without, to date, serious incidents or reports of casks operating outside specified thermal, radiation, or pressure limits. Moreover, the cask limits at Surry, which were measured at cask loading and are expected not to change significantly during normal operations, will continue to be monitored on a periodic basis. In addition, dry storage at the Palisades plant commenced about one and one-half years ago after a 1993 NRC rulemaking to approve the VSC-24 storage cask (58 FR 17948; April 7, 1993). That rulemaking exhaustively covered a number of public comments relating to Palisades and, in particular, comments questioning thermal safety margins of the storage cask. NRC responses to those public comments, particularly the response to comment 26, detail the basis for NRC acceptance of the thermal margins for the VSC-24. As set forth in the response, the basis for NRC acceptance of the VSC-24 included assurance that cask thermal margins were calculated using conservative assumptions (e.g., sustained ambient temperatures of 100 °F over several days; little heat conduction through the ends of the canister; fuel clad temperatures based on a peak heat generation rate rather than an average rate; a fuel temperature criterion derived from long-term degradation mechanisms rather than short-term mechanisms that would have led to a much higher temperature standard). Moreover, as indicated in the response, the calculated margins for the VSC-24 were significantly larger when more realistic assumptions were used in the calculations.1 Thermal analyses and calculations have also been satisfactorily resolved with respect to another cask system, the NUHOMS dry storage system. Rulemaking was completed in January 1995 for the NUHOMS system, and the applicant and NRC staff analyses and calculations are available in the docket of that rulemaking. See Docket No. PR-72 (59 FR 28496) ("List of Approved Spent Fuel Storage Casks: Addition") (see also 59 FR 65898).

Turning to the internal NRC study referenced in the comment that is the subject of this response, it is important to fully identify that the report is actually directed not at spent fuel

storage at reactors, but rather at longterm geologic disposal of high-level waste and spent fuel over thousands of years. Consequently, the report does not draw conclusions that would be directly relevant to decisions about interim storage of spent fuel in ISFSIs or, more significantly, that would be contrary to the NRC's experience with such storage to date. As discussed elsewhere (e.g., 58 FR 17948; April 7, 1993; 55 FR 29181; July 18, 1990; 54 FR 19379; May 5, 1989) and as summarized below, NRC experience to date is that spent fuel can be safely stored under dry conditions over the 20-year licensed term of an ISFSI without presenting significant public health and safety risks.

Irradiated reactor fuel has been handled under dry conditions since the mid-1940's when fuel examinations began in hot cells. Light water reactor fuel has been handled in dry cells since the early 1960's, and some fuels have been in storage under dry conditions for approximately 20 years. Experience with storage of spent fuel in dry casks is extensive, and it is growing. Six nuclear power plant sites are already using dry cask storage: Virginia Power's Surry Station (500 assembles); Carolina Power and Light's H.B. Robinson Station (60 assembles); Duke Power's Oconee Station (530 assemblies); Public Service of Colorado's Fort St. Vrain facility (1480 fuel elements); Consumers Power's Palisades plant (160 assemblies); and Baltimore Gas and Electric's Calvert Cliffs Station (190 assemblies). A seventh plant—Northern States Power's Prairie Island plant—will begin loading assemblies in March 1995. As a result of the growing use of dry storage technology experience, NRC has over 35 staff years of experience in licensing ISFSI storage, further supported by the knowledge and experience of an outside pool of recognized, expert scientists and engineers to perform independent safety analyses of ISFSI systems and components proposed by licensees and vendors in the field.

The successful experience to date in the dry storage of spent fuel storage and the licensing of ISFSIs in the United States, provides support for the Commission's belief there is reasonable assurance such storage and licensing can safely continue without the need for express Commission authorization of each ISFSI license at a reactor site. However, past successes provide no guarantee for the future, and the Commission therefore hastens to emphasize that the NRC staff—under the Commission's active supervision, as described in this document—will continue to bring to bear its full

experience in the review, licensing, and inspection of ISFSIs.

3. *Comment:* The Commission proposal would unacceptably reduce Commission oversight of the siting of ISFSIs.

Several comments opposing the Commission proposal believe it will reduce NRC oversight of spent fuel storage, and they find that reduction unacceptable for several reasons. One comment reflecting this view stated that, because the Federal Government was unable satisfactorily to solve the high-level waste (HLW) management problem, and given the growing storage of spent fuel at reactor sites, there is increasing public concern over ISFSI storage and a consequent need for more, rather than less, Commission regulatory oversight of siting decisions. Another commenter stated that ISFSI licenses should have Commissioner review because Commission members have the responsibility to protect public health and safety and should not delegate it to the Director, NMSS, or to anyone else.

Other comments argued the rule change was inappropriate because of the likelihood that the number of ISFSI licenses will increase in the future and the Commission would therefore increasingly need to supervise the licensing process. One commenter, for example, observed that requiring the NRC staff to explain all aspects of a specific ISFSI license to the Commissioners would necessarily lead to a more careful review, and that this additional layer of review would become even more important as the number of ISFSIs grew.

Another commenter argued that the Commission seemed to view its license approval review as "marginal to safety," and disagreed with this view on the ground that spent fuel storage in an ISFSI created a significant hazard to the public in the vicinity of the storage facility.

Response: While it is true the Commission believes its express authorization of each ISFSI license—the internal procedure that is the subject of these rulemaking amendments—is an unnecessary, additional layer of agency review, and, therefore, can be eliminated without reducing public health and safety protection, the Commission's belief is based on its years of experience in supervision of the entire NRC licensing review process for ISFSIs which the Commission will continue to oversee.

The anchor point of the NRC's internal review process to protect public health and safety from the potential risks of a proposed ISFSI is the NRC staff's technical review of the license

<sup>&</sup>lt;sup>1</sup> On August 1, 1994, Consumers Power Company, the Palisades licensee, reported that two small crack-like indications and a slag-like indication had been discovered in review of radiographs of a weld in a component of a VSC-24 cask at the Palisades ISFSI. After additional analyses, the licensee concluded the cask met requirements and was capable of safely storing fuel for the 20-year license term. The licensee has nonetheless decided to remove from service and replace the cask.