. Again, I don't want to tell you more than I know. The problem there, I think, was the lack of technological background and ability to diagnose the situation on the part of personnel at the plant. By common consent, I think it's acknowledged that Metropolitan Edison -- the utility in question -- was, in the words of the NRC, very thin technologically at the plant, and good-faith efforts on the part of operators to figure out what all those flashing lights may have meant fell somewhat short of success. The redundancy factor is something I would have to leave to those who are more -- better able to look at the technology involved. But I don't suspect that that would confuse or distract an experienced, capably trained operator, or appropriate management personnel in charge of that operator, at a well-run nuclear facility. Time? Bill? Last one? Okay.

>> Question: I got just a quick question. How successful was the effort by the other utilities of America to come together with this team approach that I recall them trying to use to deal with the specific problem of Three Mile Island? Was that helpful to you?

>> Thornburgh: It was very successful and not surprising. Because if it had not been successful, I think the nuclear industry would be dead in this country today. They assembled an all-American team, if you will, of experts in nuclear energy. By Saturday, March 30, two days after the accident, that team was in place. But I hasten to add that that is in sharp contrast to the undermanning of the site in terms of technologically capable people at the time of the accident.

>> Questioner: Right. I understand.

>> Thornburgh: And I think that that was a matter of survival for the industry itself, and they responded very well.

>> Question: Do you know whether or not they have any plans or they have made contingency plans to continue that type of thing on an ongoing basis? Or is it the kind of thing where they responded that time and you don't know whether or not they would do it again?

>> Thornburgh: I don't, but I would hope so. I would think some kind of a nuclear SWAT team to come to the site of any, certainly, unanticipated and not-hoped-for future emergency would be a very productive thing for the industry to pursue. Would the industry --
in some respects, in a justifiable way, on the defensive. Those kind of suggestions that you might make to your own utility executives who are involved in these -- You don't have them. All right. You don't have to run Vic's drills, then. Thank you very much. Thank you.

[ Applause ]

>> Moderator: Thank you very much, Dick. I don't think that there was a single governor envious of your position at that time, but we're all very proud of the way that you handled it.