Briefing

Montana Passes a Nuclear Initiative

Last Tuesday's election brought the passage of the first state referendum restricting the use of nuclear power.

Voters in Montana heavily supported an initiative that appears to be at least as tough as the California Initiative that was defeated in 1976. While the Montana Initiative does not ban nuclear power, it places stringent safety, performance, and liability standards on nuclear plant owners and requires voter approval for any nuclear facilities that might be built in the state. (Montana has no nuclear power plants now.) The Billings *Gazette* called it the hottest issue of the election and the initiative passed with 63 percent of the vote.

The backers of the initiative ran a low-profile campaign and did not seek national publicity. Calling themselves Nuclear Vote, they recruited local volunteers in Montana communities, and ran a decentralized effort in which each town organization handled its own advertising and canvasing operations. The opponents of the measure, calling themselves Montanans for Jobs and Energy, were supported by large contributions from out-of-state corporations, including Westinghouse, General Electric, Bechtel, and a number of power companies. The opponents reportedly spent $200,000 in an intense media campaign that may have partially backfired.

"I think a lot of voters want decisions made in the state, even if tough standards apply," says Mike Males, spokesman of the pro-initiative forces. "Montanans hate big corporations, they've been sat on by them for so long, and I think that the $200,000 spent against the initiative turned people off," he says. One interpretation of the vote is that the voters identified big corporations with the federal government, and the antigovernment sentiment expressed in the election put the vote over the top.

Perhaps 40 percent of the vote constituted hard-core nuclear opposition, according to Males. "I think it would be dishonest to call it an antinuclear vote," says Males, "it is a vote for state control."

In a separate test in Missoula County, however, more than 60 percent of the voters supported a zoning ordinance prohibiting any nuclear plants.

The control given to the state by the Montana Initiative is indeed formidable. Owners would have to post 30 percent bonds to cover decommissioning and cleanup of plants at the end of their life. Reactor emergency-core cooling systems would have to be proven under test conditions before state certificates of approval could be given. Reasonable means of securing wastes would have to be assured, in one interpretation of the law, and owners would face liabilities potentially greater than those allowed under the federal Price-Anderson Act (a clause that is almost surely grounds for future litigation). After a facility met all these tests, it would go to the voters. The law covers not only power plants, but also fuel cycle and uranium mining facilities.

The nuclear initiative issue (in Montana it was Initiative 80) heated up in September when opponents tried to reword the ballot title to call it a nuclear "ban." The state supreme court overruled the ban designation in a unanimous ruling on 3 October. The initiative was endorsed by former Montana Senator Mike Mansfield, present Senator John Melcher, and both candidates for the open Senate seat. The proponents refused to accept contributions from outside the state.

Austria Declines to Start a Nuclear Power Program

Nuclear power also suffered a setback abroad last week. In the first national referendum on the use of nuclear power, the electorate of Austria narrowly rejected power from the atom.

What the voters decided, by only a 50.4 percent majority, was that the state-run utility company should not begin operating a new $530 million reactor that had just been completed at Zwentendorg, 18 miles north of Vienna. It was Austria's first general referendum since World War II, and 64 percent of the country's 5 million eligible voters turned out.

Early in the year polls had shown that the majority of voters favored commissioning the plant, but after Chancellor Bruno Kreisky put the question on the ballot a polarized political battle developed. As in other countries, one of the opposition's most effective issues was the waste disposal question. Like West Germany, Austria is a federal republic with strong individual states, and so far no state governor has been willing to run the political risk of having the waste buried in his state. At one point, Austria had a tentative agreement that Iran would accept its nuclear waste, but when the agreement was made public in Tehran—amid the political unrest of the last year—it increased opposition to the Iranian nuclear program and was apparently shelved.

China to Build an Accelerator

As one of its ambitious initiatives to achieve rapid scientific and technical advances, China has decided to construct a 50-billion-electron-volt (GeV) accelerator in the next 5 years. High energy physics is one of the eight scientific areas to which the government has given high priority, and the planned machine—which is in the medium energy range of world high-energy research facilities—is due to be followed in five more years by a much more ambitious project intended to reach 1000 GeV.

Work on the new accelerator will be centered at the Institute for High Energy Physics in Peking, headed by Chang Wen-yü. Representatives of various industries will join scientists working on the project. To compare notes with U.S. accelerator designers, a team from the institute (which included an engineer at the Peking Broadcasting Equipment Factory) made a 3-month tour of U.S. laboratories this summer. Following it up, a five-man team is now at work at Fermilab for 6 months or more, and other physicists from the Peoples Republic are visiting the European physics center at CERN and studying at the Japanese accelerator, KEK.

What type of accelerator to build and what maximum energy to attempt were among the major questions facing the Chinese. The machine they fixed on is the same type as at Fermilab (proton synchrotron), but the energy is about one-tenth as high. A proton accelerator was chosen because it would be more versatile than other types. Since China would have only one accelerator, it was felt that the proton machine would support a broader range of experiments. If the energy were too low there would be little chance of learning new physics,

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whereas if it were too high the risk involved—given China's lack of experience and industrial capacity—would be too great. Thus the medium-range proton machine was settled on.

American physicists observe that the goal of completing the new accelerator in 5 years is quite optimistic. With shortages of young, trained scientists and deficiencies in important technological industries, the project will be challenging. Many components needed for a large accelerator—such as fast electronics, precision power supplies, modern computers, and ferrite materials—are not manufactured in China.

A site for the accelerator has already been chosen. It will be located about 30 kilometers from Peking, near the burial tombs of the 13 emperors of the Ming Dynasty. Work is due to begin in late fall.

Director of Los Alamos Laboratory Resigns

Harold Agnew has announced that he intends to resign the directorship of the country's original nuclear weapons research facility, Los Alamos Scientific Laboratory, effective 1 March 1979. In his letter of resignation, he said that he was protesting certain restrictions that have been imposed on the laboratory in recent years.

One factor Agnew cited in his decision was "my frustration with what I consider to be a continuing inequitable distribution of defense program funding by the Department of Energy" between Los Alamos and its major competitor, Lawrence Livermore Laboratory. Both laboratories have diversified to encompass a range of scientific fields, but this comment apparently refers to Livermore's traditionally higher budget for weapons. Other factors Agnew cited were "dissatisfaction" with the salary policies of the University of California, which administers both laboratories, and a "lack of advocacy of the total [Los Alamos] program."

Agnew, who worked in Enrico Fermi's group at Chicago and was present when the first nuclear pile went critical in 1942, is only the third director of the Los Alamos Laboratory. His predecessors were General Norris Bradbury and Dr. J. Robert Oppenheimer.

—William D. Metz

high repute of an establishment like CDC! What a basis, for that matter, on which to expose 40 million people to an unknown risk of side effects! And all this on the word of experts, overconfident in theories validated through but two or three pandemics, without any proper review of their logic by disinterested scientists. It is not that conclusions were inconsistent with evidence, but that the paucity of evidence belied the force with which the conclusions were advanced.

This is strong language, but the reader would be quite mistaken to infer from that and the seven decision-making flaws that Neustadt has identified any clear errors in the logic of the swine flu program. He believes the program was correct at least up to the stage of manufacturing the vaccine. "I think, given the evidence, that to do anything less would have been irresponsible," he said in an interview.

The flu campaign designers decided against the obvious option of stockpiling the vaccine, and waiting for an epidemic before immunizing, because they believed from experience with previous flu campaigns, that there would not be time to get the vaccine into people once the flu had struck. Two or three of the advisers to the swine flu campaign favored stockpiling, but the clear majority were against it. Except in the light of hindsight, it may be hard to see what should have been done differently. Neustadt, however, considers the fault to lie in too narrow and inbred a circle of advisers. The participation of more "disinterested scientists," those with no "personal agenda" in favor of public medicine, might have ensured a different decision. That could be so, but at least one adviser believes Neustadt underestimates the diversity of input. "We were no pure culture. We were as broadly constituted as a workable sized group could be. The relative unanimity among us arose because of a hard body of science pointing to what should be done," says June Osborn of the University of Wisconsin.

Neustadt also criticizes the memorandum of 18 March 1976 which initiated the swine flu campaign. Written by David Sencer, then director of the Center for Disease Control, the memo laid out cogently the case for responding to the threatened new strain, stressing in particular the option for a full fledged inoculation campaign. Neustadt considers that Sencer should have spelled out the uncertainties more explicitly, and should not have rolled all the decisions together in one yes-or-no package in a way that was tantamount to holding a gun at Ford's head.

The Neustadt-Fineberg review criticizes Sencer more than any other official, often with accusations that seem hard to substantiate. The memorandum of 18 March, they allege, "reads as though it were deliberately designed to force a favorable response from a beset Administration that could not afford to turn it down and then to have it leak." Sencer, now an executive with a New Jersey medical supply firm, vigorously denies that he intended to leak the memo. "I have never leaked anything. If they said that they have a real misconception of what was going on," Sencer says.

Another instance when Neustadt has apparently been able to read Sencer's mind is in the suggestion that Sencer held his political superiors in low esteem: "Sencer pushed his bosses without stint. They were his constitutional superiors but that gave him no pause. Cooper aside, they were laymen. Sencer evidently held the not uncommon premise that the boobs could not be trusted to decide right on their own." "I certainly don't think that," says Sencer. So how does Neustadt know? "That is the conclusion we draw from the narrative before you," says Neustadt. Besides, that is an attitude "held by a great many chiefs of government organizations." But why not give the reader the benefit of knowing that Sencer happens to deny holding it? "On the matter of do we quote Sencer on what he would believe in retrospect after having been burned, we have to make a serious judgment on whether what he says is meaningful," is Neustadt's answer.

Neustadt's explanation of his methodology would seem to offer no compelling reason for preferring his suppositions over Sencer's denial. Sencer was shown a draft of the Neustadt-Fineberg review but confined his corrections only to questions of fact. He declined the offer to write an appendix lest it look like an apology.

Like others involved in the campaign, Sencer still believes that, in the light of the knowledge then available, the right decisions were made. "Placed in a similar position again I would certainly have made the same recommendations as I did then," he says. Flu virologist Edwin Kilbourne, asked if he would still have made the same decisions, says "Absolutely, unequivocally." Kilbourne regards the swine flu campaign as a "milestone in public health" because it brought to light new problems, as a result of which "we are now better prepared for a pandemic." Osborn says she would have done the same again: "I have never been able to come up with a better rationale." Califano seems to be of the same opinion. In an interview pub-