



## Department of Energy

Idaho Operations Office  
1955 Fremont Avenue  
Idaho Falls, ID 83415

June 26, 2012

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D.C. 20555-0001

SUBJECT: Response to Three Mile Island Unit-2 Independent Spent Fuel Storage Installation –  
Horizontal Storage Module Concrete Monitoring Plans (Docket 72-20)  
(EM-FMDP-12-042)

Dear Sir or Madame:

This letter is in response to the Nuclear Regulatory Commission (NRC) letter dated May 26, 2011 which requests the U.S. Department of Energy, Idaho Operations Office (DOE-ID) provide additional information describing the Horizontal Storage Module (HSM) concrete monitoring plans to be implemented during the interim time frame of initial concrete repair and license renewal.

The actions to stabilize the concrete from further degradation were completed on October 12, 2011. A synopsis of the repairs performed is documented in CH2M-WG Idaho, LLC (CWI) Work Order Package No. 00636977 01. An HSM Concrete Surface Monitoring Program, as recommended in NUREG-1801 (Revision 2), *Generic Aging Lessons Learned (GALL) Report – Final Report*, Section XI.S6, *Structures Monitoring*, will be implemented beginning in 2012. The Program consists of an annual visual inspection of the repaired areas for any signs of additional cracking from freeze thaw action. Personnel performing inspections or evaluations will meet the requirements of ACI 349.3R-02 Chapter 11, *Qualifications of Evaluation Team*. Visual inspection of accessible HSM concrete surfaces for aging effects shall be performed per ACI-349.3-02R Section 3.5.1, *Visual Inspection* and ACI 201.1R-08, *Guide for Conducting a Visual Inspection of Concrete in Service*. Key aging effects include scaling, cracking, and spalling from freeze/thaw, and increase of porosity and permeability from leaching of calcium hydroxide.

All items identified from visual inspection will be photographed for trending purposes. All inspection equipment used to photograph the HSMs or used in measurements will be documented. Disposition of identified aging effects will be performed using the evaluation criteria in ACI-349.3R-02, Chapter 5, *Evaluation Criteria*. Conditions exceeding second-tier criteria will be further evaluated. If disposition requires additional actions, they will be documented as recommendations in the visual inspection report. Any separation of the cracks repaired with epoxy resin injection will be documented in the visual inspection report with recommendations for further evaluation.

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If you have any questions please call me at (208) 526-6613.

Sincerely,



Anthony W. Marshbank  
NRC Licensed Facilities Director

cc: U.S. NRC Region IV  
R. Elwood, CWI  
J. Stalnaker, CWI  
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