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OFFICE OF SECRETARY
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May 12, 2010

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

Before the Atomic Safety and Licensing Board

In the Matter of)	
)	
Entergy Nuclear Generation Company and)	Docket No. 50-293-LR
Entergy Nuclear Operations, Inc.)	ASLBP No. 06-848-02-LR
)	
(Pilgrim Nuclear Power Station))	

**ENTERGY'S SUBMISSION ON
SCOPE AND SCHEDULE FOR REMANDED HEARING**

As required by the Atomic Safety and Licensing Board's ("Board") May 5, 2010 Order, Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc. (collectively "Entergy") provides this submission addressing (1) the statement of the issues for hearing on Contention 3; (2) whether Entergy wishes to have a settlement judge appointed in the proceeding; and (3) the proposed schedule for the remainder of this proceeding.

I. STATEMENT OF THE ISSUES

In its May 4, 2010 Order (Regarding Agenda for Telephone Conference Call) ("May 4 Order"), the Board proposed the following statement of the specific issue on remand:

Whether the Pilgrim SAMA analysis's meteorological modeling using the straight-line Gaussian plume dispersion model is adequate, *see* [CLI-10-11] at 14, 18, 21-28, when adequacy is defined by whether alternative modeling as argued by Pilgrim Watch would cause any additional SAMAs to become cost-beneficial when examined using median results from probabilistic analyses performed using such alternative modeling in comparison to the current results using the Gaussian plume dispersion model, *see id.* at 38-39, by virtue of having a material impact on the economic cost issues originally raised by Intervenor Pilgrim Watch, as defined and limited by the Commission in CLI-10-11, *see id.* at 36-37.

May 4 Order at 2. Entergy believes that, with two qualifications, this statement is an appropriate formulation of the remanded issue.

First, consistent with the Commission's decision, the statement of issue should refer to the "mean" rather than the "median" results. See Entergy Nuclear Generation Co. and Entergy Nuclear Operations Inc. (Pilgrim Nuclear Power Station), CLI-10-11, 71 N.R.C. __ (Mar. 26, 2010) ("CLI-10-11"), slip op. at 38 ("It is NRC practice to utilize the *mean* values of the consequence distributions. . . .").

Second, the extensive discussion during the May 4, 2010 conference call suggests that there is not a common understanding of the phrase "by virtue of having a material impact on the economic cost issues originally raised by Intervenor Pilgrim Watch," with Pilgrim Watch apparently arguing that it may relitigate its prior claims concerning economic inputs. Indeed, Pilgrim Watch appears to be arguing that not only is it free to relitigate all of its claims within the scope of the contention as originally admitted, but that it is also free to litigate new claims (such as health effects, clean up costs, and spent fuel pool fire consequences) that the Commission has held are beyond the scope of the Contention. Both of these positions are clearly wrong.

As discussed below, the Commission specifically affirmed the Board majority's rulings on summary disposition of the portions of Contention 3 related to evacuation timing and economic inputs. The only portions of the majority's decision with which the Commission disagreed were the rulings on meteorological patterns. While the Commission also remanded the economic cost and evacuation time portions of Contention 3 to the Board, it did so only for the very limited purposes of enabling the Board to consider how any demonstrated deficiencies in meteorological modeling might affect the overall Pilgrim SAMA cost-benefit analysis conclusions. As demonstrated below, the Commission obviously did not intend to allow Pilgrim Watch to litigate those matters that the Commission held were correctly resolved in summary disposi-

tion; and the Commission certainly did not intend to allow Pilgrim Watch to raise claims that were beyond the scope of the originally admitted contention.

A. Background

Pilgrim Watch Contention 3 as originally admitted by the Board alleged that:

Applicant's SAMA analysis for the Pilgrim plant is deficient in that the input data concerning (1) evacuation times, (2) economic consequences, and (3) meteorological patterns are incorrect, resulting in incorrect conclusions about the costs versus benefits of possible mitigation alternatives, such that further analysis is called for.

LBP-06-23, 64 N.R.C. 257, 341 (2006). Although unstated, each of these three topics (evacuation times, economic consequences, meteorological patterns) in the admitted contention related to a separate part of the MACCS2 Code¹ that is used to estimate Public Dose Risk ("PDR") and Offsite Economic Consequences ("OECR"). MACCS2 is divided into three primary modules – ATMOS, EARLY, and CHRONC – which are used to determine the PDR and OECR. The ATMOS module is a straight line Gaussian plume mode that calculates atmospheric transport, dispersion, and deposition. The meteorological inputs are used by this portion of the code, and the results of the ATMOS calculations are stored for use by EARLY and CHRONC. The EARLY module calculates consequences due to radiation exposure in the emergency phase, (first seven days after a release). The evacuation time estimates are used in this portion of the code (i.e., in EARLY). The CHRONC module simulates the longer term costs (exposure, decon-

¹ The MACCS2 computer model performs SAMA analysis determination of consequences, including the population dose risk ("PDR"), which is measured in person-rem per year, and off-site economic cost risk ("OECR"), measured in dollars per year. The mean values of dose and cost consequence distributions for each postulated release are calculated, and the mean population dose and offsite economic costs are multiplied by the frequency of occurrence for the postulated release to determine risk values - the PDR and OECR - for each release condition. The risk estimates for the postulated release conditions are summed to determine overall PDR and OECR estimates. The PDR and OECR estimates are factored into the cost benefit portion of the SAMA analysis to determine the expected benefit obtained if a mitigation alternative is implemented. The remaining costs factored into the cost benefit portion are attributable to on-site exposure costs and on-site economic costs (defined as on-site clean-up and decontamination cost, and replacement power cost). The greater the PDR and OECR, the greater the expected benefit obtained if a mitigation measure is implemented because greater public dose and off-site economic cost risks would be avoided.

tamination costs, and other economic impacts) that occur after the emergency phase time period modeled by EARLY. Pilgrim Watch's issue concerning loss of economic infrastructure and tourism related to CHRONC.² Because EARLY and CHRONC use outputs from the ATMOS model, any modifications to the ATMOS model or meteorological inputs will necessarily result in changes to the EARLY and CHRONC outputs and will be reflected in the overall outcome of the MACCS2 analysis – the PDR and the OECR.

In Entergy's Motion for Summary Disposition of Pilgrim Watch Contention 3 (May 17, 2007) ("SD Motion"), Entergy explained why Pilgrim Watch's claims were incorrect but also presented sensitivity analyses showing that they were immaterial as well. First, Entergy established that, for any additional SAMA to become potentially cost effective, the baseline benefit, or the total cost avoided, would have to increase by more than 100%. SD Motion at 10. With respect to evacuation time estimates, Entergy presented a bounding sensitivity analysis that demonstrated that, even if there were no evacuation or sheltering, the total cost risk would only increase by 2%. Id. at 18. With respect to the economic inputs, Entergy presented a sensitivity case that modified the input parameters for the value of non-farm property to include data that specifically account for county and metropolitan area gross domestic product (accounting for tourism, business activity, and wages) and showed that the OECR would increase by only 1%. Id. at 26-27. With respect to meteorological patterns, Entergy explained why its modeling was conservative, but also presented two additional sensitivity analyses evaluating the effects of terrain changes and weather variability. Id. at 12-17.

In CLI-10-11, the Commission affirmed the Board majority's decision dismissing Pilgrim Watch's challenges to evacuation times and economic costs:

² Issues related to clean up costs, which the Commission has ruled are beyond the scope of the admitted Contention, also relate to the modeling performed by CHRONC.

Insofar as Pilgrim Watch raises distinct “economic costs” or “evacuation times” challenges that extend beyond its meteorological modeling concerns, we agree with the majority that Pilgrim Watch fails to raise a genuine material dispute for hearing.

CLI-10-11 at 27 (emphasis added). The Commission found that Pilgrim Watch presented no supported argument raising a genuine material dispute over the bounding nature of the no evacuation or sheltering sensitivity case. Id. at 35. The Commission “therefore agree[d] with the majority that none of Pilgrim Watch’s arguments regarding evacuation speed and timing, traffic, and other delays, shadow evacuation, etc. raise a genuine material dispute for hearing over the current evacuation time assumptions in the Pilgrim SAMA analyses.” Id. (footnote omitted). Similarly, the Commission “agree[d] with the majority’s conclusion that Pilgrim Watch failed to present significantly probative evidence countering the Entergy expert evidence and supplemental analyses on economic costs.” Id. at 36 (footnote omitted).

Pilgrim Watch provides no supported evidence raising a genuine material dispute with the SEIS’s conclusion that “further adjustments to more precisely account for business and tourism would not change the overall conclusions of the SAMA analysis.” . . . Even viewing Pilgrim Watch’s claims on economic costs in the most favorable light, we do not find significantly probative evidence of a genuine material dispute for hearing on any of Pilgrim Watch’s particular economic cost input claims. Pilgrim Watch’s arguments, largely based on its own unsupported reasoning and computations, are insufficient to demonstrate a genuine material dispute with Pilgrim SAMA analysis’s current overall cost-benefit conclusions.

Id.

The Commission also affirmed the majority’s rulings that certain claims raised by Pilgrim Watch for the first time in opposition to summary disposition were beyond the scope of the admitted Contention. These claims beyond the scope of the Contention include health costs, mortality risk, cancer coefficients, the dollar value assigned per person-rem, alleged difficulty in ecological restoration, alleged difficulty in surface decontamination, and alleged underestimation of decontamination or cleanup costs. Id. at 29-31. The Commission also held that claims concern-

ing spent fuel pool fires were properly rejected both as outside scope and as a challenge to NRC regulations. Id. at 33. On a more general level, the Commission emphasized that the reach of Pilgrim Watch's contention hinges on its stated bases. Id. at 28.

The Commission, however, reversed the majority's ruling on meteorological issues, holding that the arguments concerning the straight line Gaussian plume model in MACCS2 should not have been categorically rejected. Id. at 14, 18. Further, because the Board has not yet reached a merits conclusion on the adequacy of the meteorological patterns/air dispersion modeling issue, the Commission indicated that it would be "premature to dismiss entirely from this proceeding other portions of Contention 3 that may be linked to the adequacy of the meteorological modeling underpinning the SAMA analysis." Id. at 26. As the Commission explained,

if the Board on remand were to conclude that there is a material deficiency in the meteorological patterns modeling, the economic cost calculations also could warrant re-examination. We therefore remand the economic cost and evacuation time portions of Contention 3 to the Board, but only to the extent that the Board's merits conclusion on meteorological patterns may materially call into question the relevant economic cost and evacuation timing conclusions in the Pilgrim SAMA analysis.

Id. at 27. The Commission then immediately reiterated,

Insofar as Pilgrim Watch raises distinct "economic costs" or "evacuation times" challenges that extend beyond its meteorological modeling concerns, we agree with the majority that Pilgrim Watch fails to raise a genuine material dispute for hearing. Accordingly, if the Board on remand concludes that there is no significant meteorological modeling deficiency calling into question the overall Pilgrim SAMA cost-benefit analysis conclusions, no genuine dispute concerning economic costs or evacuation timing inputs will remain.

Id.

B. Scope of the Remanded Issues

As the discussion above indicates, the Commission remanded the economic cost and evacuation time portions of Contention 3 for the very limited purpose of enabling the Board to consider how any demonstrated deficiencies in meteorological modeling might affect the overall

Pilgrim SAMA cost-benefit analysis conclusions. The Commission's decision makes it abundantly clear that the Board majority correctly disposed of Pilgrim Watch's economic cost and evacuation time challenges, and that it only disagreed with the majority's conclusions on the meteorological patterns issue. Clearly, the Commission did not intend to allow litigation of economic cost and evacuation time challenges already resolved.

Importantly, the Commission explained that, "if the Board on remand were to conclude that there is a material deficiency in the meteorological patterns modeling, the economic cost calculations also could warrant re-examination." CLI-10-11 at 27 (emphasis added). "Re-examination" of economic cost calculations does not mean delving into evidentiary matters earlier dismissed by this Board and further affirmed by the Commission, but means the "SAMA economic cost calculations ultimately depend upon the results of the meteorological modeling." Id. at 36. Because EARLY and CHRONC are functions of the outputs from the ATMOS model, any modifications to the ATMOS model or meteorological inputs will necessarily result in changes to the EARLY and CHRONC outputs and will be reflected in the overall outcome of the MACCS2 analysis, the PDR and OECR.

As a general matter, the Board should interpret the Commission's decision in a manner that gives effect to all of the Commission's rulings and avoids any inconsistency. Thus, the Commission's limited remand of the economic cost and evacuation timing portions of the contention must be construed in *pari materia* with the Commission's affirmation of the majority's disposition of those portions of the contention. Interpreting the Commission's decision in this manner leads inexorably to the conclusion that the Commission did not intend to allow litigation of whether economic or evacuation timing input data would affect the results of the SAMA analysis. It remanded the economic and evacuation timing portions of the Contention only for

the very limited purpose of allowing consideration of whether meteorological modeling would affect the relevant economic cost and evacuation timing conclusions in the Pilgrim SAMA analysis. Any other construction would render nugatory the Commission's affirmation of the majority's decision on these issues.

Therefore, the only issue before the Board is whether there are meteorological modeling deficiencies in the ATMOS portion of the MACCS2 Code as applied to Pilgrim that would materially affect the results of the EARLY module (the portion of the Code calculating emergency phase costs based on estimated evacuation times) and the CHRONC module (evaluating long term economic and public dose costs). As the Commission explicitly stated, "if the Board on remand concludes that there is no significant meteorological modeling deficiency calling into question the overall Pilgrim SAMA cost-benefit analysis conclusions, no genuine dispute concerning economic costs or evacuation timing inputs will remain." CLI-10-11 at 27.

Accordingly, under the Commission's remand, if Pilgrim Watch establishes that there are meteorological modeling deficiencies, it is appropriate for the Board to consider whether any such meteorological modeling deficiencies would affect the PDR and OECR calculated by EARLY and CHRONC in a manner that would make any additional SAMA cost beneficial, holding all other inputs constant.³ Given the Commission's clear instructions, it would not be appropriate to entertain any challenge to the prior base case or bounding sensitivity analyses that goes beyond the impact of meteorological modeling.

The issues of whether there are any deficiencies in the meteorological modeling, and if so, whether such deficiencies would call into question the overall Pilgrim SAMA cost-benefit

³ In determining whether any additional SAMA is cost beneficial, it would also be appropriate for the Board to consider the effect of any demonstrated meteorological modeling deficiencies when added to the bounding increases in total cost risk already established in summary disposition for evacuation timing and economic cost inputs (a 2% and 1 % increase in total cost risk, respectively).

analysis conclusions should be considered together in any hearing. As there are no other issues within the scope of the remand, Entergy submits that there is no need for any bifurcated hearing.

II. USE OF SETTLEMENT JUDGE

While Entergy is still considering whether to reinstate settlement discussions, it does not at this juncture wish to have a settlement judge appointed.

III. PROPOSED SCHEDULE

As previously discussed in Entergy's Opposition to Pilgrim Watch's Motion to Reschedule Telephone Conference (April 7, 2010), continued delay in a final decision on Entergy's license renewal application is injurious and unnecessary. Apart from the significant financial costs (not only the litigation costs, but significant monthly capital carrying costs), the uncertainty in whether Entergy's renewal application will be granted makes business and investment decisions extremely difficult. Pilgrim's operating license expires in 2012, which at this juncture makes it unclear whether Entergy should be investing in plant improvements to support extended operation. The uncertainty also makes decisions on fuel procurement challenging and is an impediment to Entergy's ability to enter into contracts for the sale of the plant's power beyond its current expiration date. Finally, the uncertainty is unfair to plant employees, who are left to guess at the prospects for continued employment beyond the next two years.

For these reasons, Entergy previously proposed a schedule that would have resulted in a decision on the remanded issues approximately six months after the Commission's March 26, 2010 decision. See Entergy's Opposition to Pilgrim Watch's Motion to Reschedule Telephone Conference (Apr. 7, 2010). Completing the remanded proceeding within six months would be consistent with the Commission's long-standing commitment to the expeditious completion of adjudicatory proceedings. Statement of Policy on Conduct of Adjudicatory Proceedings, CLI-98-

12, 48 N.R.C. 18, 24 (1998). As the Commission stated, “applicants for a license are . . . entitled to a prompt resolution of disputes concerning their applications.” Id. at 19.

Because initial deadlines in that proposed schedule have already passed, Entergy has adjusted its proposed schedule, which is presented below:

Updates to mandatory disclosures – end of May; 15th and 30th of each month thereafter

Final witness lists – June 15, 2010

Simultaneous filing of statements of position, written direct testimony and exhibits – June 25, 2010

Simultaneous filing of rebuttal statements, testimony and exhibits – July 15, 2010 (interval consistent with 10 C.F.R. § 2.1207)

Proposed questions for judges to pose to witnesses per 10 C.F.R. § 2.1207 – July 22, 2010 (interval consistent with 10 C.F.R. § 2.1207)

Motions in limine – July 22, 2010

Responses to motions in limine – August 2, 2010

Evidentiary Hearing – During week of August 9, 2010

Proposed findings of fact and conclusions of law – 20 days after conclusion of hearing

Responses to proposed findings of fact and conclusions of law – 1 week after submission of proposed findings

Board Decision – 60 days after conclusion of hearing

Respectfully Submitted,



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Dated: May 12, 2010

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CERTIFICATE OF SERVICE

I hereby certify that copies of "Entergy's Submission on Scope and Schedule for Re-manded Hearing" were served on the persons listed below by deposit in the U.S. Mail, first class, postage prepaid, and where indicated by an asterisk, by electronic mail, this 12th day of May, 2010.

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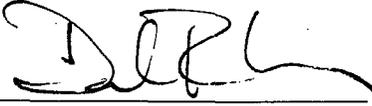
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