## Background and Industry Position on Revision 3 of Regulatory Guide 8.7

In Summary: The new interpretation in Revision 3 of Regulatory Guide 8.7, which now *requires* licensees to consider exposures received by employees during prior employment at a different facility when determining whether monitoring is required pursuant to section 20.1502, is substantially different from: (1) the interpretation that was published in both Revisions 1 and 2 of Regulatory Guide 8.7, (2) the interpretation that is currently articulated in Regulatory Guide 8.34, and (3) over two decades of industry practice developed in accordance with these interpretations. As such, we respectfully request that the NRC withdraw Revision 3 to Regulatory Guide 8.7 and cease any efforts currently underway to conform Regulatory Guide 8.34 to the new and different interpretation provided in Revision 3.

A draft of Revision 3 was published for public comment on August 28, 2015,[1] and the Nuclear Energy Institute (NEI),[2] on behalf of the nuclear industry, provided comments on the draft on October 20, 2015. Although some of our comments were incorporated into the final version of Revision 3, the final version also included a new interpretation of section 20.1502 that was not made available as part of the public comment process. Specifically, section 20.1502 states, in part:

> Each licensee shall monitor exposures to radiation and radioactive material at levels sufficient to demonstrate compliance with the occupational dose limits of this part. As a minimum—
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> (a) Each licensee shall monitor occupational exposure to radiation from licensed and unlicensed radiation sources under the control of the licensee and shall supply and require the use of individual monitoring devices by—
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> (1) Adults likely to receive, in 1 year from sources external to the body, a dose in excess of 10 percent of the limits in § 20.1201(a),
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> * * * * *
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> (4) Individuals entering a high or very high radiation area.
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> (b) Each licensee shall monitor (see § 20.1204) the occupational intake of radioactive material by and assess the committed effective dose equivalent to—
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> (1) Adults likely to receive, in 1 year, an intake in excess of 10 percent of the applicable ALI(s) in table 1, Columns 1 and 2, of appendix B to §§ 20.1001-20.2402. . . .[3]

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[1] 80 Fed. Reg. 52,345.

[2] Nuclear Energy Institute (NEI) is the organization responsible for establishing unified industry policy on matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include all entities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel cycle facilities, nuclear materials licensees, and other organizations and entities involved in the nuclear energy industry.

[3] 10 CFR § 20.1502(a), (b).

Revision 1 of Regulatory Guide 8.7

With respect to the requirement provided in sections 20.1502(a)(1) and (b)(1), Revision 1 of Regulatory Guide 8.7, which was published in 1992, states:

> For individuals who received exposure at other facilities in the current year, the previous dose need not be considered in this prospective evaluation. Only dose that could be received at the facility performing the evaluation need be considered when determining the need for monitoring and, therefore, the recordkeeping and reporting requirements.[4]

Similarly, Regulatory Guide 8.34, which was also published in 1992, states:

> Evaluation of the likelihood of doses exceeding 10% of the limit should be based on the potential occupational dose to the individual for the year. Doses that may have been received or will be received during the year from employment by another licensee are not included in the determination of monitoring requirements. The requirements in 10 CFR 20.1502 refer to *each* licensee. Each licensee makes the determination independently. It would not be appropriate to base the monitoring requirements at one licensee's facility on exposure conditions at a different licensee's facility. Rather, the need for monitoring at a facility should be based on the exposure conditions at that facility only.[5]

Revision 2 of Regulatory Guide 8.7

This interpretation of the requirements imposed in section 20.1502(a) and (b) was reiterated in Revision 2 of Regulatory Guide 8.7, which was published in 2005:

> For individuals who received a dose at other facilities in the current year, the previous dose need not be considered in this prospective evaluation. Only the dose that could be received

[4] "Instructions for Reporting and Recording Occupational Radiation Exposure Data," Regulatory Guide 8.7, Rev. 1 (June 1992)("Revision 1"), at pg. 8.7-2.

[5] Reg. Guide 8.34, at pg. 8.34-2.

A few years later, this interpretation of the monitoring requirements in section 20.1502 was reinforced again in NUREG/CR-6204, which provides the following question and answer:

> QUESTION 114: A licensee is required to provide individual monitoring for each occupationally exposed individual who is likely to receive, in a year, a dose in excess of 10% of the applicable limits in 10 CFR 20.1201, 20.1207, or 20.1208. Must a licensee account for the exposure that an individual may receive at another licensee's facility, if that worker transfers to another licensed facility during the monitoring year, when determining if it is likely that the individual may exceed 10% of the limits? In addition, if a new employee already has an exposure in excess of 10% of the limits when they start work at the new employer, must the new employer automatically monitor the employee?
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> ANSWER: No. The licensee is only responsible for evaluating the potential for exposure at its facility. If the licensee makes an evaluation that the dose will not exceed the 10% threshold, the licensee need not record or monitor the dose. If the licensee opts to measure the dose, although its preliminary evaluation shows that it is not necessary and finds that the threshold has been exceeded, it must reevaluate its program and provide monitoring as required. In addition the licensee will need to reconsider the requirements to sum internal and external doses. (Reference: 10 CFR 20.1502)

> at the facility performing the evaluation need be considered when determining the need for monitoring and, therefore, the recordkeeping and reporting requirements.[6]

Revision 3 of Regulatory Guide 8.7

This method of determining whether an employee's prospective duties will trigger the monitoring requirements of section 20.1502 has been utilized by licensees, and accepted by the NRC, since at least 1994. But, contrary to this long-standing interpretation, Revision 3 of Regulatory Guide 8.7 now states:

> If the prospective evaluation shows that an individual is not likely to receive in a year a dose that exceeds the criteria in 10 CFR 20.1502, then monitoring is not required, and the recordkeeping requiring in 10 CFR 20.2106 and the reporting requirements in 10 CFR 20.2206 are not applicable. However, for the individual that already has received greater than the dose criteria in 10 CFR 20.1502 from prior employment in the current monitoring year, monitoring of any additional radiation exposure is required by subsequent employers.
>
> For individuals who received a dose that was not required to be monitored at other facilities in the current year, the previous dose need not be considered in this prospective evaluation. When determining whether an individual is likely to exceed the dose criteria in 10 CFR 20.1502 (therefore requiring monitoring) the licensee need not speculate on the amount of radiation dose the individual may receive at another, future, employer within the current monitoring year. The licensee, however, must consider the dose that could be received by the individual at the licensee's facility during the current monitoring year, and in the case of an individual who also received prior occupational dose at another licensee's facility during the current monitoring year, the amount of that prior occupational dose must also be considered. Thus, if the individual already has received greater than the dose criteria in 10 CFR 20.1502 from prior employment in the current monitoring year, monitoring of any additional radiation exposure is required by subsequent employers.[7]

This new interpretation, which now *requires* licensees to consider exposures received by employees during prior employment at a different facility when determining whether monitoring is required pursuant to section 20.1502, is substantially different from: (1) the interpretation that was published in both Revisions 1 and 2 of Regulatory Guide 8.7, (2) the interpretation that is currently articulated in Regulatory Guide 8.34, and (3) over two decades of industry practice developed in accordance with these interpretations.

Commission Principles and Values

The Commission's Organizational Values require agency decision-making that is open, transparent, and forthright.[8] In addition, the Commission's Principles of Good Regulation require that "[o]nce

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[6] "Instructions for Reporting and Recording Occupational Radiation Exposure Data," Regulatory Guide 8.7, Rev. 2 (Nov. 2005) ("Revision 2"), at pg. 3.

[7] Revision 3, at pg. 6 (emphasis added)(footnotes omitted). Although not included in the language quoted above, footnote 3 on page 6 seems to add an additional new monitoring requirement that include any employee who enters a high or very radiation area in the calendar year at a different facility. This requirement is unreasonable and impractical because subsequent licensees are not provided this information for transient workers.

[8] "NRC Organizational Values," available at https://www.nrc.gov/about-nrc/values.html#principles (last accessed Feb. 8, 2017).

established, regulation should be perceived to be reliable and not unjustifiably in a state of transition."

Contrary to these principles and values, this substantial change in NRC's interpretation of section 20.1502 was not specifically identified and explained by the NRC staff during the revision process, and was not made available for public comment prior to being imposed on licensees. The opaque approach taken to make this change to Regulatory Guide 8.7 is particularly disappointing because, as mentioned above, a draft of Revision 3 (without the change highlight above) was the subject of public comment prior to the revision being finalized in November.

Backfitting Rule

Further, the Commission has long-recognized the importance of subjecting new or different interpretations of its regulatory requirements to the analytical requirements of the backfitting rule. For example, in the 1985 final rule amending § 50.109, the Commission stated:

> Many of the most important changes in plant design, construction, operation, organization, and training have been put in place at a level of detail that is expressed in staff guidance documents which interpret the intent of broad, generally worked regulations. The NRC has determined that the correct focus for backfit regulation is the establishment of effective management controls on existing staff processes for the interpretation of regulations that are known to result in valuable upgrades in industry safety performance. Thus, the Commission opts to adopt a management process not only for the promulgation of regulations as backfit instruments, but also for the lower tier staff review and inspection processes known to result in reactor plant changes.[9]

Revision 3 contains standard boilerplate language characterizing the direction provided in Regulatory Guide 8.7 as merely one acceptable method of demonstrating compliance with the requirements of Part 20, and stating that "the NRC staff does not intend or approve any imposition of the guidance in this regulatory guide."[10] But these assurances are inconsistent with the plain language of Revision 3, which states that monitoring is required by a subsequent employer if an individual already has received greater than the dose criteria in 10 CFR 20.1502 from prior employment in the current monitoring year, and that licensees must consider occupational dose received at another licensee's facility during the same monitoring year when making prospective monitoring decisions. This language is clearly mandatory and, contrary to the boilerplate referenced above, seeks to impose this different interpretation on licensees. Imposition of such a "new or different" interpretation of the Commission's regulations, which will result in a change to the procedures or organization required to operate nuclear power facilities, meets the definition of backfitting provided in 10 CFR § 50.109. But no cost-justified, substantial increase analysis, or documented evaluation demonstrating that an exception to the backfitting rule applies in this case, was prepared prior to publication of Revision 3.[11]

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[9] Revisions of Backfitting Process for Power Reactors, 50 Fed. Reg. 38,097, 38,101 (September 20, 1985).
[10] Revision 3, at pg. 12.
[11] *See* 10 CFR §§ 50.109(a)(3), (4).

Given the concerns outlined above, we respectfully request that the NRC withdraw Revision 3 to Regulatory Guide 8.7 and cease any efforts currently underway to conform Regulatory Guide 8.34 to the new and different interpretation provided in Revision 3.