

SEABROOK STATION  
LICENSE RENEWAL APPLICATION (LRA)  
REQUESTS FOR ADDITIONAL INFORMATION (RAI)

**RAI for Licensees regarding CLI-16-07**

**BACKGROUND:**

On May 4, 2016, the Commission issued a decision (CLI-16-07) in the Indian Point license renewal proceeding, in which it directed the Staff to supplement the Indian Point Severe Accident Mitigation Alternatives (SAMA) analysis with sensitivity analyses. Specifically, the Commission held that documentation was lacking for two inputs (TIMDEC and CDNFRM) used in the MACCS computer analyses, and that uncertainties in those input values could potentially affect the SAMA analysis cost-benefit conclusions. The Commission therefore directed the Staff to perform additional sensitivity analyses.

The two inputs (TIMDEC and CDNFRM) are commonly used in the SAMA analyses performed for license renewal applications (LRAs). These two input values were generally based on the values provided in NUREG-1150, "Severe Accident Risks: An Assessment for Five U.S. Nuclear Power Plants" and NUREG/CR-3673, "Economic Risks of Nuclear Power Reactor Accidents." The TIMDEC input value defines the time required for completing decontamination to a specified degree. The CDNFRM input parameter defines the cost (on a per person basis) of decontaminating non-farmland by a specified decontamination factor. The CDNFRM values used in NUREG-1150 (\$3,000/person for decontamination factor of 3 and \$8,000/person for decontamination factor of 15) stem from decontamination cost estimates provided in NUREG/CR-3673, the same 1984 economic risk study referenced in support of the decontamination time inputs. These decontamination cost inputs are commonly escalated to account for inflation.

**REQUEST FOR ADDITIONAL INFORMATION:**

The NRC Staff believes the Commission's decision in CLI-16-07 may be applicable to the SAMA analysis performed for Seabrook Station, Unit 1 (Seabrook), inasmuch as that analysis may have also relied upon the NUREG-1150 values for TIMDEC and CDNFRM. We therefore request that NextEra Energy Seabrook, LLC (NextEra), either justify why CLI-16-07 does not apply to the SAMA analysis performed for Seabrook or supplement the SAMA analysis with sensitivity analyses for the CDNFRM and TIMDEC values.

NextEra is requested to review the input values specified in CLI-16-07 for the Indian Point LRA, and (1) to apply the maximum values specified by the Commission (one year (365 days) for TIMDEC and \$100,000 for the CDNFRM values for the decontamination factor of 15) or, in the alternative, (2) to explain, with sufficient justification, its rationale for choosing any other value(s) for its sensitivity analyses. In any event, NextEra should execute sensitivity analyses for the release categories modeled that exceed  $10^{15}$  Becquerels of Cs-137 released. NextEra is requested to evaluate how these sensitivity analyses may affect its identification of potentially cost-beneficial SAMAs. Finally, upon completing its sensitivity analysis, NextEra is requested to submit the spreadsheet (or equivalent table if another method is used) that conveys the population dose and off-site economic cost for each release category and integrates the results into a Population Dose Risk and an Offsite Economic Cost Risk for Seabrook.