

panel hearing the application was changed and the hearings started over in April 1976. The Board's report was released on 4 July 1977.

7. Pipeline Application Assessment Group, *Mackenzie Valley Pipeline Assessment* (Department of Indian and Northern Affairs, Ottawa, 1974).
8. The application of Foothills Pipe Lines to build a pipeline from the Mackenzie Delta along the Mackenzie Valley was received by the government in March 1975. On 4 July 1975, the Minister of Indian and Northern Affairs referred the application to Judge Berger "with the view to examining any areas of significant difference [from Arctic Gas]." Foothills is reported to have spent about \$25 million on its Mackenzie Valley application. In addition, it has spent about \$17 million on its Alaska Highway (Alcan) application, which is being assessed by the Lysyk Inquiry. That Inquiry held hearings from May to July 1977 in the Yukon Territory.
9. Order-in-Council designating the Honorable Mr. Justice Thomas R. Berger as Commissioner of the Mackenzie Valley Pipeline Inquiry, under

the provisions of the Territorial Lands Act (1-7378B, 21 March 1974).

10. E. L. Knowles and I. G. Waddell, Eds., *Preliminary Materials* (Mackenzie Valley Pipeline Inquiry, Yellowknife, 4 November 1975).
11. The Mackenzie Valley Pipeline Inquiry was funded \$3.2 million from March 1974 to March 1977 by the Department of Indian and Northern Affairs. At Judge Berger's request, the department also provided funds to enable the native organizations, the environmental groups, northern municipalities, and northern business to participate in the work of the Inquiry. The four native organizations—NWT Indian Brotherhood/Métis Association of the NWT, Committee for Original Peoples Entitlement, Inuit Tapirisat of Canada, and Counsel for Yukon Indians—received \$1.2 million. The other interest groups—Canadian Arctic Resources Committee, NWT Association of Municipalities, NWT Chamber of Commerce, and NWT Mental Health Association—received \$540,000.
12. T. R. Berger, *Queen's Q.*, 83 (No. 1), 6 (1976).
13. V. Steen, *Community Hearings Transcripts*,

Mackenzie Valley Pipeline Inquiry (Allwest Reporting, Ltd., Burnaby, British Columbia, 1976), vol. C-44, pp. 4200-4202.

14. T. R. Berger, *Queen's Q.*, 83 (No. 1), 8 (1976).
15. A full record of the evidence presented to the Inquiry is contained in the Inquiry transcripts. The formal hearings have yielded 906 exhibits and 32,353 pages of testimony bound in 204 volumes. The community hearings have been transcribed in 77 volumes with a total of 8436 pages and 661 exhibits. The exhibits include such documents as the application and supporting materials submitted by Arctic Gas and Foothills (which run into many volumes), the Land Use and Occupancy maps prepared by the Indian Brotherhood of the Northwest Territories and by the Committee for Original Peoples Entitlement/Inuit Tapirisat of Canada, the 1974 report of the federal government's Pipeline Application Assessment Group, publications of the Environment Protection Board, and a number of the reports prepared for the Environmental-Social Program, Northern Pipelines, and the Beaufort Sea Project.

NEWS AND COMMENT

Policy Recommendations to VA Leave NAS at Odds with Congress

The National Academy of Sciences has gotten crosswise with Congress over a report on the Veterans' Administration health care system. Congressional ire is directed mainly at a recommendation that the VA system be phased into the general health care system, but the phrasing of an Academy press release with a headline suggesting that the VA system was "obsolete" particularly inflamed the VA's patrons on Capitol Hill.

Both Senate and House veterans' affairs committees have held hearings focused on the report.* Senator Alan Cranston (D-Calif.), chairman of the Senate Committee on Veterans' Affairs, went on record as being fully committed to an independent VA health care system and strongly opposing "any dismantling or phase out of the VA medical system." The strongest reaction, however, came from Representative David E. Satterfield III (D-W.Va.), chairman of the House Veterans' Affairs subcommittee on medical facilities and benefits, who denounced the report for not answering the questions which prompted the study in the first place while at the same time making uncalled-for policy recommendations. Satterfield went on to ask for an audit of the contract to determine whether the \$6 million expended on the study by the National Research Council, the

research arm of the Academy, had been properly spent. The General Accounting Office (GAO) investigation is just under way and findings are not expected for several months.

The furor has distracted attention from the fact that the VA concurred with many of the specific recommendations made in the report and has moved to implement a number of them. Despite this and a public apology from Academy president Philip Handler on the wording of the press release, the incident stands as the Academy's most serious collision with Congress over a report.

Why did the policy recommendation provoke such a powerful reaction? The VA, of course, has a unique clientele and a history of special treatment by Congress. There are roughly 28 million veterans who, with their families, constitute a potentially formidable voting bloc. Veterans' interests are championed by veterans' organizations which form a highly effective single-interest lobby. The 171 Veterans' Administration hospitals, which are distributed fairly evenly across the country, provide valued services and, in many areas, are a significant source of jobs. Probably most important, veterans' causes have historically exercised a strong claim on public sympathy and support. The veterans' constituency is politically supersensitive and interpreted the NAS report as an attack on its institution, threatening to deprive veterans of needed care and even

prompting fears that disabled vets would be wheeled out in the street.

Ironically, the blowup resulted from the Academy doing what its critics have frequently complained in the past that it was unwilling to do—to look beyond the narrow technical issues on which it was asked to comment to the policy implications raised by these issues.

The committee's main assignment as expressed in the 1973 legislation authorizing the study was "to determine a basis for the optimum numbers and categories of personnel and other resources needed to provide eligible veterans high quality care." As the study committee chaired by Saul J. Farber, chairman of the department of medicine, New York University School of Medicine, came to grips with the problem, its members decided they could not provide hard number estimates on staff without knowing much more about the current mix of patients and types of care and also about VA plans and expectations for the future. The NAS, therefore, negotiated a major expansion of the study involving an increase in funding from the original \$1.5 million to \$6 million for use over a 3-year period.

The report's controversial policy recommendation grew out of the committee's conviction that the VA has to face up to changes in the veteran population and in the general health care system. About half of the nation's 28 million veterans saw World War II service. The average age of these veterans is now over 56. Very shortly this group will require drastically increased acute-care and long-term care services. The report estimates that if these veterans turn to the VA for care, VA services will have to be roughly tripled in 20 years. The report notes that the spread of prepaid medical care through private health insurance,

*"Study of Health Care for American Veterans" and "Veterans' Administration's Response to the Study of Health Care for American Veterans" were published by the U.S. Government Printing Office.

and the broadening of the federal role in health care through Medicaid and Medicare have transformed the national health care system. Furthermore, the strong possibility that a national health insurance program will be enacted hovers on the horizon. It is these considerations which moved the committee to question whether a separate VA health care system should be maintained and expanded on its present design.

The principal underlying issues are eligibility and utilization. The VA system was established to care for veterans with service-connected disabilities, but the bulk of patients—an estimated 70 percent—are not in this category. The VA noted in its detailed response to the Academy report that Congress has progressively expanded eligibility standards and set up a priority system so that veterans with service-connected disabilities have first call on care and other veterans receive care on a services available basis.

Has the VA created a kind of national health service for veterans? Not exactly. The NAS report makes clear that by and large the VA's "non-service-connected" patients run to type. They are older men, often unmarried, who typically do not have health insurance. The report describes them as "medically and economically disadvantaged." Problems with alcohol figure in the case histories of many of them. They are the loners and losers, casualties not of war but of life.

Many such veterans are repeaters, spending time in VA hospitals, nursing homes, and domiciliaries and then leaving to live for a while outside. Varying the old army phrase, "They've found a home in the VA." The number of such patients helps account for VA "overbedding," in that VA patients tend to have longer average hospital stays than their counterparts in community hospitals. Many acute-care beds in VA hospitals are said to be occupied by patients actually needing long-term care, although since the late 1960's the VA has cut the number of beds substantially.

The VA continues, of course, to care for veterans injured physically or emotionally during wartime service, and, in general, does it well, although VA services to Vietnam veterans are under criticism. The VA system has also offered a kind of last resort for veterans who ordinarily would not use VA services, but turn to the VA when they become the victims of disabling accidents or serious, chronic illness.

Certainly, both the VA and Congress are aware that the system serves a large group of patients who are, in a sense,

down on their luck. The vigor with which the system is defended is attributable at least in part to the feeling that these patients are treated with a measure of dignity they would not find elsewhere and that, in many cases, there is no alternative outside the VA system.

The NAS committee was not oblivious of the social-service function of the VA health system or of the humane impulse behind much of the partisanship for the system. In fact the NAS report describes this special category of VA patients sympathetically. Furthermore, David Tilson, the staff director of the NAS study, says that the committee never advocated closing down VA services for veterans with service-connected disabilities as some readers of the report erroneously concluded. What the committee is asking, says Tilson, is that the VA adjust its program to fit the requirements of the aging veterans, the changes in the federal role in health care, and the need for community-wide planning of health care services.

Rejected Recommendations

It was this that led the committee to make its two main and most hotly disputed policy recommendations. In its fashion the committee did seek to answer the basic question on staffing by saying it believed the VA could meet the health care needs of eligible veterans by redistributing resources now available. Their assumption was that current eligibility requirements would not change.

The committee then proceeded to its second recommendation: "Clearly, the VA cannot avoid the impact of demographic and health policy developments. The committee recommends that VA policies and programs be designed to permit the VA system ultimately to be phased into the general delivery of health services in communities around the country."

In the detailed, chapter-by-chapter, point-by-point response which the VA compiled under forced draft in 3 months after release of the NAS report in June—and which was double the length of the 311-page Academy document—the policy recommendations were roundly rejected. VA Administrator Max Cleland summarized the VA view in a statement accompanying the release of the response, saying that merger would cost the taxpayer more money, that there was no evidence that the private sector would provide the comprehensive care "veterans need and deserve," and that the VA had found that the policy recommendations were not supported by data collected during the study process but

were "conclusions based on subjective observation and personal opinion."

At the same time, the VA did concur with many of the recommendations on specific aspects of the VA program. Of 39 recommendations in the NAS report, the VA accepted 23, although it attached qualifications in the case of ten of these. Most of the rejected recommendations related to the initial policy recommendations.

Criticism of VA operations came as no surprise to Congress or to the VA itself. Awareness of problems in the system had caused the commissioning of the NAS study in the first place. The veterans' committees in the early 1970's experienced great frustrations in their attempts to obtain information to throw light on complaints that hospital staffing was inadequate. The committees clashed with Nixon Administration officials on the issue repeatedly. Exasperation over the VA's inability to relate funding to patient care across the system was a major factor in Congress's pushing the VA to contract with NAS for the study.

Officials in the VA's medical division say that they have no problem in accepting most of the study's specific recommendations. They say that in a number of cases the NAS recommendations clarify or reinforce earlier findings by GAO, the Office of Management and Budget, the committees, or the VA itself. A cluster of recommendations on surgery in the system deals with an area in which, they say, corrective action is already in progress. The NAS committee asked, for example, that sophisticated cardiac surgery and kidney transplant operations be concentrated in fewer VA hospitals, as distinct from the VA's general hospitals, to increase efficiency and safety. The quality of surgery in psychiatric hospitals was strongly criticized and the NAS recommended that surgery in such hospitals be cut back drastically. The committee also asked for better supervision of residents performing surgery in VA hospitals. They found residents in many VA hospitals handling emergencies and regularly scheduled surgery without supervision by senior surgeons.

In the months that have passed since the NAS report was issued, the most extreme criticism of it remains that by Representative Satterfield. Not only does Satterfield insist that the committee did not address itself to the congressional mandate, but adds accusations impugning the integrity of the Academy study. In a statement at a House hearing on 1 November, Satterfield pointed out that the staff director of the project, Tilson, was a former employee of the Department of

Health, Education, and Welfare (HEW). HEW is apparently regarded by some VA partisans on Capitol Hill as having designs on the VA hospital system. Also citing the role of a former Academy employee in drafting HEW guidelines on the numbers of hospital beds in particular regions, Satterfield said, "The conclusion these facts promote concerning

an interrelationship between HEW and the National Academy of Sciences are disturbing. In my mind it renders any health study or health position by the National Academy of Sciences suspect as to its objectivity and, therefore, highly questionable."

Satterfield went on to say that "a number of consultants employed by the

Academy for the study agree that the report is not responsive to the congressional mandate and that it does not agree with their own observations made as site visitors. These consultants reported to the committee that instructions they received from the Academy in the conduct of their assignment appeared to suggest that their findings would be contrived

Briefing

'79 AAAS Meeting Moved from Chicago to Houston

The AAAS has changed its reservations for next year's meeting from Chicago to Houston. On 13 February, the association's board of directors voted the shift from Chicago to demonstrate support for the Equal Rights Amendment (ERA). Previously, the board had decided to hold the annual meeting only in states that had ratified ERA, but, at its December meeting, the directors decided to hold the Chicago meeting as planned because of a commitment to the Conrad Hilton Hotel and because of the long lead time required to make meeting arrangements.

In reversing itself, the board apparently took into account expressions of concern from individual AAAS members and from affiliated societies about meeting in a non-ERA state.

AAAS executive officer William D. Carey says that there was a "buildup of opinion" between the December and February board meetings. Carey said that the AAAS women's caucus had been effective in alerting the board and that a growing awareness of board members of deep and intransigent problems in expanding opportunities for women in science contributed to the decision. The board had also been notified that a resolution advocating a move out of Chicago would be introduced when the AAAS Council met at the annual meeting in Washington.

Rather than wait for an expression of feeling by the council, the board voted 4 to 2 to withdraw from Chicago with two members abstaining. Four voting members of the board were not present.

The board received legal advice on its commitment in Chicago before taking action. When the possibility of a pullout was communicated to hotel officials in Chicago, Hilton informed AAAS that if a deci-

sion to move the meeting were made, it would be impossible "to replace the loss of business," and the hotel's lawyers would "be in touch" with the AAAS. A spokesman for the hotel told *Science* on 16 February that he was not at liberty to say what action the corporation plans.

When the discussion of a change of venue arose, AAAS staff canvassed possible alternative sites and settled on Houston as best meeting criteria set by the board—including its location in a state which had ratified ERA. Cities where the association's annual meetings will be held have been designated through 1985. Atlanta, on the list as the host city of 1983, is the only city located in a state that has not ratified ERA. The board has directed that negotiations to move the 1983 meeting be initiated.

The AAAS is not the first professional organization to vote not to meet in states whose legislatures have not ratified ERA. The American Psychological Association, the Modern Language Association, and the National Education Association are among the 50 or so groups that have elected to boycott non-ERA states. The APA has voted not to meet in 1979 in Atlanta but has until the summer of that year to complete alternative arrangements. Since AAAS, on the other hand, will be meeting earlier than it did this year—in the first week in January—barely 10 months are left. So the association is probably under greater pressure than other national organizations with big meetings in carrying through a policy of institutional lustration.

Anti-Jensen Petition Makes Council Agenda

For the second year in a row, the election of educational psychologist Arthur R. Jensen as a AAAS fellow was the major

topic of debate at the annual meeting of the association's council. Last year, at a session marked by considerable acrimony and confusion (*Science*, 11 March 1977), Jensen's name was singled out for debate from a list of nominees who were ultimately all approved as fellows. This year, the issue was raised again in the form of a petition characterizing Jensen's work on black-white IQ differences as racist and asking that the council action making Jensen a fellow be rescinded.

The committee on council affairs, which serves as an executive committee for the 84-member policy-making council, proposed a suspension of the rules to permit discussion of the petition submitted by faculty members from the University of Connecticut and to provide a period of discussion to enable the sponsors of the petition to speak.

The petition on the agenda was a composite of several prepared by members of the International Committee Against Racism (CAR), an organization founded at the University of Connecticut to combat various forms of racial persecution and discrimination. It now claims some 31 chapters in the United States and Canada. The group was making its first appearance in force at a AAAS meeting.

The speakers, in frequently impassioned terms, enlarged on charges in the petition that Jensen's work relating IQ differences between blacks and whites to genetic differences provides a "popular rationale for racism," and that the scientific basis for Jensen's work has been called into question. The critics argue that AAAS recognition of Jensen by electing him a fellow gave the appearance that the association endorsed his views.

The committee on council affairs itself proposed a "clarifying" statement which in modified form was ultimately adopted. This statement named no names but noted that election does not necessarily imply endorsement of a fellow's complete work.

rather than observed." Responses to a questionnaire circulated by the committee staff on this matter are to be appended to the hearings which have not yet been published. Satterfield has not been joined by other legislators in this line of criticism. Presumably, the GAO will pursue the issues raised by Satterfield.

Asked about Satterfield's accusations,

Academy president Philip Handler observed that the committee had formulated the policy recommendations, not the staff, and that he was satisfied that HEW had no influence on the report. On the matter of disgruntled study contractors, Handler said he had consulted committee members about it and "sees no reason to pursue it further."

The offending press release was the subject of an apology by Handler before the Senate Committee on Veterans Affairs on 17 October. The headline on the release was "Report Finds Role of VA Health Care Obsolete/Recommends Integrating with Community Services," and the lead began: "Too many beds, poorly allocated staff, too few facilities

Briefing

The statement concluded, "AAAS wants it understood that we have never supported and do not support doctrines based on the supposed superiority or inferiority of races, or sexes, or national groups which serve to rationalize social, economic, and educational inequities or discrimination."

The council rejected a proposal that it appoint an expert committee to examine the credibility of Jensen's scientific work and to make recommendations on what action should be taken. During the discussion, several council members expressed concern that Jensen's right to due process be protected and there were scattered suggestions that Jensen's work had been misunderstood or misinterpreted.

The CAR petition was never voted on directly, perhaps in part because of a procedural Catch 22—the AAAS constitution and bylaws make no provision for reversal of a fellow's election. In voting down the proposal for an evaluation committee by a substantial 28 to 12 margin, the council seemed to be responding to warnings that no committee—no matter how expert—could resolve the issue, and that creation of such a committee would lead to the indefinite prolongation of the dispute.

Future of AAAS Fellows— A Poll and a Moratorium

After agonizing over the case of a particular fellow, the AAAS Council went on to discuss the institution of fellows in general. Critics have called the creation of fellows anachronistic in an organization which has grown as large and diverse as has the AAAS. The chairman of the council's committee on fellows, Robert D. Allen, of Dartmouth, gave his personal view that the system depended on to award the honorific title has become un-

workable. He noted that the information supplied on nominees is inadequate and the time available to consider the nominations is insufficient, and observed that 7 of 21 sections, including some of the largest, this year failed to submit nominations.

After discussion, the council decided to approve the 195 nominations recommended by the committee for this year, but to poll the general membership on the next ballot for election of officers for their views on awarding the status of fellow in the future. Meanwhile, they declared a moratorium on the nomination process. Currently, there are about 16,000 fellows among the roughly 128,000 AAAS members. At the meeting the council polled itself on continuing to create fellows and came up with a vote of 25 to 15 against.

Sociobiology Baptized as Issue by Activists

Styles of protest at AAAS meetings have changed since the turbulent times of the late 1960's and early 1970's, but this year's meeting saw brief revivals of older forms with picketing by opponents of nuclear power and an assault on the rostrum by critics of sociobiology in which Harvard's Edward O. Wilson was the target of a water-throwing episode.

The latter incident occurred on the afternoon of Wednesday, 15 February, during the final session of a 2-day program, titled "Beyond Nature-Nurture," devoted to a discussion of sociobiology. A group of protesters identified with the International Committee Against Racism trooped up to the dais as Wilson was being introduced, chanting uncomplimentary things about sociobiology and Wilson, whose book *Sociobiology* won broad public attention and has stimulated considerable controversy.

During the confusion, Wilson was doused with water. The panel moderator invoked the AAAS rule that permits protesters to speak on condition that the meeting then continue. By this time, however, the audience was in an uproar, and it took several minutes for order to return. The moderator then made an apology to Wilson and his copanelists which prompted a standing ovation from the audience. Whereupon Wilson, who had to take all of this sitting down because his ankle was in a cast, proceeded with his paper on "Trends in Sociobiological Research."

Science for the People, a group of political activists who focus on scientific issues and have become a perennial presence at AAAS meetings, concentrated their activities this year on opposition to sociobiology but pointedly disavowed any involvement in the Wilson incident.

The antinuclear protest, which took the form of an orderly demonstration on Monday, 13 February, was organized by the Washington area Mobilization for Survival. The protest was originally to be directed at Washington State Governor Dixy Lee Ray, a former chairman of the Atomic Energy Commission. But the group decided to carry on when Ray canceled her appearance, citing pressure of official business, since the replacement speaker was Representative Mike McCormack (D-Wash.), who is also regarded as pronuclear. According to a spokesman for the Mobilization, the demonstration was planned because it is felt that scientists have not made adequate efforts to raise moral questions implicit in the use of nuclear energy. The demonstrators numbered about 30 schoolchildren, many of them preschoolers, and 40 or so adults. The group paraded around the room carrying signs and placards before the talk began and then trooped out. A contingent of District of Columbia police arrived on the scene after being alerted that a demonstration was in progress, took one look at the demonstrators, and departed.

John Walsh

for outpatient care. . . .” Handler said it was “deeply regrettable” that the reception of the report “should have been colored, indeed, soured by the unfortunately constructed press release” issued by the Academy’s public information office. Handler said, “Perhaps out of zeal to secure maximum attention to the report, the staff of that office highlighted what they understood to be potentially controversial policy recommendations in the report while they neglected to direct attention to the many strongly positive comments concerning the quality of the Veteran’s health care system also found in the report.”

On the main issue of the mandate, Handler stuck to his guns, saying, “As your committee will be aware, . . . it has been alleged that, strictly speaking, our report was not responsive to the literal language of the charge stipulated for this study by the Congress in PL 93-82. We believe otherwise. We consider that not only is the report fully responsive to that charge, it would prove far more useful to the Congress than would have been simplistic literal adherence to the charge.”

Handler and committee chairman Farber both insist that the policy recommendations should not have come as such a surprise to the VA or Congress because

a series of conferences were held with both VA officials and members of the veterans’ committees staffs on the Hill during which the academy committee’s plans and intentions were made clear.

Will the experience make the Academy gun-shy about venturing policy recommendations unless the invitation is expressly stated in the contract? Handler says that he has looked at the question, and so have the governing board of the NRC and the chairman of the report review committee, and “there has been no determination to avoid policy formulation.” Handler does say that “the lesson to be drawn from this incident is that when such occasions arise, we should look very carefully at policy recommendations and ask if they should go forward.” Handler does see a possibility that the run-in “could cause a loss of confidence in the institution, concern in some quarters about being told things you don’t want to know.”

Handler, however, says he does not feel the incident will harm the academy in the long run and he is personally more distressed about possible damage to his friendship with Representative Olin E. Teague (D-Texas) for whom he has high regard. Teague is chairman of the House Committee on Science and Technology,

but is a combat veteran of World War II who has been a long-time major force in veterans’ matters on the Hill. Handler and Farber have carried on quiet diplomacy to assure doubters in Congress that the Academy committee’s only motive was, as Handler says, “to assure veterans of the best possible care.”

How did the Academy get itself into the unfamiliar and unwelcome spot of having its good name questioned by congressmen and its books audited by GAO? In taking on the very ambitious VA study it was attempting the first comprehensive study of a national health care system, with all the uncertainties that implies. Furthermore, the social and political dimensions of the task were as significant as the technical ones. It was not like looking at the state of the ozone layer, no matter how complex that may be. The Academy’s encounter with the VA buzz saw was, in a sense, the result of a two-cultures clash. The Academy committee followed where logic led and did what it saw as its duty, bringing significant policy questions out into the open. In the process, it triggered a powerful, protective, conditioned reflex. The report certainly didn’t win friends for the Academy, but it could influence people.—JOHN WALSH

Breeder Reactors: Fast Flux Fuel Rods Subject of Silkwood Charges

The Carter Administration’s program to develop breeder reactor technology—apart from its decision to cancel a demonstration breeder reactor at Clinch River, Tennessee—could be in for some difficulties thanks to a little-publicized chapter in the Karen Silkwood affair. Silkwood was a 28-year-old worker at the nuclear materials plant at Crescent City, Oklahoma, which belonged to the Kerr-McGee corporation. She died under unusual circumstances in November 1974, after starting to turn over information to the government and to a union on poor safety and health practices at the plant. Among other things, Silkwood alleged that plutonium fuel rods being produced at the Kerr-McGee plant might be defective because the company doctored its quality assurance records. The rods soon will be used in the government’s

large-scale experimental breeder reactor in Hanford, Washington.

Silkwood was killed when her car ran off the road at night while she was driving to a meeting with a representative of the Oil, Chemical, and Atomic Workers (OCAW) Union and a *New York Times* reporter. The story received considerable press attention because she was last seen with a file of papers that were never found, and because a union-hired investigator concluded that her car had been pushed off the road by another one. Subsequent investigations of the allegations that she and other workers made about conditions at the plant found them to be, in many cases, correct.

In 1976, Kerr-McGee shut down the part of the Crescent City facility where Silkwood had worked—the part that produced plutonium fuel rods. An adjacent

building at the site, where many of the same workers were employed and where uranium powder and fuel pellets were produced for the commercial nuclear industry, was closed in 1977.

Among her other allegations, Silkwood claimed that there was cheating in the quality assurance programs at the plant. Silkwood and other employees were telling union investigators that the plant’s product—thousands of 8-foot fuel rods filled with plutonium-uranium pellets—could be defective because welding imperfections were being overlooked. Silkwood had said, for instance, that one worker was using a felt-tip pen to touch up negatives of photographs of sample welds on the rods. And her diary noted, “Still passing all welds no matter what pictures look!” Silkwood worked as a lab technician at the plant.

The plutonium fuel rods in question were produced at Kerr-McGee from 1972 to 1976 under a contract with Westinghouse Hanford Corporation, which manages the Fast Flux Test Facility (FFTF) at Hanford, Washington, for the government. The FFTF has been planned for more than a decade as the major research effort for breeder reactor