UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD PANEL

In the Matter of
South Texas Project Nuclear Operating Co.
Application for the South Texas Project **Docket Nos. 52-012, 52-013**
Units 3 and 4
Combined Operating License

INTERVENORS' CONSOLIDATED RESPONSE TO APPLICANT'S AND STAFF'S ANSWERS TO INTERVENORS' CONTENTIONS MCR-1 – MCR-5 AND PROPOSED REVISED CONTENTION 8

Introduction

Intervenors offer the following consolidated response to the Applicant's and Staff's Answers to the main cooling reservoir contentions, MCR-1-MCR-5, filed December 22, 2009.

Additionally, Intervenors incorporate by reference the arguments and authorities related to MCR-1 herein in response to the Applicant's and Staff's Responses to Intervenors' Proposed Revised Contention 8.[1]

MCR-1

This contention is premised on the fact that the MCR is the receiving water body for discharges from the existing and proposed STP nuclear plants and that, as such, the Applicant has a duty to fully evaluate environmental impacts related to the discharges.

Applicant and Staff argue that since tritium levels are expected to be within regulatory limits there is no need to evaluate health effects from tritium exposures.[2] Neither Applicant nor Staff discuss the

[1] Intervenors recognize that the proposed revised contention 8 and the contentions MCR-1-MCR-5 were not filed with a motion specified in the Oct. 20, 2009 Scheduling Order at E.1,2. This was due to the oversight of undersigned counsel. In this response Intervenors address the timeliness provisions of section E.1,2. of the Scheduling Order and request that such be considered in lieu of the motion required under section E.1. Undersigned counsel will endeavor to follow the provisions of the Scheduling Order in future proceedings.

health effects of organically bound tritium (OBT) nor does either contest the difference in the integrated relative biological effectiveness of tritiated water and OBT as discussed by Dr. Makhijani. The substantial increase in biological impacts in OBT compared to tritiated water relative to integrated relative biological effectiveness will occur notwithstanding that MCR discharges meet regulatory limits. As discussed by Dr. Makhijani, fetal biological damage caused by OBT on, for example, is substantially higher than exposure to tritiated water.[3] Accordingly, this omission of discussion of OBT raises an issue of material dispute under 10 C.F.R. § 2.309(f)(1)(vi). The NRC recognizes that compliance with EPA water quality standards does not eliminate the requirement to evaluate environmental impacts of discharges.[4] This is particularly the case when there is no apparent dispute that the empirical evidence shows that OBT has substantially greater biological effects compared to tritiated water.

Staff objects to the MCR-1 because it is not based on new or materially different information compared to what was available prior to the filing of Intervenors' initial petition for intervention.[5] MCR-1 is a refinement of the Intervenors' contention that the Applicant has not fully accounted for the environmental impacts of the radioactive contamination of the MCR. The Applicant's ER revisions are

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[2] Applicant Answer, January 25, 2010, pp. 6-8, Staff Answer, January 25, 2010, pp.20-22.
[3] Makhijani report, December 23, 2009, pp.1-2.

[4] In *Environmental Review for Renewal of Nuclear Power Plant Licenses*, 10 C.F.R. pt. 51, 1996 WL 776999, Dec. 11, 1996 at fn. 3, the Commission stated:

Compliance with the environmental quality standards and requirements of the Federal Water Pollution Control Act (imposed by EPA or designated permitting states) is not a substitute for and does not negate the requirement for NRC to weigh all environmental effects of the proposed action, including the degradation, if any, of water quality, and to consider alternatives to the proposed action that are available for reducing adverse effects. Where an environmental assessment of aquatic impact from plant discharges is available from the permitting authority, the NRC will consider the assessment in its determination of the magnitude of environmental impacts for striking an overall cost-benefit balance at the construction permit and operating license stages, and in its determination of whether the adverse environmental impacts of license renewal are so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable at the license renewal stage. When no such assessment of aquatic impacts is available from the permitting authority, NRC will establish on its own or in conjunction with the permitting authority and other agencies having relevant expertise the magnitude of potential impacts for striking an overall cost-benefit balance for the facility at the construction permit and operating license stages, and in its determination of whether the adverse environmental impacts of license renewal are so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable at the license renewal stage.

[5] Staff Answer, pp.18-19.

the precipitating event for MCR-1 and those revisions were a response to the admission of Contention 8 that found the Applicant had failed to address the environmental impacts related to increases in radionuclide concentrations in the MCR. But the revisions still fall short of an adequate evaluation of OBT. Intervenors' Contention Eight framed a general omission contention that focused on tritium and cobalt 60.[6] MCR-1 is a product of Applicant's continuing deficiency in evaluating environmental effects related to tritium in the form of OBT. Neither Applicant nor Staff suggests that OBT has no environmental effects nor do they argue that these effects are discussed in the ER Revisions which constitute new information. MCR-1 is directly related to the omission of the ER Revisions to discuss OBT and the contention is based on this new information, to the extent that an omission of discussion is new information. Accordingly, the contention meets the requirements of 10 C.F.R. § 2.309(f)(2)(i)-(iii). Further, the requirements of 10 C.F.R. § 2.309(c) are not germane because this contention is related to the ER Revisions that were not available before November 12, 2009. [7]

Alternatively, if the Panel agrees that MCR-1 is not based on new or materially different information it may be admitted under 10 C.F.R. § 2.309(c). Intervenors have good cause under 10 C.F.R. § 2.309(c)(1)(i) for the nontimely filing because the absence of any discussion in the Applicant's original ER of the environmental effects of increased radioactive discharges into the MCR. Only after Contention Eight was admitted did Applicant revise its ER in an attempt to address the contention. Once the ER Revisions were submitted it was fair for Intervenors to point out material shortcomings in the ER Revisions. Intervenors should not have had to be more specific by including a reference to OBT in its original Contention Eight because it was an omission contention that alleged a general failure to discuss the increased radiological impacts on the MCR. Now that the ER Revisions are of record, the Intervenors have the opportunity to point out their material omissions. Intervenors have satisfied the requirements of

[6] Petition to Intervene, April 21, 2009, pp.32-35

[7] The Oct. 20, 2009 Initial Scheduling Order at E.2. specifies that contentions are timely under 10 § C.F.R. 2.309(f)(2)(iii) if filed within thirty days of the availability of new information. Intervenors neglected, due to oversight, to file the motion with the proposed contentions referenced in the Initial Scheduling Order at E.1. However, there is no dispute that the contentions were filed timely based on the availability of the subject ER Revisions.

10 C.F.R. § 2.309(c)(1)(ii)(iii) and (iv), based on the Panel's finding that they have standing to participate in this proceeding.[8] Other than admitting this contention, there is other means whereby the Intervenors' interests will be protected related to this contention.[9] No other party to this proceeding will protect Intervenors' interests related to this contention.[10] Admission of this contention will not unduly broaden or delay the proceeding.[11] Because no other party has raised questions related to the increased contamination of the MCR, admission of this contention will assist in making an adequate record concerning radiological impacts related to the MCR.[12]

MCR-2

This contention focuses on the unmonitored discharges from relief wells.

Applicant argues that it should be dismissed because it is not material and is outside the scope of the proceeding.[13] Staff argues MCR-2 is not based on new information and is outside the scope of this proceeding.[14]

The absence of a discussion in Applicant's original ER about environmental impacts related to the MCR was the basis of the original Contention Eight and prompted the subject ER Revisions by Applicant. Staff's argument on this point assumes Intervenors should have been able to predict what the ER Revisions would and would not say. Contention Eight was an omission contention and Applicant purported to remedy the omissions by revising the ER. These revisions were not available until November 12, 2009, and Intervenors could not have known whether the revisions would discuss the unmonitored discharges from the relief wells prior thereto. Accordingly, the contention is not based on previously available materials.

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[8] Panel Order, August 27, 2009, pp.4-5
[9] 10 C.F.R. § 2.309(c)(1)(v).
[10] 10 C.F.R. § 2.309(c)(1)(vi).
[11] 10 C.F.R. § 2.309(c)(1)(vii).
[12] 10 C.F.R. § 2.309(c)(1)(viii).
[13] Applicant Answer, pp. 9-11.
[14] Staff Answer, pp. 22-26.

Alternatively, if the Panel agrees that MCR-2 is not based on new or materially different information it may be admitted under 10 C.F.R. § 2.309(c). Intervenors have good cause under 10 C.F.R. § 2.309(c)(1)(i) for the nontimely filing, because the absence of any discussion in the Applicant's original ER of the unmonitored discharges from the relief wells. This is a salient part of the environmental impacts related to the MCR. Once the ER Revisions were submitted it was fair for the Intervenors to point out material shortcomings in the ER Revisions.[15]

Both Applicant and Staff argue that because the TPDES permit applies to the unmonitored discharges, the issue is beyond the scope of this proceeding.[16] Contrary to this assertion, Intervenors are not attempting to impose new or different effluent limits related to the relief wells discharges. MCR-2 is related to the effects of the unmonitored discharges from the MCR, and the fact that a TPDES permit is in place to authorize the discharges says nothing about environmental effects thereof. Moreover, this TPDES permit does not eliminate the duty to evaluate discharges from the unmonitored relief wells. [17]

MCR-3

This contention addresses the variations in MCR levels during operation of all four units and the omission of specific calculations to determine impacts on groundwater seepage rates caused by the variations.[18] [19]

Applicant and Staff argue this contention does not raise a material dispute.[20] Staff also argues this contention is not based on new information.[21]

As explained by Dr. Ross, seepage rates are affected by the level of the MCR. And while the operation of all four units is not expected to cause the design level to exceed 49 feet MSL there is still an

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[15] Intervenors incorporate by reference the arguments made above related to MCR-1 as related to compliance with 10 C.F.R. 2.309(c)(1).
[16] Applicant Answer, pp. 10-11, Applicant Answer, pp. 24-26.
[17] *Environmental Review for Renewal of Nuclear Power Plant Licenses*, 10 C.F.R. pt. 51, 1996 WL 776999, Dec. 11, 1996 at fn. 3
[18] MCR Contentions, December 23, 2009, pp.4-5.
[19] See also footnote 7, *supra*. regarding prerequisites for filing new contentions.
[20] Applicant Answer, pp. 12-13, Staff Answer, pp. 28-30.
[21] Staff Answer, pp. 27-28.

increase expected in the MCR level. Because the variations in MCR levels cause fluctuations in groundwater seepage rates the ER should account for these differences.[22]

This is a material dispute because the omitted information has a bearing on the amount of discharge from the MCR during four unit operation and the impacts on the amount of water needed to compensate for this seepage.[23]

MCR-4

MCR-4 is based on the premise that the ER does not adequately evaluate the environmental impacts associated with nonradioactive contaminant discharges.

Applicant argues this contention should be dismissed because it is outside the scope of the proceeding and it does not represent a genuine dispute over a material fact. Staff also argues the contention is beyond the scope of the proceeding and that it is not based on new information.[24]

This contention is materially different from Contention 12 that was presented in Intervenors original petition for intervention and that argued the TPDES permit was an insufficient means to protect water quality.[25] MCR-4 focuses on the failure of the ER to discuss the impacts on water quality of nonradioactive contaminants. This contention is not related to the TPDES permit because the permit is not a substitute for an analysis of the impacts to water quality caused by the nonradioactive contaminants including toxic metals, salinity and TDS.[26] The Applicant and Staff argue that the issues raised in the contention have already been addressed.[27] However, this argument is based on the ER's conclusory statement that the impacts of the contaminants would be small and discharges are monitored.[28]

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[22] Ross Report dated Dec. 14, 2009, Attachment to Intervenors' MCR Contentions, December 23, 2009, pp. 1-2.
[23] Intervenors incorporate by reference the arguments supra related to MCR-1 concerning timeliness.
[24] Applicant Answer, p.13, Staff Answer, p.31.
[25] Ross Report, dated April 21, 2009, Attachment to Intervenors' Petition for Intervention, April 21, 2009, at pp. 7-8.
[26] Ross Report dated Dec. 14, 2009, Attachment to Intervenors' MCR Contentions, December 23, 2009, pp. 2-4.
[27] Applicant Answer, pp.15-16, Staff Answer, pp.33-36.
[28] Id.

The fact that there is a TPDES permit related to some of the nonradioactive contaminants[29] does not mean that environmental impacts caused by the contaminants have been evaluated. Nor does the issuance of a TPDES permit excuse an evaluation of the impacts.[30]

Additionally, Intervenors contend that the ER omits discussion of the impacts of lead, molybdenum, and vanadium.[31] Applicant and Staff argue in response that this absence is excused because the contention does not allege significant environmental impacts related to these contaminants.[32] However, this is an omission contention and it raises a NEPA related issue that addresses water quality. The potential environmental impacts of discharges of lead, molybdenum, and vanadium is a valid water quality issue that should be included in the ER. Only if this analysis is included in the ER may the Intervenors determine whether the projected impacts have been adequately characterized by the Applicant.

Applicant argues that it is unnecessary to evaluate the TDS concentrations during drought conditions because the Lower Colorado River "is subject to tidal influences near the STP site and becomes almost entirely saltwater at times."[33] There is no factual support for this statement and it should be disregarded as a basis for a decision concerning whether the ER has adequately accounted for increases in TDS.[34]

Staff's argument concerning whether this contention is based on new information assumes the ER has adequately determined the impacts from the discharge of nonradioactive contaminants. But as Dr Ross notes, this part of the Applicant's water quality evaluation is deficient.[35] This contention is prompted

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[29] As Dr. Ross points out, the TPDES permit does not address salinity or TDS. Ross report, Dec. 14, 2009, p. 3.
[30] See footnote 3, supra.
[31] MCR contentions, p. 6.
[32] Applicant Answer, p.16, fn.70.
[33] Applicant Answer, p. 16.
[34] *Limerick Ecology Action v. NRC,* 869 F.2d 719, 739 (Argument by counsel cannot take the place of an agency's statement of reasons or findings).
[35] Ross Report, Dec 14, 2009, pp.3-4.

by the Applicant's ER revisions that constitute new information and, as such, satisfies the requirements of 10 C.F.R. § 2.309(f)(2) and § 2.309(c).[36]

MCR-5

This contention addresses the seepage rate, quantity and quality of water discharged from the MCR. Applicant and Staff argue that the ER establishes that the MCR discharges will have no adverse environmental impact and thus there is no material disputed issue.[37] Staff also argues this contention is not based on new information.[38] Applicant argues that the ER Revisions indicate there will be no adverse effects associated with discharges from the MCR to groundwater.[39]

The ER Revisions acknowledge that under a four unit operating scenario, continuous blowdown to the Lower Colorado River could last up to 73 days. The ER Revisions do not discuss the contaminants that would be associated with blowdown discharges. Intervenors understand that blowdown is an infrequent occurrence. But the discharges related to blowdown include accumulations of heavy metals that may occur in acute concentrations.[40] And while the blowdown discharges are diluted once introduced into the MCR, presumably there is still some environmental effect caused thereby. The ER Revisions do not address discharges of water contaminated by blowdown. Further, as discussed in MCR-2, relief wells used during blowdown are not monitored for water quality.

Intervenors also contend that the ER revisions document a reduction in the total amount of water that seeps from the MCR that will recharge groundwater.[41] The Applicant's original ER suggested that all the seepage would recharge groundwater. The total amount of MCR seepage that had been expected to

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[36] See also footnote 7, I.
[37] Applicant Answer, pp.16-19, Staff Answer, pp.36-39.
[38] Staff Answer, p. 36. Intervenors incorporate by reference the arguments supra related to MCR-4 concerning timeliness. Here, the Intervenors could not have known prior to the submittal of the revised ER that the proportion of MCR seepage that would be discharged to the Lower Colorado River would change.
[39] Applicant Answer, p. 17.
[40] Blowdown discharges from nuclear-powered steam generators exceed acute Federal criteria and State acute water quality criteria for copper, and the most stringent State acute water quality criteria for lead and nickel. http://unds.bah.com/NotReq/Bolrbldn_sum.pdf.
[41] MCR Contentions, p.8.

recharge groundwater will now be reduced by 32%. This is a significant relative reduction and the environmental effects caused by this reduction have not been discussed in the ER.

MCR-5 also alleges that a sentence from the ER regarding relief well flow rate monitoring had been deleted from the ER.[42] Applicant and Staff correctly point out that the sentence in question was actually moved.[43] Accordingly, Intervenors concede that this part of MCR-5 is subject to dismissal.

Conclusion

For the reasons stated above Intervenors urge that contentions MCR-1 – MCR-5 and the proposed revised contention 8 be admitted for adjudication.

Respectfully submitted,

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[42] MCR Contentions, p.8.
[43] Applicant Answer, p. 19, Staff Answer, p.38-39.

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CERTIFICATE OF SERVICE

I hereby certify that on February 1, 2010 a copy of "Intervenors' Consolidated Response to Applicant's and Staff's Answers to the Intervenors' Contentions MCR-1 – MCR-5 and Proposed Revised Contention 8" was served by the Electronic Information Exchange on the following recipients:

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