§ 76.85 Assessment of accidents.

The Corporation shall perform an analysis of potential accidents and consequences to establish the basis for limiting conditions for operation of the plant with respect to the potential for releases of radioactive material. Special attention must be directed to assurance that plant operation will be conducted in a manner to prevent or to mitigate the consequences from a reasonable spectrum of postulated accidents which include internal and external events and natural phenomena in order to ensure adequate protection of the public health and safety. Plant operating history relevant to the assessment should be included. In performing this assessment, the full range of operations should be considered including, but not necessarily limited to, operation at the maximum capacity contemplated. The assessment must be performed using an expected release rate resulting from anticipated operational occurrences and accidents with
existing systems and procedures intended to mitigate the release consequences, along with site characteristics, including meteorology, to evaluate the offsite radiological consequences.

§ 76.87 Technical safety requirements.

(a) The Corporation shall establish technical safety requirements. In establishing the requirements, the Corporation shall consider the analyses and results of the safety analysis report submitted pursuant to §76.35.

(b) The format for the technical safety requirements must be appropriate for each individual requirement.

(c) Appropriate references to established procedures and/or equipment to address each of the following safety topics must be included in technical safety requirements:

1. Effects of natural phenomena;
2. Building and process ventilation and offgases;
3. Criticality prevention;
4. Fire prevention;
5. Radiation protection;
6. Radioactive waste management;
7. Maintenance;
8. Environmental protection;
9. Packaging and transporting nuclear materials;
10. Accident analysis;
11. Chemical safety;
12. Sharing of facilities, structures, systems and components;
13. Utilities essential to radiological safety; and

(d) Technical safety requirements must include items in the following categories:

1. Safety limits. (i) If any safety limit is exceeded, corrective action must be taken as stated in the response procedures associated with the technical safety requirements or the affected part of the process must be shut down unless this action would increase the risk to the health and safety of the public or plant personnel.
   (ii) If any safety limit is exceeded, the Corporation shall notify the Commission if required by §76.120, review the matter, and record the results of the review, including the cause of the condition and the basis for corrective action taken to preclude recurrence.
   (iii) The Corporation shall retain the record of the results of each review until the Commission no longer has certification authority.

2. Limiting control settings. (i) Where a limiting control setting is specified for a variable on which a safety limit has been placed, the setting must be so chosen that protective action, either automatic or manual, will correct the abnormal situation before a safety limit is exceeded. If, during operation, the automatic alarm or protective devices do not function as required, appropriate action must be taken to maintain the variables within the limiting control-setting values and to repair promptly the automatic devices or to shut down the affected part of the process.
   (ii) If, during operation, an automatic alarm or protective device does not function as required, the Corporation shall notify the Commission if required by §76.120, review the matter, and record the results of the review, including the cause of the condition and the basis for corrective action taken to preclude recurrence.
   (iii) The Corporation shall retain the record of the results of each review until the Commission no longer has certification authority.

3. Limiting conditions for operation. When a limiting condition for operation of any process step in the system is not met, the Corporation shall shut down that part of the operation or follow any remedial action permitted by the technical safety requirements until the condition can be met.
   (i) If a limiting condition for operation of any process step in the system is not met, the Corporation shall notify the Commission if required by §76.120, review the matter, and record the results of the review, including the cause of the condition and the basis for corrective action taken to preclude recurrence.
   (ii) The Corporation shall retain the record of the results of each review until the Commission no longer has certification authority.

4. Design features. Design features to be included are those systems, components, or structures of the plant which, if altered or modified, would have a significant effect on safety and are not