

October 14, 2008

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	
CROW BUTTE RESOURCES, INC.)	Docket No. 40-8943
)	
(License Amendment for the North Trend Expansion Area))	ASLBP No. 07-859-03-MLA-BD01

NRC STAFF'S RESPONSE IN OPPOSITION TO
PETITION FOR LEAVE TO FILE NEW CONTENTION RE: ARSENIC

INTRODUCTION

Pursuant to 10 C.F.R. § 2.309(h), the NRC staff ("Staff") herein proffers its response to Western Nebraska Resource Council's ("WNRC" or "Petitioner") "Petition for Leave to File New Contention RE: Arsenic."¹ The Petitioner therein seeks leave from the Atomic Safety and Licensing Board ("Board") "to file a new contention based on the connection between low-level arsenic in the water resulting from Applicant's ISL uranium mine and failures of the pancreas including diabetes and pancreatic cancer in the people living near the mine."² For the reasons detailed hereinafter, the Staff submits that the Board should deny the admission of such contention because (1) pursuant to 10 C.F.R. § 2.309(f)(2), the contention is not "timely," (2) the contention fails to meet the requirements for a "nontimely" contention per 10 C.F.R. § 2.309(c)(1), and, furthermore, (3) the contention fails to meet to the general contention admissibility requirements of 10 C.F.R. § 2.309(f)(1).

¹ "Petition for Leave to File New Contention RE: Arsenic" ("Petition") (Sept. 22, 2008).

² *Id.* at 1.

BACKGROUND

On May 30, 2007, Crow Butte Resources, Inc. (“CBR” or “Applicant”) requested an amendment to its existing operating license (SUA-1534) that would allow the development of a satellite in-situ leach (ISL) uranium recovery facility, the “North Trend Expansion Area” (“NTEA”), near its existing ISL operation in Crawford, Nebraska. On November 12, 2007, NRC received timely petitions from Debra White Plume, Thomas K. Cook, Owe Aku, Slim Buttes Agricultural Development Corporation, and WNRC. On April 29, 2008, the Board admitted as parties to this proceeding Petitioners Owe Aku, WNRC, and Debra L. White Plume, along with, as reframed and limited by the Board, Environmental Contentions A, B, and C. On September 22, 2008, the Petitioner submitted the subject petition for leave to file a new contention “based on the connection between low-level arsenic in the water resulting from Applicant’s ISL uranium mine and failures of the pancreas including diabetes and pancreatic cancer in the people living near the mine.”³ In such, the Petitioner makes reference to a recently published article in the Journal of the American Medical Association regarding the potential association between inorganic arsenic exposure and type 2 diabetes.⁴ The Staff hereinafter responds to the Petitioner’s request for leave to file its new contention.

³ *Id.*

⁴ *Id.* at 1-2 (citing “Arsenic Exposure and Prevalence of Type 2 Diabetes in US Adults,” JAMA, Vol. 300, No. 7, 814 (Aug. 20, 2008)); *see also* Affidavit of David C. Frankel, (“Frankel Affidavit”) at 2 (Sept. 22, 2008). As several of the authors of the study are affiliated with the Johns Hopkins Bloomberg School of Public Health, the Petitioner refers, in shorthand, to the study as the “Johns Hopkins Study.” Petition at 1. The Staff adopts the same shorthand for the purpose of its response herein.

DISCUSSION

I. Issues Raised by the Petitioner in the Petition Fall within the Purview of Contentions Already Proffered in this Proceeding

Compared with those contentions already admitted in this proceeding, the Staff submits that Petitioner's new contention is not actually a *new* contention, as the issues raised by it fall within the purview of those contentions already admitted in this proceeding.⁵ Petitioner WNRC itself points out that arsenic was referenced in their initial petition as a "groundwater contaminant of concern."⁶ Petitioner's Contentions A and B, dealing with the contamination of water resources by the operation of the proposed expansion facility and the human health impacts incident thereto, were subsequently admitted, as reframed and limited by the Board.⁷ As such, the Staff submits that the issues raised by this new contention—potential human health effects of consuming arsenic—are subsumed within either admitted Contention A or B. While the Petitioner did not specifically discuss or reference, as part of those contentions, diabetes or pancreatic cancer as potential human health effects of exposure to ingested arsenic, the Staff fails to understand how such would not fall, nonetheless, within the purview of either Contention A or B.

II. Contention Admissibility

Once an adjudicatory proceeding has begun, three sections of the NRC's regulations address the admissibility of newly proposed contentions:

⁵ See Memorandum and Order (Ruling on Standing and Contentions of Petitioners Owe Aku, Bring Back the Way; Western Nebraska Resources Council' Slim Buttes Agricultural Development Corporation; Debra L. White Plume/ and Thomas Kanatakeniate Cook), ("April 29 Order") 94-102 (April 29, 2008).

⁶ Petition at 2 (citing "Request for Hearing and/or Petition to Intervene for Western Nebraska Resources Council," ("Initial Petition") at 3, 7 (Nov. 12, 2007).

⁷ See April 29 Order at 101.

(a) 10 C.F.R. § 2.309(f)(2), which deals with the admission of new and timely contentions; (b) 10 C.F.R. § 2.309(c), which deals with the admission of nontimely contentions; and
(c) 10 C.F.R. § 2.309(f)(1), which establishes the basic criteria that all contentions must meet in order to be admissible.⁸

Each of the foregoing is addressed hereinafter in the order enumerated above.

A. Whether, Pursuant to 10 C.F.R. § 2.309(f)(2), a Contention is “Timely”

1. 10 C.F.R. § 2.309(f)(2) Criteria

In determining the admissibility of a new or amended contention, “the first step is to determine if the additional contention is ‘timely’ and otherwise meeting the requirements of 10 C.F.R. § 2.309(f)(2).”⁹ That section provides that

contentions may be amended or new contentions filed after the initial filing only with leave of the presiding officer upon a showing that—

(i) The information upon which the amended or new contention is based was not previously available;

(ii) The information upon which the amended or new contention is based is materially different than the information previously available; and

(iii) The amended or new contention has been submitted in a timely fashion based on the availability of the subsequent information.¹⁰

2. Petitioner’s Argument as to 10 C.F.R. § 2.309(f)(2) Criteria

At the outset of its discussion of the 10 C.F.R. § 2.309(f)(2) criteria, the Petitioner highlights that, in its initial petition in this proceeding, arsenic was referenced as “one of the groundwater contaminants of concern.”¹¹ The Petitioner asserts that “[a]s this case has

⁸ *Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), LBP-06-14, 63 NRC 568, 571-72 (May 25, 2006).

⁹ *Id.* at 572 (citing *Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), LBP-05-32, 62 NRC 813, 819 (Dec. 2, 2005)).

¹⁰ 10 C.F.R. § 2.309(f)(2).

¹¹ Petition at 2 (citing Initial Petition at 3, 7).

progressed, *more* has been learned about the connections between Applicant's ISL uranium mine in the Chadron Aquifer and the release of arsenic and related health impacts to the people living nearby in the form of diabetes and pancreatic cancer."¹²

i. First Factor: Information Not Previously Available

As to the first factor of 10 C.F.R. § 2.309(f)(2),¹³ the Petitioner states that "[o]n or about August 20, 2008, [it] *became aware* of the Johns Hopkins Study and the connection between arsenic in the drinking water and adult onset of Type 2 diabetes."¹⁴ Furthermore, "[o]n or about August 28, 2008, WNRC Attorney David Frankel *became aware* of a high incidence of pancreatic cancer in Chadron."¹⁵ Based on Counsel's observational study and analysis, Counsel for the Petitioner believes that the pancreatic cancer rate in Chadron, NE is 20 times higher than the national average.¹⁶

ii. Second Factor: Information Materially Different from Previously Available Information

As to the second factor of 10 C.F.R. § 2.309(f)(2),¹⁷ the Petitioner asserts that while it had been aware of the "connection between the oxidizing impacts of Applicant's ISL mining and the release of arsenic, it wasn't until July 25, 2008 that [it] *became aware* of the 1982 Baseline Study."¹⁸ The Petitioner purports the 1982 Baseline to show that "Arsenic levels increase in an

¹² *Id.* at 3 (*emphasis added*).

¹³ 10 C.F.R. § 2.309(f)(2)(i).

¹⁴ Petition at 3 (*emphasis added*); *see also* Frankel Affidavit at 1.

¹⁵ *Id.* (*emphasis added*).

¹⁶ *Id.* at 3-4; *see also* Frankel Affidavit at 2.

¹⁷ 10 C.F.R. § 2.309(f)(2)(ii).

¹⁸ Petition at 4 (*emphasis added*) (*citing* "Baseline Hydrogeological Investigation in a Part of Northwest Nebraska prepared by Nebraska Department of Environmental Control," ("1982 Baseline (continued. . .)

oxidizing environment such as that intentionally created by Applicant's mining activities."¹⁹ The Petitioner avers that the arsenic released from the Applicant's mining activities "have adversely impacted public health particularly causing ailments associated with the pancreas such as diabetes and pancreatic cancer."²⁰ These particular human health impacts "*were not fully known* until on or about August 28, 2008 and this information taken together constitutes materially different information than what was previously known to Petitioners when the initial Petition was filed in November 2007."²¹

iii. Third Factor: Contention Submitted in a Timely Fashion Based on the Availability of the Subsequent Information

As to the third factor of 10 C.F.R. § 2.309(f)(2),²² the Petitioner, cognizant of "general NRC practice ... that new contentions are to be filed within thirty days after the new information is received,"²³ argues that such "thirty day period should not start until August 28, 2008 when the information was received concerning the high incidence of pancreatic cancer in Chadron."²⁴ As such, the Petitioner asserts that "[the] Petition for New Contention [was] timely filed on September 22, 2008."²⁵

(. . .continued)
Study") (June 1, 1982).

¹⁹ *Id.* at 4.

²⁰ *Id.* at 5.

²¹ *Id.* (*emphasis added*).

²² 10 C.F.R. § 2.309(f)(2)(iii).

²³ Petition at 5.

²⁴ *Id.* at 6.

²⁵ *Id.*

3. NRC Staff's Response to Petitioner's Argument

i. First Factor: Information Not Previously Available

The first factor of 10 C.F.R. § 2.309(f)(2) is not, as the Petitioner seems to contend, whether the information upon which the new contention is based was not “previously known,” but rather whether the information was not “previously available.”²⁶ The Petitioner does not demonstrate why its own observational study and analysis regarding the prevalence of pancreatic cancer in Chadron, Nebraska could not have been conducted prior to the deadline for the initial petitions to intervene in this proceeding. Likewise, the Petitioner does not make clear why the 1982 Baseline Report was information previously unavailable at the time by which initial petitions were due in this proceeding.

As the Commission has made consistently clear, “[p]etitioners have an obligation to examine the application and publicly available information, and to set forth their claims at the earliest possible moment.”²⁷ The Petitioner simply has not demonstrated, in light of said obligation upon it to examine publicly available information, why it could not have found factual or expert support, such as it proffers now, for its contention at the time when initial petitions for intervention were due in this proceeding.

ii. Second Factor: Information Materially Different from Previously Available Information

While the Johns Hopkins Study did not exist at the time by which initial petitions for intervention were due in this proceeding,²⁸ the Petitioner does not demonstrate in what material

²⁶ See 10 C.F.R. § 2.309(f)(2)(i).

²⁷ *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 429 (2003).

²⁸ See 10 C.F.R. § 2.309(f)(2)(i).

respect the conclusions of that Study or the data generated thereby are unique—in other words, why the Petitioner needed to have relied for its expert support on the Johns Hopkins Study in particular, as opposed to an available study to the same end. In fact, the cited Johns Hopkins Study itself discusses (albeit, critiquing in part) other studies which found an association between exposure to inorganic arsenic and diabetes.²⁹ The Petitioner simply does not demonstrate why it could not have relied on any one of those studies (or others) to support the pending contention at the time initial petitions were due in this proceeding. The Petitioner's ignorance of such studies is not a valid excuse pursuant to 10 C.F.R. § 2.309(f)(2)(ii). The inquiry pursuant to that part is whether the information upon which the new contention is based is materially different from information *previously available*, not whether such other information was *previously known* by the contention's sponsor.³⁰ Again, as earlier mentioned, the Commission has stated that petitioners, in the formulation of contentions, have an obligation to examine the gamut of publicly available information.³¹ The Petitioner has not, in this instance, demonstrated that such a review of publicly available information would not have revealed other material sources, such as those cited by the Johns Hopkins Study itself.

iii. Third Factor: Contention Submitted in a Timely Fashion Based on the Availability of the Subsequent Information

As the Petitioner has not demonstrated that (1) the information upon which it relies to formulate the pending contention was not previously available at the time by which initial petitions were due in this proceeding and, further, that, (2) such information is materially different from information that was available at the time by which initial petitions were due,

²⁹ Johns Hopkins Study at 820-21.

³⁰ See 10 C.F.R. § 2.309(f)(2)(ii).

³¹ See *Duke Energy Corp.*, 58 NRC at 429.

Petitioner's submission of the pending contention cannot be considered "timely." While the Petitioner asserts that it was not fully aware of the information upon which it bases the pending contention until August 28, 2008, the Petitioner makes no showing that such information was not available prior to that date. In light of the foregoing, the Board should find that the Petitioner's submission of the pending contention was not timely pursuant to the criteria of 10 C.F.R. § 2.309(f)(2).

B. Admissibility of "Nontimely" Contentions Pursuant to 10 C.F.R. § 2.309(c)

1. 10 C.F.R. § 2.309(c)(1) Factors for Nontimely Contentions

If a contention is not "timely" pursuant to the criteria of 10 C.F.R. § 2.309(f)(2), the admissibility of the nontimely contention is predicated upon an evaluation of the contention "according to [the] eight potentially applicable factors" of 10 C.F.R. 2.309(c)(1).³² Pursuant to 10 C.F.R. § 2.309(c)(1), nontimely contentions will not be entertained absent a determination by the Board that a balance of the following eight factors—all of which *must* be addressed by the petitioner in its nontimely filing—weighs in favor of the contention's admission:

- (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.³³

³² *Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc.*, 63 NRC at 574-75.

³³ 10 C.F.R. § 2.309(c).

The first of the foregoing factors, the “good cause” factor, is entitled to the most weight in the balancing test.³⁴ “To demonstrate good cause, a petitioner must show not only why it could not have filed within the time specified in the notice of opportunity for hearing, but also that it filed as soon as possible thereafter.”³⁵ If a petitioner does not make a showing of good cause, “then its demonstration of the other factors must be ‘compelling.’”³⁶

2. NRC Staff’s Response

Because the Petitioner failed to address the factors of 10 C.F.R. § 2.309(c)(1), the Board should summarily deny Petitioner’s contention. As 10 C.F.R. § 2.309(c)(2) makes clear, the Petitioner must address the eight factors of 10 C.F.R. § 2.309(c)(1) in the submission of its nontimely contention. The Commission has summarily dismissed a petitioner’s filing for failure to address the factors for admission of nontimely contentions.³⁷ Thus, the Board should deny Petitioner’s pending contention because the Petitioner has utterly failed to address the factors of 10 C.F.R. § 2.309(c)(1).

C. General Contention Admissibility Criteria of 10 C.F.R. § 2.309(f)(1)

1. Legal Standard

The “six basic contention admissibility standards contained in 10 C.F.R. § 2.309(f)(1)(i)-

³⁴ *E.g., Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 564 (2005) (*citing Private Fuel Storage, LLC* (Independent Spent Fuel Storage Installation), CLI-00-02, 51 NRC 77, 79 (2000)); *State of New Jersey* (Department of Law and Public Safety’s Requests Dated Oct. 8, 1993), CLI-93-25, 38 NRC 289, 296 (1993)).

³⁵ *Dominion Nuclear Connecticut, Inc.*, 62 NRC at 564-65 (*citing State of New Jersey*, 38 NRC at 295).

³⁶ *Id.* (*quoting State of New Jersey*, 38 NRC at 296).

³⁷ *See Baltimore Gas & Elec. Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 NRC 325, 348 (1998) (*citing Texas Utilities Elec. Co.* (Comanche Peak Steam Elec. Station, Unit 2), CLI-93-11, 37 NRC 251, 255 (1993)).

(vi) ... must be met by all contentions, whether they are filed at the outset of the proceeding, are filed in a timely fashion when material new information arises, or are untimely filings.”³⁸

Pursuant to 10 C.F.R. § 2.309(f)(1), for each contention a petitioner wishes to have admitted at hearing, the petitioner must

- (i) Provide a specific statement of the issue of law or fact to be raised or controverted;
- (ii) Provide a brief explanation of the basis for the contention;
- (iii) Demonstrate that the issue raised in the contention is within the scope of the proceeding;
- (iv) Demonstrate that the issue raised in the contention 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 which support the requestor’s/petitioner’s position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue; and
- (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.³⁹

Additionally, a contention must be within the scope of the proceeding as defined by the notice of hearing in order to be admissible.⁴⁰ The contention rule is “strict by design.”⁴¹ The rule operates as a “[t]hreshold standard [] necessary to ensure that hearings cover only genuine and pertinent issues of concern and that the issues are framed and supported concisely enough at the outset to ensure that the proceedings are effective and focused on real, concrete issues.”⁴²

As such, failure to comply with any of the foregoing elements of 10 C.F.R. § 2.309(f)(1) is

³⁸ *Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc.*, 63 NRC at 575.

³⁹ 10 C.F.R. § 2.309(f)(1).

⁴⁰ *See Florida Power and Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4) CLI-00-23, 52 NRC 327, 329 (2000).

⁴¹ *See Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 3) CLI-08-___, 2008 WL 3540073, Slip op. at *1 (Aug. 13, 2008).

⁴² Changes to Adjudicatory Process, 69 Fed. Reg. at 2,182, 2,189-90 (Jan. 14, 2004).

grounds for a contention's dismissal.⁴³ Commission practice does not "allow mere notice pleading," and, therefore, the Commission does not permit the "filing of a vague, unparticularized contention, unsupported by alleged fact or expert opinion and documentary support."⁴⁴ A petitioner may not rely on mere speculation nor base allegations as support for the admission of a proffered contention.⁴⁵ If a petitioner fails to provide sufficient support for proffered contentions, it is not within the authority of a Board to construct assumptions of fact to shore up those deficiencies.⁴⁶ Similarly, a petitioner must provide sufficient explanation as to the significance thereof of materials and documents referenced in support of the contention.⁴⁷

2. Petitioner's Argument as to the General Contention Admissibility Factors of 10 C.F.R. § 2.309(f)(1)

The issue raised by the Petitioner with its new contention

is that Arsenic being released by the oxidizing of Uranium due to Applicant's injection of lixiviant and that such levels of Arsenic (even if within the US drinking water standards) constitutes ongoing low-level exposure to Arsenic which causes failures in the pancreas to people drinking water affected into which the Arsenic flows.⁴⁸

⁴³ *E.g., Dominion Nuclear Connecticut, Inc.*, 62 NRC at 567; *Private Fuel Storage* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999); *Arizona Pub. Serv. Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155-56 (1991); *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Unit 1), LBP-07-11, 65 NRC 41, 55-56 (2007).

⁴⁴ *Consumers Energy Co., Nuclear Energy Management Co., LLC, Entergy Nuclear Palisades, LLC, and Entergy Nuclear Operations, Inc.* (Palisades Nuclear Power Plant), CLI-07-18, 65 NRC 399, 414 (2007) (*internal quotation marks omitted*) (*quoting Power Authority of the State of New York and Entergy Nuclear Fitzpatrick LLC, Entergy Nuclear Indian Point 3 LLC, and Entergy Nuclear Operations, Inc.* (James A Fitzpatrick Nuclear Power Plant and Indian Point Nuclear Generating Unit No. 3), CLI-00-22, 52 NRC 266, 295 (2000)).

⁴⁵ *See Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003).

⁴⁶ *See Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-01-35, 54 NRC 403, 422 (2001); *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia) LBP-95-6, 41 NRC 281, 305 (1995).

⁴⁷ *See Fansteel, Inc.*, 58 NRC at 204.

⁴⁸ Petition at 7.

At the outset of their discussion of the 10 C.F.R. § 2.309(f)(1) factors, the Petitioner asserts that “the facts and contentions raised in the [initial] Petition are incorporated herein by this reference, including the specific references to the Application.”⁴⁹

According to the Petitioner, “[t]he [Application] shows that Applicant is aware that its ISL Uranium mining causes oxidation of the Uranium and the release of Arsenic into the Water including the Brule Aquifer.”⁵⁰ The Petitioner asserts that “[p]rior findings by the Board in [this proceeding] show that the Petitioners have meet their initial burden that there exist fractures and faults and pathways along The White River.”⁵¹

The Petitioner argues that transmission through the above pathways “lead to the human and environmental exposure to increased Arsenic levels from Applicant’s mine.”⁵² Such “exposures to Arsenic from Applicant’s mine are related to the high incidence of diabetes and pancreatic cancer and appear to be a causal and contributing factor to such diseases being suffered by the people nearby the mine.”⁵³ According to the Petitioner, the “Johns Hopkins Study shows a link between low-levels of Arsenic in the drinking water and Type 2, Adult-Onset Diabetes.”⁵⁴ Furthermore, the Petitioner alleges that, based on Counsel’s observational study and analysis, “Chadron appears to have a very high incidence of pancreatic cancer that is 20 times the national average.”⁵⁵ As to such, the Petitioner avers that “[t]here is a link between

⁴⁹ *Id.* at 7.

⁵⁰ *Id.* at 8.

⁵¹ *Id.*

⁵² *Id.*

⁵³ *Id.*

⁵⁴ *Id.* at 7.

⁵⁵ *Id.*

diabetes and pancreatic cancer.”⁵⁶

3. NRC Staff’s Response to Petitioner’s Argument

As hereinafter discussed, the Petitioner (1) fails to formulate the contention with sufficient particularity, (2) fails to provide sufficient, if any, factual or expert support for the positions it advances as its contention and (3) fails to specify what, if any, genuine dispute exists with the Applicant on a material issue of law or fact.

i. Johns Hopkins Study

The Johns Hopkins Study does not stand for the conclusion that the Petitioner suggests that it does. The Petitioner states that “[t]he Johns Hopkins Study shows that low level Arsenic exposures of inorganic arsenic in the water such as that resulting from ISL uranium mining increases the risk of Type 2 Diabetes in adults.”⁵⁷ The Johns Hopkins Study simply does not support this proposition. While the Study finds “a positive [statistical] association between total urine arsenic, likely reflecting inorganic exposure from drinking water and food, with the prevalence of type 2 diabetes in a population with low to moderate arsenic exposure,”⁵⁸ the Study, nonetheless, indicates that “[p]rospective studies in populations exposed to a range of inorganic arsenic levels are needed to establish *whether this association is causal*.”⁵⁹ Thus, Petitioner’s assertion that the Study proves a causal relationship between exposure to low level

⁵⁶ *Id.* at 8 (citing “Probability of Pancreatic Cancer Following Diabetes: A Population-Based Study,” *Gastroenterology*, Vol. 129, No. 2, 504 (August 2005)). Staff was unable to obtain the article as published in *Gastroenterology* (the journal of the Institute of the American Gastroenterology Association). Staff was, however, able to obtain the author manuscript thereof. See “Author Manuscript of Probability of Pancreatic Cancer Following Diabetes: A Population-Based Study,” (“Pancreatic Cancer Study”) <http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=2377196&blobtype=pdf> (downloaded on October 12, 2008).

⁵⁷ *Id.* at 1-2.

⁵⁸ Johns Hopkins Study at 821.

⁵⁹ *Id.* at 814.

arsenic and type 2 diabetes is blatantly erroneous. A Board is “not to accept uncritically the assertion that ... an expert opinion supplies the basis for a contention ... the Board should review the information provided to ensure that it does indeed supply a basis for the contention.”⁶⁰ In this instance, the Petitioner’s claims about the Johns Hopkins Study simply do correspond with what the Study actually states.

Even if the Johns Hopkins Study were to stand for the conclusion of causality as to which the Petitioner incorrectly suggests, the Petitioner makes no attempt to correlate the findings of the Study with the conditions present at Chadron, Nebraska or at the Pine Ridge Indian Reservation. The Petitioner does not offer any data to support the proposition that individuals in such areas are exposed through drinking water to inorganic arsenic in such quantities to suggest similar total arsenic content in urine as found to have a positive association with type 2 diabetes in the Study. The Petitioner does not even specify the drinking water source for those persons it purports suffer from pancreatic cancer caused by exposure to arsenic. Without such necessary supporting data, the Petitioners’ assertion that the findings of the Study are relevant to and explanatory of the alleged prevalence of diabetes at such locales amounts to nothing more than a bald and impermissible allegation.⁶¹

As the Johns Hopkins Study does not stand for the conclusion upon which the Petitioner relies in support of its contention and, in the alternative, the Petitioner does not proffer any data to link the supposed findings of the Study with the conditions present at the relevant locales, the Petitioner has not supplied any support for its assertion regarding the causal connection between exposure to low level arsenic in drinking water and type 2 diabetes.

⁶⁰ *Private Fuel Storage, LLC* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 181 (1998).

⁶¹ See *Fansteel, Inc.*, 58 NRC at 204.

ii. Counsel's Observational Study of Pancreatic Cancer Incidents

The Petitioner asserts that “[b]ased on [Counsel’s] information and belief, there are at least seven (7) cases of pancreatic cancer in Chadron which has a population of 5,208 which is about 20 times the national average of 11.5 cases per 100,000 Americans.”⁶² The seven cases of pancreatic cancer to which the Petitioners make reference is the product only of the *unsubstantiated* personal knowledge of a Mr. Mike Waugh.⁶³ By his own accounting, Counsel for the Petitioner made only a very limited attempt to substantiate such information,⁶⁴ and, as such, Counsel proffers no verification in the Petition or his affidavit of Mr. Waugh’s personal beliefs. The Petitioner cannot support its contention with bare allegations.⁶⁵ The Petitioner also fails to provide any information regarding the source of drinking water for those individuals who purportedly suffer from pancreatic cancer. Without even a showing of such information, it is extremely difficult—if not impossible—to understand how the Petitioner can assert that such individuals potentially contracted pancreatic cancer due to the ingestion of arsenic in drinking water tainted as such by the Applicant’s in situ leach extraction operations.⁶⁶

While the Petitioner asserts that “exposures to Arsenic from the Applicant’s mine are related to the high incidence of ... pancreatic cancer and appear to be a causal and contributing

⁶² Petition at 3-4 (*internal citations omitted*).

⁶³ See Frankel Affidavit at 1.

⁶⁴ See *id.*

⁶⁵ See *Fansteel, Inc.*, 58 NRC at 204.

⁶⁶ Furthermore, Counsel’s overly simplistic statistical calculation (and seeming reliance thereof) that seven incidents of pancreatic cancer represent an average 20 times the national average ignores and contravenes one of the most fundamental statistical principles, statistical significance. The very concept of an average contemplates that there is likely deviation in both directions from an average—hence, the average representing the average value of a series of values or returns. Counsel for the Petitioner makes no attempt to show that such deviation from the average or the expected value is statistically significant (i.e., simply not the product of randomness).

factor to such disease[],”⁶⁷ Petitioners do not provide any expert support for such purported causal relationship. The Petitioner cites to the Pancreatic Cancer Study for the proposition that there is a link between diabetes and pancreatic cancer, and, as it appears, the Petitioner suggests by such link that diabetes causes or is a contributing factor to pancreatic cancer,⁶⁸ but that is not at all the conclusion of the Pancreatic Cancer Study. Rather, the Study, in light of “increasing evidence to support the notion that diabetes *may be a consequence* of pancreatic cancer,”⁶⁹ attempts to evaluate through statistical analysis the “value of new-onset diabetes as a marker of underlying pancreatic cancer.”⁷⁰ Absent the Pancreatic Cancer Study, the Petitioner provides, in contravention of 10 C.F.R. § 2.309(f)(1)(v), no other factual or expert support for its proposition that there is a causal link between exposure to arsenic and the development of pancreatic cancer.

iii. Lack of Genuine Dispute with the Applicant

As the Petitioner makes no reference to any portion of the Application or other statement made by the Applicant in support of its Application, Petitioner additionally fails to identify any statement of fact or law made by the Applicant in its Application with which it has a genuine dispute.

For the reasons aforementioned, the Board should find that the Petitioner has not satisfied its burden pursuant to 10 C.F.R. § 2.309(f)(1) and the pending contention should be denied.

⁶⁷ Petition at 8.

⁶⁸ *See id.*

⁶⁹ Pancreatic Cancer Study at *2 (*emphasis added*).

⁷⁰ *Id.* at *1.

CONCLUSION

In light of the foregoing, the Staff submits that the Board should deny the admission of the Petitioner's new contention because (1) pursuant to 10 C.F.R. § 2.309(f)(2), the contention is not "timely," (2) the contention fails to meet the requirements for a "nontimely" contention per 10 C.F.R. § 2.309(c)(1), and, furthermore, (3) the contention fails to meet to the general contention admissibility requirements of 10 C.F.R. § 2.309(f)(1).

Respectfully submitted,

/RA/

Brett Michael Patrick Klukan
Counsel for NRC Staff

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)
CROW BUTTE RESOURCES, INC.) Docket No. 40-8943
In-Situ Leach Facility, Crawford, Nebraska)
) ASLBP No. 07-859-03-MLA-BD01
(License Amendment for the North Trend)
Expansion Project))

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing "NRC STAFF'S RESPONSE IN OPPOSITION TO PETITION FOR LEAVE TO FILE NEW CONTENTION RE: ARSENIC" has been served upon the following through deposit in the NRC's internal mail system, with copies by electronic mail, as indicated by an asterisk, or by deposit in the U.S. Postal Service, as indicated by double asterisk, with copies by electronic mail this 14th day of October, 2008:

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