

Kevin Ramsey

From: Shackelford, W. Randy [WRShackelford@nuclearfuelservices.com]
Sent: Wednesday, February 25, 2009 4:04 PM
To: Kevin Ramsey
Cc: Wheeler, Jennifer K.; Droke, Rik P.
Subject: RE: Supplemental Info for Reflection License Amendment
Attachments: Draft Information to Support License Amendment Request Regarding Reflection.doc

Kevin –

Attached is the draft supplemental information to support the license amendment request for reflection. We are in the process of preparing a letter to you with the supplemental information.

Randy Shackelford

From: Kevin Ramsey [mailto:Kevin.Ramsey@nrc.gov]
Sent: Wednesday, February 25, 2009 2:35 PM
To: Shackelford, W. Randy
Subject: RE: Supplemental Info for Reflection License Amendment

We can take a look at it if you have something ready to review.

From: Shackelford, W. Randy [mailto:WRShackelford@nuclearfuelservices.com]
Sent: Wednesday, February 25, 2009 12:18 PM
To: Kevin Ramsey
Subject: Supplemental Info for Reflection License Amendment

Kevin –

We have a draft of our supplemental response to the reflection license amendment. Do you want us to send you our draft so you can let us know if additional information is needed or do you want to wait until we send you our final version on Friday?

Randy Shackelford

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Additional Information to Support License Amendment Request Regarding Reflection

The type and amount of reflection analyzed in nuclear criticality safety evaluations (NCSEs) is an important consideration for the safety of the system. The current license requirements regarding reflection are documented in SNM-124, Chapter 4. These legacy requirements are ambiguous, which has led to confusion and misinterpretation by both NFS and NRC throughout the years. NRC Inspection Reports 2007-207 and 2008-202 cite examples of where differences in interpretation exist. The reflection requirements are also unnecessarily prescriptive and inflexible, which sometimes dictate conditions that may be inappropriate for non-routine processes or activities. In addition, the requirements are overly conservative and require reflection conditions that are generally not credible (e.g., full water reflection for systems not located in the flood plain). The result is unnecessary and/or excessively restrictive controls, which may have a net negative effect on facility safety.

The proposed criteria (in the license amendment request) embrace general industry practices to consider credible reflector conditions with supporting discussion and justification in the associated NCSE. Credible reflector conditions may include floors, walls, equipment, people, hands, etc. As with all safety evaluations, the judgment and experience of the evaluator is paramount to ensuring safety. The proposed license amendment provides a conservative framework within which an experienced and qualified nuclear criticality safety engineer can perform all system analyses. This approach will ensure that appropriate reflection is applied to each case on an individual basis.