Salgado observed that the report was really about "a department in transition. It's about how we are making changes and how we are meeting our responsibilities and obligation. This report is a continuation of what we began more than two years ago." In response to the committee's recommendations, Herrington directed that an independent oversight panel be established and action plans be prepared by the assistant secretaries for environment, safety, and health and for defense programs.[135]

On July 1, 1988, Salgado forwarded the promised study detailing environmental conditions at the Department's nuclear facilities to the Senate Governmental Affairs Committee. Salgado told the committee that the environmental issue represented a "major challenge for the Department, the Congress, and the Nation. . . . [requiring] a significant investment over a long period of time." The Department's study focused on seventeen sites and examined efforts both to clean up environmental contamination and to assure and maintain compliance with environmental, safety, and health standards. The study estimated "expected" clean up and compliance costs of $66 billion through fiscal year 2025. Under a "high" clean up and compliance scenario, estimated costs rose to $110 billion through fiscal year 2045. Senator John Glenn (D-OH), chairman of the Governmental Affairs Committee, observed that the "high" estimate was more likely to be a "floor . . . than a ceiling." The Department, he added, could not "assume that it will continue to be treated as a royal exception to the laws, standards and regulations that all other hazardous industrial enterprises in the United States are subject to."[136]

New Production Reactor

Following the National Research Council committee's recommendation that the Department accelerate planning for a New Production Reactor (NPR), Secretary Herrington asked the Department's Energy Research and Advisory Board to conduct a review and assessment of reactor options. The primary mission of the NPR would be to produce tritium used in nuclear warheads to boost explosive yield. Herrington limited the board's consideration to four reactor types: low temperature heavy water reactor, light water reactor, high temperature gas-cooled reactor, and liquid metal reactor. Among the evaluating criteria to be used were ability to produce tritium in a timely and cost-effective manner, ability to meet safety and environmental requirements, and contributions to the advancement of nuclear technology.[137]

The Energy Research Advisory Board submitted its report to Herrington in late June 1988. The board stated its conviction that it was "urgent for DOE to begin the long process to acquire new production capacity." The board found that the heavy water reactor has "the most mature technology" for tritium production. "If there is a need for full tritium production as early as possible," the board noted, then the heavy water reactor "appears to have the best chance of quickly providing the needed capacity because of the existing facilities, personnel, and experience at Savannah River." Nonetheless, the board declared the high temperature gas-cooled reactor the leading candidate with "potential to contribute substantially to the advancement of new commercial designs through the application of passive safety technology."[138]

This was no mean consideration. With no firm order to build a commercial reactor in the United States since 1974, reactor manufacturers clearly were eager for a new construction project, especially one that might prove out a new civilian reactor design. The design for the high temperature gas-cooled reactor used a modular concept being developed under the Department's Advanced Reactor Program. A standardized modular design would include maximum factory fabrication, transportability to site, and minimum site installation and construction, thus shortening construction time and reducing costs. The high temperature gas-cooled reactor's passive reactor shutdown feature, the Energy Research Advisory Board stressed, "eliminates the possibility of core meltdown and . . . provide[s] an opportunity for a potentially significant advancement in the level of safety over current commercial reactor experience."[139]