

June 9, 2011

MEMORANDUM TO: Jeffrey Cruz, Chief
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Division of New Reactor Licensing
Office of New Reactors

FROM: Joseph M. Sebrosky, Senior Project Manager /RA/
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SUBJECT: SUMMARY OF MAY 24, 2011, PUBLIC MEETING WITH THE AP1000
DESIGN CENTERED WORKING GROUP (DCWG) TO DISCUSS THE
CLOSURE PLAN FOR AP1000 PIPING DESIGN ACCEPTANCE
CRITERIA (DAC) AND INITIAL TEST PROGRAM (ITP) LICENSE
CONDITIONS

On May 24, 2011, the U.S. Nuclear Regulatory Commission (NRC) staff held a public meeting with the AP1000 DCWG to discuss the closure plan for the AP1000 piping DAC including pipe rupture hazards analysis and to discuss initial test program license conditions. The associated meeting notice is available through the NRC's Agencywide Documents Access and Management System (ADAMS) under Accession No. ML111390647. The following handouts from the meeting are also available in ADAMS:

- Staff Handouts Regarding Piping DAC (ML111460082)
- Industry Handouts Regarding Piping DAC (ML111460084)
- Draft Inspection Procedure 65001.20, "Inspection of Safety-Related Piping Design Acceptance Criteria (DAC) – Related ITAAC" (ML111460096)
- Draft Initial Test Program License Conditions (ML111460093)

Highlights of the Meeting

Piping Design Acceptance Criteria

The NRC staff and industry discussed the closure options for piping DAC, how previous issues that were identified will be addressed in this process, and the applicability of inspections, tests, analyses and acceptance criteria (ITAAC) maintenance requirements to piping DAC.

The piping DAC that were discussed included the following:

- As designed piping DAC as defined by COL Information Item 3.9-7 to be all Class 1 piping greater than 1 inch diameter and Class 2/3 lines included in Table 3.9-20 of the AP1000 design control document (DCD)

- As-designed pipe rupture hazard analysis (PRHA) as defined by COL Information Item 3.6-1

At one point the AP1000 design certification amendment (DCA) review included within its scope the resolution of these piping DAC. However, due to schedule concerns the resolution of these piping DAC was removed from the scope of the DCA and the piping DAC that was approved as part of AP1000 DCD Revision 15 was used. The issues that were identified as open items in the AP1000 DCA safety evaluation report (SER) with open items associated with the closure of piping DAC were closed in the AP1000 advanced safety evaluation based on the closure of piping DAC being removed from the scope of the AP1000 DCA review. Issues were also identified in an April 1, 2011, audit report (ADAMS accession ML110250634) on the use of the WESTEMS™ computer code in the fatigue analysis associated with piping DAC.

Industry indicated the as-designed piping DAC would rely on the use of the WESTEMS™ computer code for the piping fatigue analysis. In the AP1000 DCA SER with open items and in the April 1, 2011, audit report, the staff had identified several issues associated with the use of this code. As part of the closure plan for piping DAC industry indicated that it would request NRC write a safety evaluation on a topical report that would propose the addition of the WESTEMS™ computer code to DCD Table 3.9-15. Assuming that this topical report would be approved, it would then be referenced in future AP1000 license amendment requests via a departure in accordance with 10 CFR 52 Appendix D Section VIII.

Industry then described how it was addressing the issues that were identified with the use of WESTEMS™ computer code. Industry provided a timeline for the topical report indicating submittal later in calendar year 2011. The staff indicated that the use of a topical report followed by an amendment seemed appropriate given its design centered review approach which encourages the use of reviewing an issue once and referencing the resolution of that issue in future licensing activities. The staff also noted that in addition to addressing the issues previously identified by the staff in the audit report, the topical report should address Standard Review Plan Section 3.9.1.

The time line that industry provided also provided time frames for when industry believed the as designed piping and PRHA DAC would be completed. Industry noted that the draft inspection procedure seemed to indicate that all piping DAC needed to be completed before the staff would perform an inspection and industry indicated that some portions of the piping DAC would be completed before other portions. Industry suggested a phased approach to the piping DAC inspections may be more appropriate. The staff indicated the inspection procedure was guidance and not a requirement and allows for more than one piping DAC inspection at the staff's discretion. The staff indicated that more discussion would be needed regarding the scope and timing of these DAC inspections.

Industry indicated that it believed that once piping DAC was completed, ITAAC maintenance procedures would not apply to piping DAC. Industry noted that the piping design packages will likely be changed as the plant is built. Industry stated that these changes are required to be reconciled by the ASME Code and will be inspected as part of a separate ITAAC or set of system based ITAAC at each site that will specifically look at reconciliation of the as-built design. Industry's position is that ITAAC maintenance is applicable for the as-built piping system and as-built PRHA ITAACs and not to the as-designed piping and PRHA DAC.

The staff proposed that there be given consideration on how subsequent combined license (SCOLs) take advantage of piping DAC that was resolved by a previous reference COL (RCOL). The staff outlined the following proposal:

- RCOL submits ITAAC closure letter including a list of the piping packages with version number
- NRC inspects piping design and issues inspection report for ITAAC closure for the RCOL
- SCOL ITAAC closure letter for piping DAC would reference the RCOL ITAAC closure letter and RCOL ITAAC inspection report for piping DAC. The SCOL closure letter would also identify any deviations from the RCOL DAC implementation

The staff indicated that a closure plan for the AP1000 instrumentation and control (I&C) DAC should also be developed. In addition, there was a comment from a member of the audience that the staff should review the need for the proposed license condition to provide a schedule for when the piping DAC would be completed. The member believed that 10 CFR 52.99 already requires that licensees provide a schedule for closing of ITAAC and that the piping DAC schedule license condition was redundant to this requirement. The staff indicated that the license condition had been provided by the applicant in response to a staff request for schedule information for DAC closure. During the ensuing discussion, staff indicated that the intent of the License Condition was to support inspection scheduling and that the licensee had the option to address the license condition in phases to better support their construction schedule.

The following action items were taken from this portion of the meeting:

- Another meeting will be held prior to the submittal of the WESTEMS™ topical report discussed above. The purpose of the meeting would include a discussion of the scope and content of the topical report. This meeting would be used to identify any other issues that need to be resolved in the topical report or as part of the piping DAC closure process. The meeting would also include a discussion of the AP1000 I&C DAC.
- The NRC staff took an action to internally discuss industry's proposal that ITAAC maintenance procedures do not apply to piping DAC, and to provide a response to industry in a future meeting.
- There was a joint action item to consider how best to document lessons learned from the piping DAC closure process. For example, updates to Regulatory Guide 1.215, "Guidance for ITAAC Closure Under 10 CFR Part 52," and NEI-08-01, "Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52," were discussed as possibilities.

Initial Test Program License Conditions

The staff discussed the proposed initial test program (ITP) license conditions (available in ADAMS under ML111460093). Industry provided several specific comments regarding the license conditions including the following:

- Industry noted that the preoperational license conditions provided in (2)(a) of the draft license did not contain the complete set of preoperational tests. Industry wanted to know if this license condition was limited on purpose. The staff indicated that it limited this license condition on purpose to only those preoperational programs that involved first-plant-only or first-three-plants-only testing.
- Industry stated that it was concerned that the wording of several of the license conditions would have an unintended consequence of requiring license amendments when the 10 CFR 50.59 process would allow a licensee to make changes without prior approval from the NRC. Specifically, industry expressed concern about using language that includes “as described in AP1000 DCD, Revision 19, Section xxxx.” Industry suggested replacing the term “described” with “indicated” and also to remove the specific revision number of the DCD. The staff indicated that it would consider the comment.
- Regarding the first-plant only and first-three-plant-only license conditions described in proposed license conditions (2)(a), (4)(b), and (5)(b), industry objected to the use of the term “perform” in the proposed license condition. Industry indicated that it wanted to take advantage of first-plant-only and first-three-plants-only testing that may be performed in China. Industry indicated that it preferred that the license condition be rephrased to “the licensee shall document” and not necessarily “perform” the tests. The staff indicated that the language would not be changed from “perform”. The staff stated that if a licensee wanted to take advantage of first-plant-only testing or first-three-plants-only testing that was performed at another site it would have to provide a license amendment providing the details of why it believed the testing performed at these other sites satisfied this license condition. The staff indicated that it would consider the use of first-plant-only testing done in other countries but that additional issues would need to be addressed in the use of this data. These issues included but were not limited to the quality assurance program associated with the first-plant-only testing, NRC access to the testing when it is performed, and NRC access to the test results.
- Industry objected to the use of the term “in accordance with” in proposed license condition (2)(b) and other similar license conditions. The staff stated it would consider removing this phrase in these license conditions.
- Industry indicated that proposed license condition (2)(d) should be separated from the preoperational testing program section. The staff stated it would consider this comment. Industry also noted that this license condition would not be needed if proposed changes to 10 CFR 52 as part of the ITAAC maintenance rulemaking, which include this notification requirement, are adopted. The staff agreed and stated that until the change is made to 10 CFR Part 52, COLs would have this license condition.

- Industry noted that proposed license condition (3)(b) contains a typographical error in its reference to 10 CFR 52.103(g). The staff indicated it would fix this error.
- Industry noted that proposed license condition (6) uses the term “thermal power.” The staff stated that it used this term to be consistent with existing operating licenses.

The following action item was taken from this portion of the meeting:

- Industry and the NRC staff agreed that there should be additional dialogue on how the use of first-plant-only and first-three-plants-only testing that maybe performed in China can be used to satisfy the requirement for these tests for a plant in the United States. The purpose of this future interaction would be to provide more specifics on what would need to be done in order for a licensee to use China testing to satisfy these license conditions.

Docket Nos. 52-014, 52-015, 52-018, 52-019, 52-022, 52-023, 52-025, 52-026, 52-027, 52-028, 52-29, 52-30, 52-40, 52-41

Enclosure:

1. Attendance List

cc w/encl: See next page

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Enclosure:

1. Attendance List

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OFFICE	PM:NRO/DNRL/NWE1	LA:NRO/DNRL/NWE1	NRO/DCIP/CIPB	BC:NRO/DCIP/CQVA	BC:NRO/DE/EMB
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**PUBLIC MEETING WITH AP1000 DESIGN CENTERED WORKING GROUP
TO DISCUSS THE CLOSURE PLAN FOR PIPING DESIGN ACCEPTANCE
CRITERIA AND INTIAL TEST PROGRAM LICENSE CONDITIONS**

May 24, 2011

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(Revised 04/13/2011)

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