that it will be a year, maybe two, before the legislation he envisions can work its way through both houses of Congress, while "the problem is with us now." The joint commission should be seen as a way of getting on with the task while the legislative process wends its way.

Kennedy first proposed creation of the commission last May in a speech before the PMA, which represents most of the nation's drug manufacturers. And PMA, trying hard to shed its "bad guy" image with Congress and the public, decided it would not do much harm to sponsor an independent commission to look into things.

Money for the commission—guaranteed at $250,000 a year for the 3 years, with a more than reasonable chance of more if necessary—is being put into what amounts to a blind trust. Each of PMA's approximately 130 member companies will be assessed, according to sales volume, for a total PMA contribution of about $200,000 annually (no one is going to go broke at that rate), with the remainder coming from the American Academy of Family Physicians, the American Medical Association, the American Hospital Association, the American Pharmaceutical Association, and the American Society of Hospital Pharmacists. It gets almost everyone into the act, at least a little.

So did the process of selecting commission members—there are 18—which was designed to preclude its being weighted by any special interests. Thus, a number of organizations, including each of the commission's sponsors, two scientific societies, and a public interest group, submitted nominations and a broad range of points of view are represented among the members who were finally selected. Each nominating group was entitled to one or two representatives on the commission with the exception of the "public interest"—it has three representatives. The final decisions were made by Kennedy, Theodore Cooper, assistant secretary for health, and David A. Hamburg, president of the Institute of Medicine.

Conspicuous by their absence from the group are consumer representatives of the Nader organization, particularly the Washington-based Health Research Group from which Sidney Wolfe, an M.D., and Anita Johnson, a lawyer, watch over both the drug industry and the FDA, which is also notably absent from any involvement with the commission. It is reliably said that PMA president Joseph Stetler was adamant in his opposition to having either Wolfe or Johnson on the commission on grounds that he would "never be able to raise a nickel" from drug companies if they were members, but it is not clear that he actually exercised any veto power on the subject.

Johnson, who says she knows nothing of PMA's opposition, reports that she was asked if she would consider joining the commission, though she does not know whether it was a firm invitation or just a request to put her name on a list. In any case, Johnson says she declined any connection with the group which she expects will issue recommendations that represent a compromise. "I don't see my role as working out a compromise. My job is to defend the consumer," she said, adding that it "clouds the issue" to have so many people on the commission and that it is "ludicrous to think these issues can be batted out in an industry-sponsored panel." Johnson observed that if PMA wanted to do something about adverse reactions, they could more appropriately do it themselves, but then conceded that she would be unlikely to accept industry actions—leaving PMA in a damned if it does and damned if it doesn't position, it would seem, as far as her consumer group is concerned.

Most observers, however—including Johnson—believe that the three public interest members of the commission have impeccable credentials in their defense of consumer affairs.

Just how the joint commission will turn out is anybody's guess but it seems to be off to a satisfactory start. Certainly, its potential for significantly affecting the process by which drugs are regulated in this country is great. And, referring to the commission as a "unique coalition of private and public groups," Kennedy has blessed it in rhetoric with even greater potential. "I believe this must be viewed as an important national experiment," he declared grandly. "Our country is too small to maintain an intransigent approach to the solution of national problems. Neither consumers nor industry, neither government nor academia, has enough talent and expertise to solve our domestic problems alone."

—BARBARA J. CULLITON

Nuclear Partners: Adversity Breeds Trouble Between Dow and Utility

Nearly 10 years ago, in 1967, Michigan's Consumers Power Company and the Dow Chemical Company reached an agreement looking to construction of the world's first and largest major dual-purpose nuclear plant for the generation of electricity and industrial process steam. Consumers Power was to build the nuclear facility at Midland and supply steam to Dow's large and expanding industrial complex there. The two companies hailed the project as innovative and progressive. Its supposed benefits included at least a modest improvement in energy efficiency.

But, impeded by regulatory hurdles and financial difficulties, the project fell far behind schedule. Originally to have been finished by 1975, it is still only about 20 percent completed today, and it will not be fully operating before 1982, if then. Moreover, the warm spirit of collaboration that once marked relations between Consumers Power and Dow has now vanished. As a Dow attorney noted recently at an embittered regulatory hearing, their relationship has become "adversarial and antagonistic," with each company warning that it will sue the other if contractual commitments are not kept. Environmental intervenors have been trying since 1970 to stop the project. They are now convinced that Dow would renounce its contract with Consumers Power except for an implied threat by Consumers to file huge damage claims if, because of such action by Dow, the construction permit is revoked.

But the company takes a risk in standing by the contract, too. The company-owned fossil-fuel boilers with which Dow is now generating power and process steam are old and must be replaced by 1984 if breakdowns that could seriously cripple Dow's Midland operations are to be avoided. Furthermore, the variance in air pollution control standards under which these boilers are being operated will have to be extended even if the Consumers Power project is completed on schedule.

Dow has agreed to buy at least 2 million pounds of process steam per hour as well as nearly a fourth of the 1300 megawatts which the facility's two reactors will generate. This is absolutely critical to the Midland project's economic justification. Project costs are now at stratospheric levels; once put at less than $500 million, they are now estimated at $1.6 billion and they may actually hit $2 billion. The dual-purpose design, besides adding to construction costs, reduces the potential for power generation by about 300 megawatts.

The project's history is one of almost constant trouble and frustration. Site preparations began in 1969, but the construction permit was not issued by the Atomic Energy Commission until mid-1973. Nuclear power projects all around the country were encountering opposition from environmental intervenors in licensing proceedings. The Midland project could hardly have failed to arouse strong opposition. The reactors were to be built less than a half-mile from the Dow complex and only about a mile from Midland's Main Street. To serve a dual purpose, the facility *had* to be immediately adjacent to Dow because steam travels poorly.

The new impact review procedures imposed by the National Environmental Policy Act (NEPA) contributed to the construction permit delays, as did a general tightening of AEC reactor safety requirements. Even after construction began in 1973, the work went slowly. The AEC was mandating numerous generic design changes which affected this project as well as others. In one instance, the agency's Atomic Safety and Appeals Board sharply criticized Consumers Power for negligence in quality control, and, as a result, some work was ordered suspended briefly.

In late 1974, Consumers Power, in a financial pinch, began a drastic, albeit temporary, cut in the project work force. Consumers has ascribed its financial problems chiefly to the high cost of capital and the state utility commission's refusal to grant sufficient and timely rate increases. But these problems also were due in part to the company's troubles with its Palisades nuclear plant on Lake Michigan. This plant has had one of the worst reliability records in the nuclear industry.

Then, last July, the U.S. Circuit Court of Appeals for the District of Columbia, ruling in a suit brought by the environmental intervenors under NEPA, ordered the Nuclear Regulatory Commission (the AEC's successor in regulatory matters) to reconsider several issues, including those related to reactor safety, disposal of nuclear wastes, energy conservation (as an alternative to the generation of nuclear power), and the project's benefit-cost ratio as affected by Dow's present needs for electricity and process steam. On 30 November, NRC's Atomic Safety and Licensing Board (ASLB) began several days of hearings on whether work on the project should be suspended pending a resolution of the issues on the merits.

At these hearings it has come to light that in September the general manager of Dow's Michigan Division, Joseph G. Temple, Jr., sent the company's top corporate officials an urgent memorandum. "In our judgment, the July decision by the Court of Appeals has dramatically and adversely affected the odds that Consumers will complete the plant by their new, target completion-operation date," he wrote.

Lawsuit Threatened

Temple said there were now more "unknowns" about the project than ever before and that "the project will most likely be disadvantageous to Dow and to the Midland plant and to our employees in this community." He recommended that a top-level review of the contract with Consumers Power be undertaken, with an eye both to Dow's contractual rights and obligations and to other possibilities for meeting the company's future needs for power and process steam. Subsequently, A. H. Aymond, Consumers' board chairman, is reported to have warned Dow officials that, if the construction permit were revoked because of a failure on Dow's part to abide by the contract, the utility would sue for damages that could run as much as $600 million. A Consumers Power memorandum went so far as to suggest that it would be "inconsistent with Dow's contract obligations" for the company to tell the ASLB that it is standing by the contract reluctantly or that it believes its interests could be better served by an alternative source of steam and electricity.

In his prepared testimony, Temple reaffirmed Dow's commitment to the Midland project and said that, in the company's latest economic analysis, the project still offered at least a narrow advantage over a coal-fired facility for production of power and steam. But, as the ASLB soon learned, this testimony was partly prepared by attorneys for Dow and Consumers and did not fully reflect Temple's views. Responding to questions by Myron Cherry, the Chicago attorney representing the intervenors, Temple said that he still felt the project to be disadvantageous to Dow. If there were no threat of a lawsuit, he indicated, Dow would "go its own way."

Whatever the contradictions in Dow testimony, it is clear that the company does not like its present contract with Consumers and that it is pressing for revisions. In particular, Dow wants it stipulated that unless Consumers can meet a "firm deadline" for commencement of service, the steam contract will be terminated.

The long-troubled Midland project will be in grave difficulty if construction work is suspended even briefly. But a suspension would entail such high costs that the ASLB is perhaps unlikely to order one. Moreover, the project is now so far along that not even the environmental intervenors think there is much chance of its ultimately being abandoned.

Although a collapse of project financing remains a possibility, there are now moves afoot which suggest that this, too, will be averted. Some financially sound electric cooperatives and municipally owned utilities in Michigan apparently retain sufficient faith in nuclear power to want to buy into the project.

What the story of the Midlands project seems best to illustrate is that in all its aspects—technological, economic, and regulatory—the nuclear enterprise is one of agonizing uncertainty. Any electric utility or large industrial consumer of power or process steam that commits itself deeply to this enterprise surely needs, besides strong faith and good luck, clever lawyers to write the contracts so as to make the uncertainty bearable.—LUTHER J. CARTER

APPOINTMENTS

William H. Muller, Jr., chairman, surgery department, University of Virginia School of Medicine, to vice president for health science of the university. . . . **M. Alton Hodges**, acting dean, School of Allied Health Sciences, University of Texas, Houston, to dean of the school. . . . **Mary Duren**, dean, School of Humanities and Social Sciences, University of Zambia, to dean, School of Health and Human Services, California State University, Chico. . . . **George F. Reed**, chairman of otolaryngology and communication sciences, Upstate Medical Center, State University of New York, to dean, College of Medicine at the center.