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# Oconee Flood Protection and the Jocassee Dam Hazard

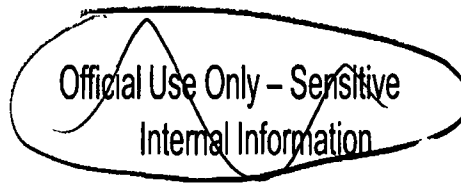
Commission Assistants brief  
August 12, 2008

10/3/2012

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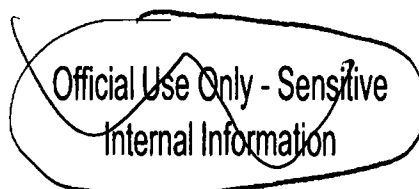
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# Overview

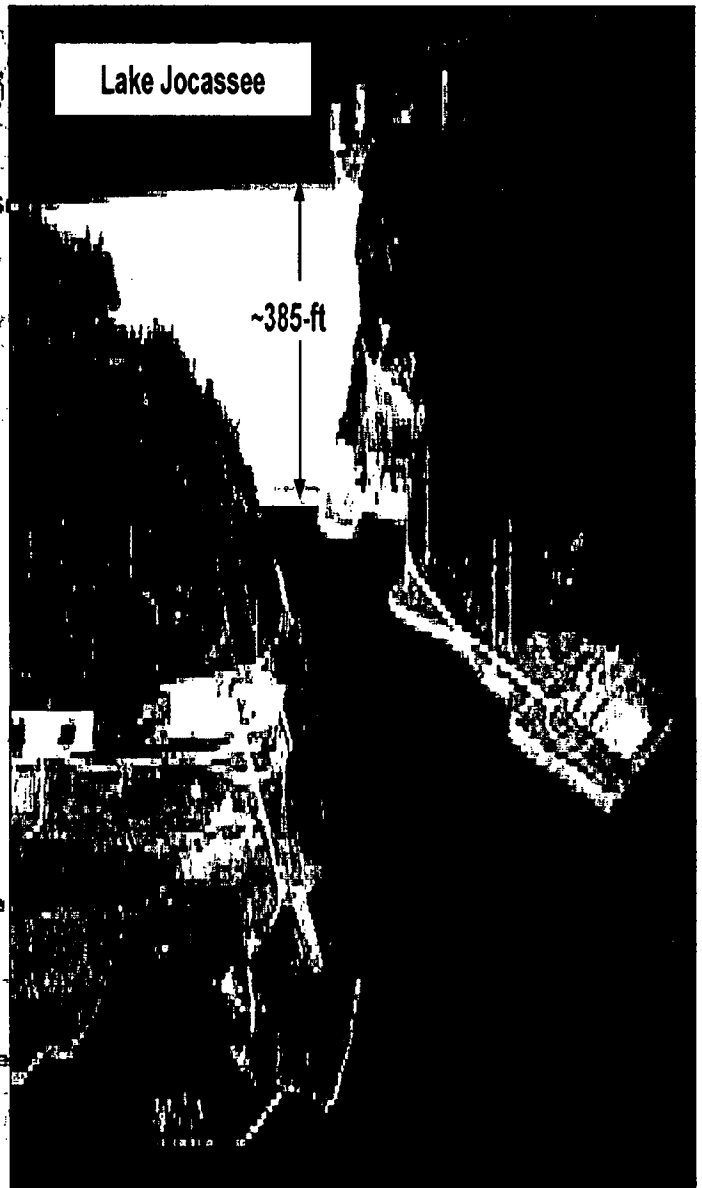
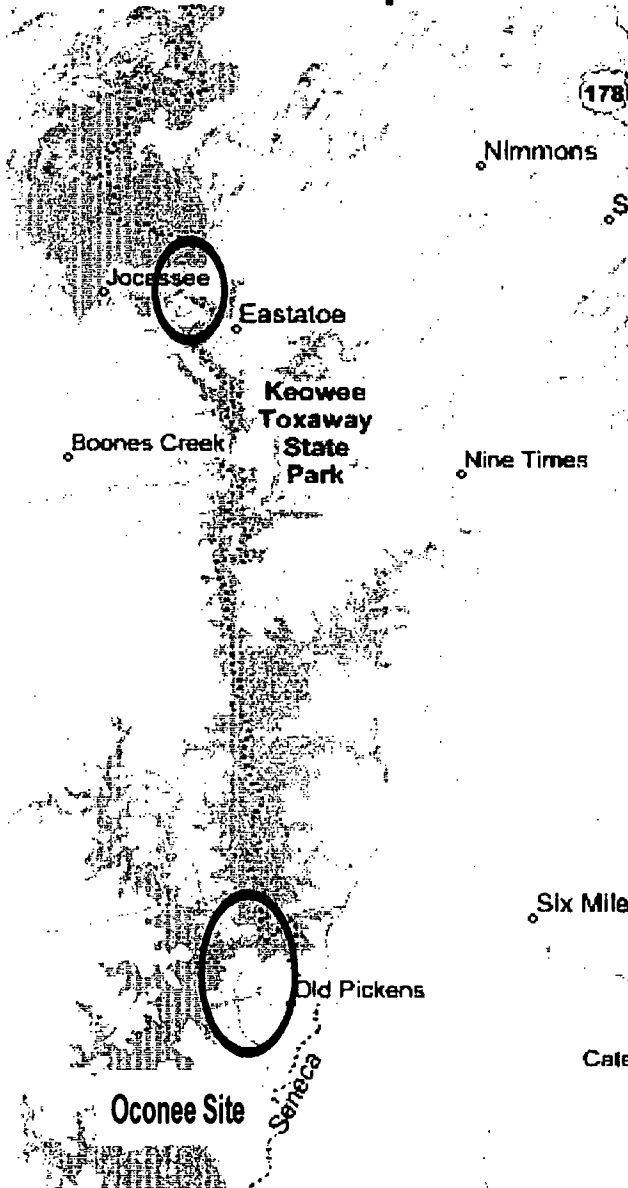
- Objective
  - Provide background information for issue.
  - Attain senior management alignment on issuance of a request for information per 10 CFR 50.54(f).
    - Alignments meetings held within NRR (7/28) and between NRR, RII, OE and OGC (8/1) for path forward on letter.
- Success
  - Understanding of the regulatory and safety issues.
  - Confirmation of the path forward to resolve issue.

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# The Flood Scenario

## Rupture of Jocassee Dam



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# Jocassee Dam Aerial



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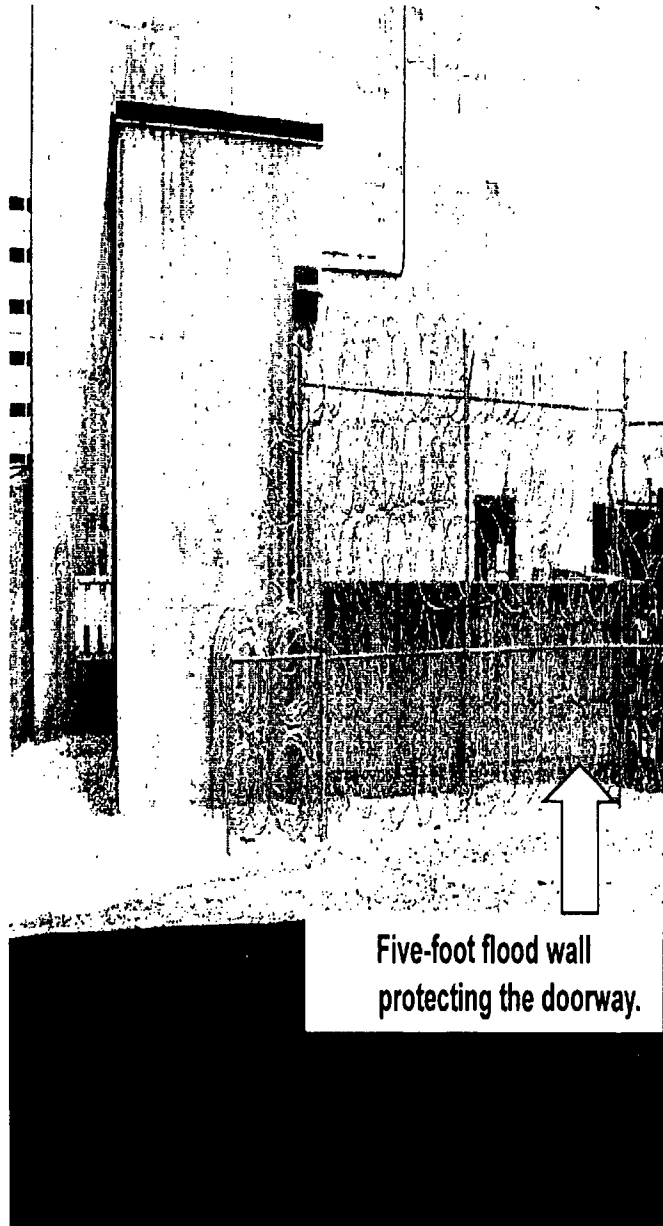
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# The SSF Flood Barriers



Five-foot flood wall  
protecting the doorway.

## Key Insights from Reactor Oversight Process

- Staff discovered that the Jocassee dam failure issue had not been adequately resolved.
- Duke Hydro/FERC Inundation Study completed in early 1990s. Estimated flood heights up to 16.8 ft above SSF grade level.
- Floods in excess of 5 ft lead to three-unit core damage event.
- Staff identified an under-estimate in licensee's dam failure frequency.



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## Issuance 50.54(f) Letter

- 50.54 letter is best regulatory approach to initiate resolution.
- Goal to issue letter by August 8.
- Letter seeks information to assure protection of public and elevates NRC's regulatory and safety concerns.
- Letter states that Jocassee Dam Failure Inundation Study indicates flood heights up to 16.8 feet above SSF grade
- NRR Director and Region II Administrator to have joint call with Duke senior management when letter is issued.
- Brief Commissioner Assistants prior to letter issuance.

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## **Actions Concurrent with 50.54(f) Letter**

- Backfit evaluation: external flooding within licensing basis. Licensee did not address Jocassee dam failure.
- Cost-benefit estimate of \$3 million in modifications. Modifications on the order of \$13 million justified.

## **Actions Concurrent with 50.54(f) Letter**

(continued)

- Generic issue preliminary assessment completed.
  - Twenty five sites have a dependency on dam performance. Eight sites (including Oconee) have dams up river of the site.
  - Draft Information Notice has been written.
- Communication plan developed for Oconee actions and generic implications. Plan covers internal stakeholders only because information concerning issue is sensitive.
- Justification for continued interim operations of Oconee in progress.



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## **Follow-up Actions After Issuance of 50.54(f) Letter**

- Prepare a draft Safety Order to direct Oconee plant modifications and modify Oconee license.
- NRC senior management to call Duke senior management when letter is issued.
- Evaluate licensee's response to letter.
- Determine if Safety Order is the appropriate regulatory vehicle.

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