

February 27, 2017

MEMORANDUM TO: Steven Zane
Acting Assistant Inspector General for Audits

FROM: Vonna Ordaz, Acting Director ~~/RA/~~ M. Mayfield for
Office of New Reactors

SUBJECT: STATUS OF RECOMMENDATIONS FROM "AUDIT OF THE U.S.
NUCLEAR REGULATORY COMMISSION'S OPERATOR
LICENSING PROGRAM FOR THE AP1000 POWER REACTOR"
(OIG-16-A-08)

On March 9, 2016, by memorandum from Michael R. Johnson, Deputy Executive Director for Reactors and Preparedness Programs, to Stephen D. Dingbaum, Assistant Inspector General for Audits (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16060A139), the staff of the U.S. Nuclear Regulatory Commission (NRC) responded to the Office of the Inspector General's (OIG's) memorandum that transmitted OIG-16-A-08, "Audit of the U.S. Nuclear Regulatory Commission's Operator Licensing Program for the AP1000 Power Reactor," dated February 8, 2016 (ADAMS Accession No. ML16039A297). The staff agreed to two recommendations:

Recommendation 1: Develop and implement an agencywide, consistent interpretation of regulations and guidance to address issues specific to new reactor operator licensing requirements.

Recommendation 2: Implement staff processes for documenting, addressing, communicating, and monitoring key decisions relevant to new reactor operator licensing requirements.

On August 29, 2016, by memorandum from Jennifer Uhle, Director, Office of New Reactors, to Steven Zane, Acting Assistant Inspector General for Audits, (ADAMS Accession No. ML16216A285), the staff provided a status update on the completion of the recommendations from OIG-16-A-08, describing the activities completed to date, proposing a new target completion date of February 28, 2017, for Recommendation 1, and proposing that Recommendation 2 be considered completed and ready for closure.

This memorandum provides an update to the activities completed since August 29, 2016, explains the staff's position and progress for Recommendation 1, and provides the basis for the staff's proposal that Recommendation 1 be considered as completed and ready for closure.

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Recommendation 1:

Develop and implement an agencywide, consistent interpretation of regulations and guidance to address issues specific to new reactor operator licensing requirements.

OIG Analysis

In a memorandum dated March 17, 2016 (ADAMS Accession No. ML16077A007), OIG stated that the proposed actions meet the intent of the recommendation. This recommendation will be closed when OIG verifies that the NRC has completed its proposed actions to have the Office of New Reactors (NRO), the Office of Nuclear Reactor Regulation (NRR), Region II (R-II), and the Office of the General Counsel do the following:

- Address and develop a consensus on the time interval between written examination and operating test administrations for AP1000 facilities currently under construction.
- Address the requirements to qualify a simulator as a Commission-approved simulation (CAS) facility for use in AP1000 operating tests.
- Determine the impact on operator licensing for currently operating reactors.

Status: Resolved.

NRC Staff Update

A group consisting of staff from the Human Performance, Operator Licensing, and Inspection, Test, Analysis, and Acceptance Criterion/Criteria Branch (HOIB) in NRO; the Operator Licensing and Training Branch in NRR; and R-II (collectively "staff") developed consensus positions for the following items:

- The time interval between written examination and operating test administrations for AP1000 facilities currently under construction.
- The requirements to qualify a simulator as a CAS facility for use in AP1000 operating tests.
- The impact on operator licensing for currently operating reactors.

Address and develop a consensus on the time interval between written examination and operating test administrations for AP1000 facilities currently under construction

The staff determined that guidance that currently exists in NUREG-1021, Revision 11, "Operator Licensing Examiner Standards for Power Reactors," is acceptable for addressing the time interval between the written examinations and operating test administrations for AP1000 facilities currently under construction. NUREG-1021, Revision 11, Sections ES-201 and ES-302 state that normally the operating tests should be administered within 30 days of the written examinations, and the regional office shall obtain concurrence from the NRR/NRO operator

licensing program office, if the examination dates diverge by more than 30 days. The staff determined that no changes to this aspect of NUREG-1021 were necessary.

The flexibility in NUREG-1021 has been applied numerous times in the past to situations concerning the operating fleet to allow divergence in the dates of the administration of portions of the licensed operator examination in excess of 30 days, with the affected NRC region obtaining concurrence from the appropriate Headquarters program office. Typically, past examples were cases involving circumstances beyond an applicant's control that prevented an individual from completing all portions of the operator licensing examination within the 30-day timeframe. If applicable for AP1000 reactors under construction, the region will obtain concurrence from the NRR/NRO operator licensing program office, if the examination dates diverge by more than 30 days, and will provide case-specific justification. The region will convey these requests to NRO via a Report on Interaction (as is done for the operating fleet), consistent with NUREG-1021 guidance and Operator Licensing Manual Chapter 160, "Regional Office Interactions."

Address the requirements to qualify a simulator as a Commission-approved simulation facility for use in AP1000 operating tests

NRO, NRR, and R-II drafted an appendix to NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition," to provide acceptance criteria (see Attachment 1) that a licensee must meet in order for the Commission to approve the licensee's simulation facility for use in operator licensing operating tests. Using information provided by the COL holders, NRC staff inspections, and Westinghouse, the HOIB staff in NRO determined that the acceptance criteria were satisfied and therefore, the AP1000 simulation facilities at V.C. Summer and Vogtle were adequate to be used for operator licensing examinations.

For the AP1000 reactors currently under construction, the staff used this process to conduct operator licensing exams within the time interval specified in NUREG-1021 after the licensees obtained (1) approval to use the AP1000 simulation facilities for operating tests, and (2) an exemption from the walkthrough requirement in 10 CFR 55.45(b) and approval to use an alternative method to perform the in-plant systems job-performance measures. The staff now has a well-established process for evaluating exemptions, and NUREG-1021 contains guidance and criteria for evaluating alternatives to its examination standards. As a result, the first Vogtle Unit 3 examination was successfully administered in July 2016 with the operating test and written examination portions conducted within 30 days as specified in NUREG-1021. The first V.C. Summer Unit 2 examination was successfully administered in September 2016 with the operating test and written examination portions conducted within 30 days of one another, consistent with the timeframes for operator licensing examinations specified in NUREG-1021.

The staff will incorporate this draft guidance and review method in a revision to Section 13.2.1, "Reactor Operator Requalification Program and Reactor Operator Training," of NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition." After seeking feedback on this draft guidance during a public comment period and resolving public comments, the staff will issue the guidance in final form. The staff may then use this guidance to evaluate future requests for a CAS.

The enclosure is a draft of this addition to the Standard Review Plan (SRP).

Determine the impact on operator licensing for currently operating reactors

The staff determined that consensus positions on the time interval between written examination and operating test administrations for AP1000 facilities currently under construction, and requirements to qualify a simulator as a CAS for use in AP1000 operating tests do not impact operator licensing for currently operating reactors for two reasons. First, the 30-day timeframe for operator licensing examinations provided in NUREG-1021 guidance remains sufficient for currently operating reactors and reactors under construction. Because no changes were made to this guidance, there is no effect on currently operating reactors.

Second, the draft technical review guidance for review and approval of a licensee request for a CAS for use in operator licensing operating tests, to be included as part of the SRP, does not impact the operating fleet because every operating nuclear power plant has a plant reference simulator, and established processes for maintaining them; operating reactors do not have a need for a CAS. Accordingly, the staff would not receive any requests for a CAS from the operating fleet.

Conclusion

With these actions, we consider Recommendation 1 to be complete and recommend closure.

Enclosure:
DRAFT AP1000 CAS Facility Requests,
Section 13.2.1, Appendix A (NUREG-0800)

Correspondence References
OIG-16-A-08, "Audit of NRC's Operator Licensing Program for the AP1000 Power Reactor"

OIG-16-A-08, "Audit of NRC's Operator Licensing Program for the AP1000 Power Reactor," Office of the Inspector General, February 8, 2016 (ADAMS Accession No. ML16039A297).

Memorandum from Stephen D. Dingbaum to Victor M. McCree, "Status of Recommendations: Audit of NRC's Operator Licensing Program for the AP1000 Power Reactor (OIG-16-A-08)," March 17, 2016 (ADAMS Accession No. ML16077A007).

Memorandum from Jennifer Uhle to Steven Zane, "Status of Recommendations from Audit of the NRC's Operator Licensing Program for the AP100 Power Reactor (OIG-16-A-08)," August 29, 2016 (ADAMS Accession No. ML16216A285).

STATUS OF RECOMMENDATIONS FROM "AUDIT OF THE U.S. NUCLEAR REGULATORY COMMISSION'S OPERATOR LICENSING PROGRAM FOR THE AP1000 POWER REACTOR" (OIG-16-A-08), Dated February 27, 2017.

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NRO-002

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