

## **GSI-191 Resolution Criteria Low/No Fiber Plants**

### **Scope**

Generic Letter 2004-02 called for all PWRs to address the potential blockage of ECCS recirculation flow during design basis events. All PWRs have performed testing and completed design modifications to address GL 2004-02. This document is intended to provide resolution criteria for GSI-191 for plants with no or low fiber conditions. The criteria address strainer head loss and in-vessel downstream effects.

### **Purpose**

The purpose of this document is to provide criteria for acceptable strainer head loss and in-vessel downstream effects for low or no fiber plants. For plants that satisfy both of the criteria below, the basis is established for an approach for the NRC to provide a letter to these specific plants closing out GL 2004-02, or identifying necessary plant commitments to close out GL 2004-02. This would enable the associated generic safety issue (GSI-191) to be closed.

### **Criteria**

- A. Strainer Head Loss criterion is satisfied if one of the following two conditions is met:
1. If quantity of fiber transported to strainer will result in 1/16" theoretical debris bed or less, a head loss test will not be required based on the following assumptions:
    - No problematic debris materials transported to strainer (e.g., calcium silicate, microTherm, MinK)
    - Measures have been taken to prevent problem materials from entering debris source term (e.g., double banding)
    - Credit full strainer area (i.e., total of all trains) in determining whether 1/16" debris bed criterion is met
    - Consideration of paint chip impact on available strainer area for strainers in pits
    - 1/16" applies to strainer area after reductions accounting for materials like tags.
  2. An NRC accepted strainer head loss test can be used to meet this criterion
- B. In-vessel Downstream Effect Criterion is satisfied if one of the following two conditions is met:

1. In vessel downstream effects do not need to be explicitly addressed if the total amount of fiber within the Zone of Influence (ZOI), available for transport, plus latent fiber is 20 lbm or less with the following assumption:
  - This is based on a fuel fiber limit of 15 gm/assembly. The 20 lbm criterion is calculated assuming 75% debris transport, 45% strainer bypass and 200 fuel assemblies (i.e.,  $[(20\text{lb} \cdot .75 \cdot .45 \cdot 453.6 \text{ gm/lb}) / 200] = \sim 15 \text{ gm/assembly}$ ).
  - Plant specific values for # of assemblies should be used to determine appropriate fiber limit.
  - Criterion can be relaxed for plants with upper plenum injection
2. An NRC accepted bypass test in combination with supportable plant specific fuel debris limit can be used to meet this criterion.

### **Records**

The plant shall maintain the documentation required to substantiate satisfactory compliance with the criteria.