

(from The Washington Post, 11 January 1976)

Up and Atom

We Almost Lost Detroit, by John G. Fuller (*Reader's Digest* 1976)

By Walter C Patterson

For more than two decades the public has largely conceded that nuclear affairs are beyond it. People who hold – and are not reluctant to express – vigorous opinions on foreign policy, constitutional law, economics, athletic prowess, artistic creativity, and technologies from internal combustion to acoustic electronics have declined to commit themselves about nuclear activities which “they do not understand”. But the nuclear mystique cannot last much longer. When the *Reader's Digest* commissions a book-length chronicle of the misdeeds and misfortunes of the civil nuclear establishment the jig must be very nearly up.

In describing how *We Almost Lost Detroit* – as a result of a major reactor accident – John Fuller also clarifies comprehensively why the public has always felt ill-informed about nuclear questions. It has been ill-informed, by those who know but are not saying. Nuclear technology is no more inherently arcane than, say, color television; but the habit of secrecy in nuclear matters, acquired during the Manhattan atom-bomb project, has ever since been ingrained and difficult to break even in context of the ostensibly “civil” endeavors of nuclear power generation.

It might of course have been easier to break the habit of secrecy if the nuclear business had not so rapidly found itself accumulating embarrassingly radioactive skeletons in its closet. As his Exhibit A, Fuller takes the Detroit Edison fast breeder reactor power plant – its conception, gestation, brief but dramatic life and lingering death. The plant was named after the brilliant physicist Enrico Fermi; Fermi, who deserved no such ignominy, may still be spinning in his grave. The nuclear industry has been so eager to expunge the memory of the Fermi plant fiasco that the proposed Clinch River plant in Tennessee is being stubbornly promoted as the nation's “first demonstration fast breeder power plant”. Judging by its estimated cost, which has tripled even before ground has broken, the Clinch River plant may indeed be a worthy successor. But Fermi was first. As Fuller recounts, with racy vividness, the Fermi plant's record will be hard to beat.

Before it was off the drawing board its design was rendered suspect by the accident in 1955 which destroyed the core of its baby brother in Idaho. In 1956 an unfavourable official report on its safety was suppressed by the then Atomic Energy Commission, which licensed it anyway. The United Auto Workers and other objectors, concerned about safety of an unproved reactor so close to major cities, fought the Fermi plant all the way to the Supreme Court; they lost by a split decision, Justices Black and Douglas dissenting. The plant became operational in 1963, but was dogged by one mishap after another. Shortly thereafter a fundamental AEC safety study – suggesting that a reactor accident might lead to 27,000 deaths and property damage of \$17 billion – was filibustered to a standstill by AEC staff afraid that the publication of the study would impede “public acceptance” of nuclear power. Then, on 5 October 1966, the accident that had been warned against all the way to the Supreme Court – and declared “incredible” by the promoters – nonetheless happened.

Anyone who still thinks that nuclear affairs should be left to the experts owes it to future generations to read how *We Almost Lost Detroit* – experts notwithstanding. The quote, understandably anonymous, is from one of the engineers at the Fermi plant. Fuller takes pains to stress that the industry people involved in the Fermi project were one and all sincere and dedicated.

It may not be Fuller's fault that after a time these reiterations remind one of Mark Antony's "honourable men". That we did not "lose Detroit" may be reassuring to some; but there is no guarantee that our luck will hold indefinitely. During the life story of the Fermi plant there occurred enough near-misses to give any thoughtful person pause.

Fuller's narrative describes the runaway which demolished the core of the Canadian NRX reactor in 1952; the fire which destroyed the British Windscale number one plutonium production reactor in 1957; the fuel fire in the Canadian NRU reactor plant in 1958; and the hideous SL-1 reactor accident in Idaho in 1961 which killed three young servicemen. He might have included others. Indeed, his book was no sooner in the press, in March 1975, than the world's largest operating nuclear plant, at Brown's Ferry, Alabama, was brought to the brink of disaster by a fire ignited by an electrician's candle.

Writing for a *Digest* reader Fuller leaves little doubt that the essential nuclear issues can be depicted in crisp monosyllables. He makes his quota of minor technical fluffs – graphite control rods, cobalt-58 a fission product – which the nuclear bulldogs will pounce on, to demonstrate that he is not "qualified" to pronounce on nuclear policy. However, an industry whose senior executives can regularly be heard confusing radioactivity with radiation (the former produces the latter) and referring to "newkyular power" is not entitled to be overly finicky about outsiders.

In any case it is becoming clear – as Fuller reflects in an epilogue retracing his year of research and interviews – that reactor safety, per se, in only one of many issues of nuclear policy which remain unresolved, and which have received far too little public consideration. What of all the support facilities for nuclear power plants – uranium mines and mills, enrichment plants, reprocessing plants, plutonium plants, radioactive waste storage, transport? What of sabotage? Plutonium security? The seemingly inevitable proliferation of nuclear weapons, not only to other nations but even to terrorists? What of the staggering costs involved, government funds which might be better applied in other directions, cheaper, easier and safer?

It is long past time that the public – all the public – looked long and hard at the nuclear option. After 20 years of nuclear coyness the seventh veil, given a timely yank by John Fuller and the *Digest*, is fluttering and about to fall. You may not like what you see; but don't blink.

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