

From: [Ford, William](#)
To: michaelp.gallagher@exeloncorp.com
Subject: FW: REQUEST FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE LASALLE COUNTY STATION LICENSE RENEWAL APPLICATION, SEVERE ACCIDENT MITIGATION ALTERNATIVE (SAMA) SENSITIVITY ANALYSIS
Date: Wednesday, July 06, 2016 5:28:00 PM

From: Ford, William
Sent: Wednesday, July 06, 2016 5:17 PM
To: 'michaelp.gallagher@exeloncorp.com' <michaelp.gallagher@exeloncorp.com>
Subject: FW: REQUEST FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE LASALLE COUNTY STATION LICENSE RENEWAL APPLICATION, SEVERE ACCIDENT MITIGATION ALTERNATIVE (SAMA) SENSITIVITY ANALYSIS

From: Ford, William
Sent: Wednesday, July 06, 2016 5:09 PM
To: 'michaelp.gallagher@exeloncorp.com' <michaelp.gallagher@exeloncorp.com>
Cc: 'Ranek, Nancy L.:(GenCo-Nuc)' <Nancy.Ranek@exeloncorp.com>; Mitchell, Jeffrey <Jeffrey.Mitchell2@nrc.gov>; Plasse, Richard <Richard.Plasse@nrc.gov>; Danna, James <James.Danna@nrc.gov>; Wachutka, Jeremy <Jeremy.Wachutka@nrc.gov>; McIntyre, David <David.McIntyre@nrc.gov>; Kunowski, Michael <Michael.Kunowski@nrc.gov>; Mitlyng, Viktoria <Viktoria.Mitlyng@nrc.gov>; Chandrathil, Prema <Prema.Chandrathil@nrc.gov>; Logaras, Harral <Harral.Logaras@nrc.gov>; Lipa, Christine <Christine.Lipa@nrc.gov>; Sheldon, Stuart <Stuart.Sheldon@nrc.gov>; Ruiz, Robert <Robert.Ruiz@nrc.gov>; Robbins, John <John.Robbins@nrc.gov>; Dozier, Jerry <Jerry.Dozier@nrc.gov>; RidsNrrDlr Resource <RidsNrrDlr.Resource@nrc.gov>; RidsNrrDlrRpb1 Resource <RidsNrrDlrRpb1.Resource@nrc.gov>; RidsNrrDlrRerb Resource <RidsNrrDlrRerb.Resource@nrc.gov>; RidsNrrDlrRarb Resource <RidsNrrDlrRarb.Ressource@nrc.gov>; RidsNrrDlrRasb Resource <RidsNrrDlrRasb.Resource@nrc.gov>; RidsNrrDlrRsrg Resource <RidsNrrDlrRsrg.Resource@nrc.gov>; RidsNrrPMLaSalle Resource <RidsNrrPMLaSalle.Resource@nrc.gov>; RidsOpaMail Resource <RidsOpaMail.Resource@nrc.gov>; RidsOgcMailCenter Resource <RidsOgcMailCenter.Resource@nrc.gov>
Subject: REQUEST FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE LASALLE COUNTY STATION LICENSE RENEWAL APPLICATION, SEVERE ACCIDENT MITIGATION ALTERNATIVE (SAMA) SENSITIVITY ANALYSIS

Dear Mr. Gallagher:

By letter dated December 9, 2014, Exelon Generation Co., LLC, submitted an application pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 51 and 10 CFR Part 54, to renew the operating license NPF-11 & NPF-18 for LaSalle County Station, for review by the U.S. Nuclear Regulatory Commission (NRC or the staff). The staff is reviewing the information contained in the license renewal application and the associated environmental report. The staff has identified below, an area where additional information is needed to

complete the review.

As discussed with your staff, we request that you provide your responses no later than 30 days from the date of this email. If you have any questions, please contact me at 301-415-1263 or by email at william.ford@nrc.gov.

Sincerely,

William Ford, Sr. Physical Scientist
Environmental Review and Project Management
Branch
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-373 & 50-374

cc: Listserv

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ADAMS Accession No.: ML16188A187

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| OFFICE | PM:RERP:DLR | BC:RERP:DLR | PM:RERP:DLR |
| NAME | W Ford | J Danna | W Ford |
| DATE | 7 / 6 /2016 | 7 / 6 /2016 | 7 / 6 /2016 |

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**Request for Additional Information on Severe Accident Alternatives
For LaSalle County Station Units 1 and 2 License Renewal Environmental Review**

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.

The NRC Staff believes the Commission's decision in CLI-16-07 may be applicable to the SAMA analysis performed for LaSalle County Station Units 1 and 2, inasmuch as that analysis may have also relied upon the NUREG-1150 values for TIMDEC and CDNFRM. We therefore request that Exelon Generation Company, LLC either justify why CLI-16-07 does not apply to the SAMA analysis performed for LaSalle County Station, Units 1 and 2 or supplement the SAMA analysis with sensitivity analyses for the CDNFRM and TIMDEC values.

Exelon Generation Company, LLC 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, Exelon Generation Company, LLC should execute sensitivity analyses for the release categories modeled that exceed 10^{15} Becquerels of Cs-137 released. Exelon Generation Company, LLC is requested to evaluate how these sensitivity analyses may affect its identification of potentially cost-beneficial SAMAs. Finally, upon completing its sensitivity analysis, Exelon Generation Company, LLC 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 LaSalle County Station, Units 1 and 2.