January 25, 2010

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
	)	
STP NUCLEAR OPERATING COMPANY	)	Docket Nos. 52-012 & 52-013
	)	
	)	
(South Texas Project, Units 3 & 4)	)	

NRC STAFF'S ANSWER TO INTERVENORS' AMENDED AND MCR NEW CONTENTIONS

INTRODUCTION

Pursuant to the Atomic Safety and Licensing Board's (Board) Order dated December 18, 2009, the staff of the U.S. Nuclear Regulatory Commission (Staff) hereby answers the proposed amended contention in "Intervenors' Response to Applicant's Motion to Dismiss Contentions 8, 9 and 14" (Dec. 14, 2009) ("December 14 Response") and the new contentions in "Intervenors MCR Contentions" (Dec. 23, 2009) ("December 23 Petition"). *See South Texas Project Nuclear Operating Co.* (South Texas Project Units 3 and 4), unpublished order (LBP Dec. 18, 2010) (ML093520679) (Granting Applicant & NRC Staff's Joint Motion to Consolidate answers). For the reasons set forth below, Amended Contention 8 and the five new proposed contentions should be dismissed for failure to comply with the requirements for new and amended contentions in 10 C.F.R. §§ 2.309(f)(2) and 2.309(c) and/or the contention admissibility requirements in 2.309(f)(1).[1]

[1] In the Board's Initial Scheduling Order of October 20, 2009, the Board stated that parties (continued. . .)

BACKGROUND

On September 20, 2007, STP Nuclear Operating Company (Applicant), pursuant to the Atomic Energy Act of 1954, as amended (AEA) and the Commission's regulations, submitted an application for combined licenses (COL) for two Advanced Boiling Water Reactors (ABWR) to be located adjacent to the existing South Texas Project, Units 1 and 2 near Bay City, Texas (Application). The Application references the issued standard design certification, including a design control document (DCD), issued to General Electric (GE) Nuclear Energy. The proposed units are known as South Texas Project, Units 3 & 4.

On February 13, 2009, the NRC published a Notice of Hearing on the Application, which provided members of the public sixty days from the date of publication to file a petition for leave to intervene in this proceeding. 74 Fed. Reg. 7934 (Feb. 20, 2009). In response to the Notice of Hearing, Intervenors submitted a petition to intervene. Petition for Intervention and Request

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(. . .continued)

seeking to submit additional contentions should file a "motion for leave and the substance of the proposed contention simultaneously." Initial Scheduling Order at 8. The Board also stated:

> The pleading shall include a motion for leave to file a timely new or amended contention under 10 C.F.R. § 2.309(f)(2), or a motion for leave to file an untimely new or amended contention under 10 C.F.R. § 2.309(c) (or both), and the support for the proposed new or amended contention showing that it satisfies 10 C.F.R. § 2.309(f)(1). Within twenty-five (25) days after service of the motion and proposed contention, any other party may file an answer responding to all elements of the motion and contention.

Id. The Intervenors submitted their amended and new contentions in two separate pleadings, neither of which was accompanied by a "a motion for leave to file a timely new or amended contention under 10 C.F.R. § 2.309(f)(2), or a motion for leave to file an untimely new or amended contention under 10 C.F.R. § 2.309(c) (or both)." Although, the Intervenors did not submit a motion or otherwise address the late-filing factors, the Staff's answer, here, will address the late-filing factors of § 2.309(c) and (f)(2) in addition to the contention admissibility requirements of § 2.309(f)(1).

for Hearing (Apr. 21, 2009) ("Petition to Intervene"). On August 27, 2009, and September 29, 2009, the Board ruled on Intervenors' proposed contentions, admitting five contentions including contentions 8, 9, 14, 16 and 21. *South Texas Project Nuclear Operating Co.* (South Texas Project Units 3 & 4), LBP-09-21, 70 NRC __ (Aug. 27, 2009) (slip op.); *South Texas Project Nuclear Operating Co.* (South Texas Project Units 3 & 4), LBP-09-25, 70 NRC __ (Sept. 29, 2009) (slip op.).

On November 12, 2009, the Applicant notified the licensing board and the parties of an amendment to the Environmental Report (ER) with regard to Contentions 8, 9, and 14. Letter from Stephen J. Burdick to Members of the Licensing Board, Notification of Filing Related to Contentions 8, 9, and 14 (Nov. 12, 2009). Attached to this letter was an Applicant submission to the NRC dated November 11, 2009, containing an attached supplement to the ER (November 11 ER Supplement).[2] Subsequently, the Applicant filed a motion to dismiss Contentions 8, 9 and 14 as moot. Applicant's Motion to Dismiss Contentions 8, 9 and 14 as Moot (Nov. 30, 2009) ("Motion to Dismiss"). The staff agreed that the Applicant's November 11 and 23 ER Supplements rendered Contentions 8, 9, and 14 moot. *Id.* at 10. Conversely, the Intervenors argued that contentions 8, 9 and 14 are not moot. December 14 Response at 1.[3] In addition, the Intervenors proposed that Contention 8 be modified. *Id.* at 5.

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[2] On November 24, 2009, the Applicant filed a notification with the Board stating that it had made revisions to its November 11 ER Supplement. Letter from Stephen J. Burdick to Members of the Licensing Board, Notification of Filing Related to Contention 8 (Nov. 24, 2009) ("November 23 ER Supplement"). The Applicant stated that these revisions were minor and did not change the conclusions in the November 11 ER Supplement. *Id.*

[3] Intervenors' December 14, 2009 Response was filed pursuant to the Board's December 4, 2009 Order (Granting Intervenors' Request to Extend Time for Responding to Motion to Dismiss).

On December 23, 2009, the Intervenors filed five new contentions regarding the Applicant's November ER Supplements. *See* December 23 Petition at 1-3.[4] On December 18, 2009, the Board granted the Applicant and Staff's joint request to consolidate their answers to amended contention 8 and the related new contentions. Order (Granting Applicant & Staff's Joint Motion to Consolidate Answers) at 1 (Dec. 18, 2009).

DISCUSSION

Intervenors assert that Amended Contention 8 and five new contentions should be admitted in this proceeding. For the reasons set forth below, Intervenors' amended and new contentions should be dismissed.

I. LEGAL STANDARDS

The admissibility of new and amended contentions is governed by 10 C.F.R. §§ 2.309(f)(2), 2.309(c), and 2.309(f)(1).

First, contentions filed after the initial filing period may be admitted with leave of the presiding officer if, in accordance with 10 C.F.R. § 2.309(f)(2), the contention meets the following requirements:

> (i) The information upon which the amended or new contention is based was not previously available;
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> (ii) The information upon which the amended or new contention is based is materially different than information previously available; and
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> (iii) The amended or new contention has been submitted in a timely fashion based on the availability of the subsequent information.

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[4] Intervenors' new contentions were filed pursuant to the Board's December 14, 2009 Order (Granting Intervenors' Request to Extend Time for Filing New Contentions) (Dec. 14, 2009).

10 C.F.R. § 2.309(f)(2)(i)-(iii). Specifically, in this proceeding, the Board stated that a motion and proposed new contention will be timely under 10 C.F.R. § 2.309(f)(2)(iii) if it is filed "within thirty (30) days of the date when the new and material information on which it is based first becomes available . . . ." *South Texas Project Nuclear Operating Co.* (South Texas Project Units 3 and 4) unpublished order at 8 (LBP Oct. 20, 2009) (ML092930523) ("Initial Scheduling Order").

Second, a contention that does not qualify for admission as a new contention under 10 C.F.R. § 2.309(f)(2) may still be admitted if it satisfies the provisions set forth in of 10 C.F.R. § 2.309(c). *See* Initial Scheduling Order at 8-9. In accordance with § 2.309(c)(1), the presiding officer may admit a late filed contention after balancing the following eight factors:

(i) Good cause, if any, for the failure to file on time;
(ii) The nature of the requestor's/petitioner's right under the Act to be made a party to the proceeding;
(iii) The nature and extent of the requestor's/petitioner's property, financial or other interest in the proceeding;
(iv) The possible effect of any order that may be entered in the proceeding on the requestor's/petitioner's interest;
(v) The availability of other means whereby the requestor's/petitioner's interest will be protected;
(vi) The extent to which the requestor's/petitioner's interests will be represented by existing parties;
(vii) The extent to which the requestor's/petitioner's participation will broaden the issues or delay the proceeding; and
(viii) The extent to which the requestor's/petitioner's participation may reasonably be expected to assist in developing a sound record.

10 C.F.R. § 2.309(c)(1). Intervenors seeking admission of a late-filed contention bear the burden of showing that a balancing of these factors weighs in favor of admittance. *See Baltimore Gas & Elec. Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 & 2), CLI-98-25, 48 NRC

325, 347 (1998) (noting that the Commission has summarily dismissed petitioners who failed to address the factors for a late-filed petition).

The first factor, whether good cause exists for the failure to file on time, is entitled to the most weight. *State of New Jersey* (Department of Law and Public Safety), CLI-93-25, 38 NRC 289, 296 (1993). The Commission has defined "good cause" as a showing that the petitioner could not have met the filing deadline and "filed as soon as possible thereafter." *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 & 3), CLI-05-24, 62 NRC 551, 564-65 (2005). Where no showing of good cause for lateness is tendered, a petitioner's demonstration on the other factors must be particularly strong. *Texas Utils. Elec. Co.* (Comanche Peak Steam Electric Station, Units 1 & 2), CLI-92-12, 36 NRC 62, 73 (1992) (quoting *Duke Power Co.* (Perkins Nuclear Station, Units 1, 2, & 3), ALAB-431, 6 NRC 460, 462 (1977)). The fifth and sixth factors, the availability of other means to protect the petitioner's interest, and the ability of other parties to represent the petitioner's interest, are less important than the other factors, and are therefore entitled to less weight. *See id.* at 74.

Third, amended and late-filed contentions must comply with the general contention admissibility requirements set forth in 10 C.F.R. § 2.309(f)(1). In accordance with 10 C.F.R. § 2.309(f)(1), an admissible contention must:

> (i) provide a specific statement of the legal or factual issue sought to be raised;
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> (ii) provide a brief explanation of the basis for the contention;
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> (iii) demonstrate that the issue raised is within the scope of the proceeding;
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> (iv) demonstrate that the issue raised is material to the findings the NRC must make to support the action that is involved in the proceeding;

> (v) provide a concise statement of the alleged facts or expert opinions, including references to specific sources and documents, that support the petitioner's position and upon which the petitioner intends to rely at the hearing; and
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> (vi) . . . provide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact. This information must include references to specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes and the supporting reasons for each dispute, or, if the petitioner believes that the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner's belief . . . .

See 10 C.F.R. § 2.309(f)(1). Failure to comply with any of the contention admissibility requirements may be grounds for dismissing a contention. *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999).[5]

II. PROPOSED AMENDED AND NEW CONTENTIONS

a. Amended Contention 8

Contention 8, as admitted by the Board, states that "[t]he Environmental Report fails to address adequately the environmental impacts associated with the increase in radionuclide concentration in the MCR [Main Cooling Reservoir] due to operation of STP Units 3 & 4." *South Texas,* LBP-09-25, 70 NRC at __ (slip op. at 31). As discussed above, on November 11 and 23, the Applicant submitted supplements to its ER related to Contention 8. Based on these supplements, the Intervenors now argue that Contention 8 should be modified because the Applicant failed to include a discussion of "the actual environmental impacts, including

[5] A more comprehensive discussion of the contention admissibility factors was provided in the Staff's answer to the Intervenors' initial intervention petition. S*ee* NRC Staff's Answer to Petition for Intervention and Request for Hearing at 6-9 (May 18, 2009).

bioaccumulation and bioconcentration, anticipated from radioactive particulates and tritium discharged into the MCR." December 14 Response at 5. Like admitted contention 8, amended contention 8 is framed as a contention of omission.

Intervenors allege a number of omissions in the November ER Supplements. Intervenors claim that the Applicant failed to: 1) quantify the difference in discharge of radioactive liquids from the existing and proposed units (*id.* at 2); 2) discuss the environmental impacts from discharge of radioactive liquids from the liquid waste management system (LWMS) (*id.*); 3) discuss actual environmental effects of discharging radioactive particulates into the MCR (*id.* at 5); 4) use proper assumptions when considering concentration of radioactive particulates in the MCR sediment (*id.* at 3); and 5) discuss bioaccumulation and bioconcentration of radionuclides in the MCR (*id.* at 4). Specifically, with regard to Co-60, Intervenors argue that the Applicant failed to address the environmental effects of Cobalt-60 (Co-60) including: 1) continued concentration of Co-60 in the MCR sediment (*id.* at 2); 2) impacts to humans in the context of accepted risks associated with Co-60 (*id.* at 3); 3) impacts of gamma radiation from Co-60 to living organisms in the MCR (*id.* at 4); 4) migration of Co-60 laden sediment to the groundwater or surface water (*id.*); and 5) qualities of Co-60 in terms of dimension and weight (*id.*). With regard to tritium, Intervenors argue that the Applicant failed to consider impacts from organically bound tritium in the body. *Id.* at 5.

Staff Answer: Amended Contention 8 is inadmissible because it fails to meet the requirements of 10 C.F.R. §§ 2.309(f)(2), 2.309(c) and 2.309(f)(1)(iv) and (vi).

i. Amended Contention 8, in part, fails to meet the requirements of §§ 2.309(f)(2) and 2.309(c).

A contention may be admitted as amended, upon a showing that the amended contention is based on new information not previously available, the information is materially

different than information previously available, and it has been submitted in a timely fashion with regard to the availability of new information. 10 C.F.R. § 2.309(f)(2)(i)-(iii). Intervenors do not address any of the 10 C.F.R. § 2.309(f)(2) factors.[6]

With regard to tritium, Intervenors argue that based on the Applicant's statement in the November 11 ER Supplement, the applicant failed to consider the impacts of organically bound tritium (OBT) in the body. December 14 Response at 5. However, earlier ER revisions also do not distinguish between tritium and OBT. *Compare* November 11 Supplement *with* ER Rev. 2, Sect. 5.4. (ML082831313) *and* ER Rev. 3, Sect. 5.4 (ML092931565). Further, Intervenors made a number of general claims regarding health impacts from tritium in their Initial Petition, including the fact that "tritiated water can irradiate a large number of cells across the placenta and cause effects on developing fetuses", but Intervenors did not include claims regarding OBT. *See* Petition to Intervene at 32 (citing Makhijani, *Nuclear Wastelands: A Global Guide to Nuclear Weapons Production and its Health Effects* (1995)). Intervenors do not provide any information that is new and materially different to support their allegedly new claim regarding OBT. Intervenors' references include a link to the EPA website that was last updated February 9, 2009[7] and an article published in February 2009 by Hunt et al.[8] Therefore, because

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[6] The Board's initial scheduling order states that Intervenors must address 10 C.F.R. § 2.309(f)(2), 10 C.F.R. § 2.309(c), or both, when seeking leave to file new or amended contentions. *See* Initial Scheduling Order at 8-9.

[7] December 14 Response at 5, n.19 (citing US Environmental Protection Agency, *Tritium, available at http://www.epa.gov/radiation/radionuclides/tritium.html* (last updated Feb. 9, 2009) (accessed January 18, 2010)).

[8] December 14 Response at 5, n.19 (citing Hunt et al., *The Human Body Retention Time of Environmental Organically Bound Tritium*, 29 J. RADIOL. PROT. 23 (Feb. 2009), *available at* http://www.iop.org/EJ/article/0952-4746/29/1/001/jrp9_1_001.pdf?request-id=1a5d5574-88ac-4722-a400-aa555503f9ae).

Intervenors' claim regarding OBT is not based on new and materially different information, and the support for Intervenors' claims was available more than thirty days prior to Intervenors' December 14 filing, Intervenors' assertions regarding OBT could have been raised earlier. *See AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 272 (2009).

Although the above claim is untimely, Intervenors did not address the 10 C.F.R. § 2.309(c) factors for non-timely filings as required by the Board's Initial Scheduling Order. *See* Initial Scheduling Order at 8-9. In particular, Intervenors did not demonstrate good cause because the information they rely on is not new and could have been raised earlier. *See Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 564-65 (2005) (good cause includes a showing that the filing deadline could not have been met and that the petitioner "filed as soon as possible thereafter"). Good cause is the most important of the balancing factors, *State of New Jersey,* CLI-93-25, 38 NRC at 296, and where good cause has not been shown, the showing on the other factors must be particularly strong. *See Comanche Peak,* CLI-92-12, 36 NRC at 73. Intervenors have not, however, shown that the other factors weigh in their favor. Accordingly, because Intervenors failed to demonstrate that the 10 C.F.R. § 2.309(c) factors weigh in their favor, Intervenors' claim regarding OBT should be dismissed. *See* 10 C.F.R. §§ 2.309(f)(2)(i)-(iii), 2.309(c).

ii. Amended Contention 8 fails to meet the requirements of § 2.309(f)(1)(iv) and (vi).

Intervenors claim that the Applicant failed to discuss the actual environmental impacts anticipated from radioactive particles that are discharged into the MCR. December 14 Petition at 5. Intervenors frame Amended Contention 8 as a contention of omission. *Id.* As discussed

below, Amended Contention 8 is not an admissible contention of omission because it fails to satisfy the requirements of § 2.309(f)(1)(iv) and (vi).

Intervenors identify a number of alleged omissions in the November ER Supplements. For example, Intervenors claim that the Applicant states the LWMS may minimize discharges of radioactive liquids, but fails to quantify the difference in discharge between the existing and proposed units. *See* December 14 Response at 2. The Applicant did, however, include a comparison of discharges of Co-60 and tritium from the existing and proposed units. November 11 Supplement, Attachment 2, p. 4-5 (comparing anticipated tritium releases) Attachment 3, p.3 (comparing anticipated Co-60 releases). Intervenors do not directly reference or dispute these calculations. Accordingly, this assertion cannot support admission of this contention. *See PPL Susquehanna LLC* (Susquehanna Steam Electric Station, Units 1 & 2), LBP-07-10, 66 NRC 1, 24 (2007) ("Any contention that fails directly to controvert the application or that mistakenly asserts the application does not address a relevant issue can be dismissed."), *appeal denied*, CLI-07-25, 66 NRC 101 (2007) (internal citations omitted).

Similarly, Intervenors argue that the Applicant failed to consider the continued concentration of Co-60 in the MCR sediment and made "no attempt to determine whether Cobalt-60 laden sediment particles migrate to groundwater or surface water." December 14 Response at 2, 4. However, as indicated in Section 5.4.1 of the November 23 ER Supplement, the Applicant states that "[b]ecause STP 3 & 4 would discharge to the MCR currently being used by STP 1 & 2, the radioactive discharges from STP 1 & 2 must also be considered in determining the total radionuclides in the MCR." Attachment p.2. The Applicant stated that it expects the equilibrium concentration of Co-60 in the MCR sediment to "be less than the required detection capability of the radiological environmental monitoring program" and also that "average equilibrium concentrations of radioactive material in the reservoir sediments are

anticipated to remain less than detectable." *Id.* at 3. Further, the Applicant references its "Offsite Dose Calculation Manual" (ODCM), which states that the Applicant's analysis of offsite dose includes the assumption that some radioactive particles discharged into the MCR would remain in solution and may migrate to the off-site environment.[9] Intervenors this information nor do Intervenors provide supporting information to demonstrate why or how the Applicant's assumptions and considerations are flawed. *See Millstone,* CLI-01-24, 54 NRC at 358 (stating petitions must submit more than "'bald or conclusory allegation[s]' of a dispute with the applicant," but instead "must 'read pertinent portions of the license application . . . and . . . state the applicant's position and the petitioner's opposing view.'") (internal citation omitted); *Fla. Power & Light* (Turkey Point Nuclear Generating Plant, Units 3 & 4), LBP-90-16, 31 NRC 509, 512 (1990) (finding a contention inadmissible where petitioner failed to offer support to demonstrate why the application was unacceptable).

Intervenors also argue that the Applicant failed to address the health impacts on humans in the context of accepted risks of Co-60, impacts of gamma radiation from Co-60 to biota in the MCR, and bioconcentration and bioaccumulation or radionuclides in the MCR. December 14 Response at 3, 4. Intervenors do not, however, demonstrate that their claims raise a genuine material dispute regarding a material issue of law or fact. Section 5.4.1 of the November 11 ER Supplement discusses the exposure pathways, including Co-60 discharged into the MCR. November 11 ER Supplement at Attachment 3. In addition, in ER Sections 5.4.3 and 5.4.4 and in its response to RAI 05.09.05-01, the Applicant assessed dose to humans and biota. ER

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[9] Specifically, the ODCM states: "Five (5) percent of radioactive material . . . discharged from the plant to the reservoir remains in solution and available for release from the reservoir to the off-site environment . . . ." ODCM at B4-4 (Rev. 13) (Jan. 1, 2006) (ML061290127).

Section 5.4.3, 5.4.5, Table 5.4-10; STP Response to RAI 05.09.05-01 at Attachment 8 (Sept. 14, 2009) (ML092580491) (assessing dose to biota in the MCR). The Applicant compared its dose calculations to the allowable regulatory limits and determined that impacts would be small. *Id*. Intervenors do not reference the Applicant's analyses or conclusions nor do they provide any information to demonstrate that the analyses are flawed in a material respect. *See* 10 C.F.R. § 2.309(f)(1)(vi).[10]

Intervenors next argue that the Applicant's assessment of radionuclides, which uses an equilibrium concentration, is flawed. December 14 Response at 3. To support this argument Intervenors provide a report from Dr. Lauren Ross, who states that the Applicant's evaluation is based on the assumptions that deposits will be uniform and mixing will occur in the top six inches of the sediment. Ross Letter at 1. Dr. Ross states that both situations are "unlikely" and suggests that the Applicant should have estimated the concentration of radionuclides by using sediment deposition rates. *Id.* Other than stating the Applicant's assumptions are "unlikely" and "unsupported", neither Intervenors nor Dr. Ross provide any reasoning or analysis to demonstrate that the Applicant's calculations are flawed and its failure to assess radionuclide concentration using deposition rates renders the application deficient in a material respect. Such conclusory statements cannot, without a reasoned basis or explanation, demonstrate the existence of a genuine dispute. *See Summer,* CLI-10-01, 71 NRC __ (slip op. at 22 n.84)

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[10] Intervenors also claim that the Applicant has not described the qualities of Co-60 in terms of weight and dimension and that it is not possible to measure health effects without this information. December 14 Response at 4. But Intervenors do not provide any information to demonstrate that the Applicant's analysis and conclusions regarding impacts are flawed. Intervenors cannot simply allege that the license application is "inadequate" or "unacceptable", without providing supporting facts and a reasoned statement for why the application is flawed in a material respect. *See Turkey Point*, LBP-90-16, 31 NRC at 521.

(finding that an expert's declaration that "neither quantified the need for power nor provided any analysis to challenge that supplied by the" Applicant failed to "provide sufficient information to demonstrate the existence of a genuine dispute"); *USEC, Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006).

Intervenors also claim that the Applicant failed to discuss the actual physical changes to the environment that result from discharging radioactive material into the MCR. December 14 Response at 5. Specifically, Intervenors state that "the Applicant's approach is to describe what means it will use to control discharges to the MCR" but has failed to describe the actual effects and physical changes to the environment. *Id.* To support this assertion, Intervenors reference *Sabine River Authority,* which states that NEPA applies to federal actions that may change the physical environment. *Id.* (citing *Sabine River Auth. v. US Dep't of Interior,* 745 F. Supp. 388, 394 (E.D. Tex. 1990) (*citing Metropolitan Edison Co. v. People Against Nuclear Energy,* 466 US 766, 774 (1983))). This case does not, however, support admission of this alleged contention of omission.

The issue in *Sabine River Authority* was whether NEPA requires consideration of effects of a federal action when the effects would foreclose the development or use of a resource, i.e., effects from acquiring a conservation easement. *Sabine River Auth.* 745 F. Supp. at 395. The Court found that these effects were not within the scope of NEPA. *Id.* at 404. *Sabine River Authority* supports the proposition that NEPA requires agencies to consider effects or impacts "that have a reasonably close causal relationship to a change in the physical environment caused by the federal action at issue." *See Sabine River Authority,* 745 F. Supp. at 402 (citing *Metropolitan Edison,* 460 US at 773). Here, the Applicant described controls to the ER, discussed environmental effects, and concluded that water quality standards would be maintained and impacts to surface water, groundwater, humans, and biota would be small. *See*

November 11 Supplement at Attachments 2 & 3. Intervenors do not dispute the Applicant's conclusion that impacts from discharges would be small and doses would be within accepted regulatory limits. Further, Intervenors have not provided any information to support the assertion that these small impacts would have "actual physical changes" that have not been adequately considered or discussed by the Applicant. *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 180 (1998) ("a petitioner must provide documents or other factual information or expert opinion that set forth the necessary technical analysis to show why the proffered bases support its contention") (citing *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-6, 41 NRC 281, 305 (1995), *vacated in part and remanded on other grounds*, CLI-95-10, 42 NRC 1, *aff'd in part*, CLI-95-12, 42 NRC 111 (1995)).

Finally, Intervenors claim that the Applicant dismissed the effects of tritium because it states that tritium does not concentrate in the environment. December 14 Response at 5 (citing November 11 Supplement at Attachment 2, p.4). Intervenors claim that this assumption overlooks the fact that OBT stays in the body longer than tritiated water. *Id.* To support this claim, Intervenors reference a February 2009 article discussing OBT and the EPA's website. *Id.* at nn. 19-20. To the extent that the Applicant has not differentiated between impacts from tritiated water and OBT, Intervenors are correct. This does not, however, create an admissible contention of omission.

With respect to environmental contentions, the Commission has stated that in "NRC licensing hearings, petitioners may raise contentions seeking correction of significant inaccuracies and omissions in the ER. Our boards do not sit to 'flyspeck' environmental documents or to add details or nuances." *System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), CLI-05-4, 61 NRC 10, 13 (2005) (internal citation omitted). NEPA

analyses are subject to a "'rule of reason,' which frees the agency from pursuing unnecessary or fruitless inquiries." *Private Fuel Storage, LLC,* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 139 (2004) (internal citation omitted).

Here, Intervenors have not shown that the Applicant's failure to include a separate assessment of OBT is material and constitutes a "significant inaccurac[y] and omission[ ] . . . ." *See System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), CLI-05-5, 61 NRC 10, 13 (2005). Based on its analysis, the Applicant concluded that impacts from tritium on water quality and users would be small. November 11 ER Supplement at Attachment 2, pages 6-8. Although Intervenors provide supporting references for their assertion that OBT remains in the body longer than tritiated water, Intervenors have not provided any analysis to suggest that if the Applicant had differentiated the impacts from tritiated water and OBT, the Applicant's conclusion that impacts are small and below regulatory limits would change. *See Susquehanna,* LBP-07-10, 66 NRC at 24 (internal citations omitted) ("This requirement of materiality often dictates that any contention alleging deficiencies or errors in an application also indicate some significant link between the claimed deficiency and either the health and safety of the public or the environment."). In fact, Intervenors do not specifically reference or dispute the Applicant's conclusions regarding impacts. Nor do Intervenors dispute the fact that the Applicant states its consideration of radiological impacts is based on NRC approved models, including LADTAP-II[11] and GASPAR-II (*see* November 11 ER Supplement at Section 5.4.1),

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[11] The Staff proposed that certain NRC regulations and guidance, including the use of LADTAP II, be revised to align with International Commission on Radiological Protection (ICRP) Publication 103 by incorporating updated recommendations, concepts, and qualities. However, the Staff maintained that "the current regulatory framework continues to provide adequate protection of public health and safety." SECY-08-0197, "Options to Revise Radiation Protection Regulations and Guidance with Respect to the (continued. . .)

which also do not differentiate between impacts from tritium and OBT.[12] Thus, because Intervenors have failed to demonstrate that the Applicant's failure to differentiate the impacts from OBT is material to the NRC's licensing decision and that a genuine dispute exists on material issue of law or fact, Intervenors' assertions regarding OBT cannot support admission of amended contention 8. *See* 10 C.F.R. §2.309(f)(1)(iv) and (vi).

In summary, for the reasons set forth above, Amended Contention 8 should be dismissed because the Intervenors have not demonstrated that this amended contention satisfies the requirements of 10 C.F.R. §§ 2.309(f)(2), 2.309(c), and 2.309(f)(1).

b. Proposed MCR-1

> The Environmental Report fails to discuss the actual environmental impacts, including bioaccumulation, bioconcentration, and human health effects, anticipated from radioactive particulates and tritium discharged into the MCR.

December 23 Petition at 3. In support of this contention, Intervenors state that they incorporate by reference the arguments and authorities in their December 14 Response regarding the

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(. . .continued)

2007 Recommendations of the International Commission on Radiological Protection," at 5-6 (Dec. 18, 2008) (ML083360582). The Commission, in the corresponding Staff Requirements Memorandum, agreed, stating, "The Commission agrees with the staff and the Advisory Committee on Reactor Safeguards (ACRS) that the current NRC regulatory framework continues to provide adequate protection of the health and safety of workers, the public, and the environment." SRM-SECY-08-0197 at 1 (Apr. 2, 2009) (ML090920103). The Staff notes that when the ICRP previously considered OBT it found that values of committed dose equivalent could be estimated by considering the retention of only tritiated water and that OBT could be neglected. Annals of the ICRP, Vol. 2, at 66 (1979).

[12] Consistent with this, Regulatory Guide 1.109, Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 C.F.R. Part 50, or Regulatory Guide 1.111 "Methods for Estimating Atmospheric Transport and Dispersion of Gaseous Effluents in Routine Releases from Light-Water-Cooled Reactors" (both of which were used by the Applicant, November 11 ER Supplement, Attachment 3, p.1), do not state that impacts from tritiated water and OBT should be differentiated.

mootness of Contention 8. *Id.* at 3. In addition, Intervenors provide a two page Report by Dr. Arjun Makhijani, dated December 23, 2009 ("Makhijani Report").

Intervenors claim that the Applicant failed to fully evaluate the effects of using groundwater contaminated with tritium for livestock and vegetables. December 23 Petition at 3. Specifically, Intervenors argue that tritium will become bound to molecules of livestock, vegetables, fruits, or grains, creating organically bound tritium (OBT). *Id.* (quoting Makhijani Report at 1). Intervenors claim that there are greater health impacts from ingesting OBT compared to ingesting tritiated water. *Id.* (quoting Makhijani Report at 1). Intervenors argue that because the Applicant does not describe or account for the biological damage from OBT, MCR-1 is an admissible contention of omission. *Id.* at 4.

Staff Response: As discussed below, MCR-1 is inadmissible because it fails to meet the requirements of 10 C.F.R. §§ 2.309(f)(2), 2.309(c), and 2.309(f)(1). Intervenors incorporate the arguments and authorities from Amended Contention 8 into MCR-1. The staff's response to these incorporated arguments and authorities are addressed above.

i. MCR-1 should be dismissed for failure to meet the requirements of 10 C.F.R. §§ 2.309(f)(2) and 2.309(c).

MCR-1 fails to meet the requirements of § 2.309(f)(2)(i)-(iii) because Intervenors' claims are not based on new and materially different information. Intervenors claim that the Applicant's November 11 ER Supplement is deficient because it fails to describe or account for the fact that the "biological damage of OBT is greater than tritium." December 23 Petition at 4. The Intervenors, however, could have raised this contention previously because it is not based on new and materially different information.

Like the November ER Supplements, the Applicant's ER, which was previously available, does not distinguish between the health effects of tritium and OBT. *Compare*

November 11 Supplement *with* ER Rev. 2 (ML082831313), Sect. 5.4, ER Rev. 3 Sect. 5.4 (ML092931565). Further, as discussed above in the Staff's Answer to Amended Contention 8, Intervenors made a number of general claims regarding the health impacts from tritium in their initial petition, but did not discuss impacts from OBT. *See* Initial Petition at 32. The documents that Intervenors and Dr. Makhijani rely on to support their assertions regarding health impacts from OBT were also previously available; these references include a 1988 EPA report and a table from a 2006 article. *See* Makhijani Report at 2. The Initial Scheduling Order provides that late contentions will be considered timely if submitted within thirty days of the date when new, material information first becomes available. Initial Scheduling Order at 8. Because MCR-1 was not submitted within thirty days of the availability of new and materially different information and the claims could have been raised earlier, it is not timely. *See id.*; *Oyster Creek*, LBP-06-22, 64 NRC at 240.

Intervenors did not, however, address the late filing factors in 10 C.F.R. § 2.309(c). *See* Initial Scheduling Order at 8-9. In particular, Intervenors did not demonstrate good cause because the information they rely on is not new and could have been raised earlier. *See Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 564-65 (2005) (good cause includes a showing that the filing deadline could not have been met and that the petitioner "filed as soon as possible thereafter"). As discussed above in the Staff's response to Amended Contention 8, absent a showing that the § 2.309(c) factors weigh in favor of admission, the MCR-1 should be dismissed as non-timely. *See Calvert Cliffs,* CLI-98-25, 48 NRC at 347 (stating the intervenor has the burden to show the factors for non-timely filings weigh in favor of admittance).

ii. MCR-1 should be dismissed for failure to meet the requirements of § 2.309(f)(1)(iv) and (vi).

MCR-1 should be dismissed because it fails to meet the requirements of § 2.309(f)(1)(iv) and (vi). As discussed above in the Staff's response to Amended Contention 8, Intervenors' assertion regarding OBT does not create an admissible contention of omission because Intervenors have not shown that the Applicant's failure to "differentiate between the environmental and health effects of tritium and organically bound tritium" (December 23 Petition at 4), is an omission that is material to the NRC's licensing decision.

The Applicant did assess the impacts from tritium on well users in its ER supplement. Specifically, the applicant stated that water seeping from the MCR to the Shallow Aquifer travels at approximately 40ft/yr. November 11 ER Supplement at Attachment 2, page 8. Assuming water will travel directly to the closest well used for watering livestock, which is 1400 feet away, the Applicant concluded that it will take 35 years for tritiated water to reach this well. *Id.* The Applicant considered the initial concentration of tritium in groundwater and the half-life for tritium in order to calculate the concentration of tritium in this offsite well. The Applicant determined, without taking into account dilution over time and distance, that the concentration of tritium in the nearest offsite well would be 1,600 pCi/L, which is "well below the EPA drinking water standard for tritium of 20,000 pCi/L." *Id.* The Applicant concluded that, based on the fact that tritium in the well is "well below" regulatory limits, the "impact on users of the well water from the Upper Shallow Aquifer would be SMALL." *Id*.

Intervenors claim that this assessment does not fully address the health consequences from using tritiated water in farming because the Applicant does not differentiate between the environmental and health effects of tritium and OBT when considering "the health impacts of eating contaminated livestock and vegetables." *See* December 23 Petition at 3 (quoting

Makhijani Report). Specifically, Dr. Makhijani states that health impacts from OBT are "considerably greater" compared to tritiated water. Makhijani Report at 1. To support this assertion, Dr. Makhijani provides a table with research data indicating that doses are higher for a given exposure to tritium when tritium is in the form of OBT. *Id.* However, neither Dr. Makhijani nor the Intervenors discuss or specifically dispute the Applicant's conclusion that impacts from tritium contamination in this offsite well to users would be small. Nor do they provide any analysis to suggest how or if the Applicant's assessment of impacts to well users would change if impacts from OBT were differentiated. *See Summer,* CLI-10-01, 71 NRC __ (slip op. at 22 n.84) (finding that an expert's declaration that "neither quantified the need for power nor provided any analysis to challenge that supplied by the" Applicant failed to "provide sufficient information to demonstrate the existence of a genuine dispute"); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 180 (1998) ("a petitioner must provide documents or other factual information or expert opinion that set forth the necessary technical analysis to show why the proffered bases support its contention") (citing *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-6, 41 NRC 281, 305 (1995), *vacated in part and remanded on other grounds*, CLI-95-10, 42 NRC 1, *aff'd in part*, CLI-95-12, 42 NRC 111 (1995)). Accordingly, Intervenors have failed to provide sufficient information to demonstrate a genuine dispute exists on a material issue of law or fact. *See* 10 C.F.R. § 2.309(f)(1)(vi).

Further, as stated above, "petitioners may raise contentions seeking correction of significant omissions in the ER" but "boards do not sit to 'flyspeck' environmental documents or to add details or nuances." *System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), CLI-05-4, 61 NRC 10, 13 (2005) (internal citation omitted). When the Commission amended its hearing regulations in 1989 to strengthen the standards for contention admissibility,

the Commission explained that a dispute would not be considered "material" under former 10 C.F.R. § 2.714(b)(2)(iii) unless "the resolution of the dispute would make a difference in the outcome of the licensing proceeding." Rules of Practice for Domestic Licensing Proceedings—Procedural Changes in the Hearing Process, 54 Fed. Reg. 33,168, 33,172 (Aug. 11, 1989).[13] As discussed above, Intervenors have not shown that specific consideration of impacts from OBT in this offsite well, where the Applicant has stated tritium levels are well below regulatory limits, is material to the NRC's licensing determination. *See* 10 C.F.R. § 2.309(f)(1)(vi).

Accordingly, for the reasons discussed above, MCR-1 should be dismissed for failure to comply with 10 C.F.R. §§ 2.309(f)(1)(iv) and(vi), 2.309(f)(2), and 2.309(c).

c. Proposed MCR-2

> The ER does not include monitoring relief well discharge quality nor are minimum water quality standards applied to these discharges.

December 23 Petition at 4. Intervenors argue that the Applicant's failure to address ways to monitor and control discharges from the MCR relief wells is a material omission. *Id*. To support this contention, Intervenors provide a report by Dr. Lauren Ross. Letter to Robert Eye, Attorney from Dr. Lauren Ross, *Proposed South Texas Plant Expansion: Proposed Revision to Environmental Report, November 11, 2009 and Response to Request for Additional Information November 23, 2009* (Dec. 23, 2009) ("Ross Report").

Staff Response: MCR-2 is inadmissible because it fails to meet the requirements of 10 C.F.R. §§ 2.309(f)(2), 2.309(c) and 2.309(f)(1)(iii) and (vi).

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[13] Former § 2.714(b)(2)(iii) contained the genuine, material dispute standard that is now found, with some minor differences, in § 2.309(f)(1)(vi).

i. MCR-2 should be dismissed for failure to meet the requirements of §§ 2.309(f)(2) and 2.309(c).

MCR-2 should be dismissed for failure to meet the requirements of § 2.309(f)(2) because Intervenors fail to demonstrate that the information on which MCR-2 is based is new and materially different from information that was previously available. *See* 10 C.F.R. § 2.309(f)(2). Intervenors take issue with the fact that the Applicant's TPDES permit authorizing discharges from the MCR relief wells does not include minimum water quality standards or monitoring for these wells. December 23 Petition at 4 (citing Ross Report at 1). The terms of this permit were, however, previously available. *See, e.g.,* WQ0001908000 (permit dated July 21, 2005; letter to NRC transmitting permit dated Aug. 3, 2005) (ML052230202). In fact, Dr. Ross referenced this permit in her April 2009 report, which was filed with the Intervenors' Initial Petition to Intervene. Dr. Lauren Ross, *Water Quality and Quantity Impacts from Proposed South Texas Plant Expansion*, at 2, 7 (Apr. 2009) ("April 2009 Ross Report)".[14] In addition, in support of MCR-2, Dr. Ross refers to ER Section 6.5.1.2 and states that this section "makes no reference to groundwater monitoring for the reservoir relief wells." Ross Report at 1. ER Section 6.5.1.2 was not, however, impacted by the November 11 ER Supplement. Therefore, because Intervenors' claims regarding the terms of the Applicant's TPDES permit and current monitoring and controls were not submitted within thirty days of the availability of new and materially different information, MCR-2 is not timely. *See* 10 C.F.R. § 2.309(f)(2)(i)-(iii); *see also* Initial Scheduling Order at 8.

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[14] Intervenors also raised similar claims regarding monitoring of relief wells at oral argument, contenting that monitoring of constituents other then tritium "is something necessary under NEPA." *See* Transcript, *STP Nuclear Operating Co.* (South Texas Project, Units 3 and 4) at 243 (Jun. 23, 2009) (ML091820418).

Intervenors did not, however, address the late filing factors in 10 C.F.R. § 2.309(c). *See* Initial Scheduling Order at 8-9. In particular, Intervenors did not demonstrate good cause because the information they rely on is not new and could have been raised earlier. *See Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 564-65 (2005) (good cause includes a showing that the filing deadline could not have been met and that the petitioner "filed as soon as possible thereafter"). As discussed above, absent a showing that the § 2.309(c) factors weigh in favor of admission, MCR-2 should be dismissed as non-timely. *See Calvert Cliffs,* CLI-98-25, 48 NRC at 347.

ii. MCR-2 should be dismissed for failure to meet the requirements of § 2.309(f)(1)(iii) and (vi).

MCR-2 is inadmissible because it appears to raise an issue that is outside the scope of this proceeding and does not constitute an admissible contention of omission. *See* 10 C.F.R. § 2.309(f)(1)(iii), (vi). Intervenors state that the Applicant's TPDES permit authorizes discharges from the MCR relief wells. December 23 Petition at 4 (citing Ross Report at 1). Specifically, Dr. Ross points to page 11 of the TPDES permit which states, that water from the relief wells may be discharged to the Colorado River, West Branch of the Colorado River, Little Robbins Slough, or the East Fork of Little Robbins Slough. Ross Report at 1, n.3; TPDES Permit at 11. Intervenors argue that there is a material omission in the Application because there "are no requirements, minimum standards, or permit limits for monitoring relief well discharge quality." Ross Report at 1.

To the extent Intervenors seek to dispute the terms of the TPDES permit authorizing discharges from the relief wells, MCR-2 is outside the scope of this proceeding.[15] When water quality decisions have been made by a State pursuant to the Federal Water Pollution Control Act Amendments of 1972 and these decisions are raised in NRC licensing proceedings, the NRC is bound to take these decisions at face value. *See Carolina Power & Light Co.* (H.B. Robinson, Unit No. 2), ALAB-569, 10 NRC 557, 561-62 (1979). *See also* 33 U.S.C. § 1371(c)(2); *Hydro Resources, Inc.* (292 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-98-16, 48 NRC 119, 121 (1998) ("Congress granted us authority merely to regulate radiological and related environmental concerns. It gave our agency no roving mandate to determine other agencies' permit authority."). Thus, to the extent that Intervenors seek to dispute the content of the TPDES permit, this contention raises an issue outside the scope of this proceeding. *See* 10 C.F.R. § 2.309(f)(1)(iii).

However, as the Board stated in its September 2009 ruling on contention admissibility, the ER must analyze the environmental impacts even if a matter is regulated by another agency. *See South Texas,* LBP-09-25, 70 NRC __ (slip op. at 23, 24 n.144, 25). The Applicant's November 11 ER Supplement discusses the environmental impacts of seepage from the MCR that is collected by relief wells and discharged into surface waters. November 11 Supplement, Attachment 2, Sect. 5.2.3.1. Based on its analysis of impacts from operation of the

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[15] Intervenors' assertions in MCR-2 are similar to those made in the Intervenors' Initial Petition to Intervene with regard to Contention 14. *Compare* December 23 Petition at 4 and Ross Report at 1 *with* Initial Petition to Intervene at 40 and April 2009 Ross Report at 9. In its decision on contention admissibility, the Board noted that the Clean Water Act does not authorize regulation of discharges to groundwater. *South Texas,* LBP-09-25, 70 NRC __ (slip op. at 24 n.145). Contention 14 was admitted by the Board, as narrowed, "insofar as it complains that the ER fails to analyze adequately the environmental impacts of unregulated seepage from the MCR into the adjacent shallow groundwater." *Id.* at __ (slip op. at 24-25).

proposed units, the Applicant concludes that impacts to surface waters receiving water from the MCR, directly or indirectly, would be small. *Id.* at pp. 3, 5.

Intervenors do not reference or dispute the Applicant's analysis or conclusions regarding water quality in MCR-2, nor do they provide any support to demonstrate that the applicant's analysis is flawed in a material respect. Instead, Intervenors claim that there is a material omission because the Applicant fails to address means to monitor and control discharges from the MCR relief wells and note that treatment of the relief wells is in contrast to requirements for discharges through Outfall 001. *See* December 23 Petition at 4 (citing Ross Report at 1). However, Intervenors do not reference or dispute the Applicant's monitoring program, which includes monitoring of tritium in some of the MCR relief wells. *See* ER Section 6.2; *see also* ER Table 2.3.3-6. Thus, Intervenors have failed to provide sufficient information to demonstrate a genuine dispute exists on a material issue of law or fact. *See* 10 C.F.R. § 2.309(f)(1)(iv).

Accordingly, MCR-2 should be dismissed because it fails to meet the requirements of 10 C.F.R. §§ 2.309(f)(1)(iii) and (vi), 2.309(f)(2), and 2.309(c).

d. Proposed MCR-3

> The ER fails to account for operational impacts on the MCR's water level.

December 23 Petition at 4. To support this contention, Intervenors provide the Ross Report. *Id.* at 4. With regard to MCR-3, Dr. Ross states that even though the MCR water level will remain within original design levels, the ER does not account for the increase in seepage due to operations of proposed units 3 and 4. Ross Report at 1-2. Thus, Intervenors argue that impacts of seepage rates from operational increases should be addressed in order to determine the overall increase in water consumption required to maintain MCR levels within design

specifications. *Id.* at 4. Intervenors claim that this is an admissible contention of omission because failure to address this issue constitutes a material omission. *Id.* at 5.

Staff Response: MCR-3 is inadmissible because it fails to meet the requirements of 10 C.F.R. §§ 2.309(f)(2), 2.309(c) and 2.309(f)(1)(v) and (vi).

i. MCR-3 should be dismissed for failure to meet the requirements of §§ 2.309(f)(2) and 2.309(c).

MCR-3 should be dismissed because Intervenors fail to demonstrate that the information on which MCR-3 is based is new and materially different from information that was previously available. *See* 10 C.F.R. §§ 2.309(f)(2)(i)-(ii). Specifically, Intervenors take issue with the following statement in the Applicant's November 11 ER supplement:

> The water level within the MCR during operation of STP Units 3 & 4 would remain within the original design levels (49 feet above MSL). Therefore, because the seepage rate is affected by the water level of the MCR and the MCR water level with STP 3 & 4 would remain within original design levels, the addition of STP 3 & 4 would have an insignificant impact on the current MCR seepage rate.

Ross Report at 1-2 (quoting November 11 ER Supplement at Section 2.3.1.1.2.1). This statement, which provides the basis for MCR-3, is similar to statements in previously available ER Revisions:

> The water level within the MCR will remain within the original design levels and therefore, large changes with the MCR seepage rate are not expected.

ER Rev. 3 at 2.3.1-14; ER Rev. 2 at 2.3.2-13. Thus, as illustrated by the above statements, the fact that the Applicant does not anticipate significant changes in MCR seepage because the MCR level would remain within the original design levels, is not new and materially different information. *See* 10 C.F.R. § 2.309(f)(2)(i)-(ii).

Further, as indicated by the Applicant's references in the ER and November 11 ER Supplement, the calculations regarding seepage from operation of proposed units 3 and 4 are based on the Final Safety Analysis Report for Units 1 and 2, which was also previously available. *See, e.g.,* November 11 ER Supplement at Attachment 1, p.1; ER Rev. 2 at 2.3.1-9 (discussing seepage rates and referencing the FSAR for Units 1 and 2) (ML082831279); ER Rev. 3 at 2.3.1-13 (ML09293153). Therefore, because the information on which MCR-3 is based is not new and materially different from previously available information, MCR-3 is not timely. *See* 10 C.F.R. § 2.309(f)(2)(i)-(iii); Initial Scheduling Order at 8.

Intervenors did not, however, address the late filing factors in 10 C.F.R. § 2.309(c). *See* Initial Scheduling Order at 8-9. In particular, Intervenors did not demonstrate good cause because the information they rely on is not new and their claims could have been raised earlier. *See Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 564-65 (2005) (good cause includes a showing that the filing deadline could not have been met and that the petitioner "filed as soon as possible thereafter"). Absent a showing that the § 2.309(c) factors weigh in favor of admission, MCR-3 should be dismissed as non-timely. *See Calvert Cliffs,* CLI-98-25, 48 NRC at 347.

ii. MCR-3 should be dismissed for failure to meet the requirements of § 2.309(f)(1)(v) and (vi).

MCR-3 fails to demonstrate a genuine dispute exists with the application, is not adequately supported, and cannot be construed as an admissible contention of omission. *See* 10 C.F.R. § 2.309(f)(1)(v) and (vi). Intervenors note that the Applicant concluded that impacts from seepage due to operation of proposed units 3 and 4 would have an insignificant impact on current MCR seepage rates. Ross Report at 2. Intervenors, however, claim that before determining this impact, the applicant should have calculated the increase in seepage due to

operations, because while the MCR will remain within original design limits, the operational level will increase. *Id*.

As indicated in the Applicant's ER and November 11 ER supplement, seepage rates from the MCR were estimated using the maximum operating water level of 49 feet above MSL. ER Rev. 3 at 2.3.1-13; November 11 ER Supplement at Attachment 1, page 1-2. The Applicant concluded that the addition of proposed units 3 and 4 would not have a significant impact on the current seepage rate. *Id.* The Applicant considered MCR seepage in its analysis of impacts from operation of the proposed units on water quality, use and radiological exposures. *Id.* at Attachments 2 & 3.

Intervenors do not claim that the assessment of seepage for 49 MSL is flawed. Nor do Intervenors provide any information to demonstrate that the Applicant's determination that the addition of proposed units 3 and 4 would have an insignificant impact on seepage rates is wrong. Rather, the Intervenors and Dr. Ross state, without further analysis, that the Applicant should have calculated the increase in seepage due to operations. Neither Intervenors nor their expert can allege that the license application is inadequate or wrong, without providing supporting facts and a reasoned statement for why the application is flawed or the omission significant. *See Summer,* CLI-10-01, 71 NRC __ (slip op. at 22 n.84) (finding that an expert's declaration that "neither quantified the need for power nor provided any analysis to challenge that supplied by the" Applicant failed to "provide sufficient information to demonstrate the existence of a genuine dispute"); *Fla. Power & Light* (Turkey point Nuclear Generating Plant, Units 3 & 4), LBP-90-16, 31 NRC 509, 521 (1990) (finding a contention inadmissible where the Petitioner failed to show how Applicant's analyses were in error or that there was a significant omission).

Further, Intervenors' bare assertion that the Applicant should have provided an additional calculation is not sufficient to support admission of this contention," absent "documents or other factual information or expert opinion that set forth the necessary technical analysis to show why the proffered bases support its contention." *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 180 (1998) (citing *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-6, 41 NRC 281, 305 (1995), *vacated in part and remanded on other grounds*, CLI-95-10, 42 NRC 1, *aff'd in part*, CLI-95-12, 42 NRC 111 (1995)). Accordingly, for the reasons set forth above, MCR-3 should be dismissed.

e. Proposed MCR-4

> The Environmental Report does not fully evaluate the water quality nor does it account for the environmental impacts of all nonradioactive contaminants, including salinity and total dissolved solids (TDS), in the MCR and the seepage water from the MCR.

December 23 Petition at 5. To support this contention, Intervenors provide the Ross Report. *Id.* at 5. Intervenors argue that the Applicant's TPDES permit for outfalls that discharge to the MCR fails to assure necessary treatment and monitoring for all nonradioactive contaminants. *Id.* at 5. Specifically, Intervenors state that the permit does not address increases in salinity and total dissolved solids and does not require treatment and monitoring for additional contaminants. *Id.* Intervenors argue that the ER fails to "fully characterize the quality of the MCR water" including salinity, TDS, toxic metal concentrations, and radionuclides. *Id.* (quoting Ross Report at 3). In addition, Intervenors claim the ER does not address how the Applicant will monitor lead, molybdenum, and vanadium, all of which, according to Dr. Ross, are "significantly higher" than EPA screening levels. *Id.* at 6 (quoting Ross Report at 3). Finally, Intervenors take issue with the Applicant's analysis of TDS and conductivity in the MCR. *Id*.

Staff Response: The Staff opposes admission of MCR-4 because it fails to satisfy the requirements of 10 C.F.R. §§ 2.309(f)(2), 2.309(c), and 2.309(f)(1)(iii), (v), and (vi).

i. MCR-4 should be dismissed, in part, for failure to meet the requirements of 10 C.F.R. §§ 2.309(f)(2) and 2.309(c).

MCR-4 should be dismissed, in part, because Intervenors fail to demonstrate that the information on which MCR-4 is based is new and materially different from information previously available. Intervenors claim that TPDES Permit No. WQ0001908000 fails to assure necessary treatment and monitoring for all nonradioactive contaminants. Similar to MCR-2, Intervenors do not claim that this assertion is based on new and materially different information. The permit conditions were previously available and Dr. Ross discussed this permit and its parameters in her April 2009 report, which was filed with the Intervenors' Initial Petition to Intervene. *See, e.g.,* WQ0001908000 (permit dated July 21, 2005; letter to NRC transmitting permit dated Aug. 3, 2005) (ML052230202); April 2009 Ross Report at 2, 7.

In addition, Intervenors' claims regarding inadequacies of the TPDES permit in MCR-4 are similar to their claims in original Contention 12. *Compare* April 2009 Ross Report at 8 ("The permit also does not require monitoring for total dissolved solids or specific conductance . . . [and] does not limit either the concentration or mass of metals other than iron and copper . . . .") *with* December 23 Petition at 5 ("The permit does not assure necessary treatment and monitoring for all nonradioactive contaminants . . . [including] salinity, or total dissolved solids").

Finally, as Intervenors indicate, the water quality standards for the MCR were discussed in ER Section 2.3.3; this section was not impacted by the November ER Supplements. *See* December 23 Petition at 5. Similarly, as Dr. Ross notes, concentrations of lead, molybdenum, and vanadium in the MCR were presented in Table 2.3.3-3, which also was not impacted by the November ER supplements. *Id.* at 6. Thus, the above claims are not based on new and

materially different information and were not submitted within thirty days of the availability of new and materially different information. *See* 10 C.F.R. § 2.309(f)(2)(i)-(iii); Initial Scheduling Order at 8.[16]

Intervenors did not address the late filing factors in 10 C.F.R. § 2.309(c). *See* Initial Scheduling Order at 8-9. In particular, Intervenors did not demonstrate good cause because the information discussed above is not new and, therefore, the above claims could have been raised earlier. *See Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 564-65 (2005) (good cause includes a showing that the filing deadline could not have been met and that the petitioner "filed as soon as possible thereafter"). Absent a showing that the § 2.309(c) factors weigh in favor of admission, the Intervenors arguments discussed above should be dismissed as non-timely. *See Calvert Cliffs,* CLI-98-25, 48 NRC at 347. Accordingly, because Intervenors have not shown that the § 2.309(c) factors weigh in their favor, MCR-4 should be dismissed, in part.

ii. MCR-4 should be dismissed for failure to meet the requirements of 10 C.F.R. § 2.309(f)(1)(iii), (v), and (vi).

MCR-4 is inadmissible because it raises issues outside the scope of this proceeding. *See* 10 C.F.R. § 2.309(f)(1)(iii). Intervenors claim that the Applicant's TPDES permit does not assure treatment and monitoring for all nonradioactive contaminants, including TDS and salinity, in the MCR and from MCR seepage. December 23 Petition at 5. This claim is similar to claims in Contention 12, which stated that the TPDES permit did not establish necessary effluent limits

[16] Regarding the Applicant's characterization of MCR radionuclides, Intervenors incorporate by reference the Makhijani Report and the arguments and authorities in its December 14 Response. December 23 Petition at 6 n.17. The Staff's response to these arguments are discussed above.

for the range of toxic and harmful chemicals. *South Texas,* LBP-09-25, 70 NRC __ (slip op. at 16-19). The Board found that Contention 12 was inadmissible because it failed to raise an issue within the scope of the proceeding. *Id.* at 18-19. Similarly here, Intervenors seem to challenge the contents of the Applicant's TPDES permit, claiming that it does not assure proper treatment and monitoring. *See* December 23 Petition at 5 & Ross Report at 2-3.

As discussed above in the Staff's response to MCR-2, when water quality decisions have been made by a State pursuant to the Federal Water Pollution Control Act Amendments of 1972 and these decisions are raised in NRC licensing proceedings, the NRC is bound to take these decisions at face value. *Carolina Power & Light Co.* (H.B. Robinson, Unit No. 2), ALAB-569, 10 NRC 557, 561- 62 (1979). *See also* 33 U.S.C. § 1371(c)(2); *Hydro Resources, Inc.*, CLI-98-16, 48 NRC at 121. Intervenors have not provided any legal support to suggest that the terms of the TPDES permit are within the scope of the NRC's regulatory authority and this proceeding. Accordingly, consistent with the Board's decision for Contention 12, to the extent Intervenors seek to dispute the contents of the TPDES permit, MCR-4 raises an issue outside the scope of this proceeding. *See* 10 C.F.R. 2.309(f)(1)(iii); *South Texas,* LBP-09-25, 70 NRC __ (slip op. at 18-19).

In addition, MCR-4 fails to meet the requirements of 10 C.F.R. § 2.309(f)(1)(vi). Intervenors claim that the only references to MCR water quality in ER Section 2.3.3 include conductance, pH, temperature, and maximum total residual chlorine. December 23 Petition at 5. Intervenors claim that the water quality standards do not provide information regarding salinity, toxic metal concentrations, and radionuclides in its discussion of MCR water quality.

Id.[17] The Applicant did, however, discuss surface water quality data from metals, salts and radionuclides in its November 11 ER Supplement, Attachment 2 page 3. The Applicant stated that based on surface water quality data, there are low concentrations of metals and salts which indicate a high level of water quality in the MCR. *Id.* at Attachment 2, p.3. Intervenors do not reference or dispute this analysis nor do they provide. *See* 10 C.F.R. § 2.309(f)(1)(vi).

Similarly, Intervenors' argument that the ER fails to address monitoring of lead, molybdenum, and vanadium cannot support admission of MCR-4. *See* December 23 Petition at 6. Intervenors claim that, based on ER Table 2.3.3-3, concentrations of lead, molybdenum, and vanadium in the MCR are above EPA screening levels for residential tap water. December 23 Petition at 6. Intervenors do not, however, explain how EPA screening levels for residential tap water are relevant to the Applicant's assessment of water quality impacts of the MCR, which according to the Applicant, "was developed solely for the industrial use of dissipating heat from STP units as an engineered cooling Pond." ER at Sect. 2.3.1.1.2. Because Intervenors have not provided any information to suggest that the MCR is used for drinking water nor have they provided an explanation of the relevance of screening levels for residual tap water, Intervenors' assertion cannot provide a basis to support admission of this proffered contention of omission. *See Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 & 3), LBP-04-15, 60 NRC 81, 89 (2004) (citing *Palo Verde,* CLI-91-12, 34 NRC at 155-56) ("A petitioner has

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[17] With regard to concentrations of radionuclides, Intervenors claim that the ER does not adequately characterize radionuclides concentrations. December 23 Petition at 6. Intervenors incorporate by reference their arguments in Amended Contention 8 and MCR-1 regarding the Applicant's characterization of radionuclides in the MCR. The Staff's Answer to these claims is included in response to Amended Contention 8 and MCR-1.

the obligation to provide the analysis and expert opinion showing why its bases support its contentions . . . .").

Intervenors also claim that the Applicant failed to provide a relationship from which TDS can be estimated based on conductivity. December 23 Petition at 6. However, the Applicant, in Response to RAI 05.02-05, which is referenced in Attachment 2 of the November 11 ER Supplement (Reference No. 5.1-13), explained that it converted from conductivity to TDS using a 0.65 conversion factor in accordance with TCEQ RG-194, "Procedures to Implement the Texas Surface Water Quality Standards (Jan. 2003). RAI-05.02-05 at Attachment 2, p.8 (July 30, 2009) (ML092150963). Intervenors do not cite this RAI response nor do they provide any information to demonstrate that this analysis is flawed in a material respect. *See* 10 C.F.R. § 2.309(f)(1)(vi).

Finally, Intervenors claim that the Applicant's calculation of TDS fails to capture TDS concentration during "critical periods and fail[s] to fully represent environmental consequences of predicted changes in either direct MCR discharges, or MCR discharges through leakage" and does not calculate discharge during hot dry periods of low flow. December 23 Petition at 6 (quoting Ross Report at 3). Intervenors do not, however, provide any additional information to support their assertion that this constitutes a material omission and additional analyses are required. An assertion that additional matters "ought to be considered or that a factual dispute exists . . . is not sufficient" absent "documents or other factual information or expert opinion that set forth the necessary technical analysis to show why the proffered bases support its contention." *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 180 (1998) (citing *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-6, 41 NRC 281, 305 (1995), *vacated in part and*

remanded on other grounds, CLI-95-10, 42 NRC 1, *aff'd in part*, CLI-95-12, 42 NRC 111 (1995)). Accordingly, for the reasons set forth above, MCR-4 should be dismissed.

f. Proposed MCR-5

> The Applicant fails to state how the MCR water seepage rate, quantity, and quality will be monitored and controlled.

December 23 Petition at 7. Intervenors argue that MCR-5 is a contention of omission. *Id.* at 8. Specifically, Intervenors assert that the Applicant failed to describe how water seepage rate, quantity, and quality will be monitored and controlled under various conditions, including protracted drought. *Id.* Also, like MCR-3, Intervenors again argue that the Applicant should calculate the increase in seepage rate from the operation of proposed units 3 and 4 before determining the impacts of seepage from operations. *Id.* Finally, Intervenors take issue with two specific revisions in the Applicant's November Supplement. *Id.* at 8. To support MCR-5, Intervenors provide a report by Dr. Ross. *Id.* at 7.

i. MCR-5 should be dismissed, in part, for failure to meet the requirements of §§ 2.309(f)(2) and 2.309(c).

MCR-5 should be dismissed, in part, because Intervenors fail to demonstrate that its assertion regarding calculations of change in seepage rate, which is similar to the claim in MCR-3, satisfies the requirements of § 2.309(f)(2). As discussed above in the Staff's response to MCR-3, Intervenors claim that the Applicant should provide additional calculations regarding seepage rates is not based on new and materially different information and Intervenors failed to address the § 2.309(c) factors.

ii. MCR-5 should be dismissed for failure to meet the requirements of § 2.309(f)(1)(v) and (vi).

Intervenors claim, pointing to ER Section 2.3.1.1.2.1, that the Applicant discussed how it would control discharges into the MCR, but did not address environmental impacts of seepage

or how the MCR seepage rate, quantity and quality will be controlled. December 23 Petition at 7. The Applicant did, however, assess the environmental impacts from operations on water quality and use, which includes an assessment of seepage from the MCR in its November 11 ER Supplement. *See* November 11 ER Supplement at Attachments 2 and 3. Based on its analysis, the Applicant concluded that impacts from operations of the proposed units on groundwater and surface water would be small. *Id*. Intervenors do not reference or dispute the Applicant's analysis of the environmental impacts to groundwater and surface water nor have they provided any information to demonstrate that the Applicant's analysis is flawed in a material respect.[18] Therefore, Intervenors have failed to show a material genuine dispute with the Applicant. *See* 10 C.F.R. § 2.309(f)(1)(vi).

In addition, Intervenors generally state that as MCR levels drop, concentrations of contaminants will increase. Intervenors point to a STP newsletter discussing MCR water levels (December 23 Petition at 7), but fail to provide any factual support or reasoned expert opinion to indicate how water quality was or may be impacted by such a decrease in MCR water levels. Absent tangible information or a reasoned expert opinion, the bare assertion that contaminants will increase when water levels drop, cannot support the admission of MCR-5. *See Fansteel,* CLI-03-13, 58 NRC at 203.

Intervenors also question the Applicant's November 11 ER Supplement, which states that 32% of MCR seepage would "migrate to the southeast, discharging at the Colorado River."

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[18] Intervenors also claim that the Applicant should calculate the increase in seepage rate due to the operations of proposed units 3 and 4. December 23 Petition at 7 (citing Ross Report at 2). This claim is identical to the claim made in MCR-3; for the reasons stated above in the staff's response to MCR-3, this assertion fails to meet the requirements of 10 C.F.R. § 2.309(f)(1)(v) and (vi).

December 23 Petition at 8 (quoting November 11 ER Supplement at Attachment 1, p.3). Intervenors note that the ER Supplement removed the prior sentence which stated "Discharge to the environment from the MCR occurs from seepage through the reservoir floor to the groundwater." *Id.* Intervenors argue that the Applicant needs to clarify the discrepancy between the two sentences and claims that the Applicant failed to address the environmental impacts from the reduction of groundwater recharge due to this change. *Id.* at 8. Intervenors do not, however, provide any support to demonstrate how or if this change impacts the Applicant's analysis of MCR seepage. Nor do Intervenors provide any support to demonstrate that there would be a significant reduction in groundwater recharge. Instead, Intervenors simply pose questions and state, without support, that the Applicant has not addressed the reduction in groundwater recharge. *See id.* Bare assertions and speculation, absent tangible information and expert opinion, cannot support the admission of this contention. *See Fansteel Inc.* (Muskogee, Oklahoma, Site), CLI-03-13, 58 NRC 195, 203 (2003).

Finally, Intervenors claim that based on a revision to Section 2.3.1.2.3.3, the Applicant fails to state how MCR water seepage rate, quantity, and quality will be monitored and controlled. December 23 Petition at 7, 8. Specifically, Intervenors claim that the Applicant deleted references to monitoring commitments made in previous revisions of the ER by deleting the following sentence:

> STPNOC periodically monitors the potentiometric head and flow rates at the MCR relief wells to assist in controlling the potentiometric head and seepage within the dike structure.

Id. (quoting November 11 ER Supplement, Attachment 1, Sect. 2.3.1.2.3.3, p.2). However, contrary to Intervenors' assertion, this phrase was not deleted entirely from the ER, rather it was moved. Attachment 1, page 2 of the November 11 ER Supplement still states:

> STPNOC periodically monitors the potentiometric head and flow rates at the MCR relief wells to assist in controlling the potentiometric head and seepage within the dike structure.

Thus, this assertion cannot support the admission of MCR-5. *See Susquehanna*, LBP-07-10, 66 NRC at 24 ("Any contention that fails directly to controvert the application or that mistakenly asserts the application does not address a relevant issue can be dismissed."), *appeal denied*, CLI-07-25, 66 NRC 101 (2007) (internal citations omitted). Accordingly, for the reasons set forth above, MCR-5 should be dismissed.

CONCLUSION

In view of the foregoing, the Intervenors have not submitted an admissible contention. Therefore, Intervenors' amended and new contentions should be denied.

Respectfully submitted,

/Signed (electronically) by/

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Dated at Rockville, Maryland
this 25th day of January, 2010

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
	)	
STP NUCLEAR OPERATING COMPANY	)	Docket Nos. 52-012 & 52-013
	)	
	)	
(South Texas Project, Units 3 & 4)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the "NRC Staff's Answer to Intervenors' Amended and MCR New Contentions," have been served upon the following persons by Electronic Information Exchange this 25th day of January 2010:

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