NRC Staff Responses to Public Comments on DG-1329:
"QUALIFICATION AND TRAINING OF PERSONNEL FOR NUCLEAR POWER PLANTS"
83 FR 6053 (February 12, 2018)

I. INTRODUCTION

This document presents the U.S. Nuclear Regulatory Commission (NRC) staff's responses to written public comments received on Draft Guide (DG)-1329, "Qualification and Training of Personnel for Nuclear Power Plants" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16091A267), in response to a request for comments published in the *Federal Register* (FR) on February 12, 2018 (83 FR 6053).

II. OVERVIEW OF COMMENTERS AND COMMENTS

The NRC received seven comment submissions. Table 1 presents information on the commenters who submitted comments on DG-1329.

Table 1.

Name	Affiliation	ADAMS Accession No.	Identifier
Thomas Byrne	-	ML18068A049	TB
James Barstow	Exelon Generation Company	ML18120A114	EGC
Robert Meyer	The Professional Reactor Operator Society	ML18085A150	PROS
Justin Wheat	Southern Nuclear Operating Company	ML18106A031	SNC
Larry Nicholson	Florida Power and Light		FPL
Brian Magnuson	-	ML18106A033	BM
Ellen Anderson	Nuclear Energy Institute	ML18106A034	NEI

Similar comments were grouped as appropriate to facilitate the NRC staff's providing of responses.

Comments were binned into the following categories for convenience:

a. Comments on DG-1329 Scope
b. Comments Related to Middle Manager Qualifications
c. Comments Related to Operator Qualifications

a. *Comments on DG-1329 Scope*

Comment: [BM-1] Request revision to the Regulatory Analysis of DG-1329 to include the current standards/methods (ANSI/ANS, INPO, or other) acceptable to the NRC and compare them to ANSI-3.1-2014 and analyze them accordingly. [BM-2] This revised regulatory analysis should be available for public comment.

NRC Response: The NRC staff disagrees with this comment. The purpose of a regulatory analysis is to determine whether a revision to a regulatory guide is necessary. A discussion of various standards available for review by the NRC staff was not necessary for the regulatory analysis for DG-1329, which concluded that a revision to RG 1.8 is warranted. RG 1.8, Revision

4, Section B, “Discussion,” contains a reason for the revision, a history of the need for the revision and comparison to other standards that the staff found most directly related to the revision, and a discussion about the history and various standards that meet regulatory requirements. The regulatory analysis is available for public comment (ADAMS Accession No. ML16091A271).

Comment: [BM-3, PROS-1] Request that the DG-1329 Regulatory Analysis be revised to include a table showing the current commitments for each nuclear plant.

NRC Response: The NRC staff disagrees with this comment. A discussion of specific licensee commitments would not be appropriate for a regulatory analysis, which is intended to determine whether a revision to a regulatory guide is necessary. Moreover, a regulatory guide provides general guidance to all persons described in its Addressees section and does not discuss specific licensee commitments or require licensees to commit to it. No changes were made to the final RG.

Comment: [PROS-2] The NRC should evaluate current nuclear power plant organizational structure to determine if any added positions are needed related to risk informed decision making.

NRC Response: The NRC staff disagrees with this comment. The NRC staff has evaluated ANSI/ANS-3.1-2014. That standard is sufficiently broad to encompass any position that affects safety at a nuclear power plant and conformance with that standard, as modified by the exceptions and clarifications in RG 1.8, is sufficient to satisfy applicable regulations. No changes were made to the final RG.

b. *Comments Related to Middle Manager Qualifications*

Comment: [EGC-2, SNC-1, FPL-2] DG-1329 Section 1.1 describes the following exception to the ANSI/ANS-3.1-2014, Section 4.3, “Middle Manager Level” criteria: An individual assigned to a specific position should meet the requirements for that position; therefore, the allowance for a specific position to be filled by a person that does not meet the requirements for that position if that person is provided a staff whose qualifications meet the selected middle manager qualification is not endorsed. The commenters recommend revising the exception to endorse Section 1.1 except for Radiation Protection Manager.

NRC Response: The NRC staff agrees in part. An individual assigned to a specific position should meet the requirements for that position, as ANSI/ANS-3.1-2014, Section 4.1, makes clear. The staff has adjusted Section 1.1 of RG 1.8, Revision 4, to provide for temporary assignments of unqualified middle managers for periods not to exceed 1 year, provided that the temporary assignee is provided with a single directly-reporting staff member whose qualifications meet the selected middle manager qualification requirements. The intention of this exception is to emphasize the importance of assigning qualified personnel to positions with specific requirements, as described in ANSI/ANS-3.1-2014, while recognizing the need for flexibility to manage human resources. This flexibility is not intended to enable purposeful long-term assignment of unqualified personnel to middle manager positions.

Comment: [EGC-3, SNC-2, FPL-3] The commenters do not agree with the addition to the experience requirements listed in Section 4.3.3 of ANSI/ANS-3.1-2014, that individuals with no prior RPM experience should have six (6) months of time onsite before being assigned RPM duties. Exelon does not agree that the licensees should evaluate required onsite time for

experienced RPMs who are new to a site or reactor technology and states that there is no such requirement in Revisions 1, 2, or 3 of RG 1.8, nor is there any such requirement in the previous ANSI/ANS-3.1-1978 or ANSI-N18.1-1971 standards.

NRC Response: The NRC staff disagrees with this comment. ANSI/ANS-3.1-1981, Section 4.4.4, "Radiation Protection," introduced a six-month onsite experience qualification for group leaders in the radiation protection area (i.e., radiation protection managers). The NRC endorsed this industry standard, with exceptions, through RG 1.8, Revision 2. The six-month onsite qualification for the RPM was omitted from the subsequent standard and the subsequent RG 1.8, Revision 3. However, the NRC staff has determined that knowledge of specific plant operating characteristics is essential for the completion of RPM duties. The six months of onsite time provides a newly promoted RPM, one with no prior experience as an RPM and who is new to a plant, sufficient opportunity to learn the location and performance characteristics of key equipment and other plant-specific information that is necessary to make informed decisions concerning radiological safety. For experienced RPMs, including those transitioning from one reactor plant technology to another (e.g., pressurized water reactor to boiling water reactor), licensees can evaluate the need for onsite time prior to assignment of a candidate to the position of RPM. No changes were made to the final RG.

Comment: [EGC-4, SNC-3, FPL-4] Exelon does not agree with the addition of the wording in the exception that personnel who are temporarily assigned to fill the RPM position as described in Section 4.1 of the ANSI/ANS-3.1-2014 standard, and who do not meet the requirements to serve as an RPM, should have first line supervisor experience of in-field RP program activities. Exelon believes that this is already adequately covered in Section 4.1 of the standard based on the statement: "Individuals temporarily filling a position due to the absence of its principal individual shall possess, as a minimum, the qualifications required for the corresponding position in the next lower functional level."

NRC Response: The NRC staff agrees with this comment in part. The staff does not agree that experience in any two of the functional areas listed in ANSI/ANS-3.1-2014 is sufficient for the RPM position. As described by letter dated March 14, 1988 (ADAMS Accession No. ML103440461), the staff recognizes that many health physics organizations have assigned narrow, specific areas of responsibility (e.g., respiratory supervisor and dosimetry supervisor). However, the RPM as the management-level representative responsible for the adequacy of the plant's radiation protection program, and for ensuring that the program is able to enforce appropriate prioritization of radiological safety issues, should have experience in supervising radiation protection operations in the field, which is where most of the radiological risk occurs at a commercial nuclear power plant. It follows that personnel who are temporarily assigned to fill the RPM position should have a similar pedigree of experience. The changes introduced to Section 1.1 of RG 1.8, Revision 4, provide for additional flexibility to manage human resources.

Comment: [EGC-5, SNC-4, FPL-5] Exelon does not agree with the addition of the wording in the exception that personnel who do not meet the requirements for this position should not be assigned to temporarily fill the position for periods exceeding three (3) months. There is not a risk-based justification for mandating a 3-month limit and in fact having this specified limit could cause additional personnel having to be assigned temporarily to the same role to meet an arbitrary time requirement. Exelon's position is that the requirement in the ANSI/ANS-3.1-2014 standard to specify and document the time period for temporary positions is reasonable and appropriate.

NRC Response: The NRC staff agrees with this comment in part. An individual assigned to a specific position should meet the requirements for that position as ANSI/ANS-3.1-2014 Section 4.1 makes clear. The staff has adjusted Section 1.1 of RG 1.8, Revision 4, to allow temporary assignments of unqualified middle managers for periods not to exceed 1 year provided that the temporary assignee is provided with a directly-reporting staff member whose qualifications meet the selected middle manager qualification requirements. The intention of this exception is to emphasize the importance of assigning qualified personnel to positions with specific requirements as described in ANSI/ANS-3.1-2014, while recognizing the need for flexibility to manage human resources. This flexibility is not intended to enable purposeful long-term assignment of unqualified personnel to middle manager positions.

Comment: [NEI-1] We appreciate the staff providing additional clarification on experience requirements for those RPMs who have previous onsite time and nuclear power plant radiation protection experience. However, for practical reasons, we request that the staff extend the time to temporarily fill the RPM position from three to six months.

NRC Response: The NRC staff agrees with this comment in part. The staff has adjusted Section 1.1 of RG 1.8, Revision 4, to provide for temporary assignments of unqualified middle managers for periods not to exceed 1 year provided that the temporary assignee is provided with a directly-reporting staff member whose qualifications meet the selected middle manager qualification requirements.

Comment: [NEI-3] In regard to Section 1.1, Page 7, of DG-1329, it appears that the guidance discussed in Section 4.3.3 for the Radiation Protection Manager contradicts this section. Please clarify or refer the reader to section 4.3.3 for Radiation Protection Manager qualifications.

NRC Response: The NRC staff agrees with this comment. Sections 1.1 and 1.3 of RG 1.8, Revision 4, have been adjusted to provide for temporary assignments of unqualified middle managers for periods not to exceed 1 year provided that the temporary assignee is provided with a directly-reporting staff member whose qualifications meet the selected middle manager qualification requirements.

Comment: [NEI-4] Both ANSI 3.1 (1993) and (2014) allow for an individual to fill a specific position even if that person does not meet the requirements for that position if the individual is provided a staff of individual(s) whose qualifications meet the selected middle manager qualification. We note that this has been a long-standing NRC position since 1993. Why has the NRC changed its position on this issue? Have there been industry performance deficiencies resulting in this change of NRC position?

NRC Response: The NRC staff agrees with this comment in part. NRC inspections observed that some plants have assigned unqualified Radiation Protection Managers and others have temporarily appointed unqualified RPMs for such lengths of time that it appeared that they were permanent appointees. The RPM is the management-level representative responsible for the adequacy of the plant's radiation protection program and for ensuring that the program is able to enforce appropriate prioritization of radiological safety issues. Therefore, to be considered adequately qualified, the RPM must be sufficiently experienced and knowledgeable of the plant-specific radiological conditions to judge whether the radiation protection program is able to achieve its purpose. In researching potential regulatory responses to these inspection observations, the staff realized that clarifications related to the RPM position were inadvertently deleted in Revision 3 to RG 1.8. As such, RG 1.8, Revision 4, endorses, with exceptions, ANSI/ANS-3.1-2014 and provides clarification with regard to the NRC's expectations pertaining

to the selection, qualification, and training of the plant RPM. Sections 1.1 and 1.3 of RG 1.8, Revision 4, have been adjusted to provide for temporary assignments of unqualified middle managers for periods not to exceed 1 year provided that the temporary assignee is provided with a directly-reporting staff member whose qualifications meet the selected middle manager qualification requirements.

Comment: [TB-1] It's not clear to me why the NRC does not endorse having individuals not fully meeting the qualifications as a manager if they have staff that do. This could prevent mentoring of a desirable person who doesn't quite have the required years of experience to enable them to take the title of manager. The goal is to have experienced people performing the site functions, whether they have the title of manager or not.

NRC Response: The NRC staff agrees with this comment in part. The minimum qualification requirements for positions as described in ANSI/ANS-3.1-2014, including the exceptions and clarifications in this RG, represent the minimum experiential, professional, and educational requirements necessary to ensure that assigned personnel can independently evaluate risks and safely execute the responsibilities associated with the positions. To conform to this guidance, an individual assigned to a specific position must meet the requirements for that position. Sections 1.1 and 1.3 of RG 1.8, Revision 4, have been adjusted to provide for temporary assignments of unqualified middle managers for periods not to exceed 1 year provided that the temporary assignee is provided with a directly-reporting staff member whose qualifications meet the selected middle manager qualification requirements. The intention of this exception is to emphasize the importance of assigning qualified personnel (inclusive of required years of experience) to positions with specific requirements as described in ANSI/ANS-3.1-2014, while allowing licensees adequate flexibility to manage human resources. However, this flexibility is not intended to allow purposeful long-term assignment of unqualified personnel to middle manager positions or to allow multiple consecutive assignments of unqualified middle managers to a position.

c. *Comments Related to Operator Qualifications*

Comment: [EGC-6, SNC-5, FPL-6, NEI-2] The 3-year eligibility exception for Senior Operators (SROs) in DG-1329 is in direct conflict with ACAD 10-001, which the NRC endorsed in NUREG-1021.

NRC Response: The NRC staff agrees with this comment. In response to this and other comments related to conflicting guidance for operator license qualifications, the NRC staff removed the applicability of 10 CFR Part 55, "Operators' Licenses," from RG 1.8, Revision 4.

Licensees currently use a Systems Approach to Training (SAT) to comply with 10 CFR 50.120, "Training and Qualification of Nuclear Power Plant Personnel," and applicable parts of 10 CFR Part 55 requirements. Per 10 CFR 55.31, "How to Apply," Section (a)(4), an applicant must either supply details of their qualifications for an operator license, or certify that they have completed a training program based on an SAT. An SAT program evaluates and revises qualification criteria based on the performance of personnel in the job setting. Therefore, an SAT program is more responsive to actual performance than static qualification requirements, such as RG 1.8, committed to at the time of facility licensing. Licensees currently use National Academy for Nuclear Training (NANT) guidelines (summary available at ADAMS Accession No. ML19053A433) to evaluate applicant qualifications per 10 CFR 55.31. The NANT guidelines are endorsed in NUREG-1021, Revision 11, "Operator Licensing Examination Standards for Power Reactors," and are referenced in NRC Form 398, "Personal Qualification Statement –

Licensee," Revised 2017. NUREG-1021 also contains guidance for evaluating an application that supplies details of qualifications instead of certification based on an SAT, and the NUREG is periodically revised based on operator performance trends. For operator licensing, in accordance with 10 CFR Part 55, the staff will continue to use NUREG-1021, which endorses the NANT guidelines, to evaluate applicant qualifications.

Comment: [EGC-7, SNC-6, FPL-7, NEI-5] The DG exception removes the flexibility of the non-traditional degree option for SRO qualification in ACAD 10-001, which the NRC has endorsed.

NRC Response: The NRC staff agrees with this comment. See comment response above regarding removing the applicability of 10 CFR Part 55, "Operators' Licenses," from RG 1.8, Revision 4.

Comment: [EGC-8, SNC-7, FPL-8, NEI-6] Some exceptions in the DG related to SRO qualifications are in conflict with ACAD 10-001, which the NRC has endorsed.

NRC Response: The NRC staff agrees with this comment. See comment response above regarding removing the applicability of 10 CFR Part 55, "Operators' Licenses," from RG 1.8, Revision 4.

Comment: [TB-2] DG-1329 is unnecessarily complex due to differences in required experience levels for reactors of the same vendor, comparable or non-comparable reactors, and military reactors.

NRC Response: The NRC staff agrees with the comment. See comment response above regarding removing the applicability of 10 CFR Part 55, "Operators' Licenses," from RG 1.8, Revision 4.

Comment: [TB-3] The benefits are unclear and the requirements are unnecessarily complex for requiring an additional year of experience for reactor operators and non-licensed operators.

NRC Response: The NRC staff agrees with the comment. See comment response above regarding removing the applicability of 10 CFR Part 55, "Operators' Licenses," from RG 1.8, Revision 4.

Comment: [BM-4] DG-1329 endorses ANS-3.1, which allows a middle manager to hold an SRO license instead of the operations manager. This undermines a lesson-learned from the Three Mile Island accident, as document in NUREG-0660. Specifically, licensees would be able to hire Operations Managers or Assistant Operations Managers without a license. In addition, an unlicensed operations manager may not comply with 10 CFR 50.54(l). The effects of this on safety are unknown.

NRC Response: The NRC staff agrees with the comment in part. 10 CFR 50.54(l) states, "The licensee shall designate individuals to be responsible for directing the licensed activities of licensed operators. These individuals shall be licensed as senior operators pursuant to part 55 of this chapter." The staff revised RG 1.8, Section 1.1, to include an exception to ensure that a manager with responsibility for operations holds an SRO license. This may be a middle manager or senior manager, according to the definitions in the standard.

Comment: [BM-6] For instructors of licensed operators, DG-1329 should require an active or inactive SRO license, and they should be enrolled in a requalification program, as specified in NUREG-0737, “Clarification of TMI Action Plan Requirements.”

NRC Response: The NRC staff agrees with the comment in part. The NRC staff agrees that instructors require similar knowledge as a licensed senior operator. The guidance in ANSI/ANS-3.1-2014 states that an instructor who provides instruction on the simulator shall hold, or shall have held, a senior operator’s license, or have been certified for equivalent senior operator knowledge. The staff determined that the guidance provides an adequate level of knowledge to instruct licensed operators. The staff determined that preparing and giving the training maintains an instructor’s knowledge and abilities and that, therefore, enrollment in a requalification program is not necessary. The staff concludes that the current guidance is adequate and no changes were made to the final RG.