

**From:** Eva Brown  
**To:** Emerson, Fred  
**Date:** Wednesday, October 08, 2003 11:21AM  
**Subject:** INFORMATION : 10-09 Conference Call with NEI on Emerging FP Issues

Fred,

Per our discussion this morning, I have reserved a bridge line for a conference call between you and the staff on Friday, October 10 at 8:30 am.

The bridge line is (800) 638-8081 with a passcode of 2993#. Attached are draft summaries on the epoxy coating and carbon dioxide lockout issues. Additionally the staff has indicated proposed actions for NEI.

If you have any questions regarding the summary, please feel free to contact Dan Frumkin at (301) 415-2280.

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## SUMMARY OF

### EMERGING FIRE PROTECTION ISSUES

#### OCTOBER 10, 2003 CONFERENCE CALL WITH

#### NUCLEAR ENERGY INSTITUTE (NEI)

#### **I. EPOXY COATINGS**

Fire protection inspectors reviewed flame spread and combustibility of epoxy floor coverings at Duane Arnold and D.C. Cook. These reviews are described in the following recent inspection reports:

- o Duane Arnold Nuclear Regulatory Commission (NRC) Inspection Report 50-331/03-02 (ML031430217) [Licensee response to NRC Unresolved Item 50-331/03-02-03(DRS): Epoxy Coatings (ML032190021)]

- o D.C. Cook NRC Inspection Report 50-315/03-05; 50-316/03-05 (ML032100754)

The inspectors identified epoxy floor covering installations having indeterminate flame spread ratings. In each of the above two inspection reports an unresolved item (URI) was identified with respect to use of epoxy floor covering. Specifically, the inspectors identified that licensees may not have accounted for combustible epoxy floor covering applied over cement flooring in their fire protection program and that the flame spread of the epoxy floor covering may be in excess of NRC guidance or the licensee's fire protection licensing basis.

This summary is provided to NEI for follow-up action by the industry as an emerging issue identified in the August 21, 2003 fire protection management meeting. This summary completes Action item 7 assigned to the NRC.

#### Background for Epoxy Floor Issue

Title 10 to the *Code of Federal Regulations* (10 CFR 50) Appendix A, General Design Criteria (GDC) 3 requires that, "Noncombustible and heat resistant materials shall be used wherever practical throughout the unit..."; and Branch Technical Position (BTP) APCS 9.5-1, Appendix A, section D.1.(d) states that interior finishes be noncombustible or listed by a nationally recognized testing laboratory for "flame spread, smoke and fuel contribution of 25 or less in its use configuration."

BTP CMEB 9.5-1 defined noncombustible material as (a) Material which, in the form in which it is used and under the conditions anticipated, will not ignite, burn, support combustion, or release flammable vapors when subjected to fire or heat; (b) Material having a structural base of noncombustible material, as defined in (a), above, with a surfacing not over 1/8-inch thick

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that has a flame spread rating of not higher than 50 when measured in accordance with ASTM E-84, "Surface Burning Characteristics of Building Materials."

Generic Letter (GL) 86-10, Supplement 1, Fire Endurance Test Acceptance Criteria for Fire Barrier Systems Used to Separate Redundant Safe Shutdown Trains Within the Same Fire Area (Supplement 1 to GL 86-10, "Implementation of Fire Protection Requirements") defined a "non-combustible material" as follows:

Noncombustible Material - (a) Material which, in the form in which it is used and under the conditions anticipated, will not ignite, burn, support combustion, or release flammable vapors when subjected to fire or heat; (b) Material having a structural base of noncombustible material, with a surfacing not over 1/8-inch thick that has a flame spread rating of not higher than 50 when measured in accordance with ASTM E-84, "Surface Burning Characteristics of Building Materials." (There is an exception to this definition as defined by BTP Appendix A, Position D.1.(d). This position allows the use of combustible interior finishes when listed by a nationally recognized test laboratory, such as Factory Mutual or Underwriters Laboratories, Incorporated, for a flame spread, smoke and fuel contribution of 25 or less in its use configuration.)

### II. CARBON DIOXIDE LOCKOUT

The Accession Numbers in ADAMS for the inspection reports which discuss carbon dioxide (CO<sub>2</sub>) systems being locked out or otherwise having identified problems are as follows:

o Millstone 3	ML013410017 - CO <sub>2</sub> system locked out since 1999
o Beaver Valley 1	ML011800436 - URI based on concentration
o Nine Mile 2	ML032040140 - Automatic function disabled since June 2002
o Peach Bottom	ML031430425 - Automatic function disabled since June 2002

Region I inspectors have identified a number of licensees with CO<sub>2</sub> fire extinguishing systems that have systems locked out or have the systems automatic actuation capability disabled. System functions have been affected for extended periods of time and for those with no related URI, there are no known actions identified to resolve the condition.

This summary is provided to NEI for follow-up action by the industry as an emerging issue identified in the August 21, 2003 fire protection management meeting. This summary completes Action item 8 assigned to the NRC.

### III. NEI ACTION

In accordance with Protocol for Resolution of Emerging Fire Protection Issues Between the Industry and NRC (included in ML031210232), NEI should address this issue by developing (from NEI's perspective where appropriate):

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- o A statement of each issue being resolved
- o A summary of each party's position on the issue (Industry's Position)
- o The priority of each issue (From Industry's Perspective)
- o The next action identified for each issue
- o Responsibilities for action completion
- o Action due dates and status
- o Applicable references for each item

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