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~~WITHHOLD PER 10 C.F.R. § 2.390 AND JULY 1, 2009 PROTECTIVE ORDER~~

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD PANEL

In the Matter of
Luminant Generation Company, LLC
Comanche Peak Nuclear Power Plant
Units 3 and 4
Combined License Adjudication

Docket Nos. 52-034 and 52-035

INTERVENORS' CONSOLIDATED RESPONSE TO THE ANSWERS OF APPLICANT AND NRC STAFF TO THE INTERVENORS' CONTENTIONS REGARDING APPLICANT'S SUBMITTAL UNDER 10 C.F.R. § 52.80 AND 10 C.F.R. § 50.54(hh)(2)

The Intervenors hereby submit the following Consolidated Response to the Answers of Applicant and NRC Staff to the Intervenors' Contentions Regarding Applicant's Submittal Under 10 C.F.R. 52.80 and 10 C.F.R. 50.54(hh)(2) (also referenced as fire and explosions contentions).

Introduction

The burden is on the Applicant to establish that its mitigative strategies are adequate to the task of dealing with fires and explosions of the magnitude that could reasonably be expected as a result of the impacts of large commercial airliners into nuclear plants.[1]

The essential disagreement between Intervenors and Applicant and Staff is whether 10 C.F.R. 50.54(hh)(2) requires a showing that the proposed mitigative strategies are adequate and proportionate to the magnitude of fires and explosions that could reasonably be anticipated from,

[1] At least one licensee, South Texas Project, is conducting exercises based on multiple airplane impacts, based on representations made during the NRC Public Meeting on June 3, 2009 in Bay City, TX discussing the NRC's assessment of STP's safety performance in 2008. Comanche Peak Oral Argument Tr. pp.304-306.

for example, the impacts of large commercial aircraft into nuclear power plants. Applicant and Staff arguments imply that the mitigative measures may be developed in a vacuum unrelated to anticipated damage states. Applicant and Staff maintain that there is no regulatory requirement to describe, quantitatively or qualitatively, what is meant by the term "loss of large areas of the plant due to explosions or fire" in section 50.54 (hh)(2). Nor do the Applicant and Staff accept that the mitigative measures adopted under section 50.54(hh)(2) have an inherent requirement to be demonstrably effective. Instead, the Applicant has offered mitigative strategies based on the guidance in NEI 06-12 without any underlying showing that such are either appropriately scaled to meet large scale fires and explosions or inherently effective under the full spectrum of anticipated damage states.

EXEMPTION 4 NEI

(b)(4)

This raises more questions than answers. For example, what is meant by "full spectrum of damage states"? Upon what basis do the authors of the guidance document make the statement that the response measures they set forth in the report do not assure the successful outcome under the full spectrum of damage states? What plans should the Applicant be prepared to implement in the event that the response strategies it utilizes are unsuccessful because of the extreme damage state? None of these questions are resolved by either the Applicant's submittal or NEI 06-12.

[2] NEI 06-12, p.1.

The value of NEI 06-12 is that it recognizes that all the mitigative measures it specifies may not be adequate under extreme damage states. This candid disclaimer in NEI 06-12 is the "elephant in the living room," the significance of which neither the Applicant nor Staff acknowledge.

The procedural history of the fires and explosions regulations also undermines the Applicant's arguments. For example, on October 26, 2006 the Commission gave notice that it would require mitigative strategies for large scale fires and explosions. 71 Fed. Reg. 62,664 at 62,674. Nearly two years later on September 19, 2008 the COLA was submitted with the Applicant's Environmental Report. However, as noted in the original fires and explosions contention, Chapter 7 of the Environmental Report made no attempt to address how to maintain reactor integrity or restore core cooling and spent fuel pool cooling subsequent to the loss of large plant areas due to fires and explosions. Now, nearly three years after the announcement that the Applicant would be required to address the means to maintain essential functions subsequent large fires and explosions, the best the Applicant can offer is mitigative measures that bear no stated relationship to any particular damage state let alone the full spectrum of potential damage states. This omission of information makes it impossible to determine whether the mitigative measures would be effective.

Intervenors' Responses to Applicant's Objections

Contention MS-1[3]

The Applicant's failure to describe the full spectrum of damage states that its mitigative strategies are intended to address is a fatal flaw in its submittal.

[3] The Intervenors will reference the latest set of fires and explosions contentions by MS-1 –MS-5.

First, the Applicant assumes that the Intervenors have interchangeably used the terms "damage states" and "numbers and magnitude of fires and explosions." Applicant Answer page 9, fn. 35. Actually, the two terms are not intended to be used interchangeably. "Damage states" are caused by the "numbers and magnitude of fires and explosions." The two have functional differences and are not intended to be used interchangeably, notwithstanding the Applicant's assertion to the contrary.

Second, the Applicant incorrectly asserts that the Intervenors confuse the aircraft impact design rule, 10 CFR 50.150, with the fires and explosions rule at 10 CFR 50.54(hh)(2). The Applicant misapprehends the Intervenors purpose in discussing both rulemakings. The two rulemakings are intended to be complementary and are inextricably related, because both are responses to the threat environment that recognizes the need to evaluate nuclear plant vulnerabilities to attack. But they are distinct to the extent that the fires and explosions rulemaking under section 50.54(hh)(2) focuses on how the Applicant is to address the large loss of plant areas due to fires and explosions; the design impact rule under section 50.150 focuses on how the structural and functional aspects of the plant are designed withstand the effects of initiating event(s). Significantly, there is no attempt by the Applicant to take advantage of the description of damage footprints provided in the guidance for the impact rule, NEI 07-13, to describe how its so-called mitigative strategies would deal with the damage footprints described therein.[4]

[4] NEI 07-13 does not specify whether the damage footprints described therein include the full spectrum of damage states that could occur from initiating events such as impacts of aircraft.

Third, the Applicant asserts that the "performance-based standards" are satisfied by the mitigative strategy guidance in NEI 06-12. The term "performance-based" should be measured against the strategic objective(s) intended to be realized, i.e. maintain/restore containment integrity, core cooling and spent fuel pool (sfp) cooling under the full spectrum of damage states. The term "strategy" is defined as "the science and art employed in the armed strength of a belligerent to secure the objects of war, especially the large scale planning and directing of operations in adjustment to combat area, possible enemy action, political alignments, etc."[5] This dictionary definition of strategy is from the vernacular of military operations. Successful military operations require planning that is focused on the marshaling and deployment of adequate resources to achieve specified objectives. So too in the context of dealing with the effects of fires and explosions caused by, among other things, the impacts of a large commercial airliners. "Performance-based" standards are meaningless unless there is an understanding of what is to be achieved under the full spectrum of damage states. Just as military operations are adjusted in relation to a "combat area" and possible enemy actions etc., operations to deal with fires and explosions must be adjusted to match the area involved and anticipate actions that will be required under the full spectrum of damage states.

For example, the Applicant and Staff maintain that there is no requirement to quantify or otherwise describe what is meant by "large areas of plant" assumed to be lost in large-scale fires and explosions. See eg. Applicant Answer, pp.9-11 and Staff Answer, pp.7-8. The Applicant's approach is to embrace a "flexible" response that relieves it of any necessity to describe with any particularity, for example, whether it would be necessary to suppress one fire, two fires or ten fires simultaneously. Nor does the Applicant and Staff consider whether the flexible responses

[5] Webster's New Collegiate Dictionary, 2nd ed.

could be compromised by damaged pipes and pumps required for fire suppression and makeup water to restore cooling functions. A flexible response is understandable; however, the range of flexibility must be adequate to meet the full spectrum of anticipated damage states. But neither the Applicant nor Staff make any attempt to demonstrate the range of the "flexible responses." Anything less than a showing by a preponderance of the evidence that the mitigative measures are effective under the full spectrum of damage states fails to meet the objectives of 10 CFR 50.54 (hh)(2) and the Atomic Energy Act, 42 U.S.C. 2133(d). The public's health and safety cannot be assured unless there is some means by which to determine whether the mitigative strategies are adequate to meet the full spectrum of damage states.

Next the Applicant argues that the plain language of sections 52.80(d) and 50.54(hh)(2) do not require specification of damage states. Applicant Answer p.10. The Applicant notes that the facial requirements of the subject regulations do not call out a specific requirement to discuss the number or magnitude of fires and explosions to be addressed by the mitigative strategies. But this argument overlooks the Commission's stated expectation that the mitigative measures will be "effective." 74 Fed. Reg. at 13958. Intervenors contend that effectiveness of the mitigation measures is inherently related to the damage states to which they apply and the Applicant rejects this relationship.

Further, the Applicant ignores the plain language of 50.54(hh)(2) that uses the term "large" to describe the fires and explosions that the mitigative measures are intended to address. Conspicuously missing from NEI 06-12 and the Applicant's submittal is any description or definition what is meant by "large." Because there's no definition of what they mean by "large,"

there is no way to determine whether the mitigative measures will be "effective." 74 Fed. Reg. at 13958.

But what is more troubling is the Applicant's willingness to use a legalistic approach to avoid addressing an urgent problem that has been identified by the Commission as a high priority for resolution. 74 Fed. Reg. 13926, 13927-8. It seems unlikely that the Commission would have devoted the resources necessary to carry out the rulemaking that yielded the fires and explosions regulation just to have it diluted by an artificially restrictive approach to developing mitigative strategies. *Druid Hills Civic Association, Inc., v. Federal Highway Administration*, 772 F. 2nd 700, 709 11th Cir. (1985). The refusal to address the full spectrum of damage states in the context of mitigative strategies is an obvious oversight and acceptance of such by the Commission would be arbitrary and contrary to the requirements of the AEA, 42 U.S.C. 2133(d) that requires that the health and safety of the public be paramount in determining whether a license to operate a nuclear plant should be issued. How can there be any assurance that the health and safety of the public is adequately protected by the applicant's mitigative strategies when there is no attempt whatsoever to describe what those strategies are expected to address? *Ohio River Valley Environmental Coalition,Inc.v. Kempthorne*, 473 F.3d 94,102 (4th Cir., 2006) (Administrative Procedure Act directs review of agency action to determine if decision is product of consideration of relevant factors and whether a clear error of judgment has occurred.)

Additionally, the Applicant goes to great lengths to point out a premise already acknowledged by the Intervenors that the initiating events may come from a variety of actions. Applicant Answer, p. 11. Initiating events are not limited to the impacts of large commercial

airliners.[6] There is no dispute that the Applicant should plan for a variety of events that would effectively render the facility incapable of pumping water from either on-site sources or obtaining from off-site supplies for fire suppression and makeup water. The Applicant should anticipate that its capacity to pump water from on-site sources will be compromised due to the effects of fires and explosions and that radiological conditions or other damage effects preclude accessing off-site water supplies. However, it should not be left to the Intervenors to project and describe potential damage states that the Applicant's proposed nuclear plants may experience as a result of large scale fires and explosions. The burden is on the Applicant to do so and to show that under those damage states its mitigative strategies will be adequate to protect the health and safety of the public. 42 U.S.C. 2133(d).

The Applicant next attempts to avoid describing the full spectrum of damage states by pointing to a single comment and response in the Federal Register notice that announced the adoption of the fires and explosions regulation. Applicant Answer, page 12. The comment cited by the Applicant does not support its argument. The subject comment sought to have the regulation describe the "types of fires and explosions" that should be anticipated and to "specify what areas of the plant are considered particularly susceptible to damage or distraction a fire or explosion." Applicant Answer p. 12, fn. 45. The Intervenors in the *instant* matter are not contending that the mitigative strategies are inadequate because they fail to specify the "types of fires or explosions." Irrespective of the types of fires or explosions involved, an understanding of the nature and extent of the damage that such cause is necessary to determine the adequacy of the mitigative measures. Therefore, the response to the subject comment is not determinative of

[6] As argued by the Intervenors in their original fires and explosions contention 1, planning for the initiating events should include both multiple air strikes along with coordinated ground attacks on a facility.

whether the Applicant in this case has an obligation to describe the damage footprints and the full spectrum of damage states that its mitigative strategies are intended to address.

Next, the applicant makes the astonishing statement that "[N]one of the statements in the SOC suggests that an applicant must evaluate aircraft impacts and identify damage states." Applicant Answer, p. 14. This is flatly contradicted by the SOC at 74 Fed. Reg. 13958 that states "Section 50.54(hh)(2) focuses on ensuring that the nuclear power plant's licensees will be able to implement effective mitigative measures for large fires and explosions including (but not explicitly limited to) those caused by the impacts of large commercial aircraft."[7] This SOC directive requires considerations of both the magnitude of fires and explosions by using the adjective "large" and the full spectrum of damage states by requiring that the mitigative measures be "effective". 74 Fed. Reg. at 13598.

The next approach taken by the Applicant is to assert again that Intervenors have confused the requirements of the fires and explosions regulation with the aircraft impacts design regulation, 10 C.F.R. 50.150. Applicant Answer, pp. 14-16. The Intervenors are not confused about the to two regulatory requirements, as noted *infra*. Furthermore, the Intervenors are not arguing that the fires and explosions regulation requires that there be specifications of aircraft size, fuel loading, speed, and angle of impact to be part of the underlying considerations of the mitigative strategies. These considerations are more relevant to the requirements of the design impact regulation, 10 C.F.R. 50.150. Rather, the Intervenors contend that the damage footprints and the full spectrum of damage states should be considered in the context of the fires and explosions regulatory requirements. It is the Applicant that is attempting to confuse the argument

[7] See Intervenors' original Fire and Explosions Contentions, Petition to Intervene, pp. 6-7, fn 3.

here. The Intervenors' citation to and reliance on the aircraft impact rule is simply to illustrate that the task of describing damage footprints related to aircraft impacts is not beyond the realm of possibility. The damage footprints described in NEI 07-13 are realistic and illustrative, though not necessarily exhaustive, of various damage states that should be anticipated in any effective mitigative strategy under 10 C.F.R. 50.54(hh)(2).

Accordingly, the Applicant's assertion that requiring a specification of the full spectrum of damage states related to the fires and explosions regulatory requirements would render the aircraft design rule unnecessary and redundant is mistaken. This is simply not the case. Section 50.150 does not merely require an assessment of aircraft impacts, but also requires that design enhancements be made depending on the results of the assessment. Moreover, aircraft impact is but one of many possible initiators of LOLA events, and is not necessarily the most severe. Showing that the mitigative measures would be effective in the event of an aircraft attack is a necessary, but not sufficient, condition for the adequacy of the mitigative measures to meet the requirements of 50.54(hh)(2).

The Intervenors recognize the distinct purposes behind the two regulatory requirements. As noted above, the aircraft design rule is intended to call out the structures and functions of a plant that are intended to show that it can withstand the impact of an aircraft and still function effectively to prevent the loss of containment integrity, reactor coolant and spent fuel pool cooling. The function of the fires and explosions regulation is to establish how containment integrity, reactor cooling and spent fuel pool cooling can be maintained/restored if the design of the plant fails to effectively prevent the loss of these essential functions. Hence, the Applicant's

assertion that the aircraft design rule would become superfluous by specification of the full spectrum of damage states is not supported by the distinct purposes the regulations are intended to accomplish.

The final argument that the Applicant makes related to the Intervenors' Contention MS-1 is that since the Commission has endorsed NEI 06-12[8] the Applicant may simply follow the prescriptive guidance therein and presumably, ignore the "high-level insights" related to the full spectrum of damage states that might render the mitigative strategies ineffective. The Applicant cites one of the high-level insights that posits that it is not possible to predict various damage states because of the "endless combinations and permutations of potential damage states." Applicant Answer, page 16. However that statement must be read in conjunction with the further qualification that the mitigative measures may not ensure success under the full spectrum of damage states that might be encountered subsequent to the impact of large commercial airliners or other similar initiating events. The NEI 06-12 authors presumably are aware of some definable damage state(s) that will render the mitigative measures ineffective. The Applicant wants the benefits of adopting the prescriptive measures in NEI 06-12 while rejecting its explicit limitations expressed in the disclaimers. The Intervenors contend that whether the prescriptive measures adopted by the Applicant are effective is tied to the full spectrum of damage states caused by large scale fires and explosions. The Applicant is understandably reluctant to acknowledge this relationship because to do so would require its mitigative measures to be more robust than called for in NEI 06-12 in order to meet the full spectrum of damage states.

[8] Interim Staff Guidance on section 50.54(hh)(2) is in the process of being developed (See 74 Fed. Reg. 13958) for release during September, 2009. Hence, whether the Applicant's submittal is consistent with the anticipated ISG is unknown.

The Applicant argues in its response that Contention MS-1 should be dismissed because it is in part an attack on NEI 06-12, which it asserts the Commission has approved "as a method for satisfying Section 50.54(hh)(2)." Applicant Answer at 16. The Applicant then selectively quotes from the Final Security Rule to support this assertion. Applicant Answer at 17. However, the Applicant's quote fails to support its assertion because it clearly states that the Commission approved NEI-06-12 "as an acceptable method for *current* reactor licensees..." (emphasis added.) In fact, the Commission apparently has not approved NEI-06-12 for COL applicants. Applicant tellingly fails to include the sentence immediately following the quotation that "The Commission is currently developing a draft regulatory guide that consolidates this guidance and addresses new reactor designs." Final Security Rule at 13,958.

Thus, the Commission recognized that NEI-06-12, which was developed to codify the B.5.b requirements for operating plants, was not adequate to address issues that might arise with regard to new reactors. Specifically, the Commission said that new applicants "are required to develop and implement procedures that employ mitigative strategies similar to those employed by current licensees"—"similar" but not "identical." Presumably for this reason, the Commission has stated its intent to provide Interim Staff Guidance 16 (ISG-16) in September 2009 on 10 CFR 50.54(hh) compliance. (September 2, 2009 Generic DCWG Meeting Slide for Interim Staff Guidance as of August 2009, ADAMS accession number ML092450022).

Contrary to the argument of the Applicant, this Board is not bound by NEI 06-12. A Commission endorsement of NEI 06-12 is not conclusive on the question of whether it is an acceptable means to address the requirements of 10 C.F.R. 50.54(hh)(2). In *Long*

Island Lighting Co. (Shoreham Nuclear Power Station, Unit One) 28 NRC 275 (1988) the Commission discussed the limitations of such regulatory documents as follows:

> As we have often stressed, NUREG–0654 and similar documents are akin to "regulatory guides." That is, they provide guidance for the Staff's review, but set neither minimum nor maximum regulatory requirements. Philadelphia Electric Co. (Limerick Generating Station, Units 1 and 2), ALAB–819, 22 NRC 681, 709–10 (1985), aff'd in part and review otherwise declined, CLI–86–5,23 NRC 125 (1986); Consumers Power Co. (Big Rock Point Nuclear Plant), ALAB–725, 17 NRC 562, 568 n. 10 (1983). Where such guidance documents conflict or are inconsistent with a regulation, the latter of course must prevail. On the other hand, guidance consistent with the regulations and at least implicitly endorsed by the Commission is entitled to correspondingly special weight. See, e.g., Limerick, 22 NRC at 711 & n. 40. 28 NRC at 290.

The Petitioners contend that the failure to discuss the full spectrum of damages expected from large fires and explosions in NEI 06-12 is inconsistent with the requirement of 10 C.F.R 50.54(hh)(2) that specifies the mitigative strategies must be effective and consistent with the loss of large areas of a nuclear plant. Accordingly, NEI 06-12 should not be given any special weight. 28 NRC at 290.

Applicant's arguments also fail in other important respects. For instance, it argues that Section 50.54(hh)(2) does not apply to applicants for design certifications or design approvals and this somehow implies that the "rule does not require an applicant to provide design evaluations of fires and explosions." Applicant's Answer, p. 8. It also argues that "Section 50.54(hh)(2) does not require an evaluation of damage caused by aircraft impacts." Applicant's Answer, p. 8. Yet the excerpt in the SOC which the Intervenors have already cited clearly implies a linkage between (1) new reactor design and the 50.54(hh)(2) mitigative strategies, and (2) the aircraft impact assessment now required in 10 CFR 50.150 and the 50.54(hh)(2) mitigative strategies:

> The mitigative strategies employed by new reactors as required by this rule would also need to account for, as appropriate, the specific features of the plant design, or any design changes made as a result of an aircraft assessment that would be performed in accordance with the proposed Aircraft Impact Assessment rule. (72 Fed. Reg. 56287; October 3, 2007)

This statement makes clear that the mitigative strategies for new reactors do in fact depend on design features, and might have to be changed to accommodate changes to the design as a result of the aircraft impact assessment rule. The Intervenors maintain that it is simply not possible to modify the mitigative strategies to account for design changes made as a result of an aircraft impact assessment without understanding how the design changes would alter the effects of the aircraft impact.

Contention MS-2

The Applicant contends that the basic premise of this contention, i.e. that mitigative strategies are tied to the number and magnitude of fires and explosions and resulting damage states, is faulty. Applicant Answer, p.19. The Applicant maintains that it is untenable to require that the mitigative strategies be scaled appropriately to the number and magnitude of fires and explosions and the resulting damage states. *Id.* The Applicant cites NEI 06-12 and its "flexible response capability" to address "variety of extreme conditions involving the spent fuel pool and reactor". *Id.* But flexibility, by definition, has limits. Again, the Applicant fails to make any attempt to match its mitigative strategies to the full spectrum of damage states expected to occur as a result of large fires and explosions. This failure is inconsistent with the Atomic Energy Act, 42 U.S.C. 2133(d).

The Applicant argues that the event guidelines need not be influenced by the numbers or magnitude of fires and explosions nor the resulting full spectrum of damage states caused

thereby.[9] Applicant Answer, p.18-19. The Applicant uses the term "event" without any attempt to define what it means. This shortcoming has significant implications. For example, does an "event" correspond to a fire that is in one part or in many parts of the plant? Does the "event" anticipate one or multiple fires? How large are the parts of the plant involved in the fire(s)? Does the "event" correspond to explosions that have caused the loss of the containment integrity, reactor cooling capacity and sfp cooling capacity simultaneously? For the event guidelines in the MST to be meaningful and functional they must have a close relationship to the full spectrum of damage states. Otherwise, the event guidelines will be inadequate to implement the mitigative strategies.

Contention MS-3

The Applicant contends that there is no need to determine dose projections beyond that which has been done for Comanche Peak 1 and 2. Applicant Answer, p. 22. The requirements of 50.54(hh)(2) are intended to yield "effective" mitigative strategies. Consistent with this expectation is an assessment of dose projections. And it is difficult to see how the mitigative strategies can be "effective" unless the dose projections are tied to the full spectrum of damage states. The Applicant makes no attempt to do so in its submittal.

This contention of omission is adequately supported. 10 C.F.R. 2.309(f)(1)(v) requires the Intervenors to provide a concise statement of the facts that support their position and upon

[9] The Applicant states that it is not clear whether the Intervenors contend that these event guidelines should be developed before the issuance of the operating license. Applicant Answer, p.20. To clairify, the Intervenors contend that the event guidelines must be developed prior to the issuance of the operating license and that the event guidelines must be tied to the numbers and magnitude of fires and explosions expected to be caused by, for example, the impact of large commercial airliners or similar initiating events and take into account the full spectrum of damage states caused thereby.

which the petitioner intends to rely at the hearing. However, the requirements of 10 C.F.R. § 2.309(f)(1)(v), that generally call for a specification of facts or expert opinion supporting the issue raised, are not applicable to a contention of omission beyond identifying the information required under the regulation in question. North Anna, LBP-08-15, 68 NRC (slip op. at 27) (quoting Pa'ina Hawaii, LLC (Materials License Application), LBP-06-12, 63 NRC 403, 414 (2006)). Thus, for a contention of omission, the Intervenors' burden is only to show the facts necessary to establish that the application omits information that should have been included.

The Applicant also asks that this contention be rejected because this Panel might not be able to distinguish between the facts asserted by the contention and its underlying legal bases. Applicant's Answer, p. 23-4. In the context of the subject contention and considering the extensive briefing that the fires and explosions regulations have received it seems likely that this Panel would be able to distinguish between the factual assertions and the legal bases therein.

Contention MS-4

(b)(4)

The Applicant contends this issue is not material under 10 C.F.R. 2.309(f)(1)(iii). Intervenors contend the materiality of this contention is based on the Applicant's assertion that its mitigative measures are consistent with NEI 06-12 and the recognition in NEI 06-12 that the responses prescribed therein do not ensure success under all damage states. The AEA, 42 U.S.C. 21343(d), makes this

a material contention because there must be a showing that the mitigative measures are protective of the public health and safety. (b)(4) The only thing that may prevent adverse effects on the public health and safety in such a situation is heroic action. And to avoid the need for heroic actions the mitigative measures must be effective under the full spectrum of damage states. In this case, the Appicant's reliance on NEI 06-12 is an admission that its mitigative measures may not be effective under the full spectrum of damage states.

The Intervenors maintain the mitigative strategies related to determining which emergency responders would be subjected to higher doses and training about such higher doses is linked to the requirement that the mitigative measures be effective. Attempting to train responders on these matters during the course of an event would not be an effective implementation of mitigative measures.

The contention is adequately supported. As a threshold matter, the contention is supported by the above-referenced disclaimer in NEI 06-12 that the responses specified therein may not be effective. That circumstance would require actions above and beyond what is called for by NEI 06-12, i.e. extraordinary actions. Dr. Lyman's support for the contention is based on the recognition in NEI 06-12 that under the full spectrum of damage states the response measures may not be adequate and require extraordinary actions.

To be effective and meet the objectives of 50.54(hh)(2) all the mitigative measures must be measured against the full spectrum of damage states. The fact that the full spectrum of damage states language is not in the text of the regulation is less important than whether the mitigative measures are effective under all damage states. Intervenors contend that the efficacy of Applicant's mitigative measures are unknown unless compared to the full spectrum of damage states.

Contention MS-5

The supply of water to the fire suppression efforts and for makeup water is tied to the Applicant's evident assumption that the infrastructure of pipes and pumps remains intact and functional during an event. Under the full spectrum of damage states the availability of the pipes and pumps is problematic. But the Applicant rejects the idea that its capacity to suppress fires and provide makeup water can be affected by the full spectrum of damage states. Instead the Applicant assumes "from an event perspective" that it will have an effective supply of water evidently irrespective of the severity of the damage state. Applicant Answer, pp. 30-1. Intervenors contend that whether the supply is adequate will matter little if the pipes and pumps required to move it are destroyed/compromised in an event that causes damage in the severe portion of the full spectrum of damage states.

Intervenors' Responses to Staff's Objections

Contention MS-1

Staff argues that there is no legal basis to require a specification of the full spectrum of damage states to which the mitigative measures are intended to apply. Staff Answer p.6-7. However, the AEA, 42 U.S.C. 2133(d) that requires protection of the public health and safety and the requirement that the mitigative measures are "effective", 74 Fed. Reg. 13958, are both legal bases for the contention.

Additionally, the Staff implies that the classified information developed by the Commission related to the Power Reactor Security Requirements obviates the need for the Applicant to independently establish the effectiveness of the mitigative measures. Staff Answer, p. 7, 10-11. First, it is noteworthy that the Applicant neither cites to nor relies on the Commission's classified information to establish its compliance with 50.54(hh)(2). Second, this information's classified status (and therefore untested by the adversarial process) makes it a dubious basis to endorse the Applicant's mitigative measures in a COLA adjudication. If there is going to be a decision that is based on classified information, such information should be made available to the Intervenors, Applicant and the Panel.[10] For Staff not to disclose such information presumably in its possession is an unjustified withholding of evidence. Third, the Staff implies that it speaks for the Commission when it asserts that the Commission has adequate information and experience to evaluate the Applicant's mitigative measures. Staff Answer, p. 7, 10-11. But if that is the case, why would the Commission require each applicant to develop plant specific mitigative measures? And if the Commission's insights gained during the studies were reassuring

[10] On a related issue the Panel did not rule on the mootness of the Intervenors' original fires and explosions contention at the Oral Argument, because pertinent information was not available to all parties at the time. Comanche Peak Oral Argument Tr. pp. 99, 106-107

that the plants were robust enough to withstand severe initiating events such as impacts of aircraft, why require additional beyond design basis mitigation measures?

Contention MS-2

The Staff argues Contention MS-2 lacks a legal basis. Again, the AEA, 42 U.S.C. 2133(d), is a legal basis for the Applicant to consider the full spectrum of damage states to protect public health and safety. And the requirement that the mitigative measures be "effective" is a further legal basis for the contention. See also Intervenors' response to Applicant's Answer to Contention MS-2, *supra.*

Contention MS-3

See Intervenors' response to Applicant's Answer to Contention MS-3, *supra.*

Contention MS-4

See Intervenor's response to Applicant's Answer to Contention MS-4, *supra.* Additionally, the Staff contends that Contention MS-4 lacks a legal basis. However, the AEA, 42 U.S.C. 2133(d) that requires protection of the public health and safety and the requirement that the mitigative measures are "effective", 74 Fed. Reg. 13958, are both legal bases for the contention.

Contention MS-5

See Intervenors' response to Applicant's Answer to Contention MS-5, *supra.*

Staff also asserts that Contention MS-5 is not adequately supported. However, this omission contention meets the requirements for such under NRC case law. *North Anna*, LBP-08-15, 68 NRC (slip op. at 27) (quoting *Pa'ina Hawaii, LLC* (Materials License Application), LBP-06-12, 63 NRC 403, 414 (2006)). Thus, for a contention of omission, the Intervenors' burden is only to show the facts necessary to establish that the application omits information that should have been included. In this case, the information that is required is the specification of full damage states to which the mitigative strategies apply. Catawba Nuclear Station, Units 1 and 2, CLI-02-28, 56 NRC 373, 383 (2002).

Staff also claims that this contention is an attack on a Commission regulation. But this contention of omission does not attack the subject regulation; rather, it attacks the Applicant's noncompliance therewith by its failure to tailor the mitigative responses to the full spectrum of damage states and to assure that the measures are effective.

Staff also argues that the contention is not supported by an adequate legal basis. However, the AEA, 42 U.S.C. 2133(d) that requires protection of the public health and safety and the requirement that the mitigative measures are "effective", 74 Fed. Reg. 13958, are both legal bases for the contention.

Conclusion

For the above and foregoing reasons Intervenors contend their Contentions MS-1-MS-5 should be admitted to this adjudication.

Respectfully submitted,

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September 11, 2009

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD PANEL

In the Matter of
Luminant Generation Company, LLC
Comanche Peak Nuclear Power Plant
Units 3 and 4
Combined License Adjudication

Docket Nos. 52-034 and 52-035

CERTIFICATE OF SERVICE

I hereby certify that on September 11, 2009 a copy of "Intervenors' Consolidated Response to the Answers of Applicant and NRC Staff to the Intervenors' Contentions Regarding Applicant's Submittal Under 10 C.F.R. § 52.80 and 10 C.F.R. § 50.54(hh)(2)" was served by the Electronic Information Exchange consistent with the Board's July 1, 2009 protective order on the following recipients:

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