

March 15, 2007

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of )  
 )  
U.S. Army ) Docket No. 40-8838-MLA  
 )  
(Jefferson Proving Ground Site) )

NRC STAFF RESPONSE TO AMENDED MOTION OF SAVE THE VALLEY, INC., TO ADMIT FOR HEARING ADDITIONAL CONTENTION B-2

INTRODUCTION

Pursuant to the Atomic Safety and Licensing Board's order of January 29, 2007, (Order (Scheduling Further Proceedings), Jan. 29, 2007)), the U.S. Nuclear Regulatory Commission Staff (Staff) hereby files its response to the motion to admit an additional contention submitted by Save the Valley, Inc. (STV or Intervenor). Amended Motion of Save the Valley, Inc. to Admit for Hearing Additional Contention B-2 and Supporting Bases A through G, (Feb. 23, 2007) (Motion). As discussed below, the Staff concludes that the additional contention and associated bases proposed by STV are not admissible under 10 C.F.R. § 2.309(f). Therefore, STV's motion should be denied.

BACKGROUND

On May 25, 2005, the U.S. Army (Army) submitted a license amendment request to the NRC for an alternate schedule for submitting a decommissioning plan for its facility at Jefferson Proving Ground (JPG) in Madison, Indiana. See Letter and Attachments from Alan G. Wilson to Dr. Tom McLaughlin, dated May 25, 2005, ADAMS No. ML051520319. On November 23, 2005, STV filed a petition to intervene in which STV proffered six contentions. Petition to Intervene and Request for Hearing of Save the Valley, Inc. (November 23, 2005) (STV Petition). The STV Petition had concerns with the environmental radiation monitoring plan (ERMP), the field

sampling plan (FSP), the health and safety plan (HASP), the timetable and the financial assurance in support of its possession only license request. *Id.* The Board partially addressed the admissibility of the November 23 petition's six contentions, and granted STV's hearing request but deferred the hearing to await the NRC Staff's completion of its technical review of the alternate proposed schedule. *U.S. Army (Jefferson Proving Ground Site), LBP-06-6, 63 NRC 167, 185 (2006).* Contention B-1 is:

As filed, the FSP is not properly designed to obtain all of the verifiable data required for reliable dose modeling and accurate assessment of the effects on exposure pathways of meteorological, geological, hydrological, animal, and human features specific to the JPG site and its surrounding area.

STV Petition at 17.

The supporting Basis A is:

The EI geophysical study which will follow the fracture analysis study, as described in section 6.1 of the FSP, is supposed to find all significant karst features and location of the water table. From these studies, 10 to 20 pairs of monitoring wells are proposed to attempt to tie into "conduits" of ground water flow. This study may help to site monitoring wells, but stream gauging studies should be an early and integral part of the search for likely conduits. The stream reaches of strong gain would be a very strong direct indicator of the discharge points of ground water "conduits." EI is an indirect technique and can miss conduits or identify features that are not conduits. The FSP alludes to doing stream gauging in its discussion of well location criteria, but the time table shown indicates stream studies will follow the ground water studies by a year.

*JPG, 63 NRC at 183.*

The Board categorized the supporting bases and noted that twelve of the eighteen alleged deficiencies focused on field activities. *JPG, LBP-06-6, 63 NRC at 173.* As understood by the Board, STV bases in support of Contention B-1 described how methodologies in the FSP were allegedly inadequate for proper site characterization for, in particular, electrical imaging (EI), groundwater, biota sampling, surface water, sediment, and determining distribution

coefficients. *Id.* The Board characterized the remaining bases as areas that STV thought the FSP did not adequately address, such as a plan for detection of transuranics, air sampling analysis, use of non-standard data gathering and modeling. *Id.* at 173-174. The last basis regarded independent technical review. *Id.* at 174.

On April 26, 2006, the license amendment was granted, and a new license condition was added to the JPG license that stated,

The Army shall submit a decommissioning plan for NRC review and approval under an alternate schedule identified in its May 25, 2005, Field Sampling Plan, its responses to action items from a September 8, 2005, public meeting by letter dated October 26, 2005, its Field Sampling Plan addendum dated November 2005, and its responses to NRC's request for additional information by letter dated February 9, 2006, by the end of 2011 or earlier. The Army will also submit an Environmental Report using the guidance in NUREG-1748 for NRC to use in preparing an Environmental Impact Statement.

Materials License SUB-1435, Docket 040-08838, Amendment 13, License Condition 13 (ADAMS ML053320014).

The cover letter transmitting the license noted that NRC anticipates having annual (or more frequent) meetings at NRC headquarters, open to the public, to discuss the Army's progress in completing the site characterization and new decommissioning plan, and said that these meetings should occur prior to the initiation of significant planned field activities, such as determining the number and location of new monitoring wells. Letter dated April 26, 2006, from Daniel M. Gillen, Deputy Director Decommissioning, to Mr. Alan G. Wilson, Garrison Manager, Department of the Army (ADAMS ML053320014).

The Board then entered an order that STV could, following its examination of the EA and SER, withdraw or amend existing contentions or add new ones. Memorandum and Order

(Scheduling Further Proceedings) (May 1, 2006). STV filed on May 31<sup>1</sup>, and the Army<sup>2</sup> and NRC<sup>3</sup> responded. STV filed a motion to further supplement its contentions on June 30,<sup>4</sup> and the Board denied the motion. Order (Denying Motion of Save the Valley, Inc. to Further Supplement Contentions) (July 12, 2006). The Board informed STV that any new contention would have to meet 10 C.F.R. § 2.309(f)(1-2), and that STV could instead offer any new information to support an admitted contention at the evidentiary hearing. *Id.* A prehearing conference was held on July 19, and subsequently the Board directed the Army and STV to meet (with elective NRC participation) and explore the concerns of STV and discuss the process for updating the Army site characterization plans. Order (Deferring Evidentiary Hearing) (July 26, 2006). The Army and STV, with the Staff optionally joining, were to file a joint status report by September 29, 2006. *Id.* The parties filed the status report, and requested additional negotiations. Joint Status Report on Settlement Negotiations (September 29, 2006). The Board granted a joint request to continue negotiations, and ordered another status report due November 9, 2006. Order (Further Deferring Evidentiary Hearing) (October 4, 2006). The parties filed the second report, in which the Army and the Staff requested the Board to rule on STV's current contentions and bases, while STV sought an interim order providing additional

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<sup>1</sup> Motion for Leave to Withdraw, Amend, and Supplement Contentions of Save the Valley, Inc. (May 31, 2006)

<sup>2</sup> Army's Response to the Motion for Leave to Withdraw, Amend, and Supplement Contentions of Save the Valley, Inc. Filed Herein On May 31, 2006 (June 19, 2006)

<sup>3</sup> NRC Staff Response To Motion For Leave To Withdraw, Amend and Supplement Contentions by Save the Valley, Inc. (June 20, 2006)

<sup>4</sup> Motion for Leave to Further Supplement Contentions of Save the Valley, Inc. within Sixty (60) Days (June 30, 2006)

guidance on negotiations. Second Joint Status Report on Settlement Negotiations (November 9, 2006).

Subsequently, in its December 20 Order, the Board ruled on the admissibility of the contentions not addressed in LBP-06-06, concluding they were not admissible. *U.S. Army*, (Jefferson Proving Ground Site), LBP-06-27, 64 NRC \_\_\_ (Dec. 20, 2006) (slip op.). The Board concluded that it need not address the sixteen bases for Contention B-1, and noted that the upon receipt of written testimony, the licensee and NRC staff will have the opportunity to object to any part they deem outside of the hearing. *Id.* The Board specifically rejected contention A-1 regarding the Environmental Radiation Monitoring Plan. *Id.*

On January 19, 2007, STV filed a motion for a new contention regarding implementation of the Field Sampling Plan (FSP). Motion of Save the Valley, Inc. to Admit for Hearing Additional Contention and Supporting Bases (January 19, 2007).

On January 29, 2007, the Board ordered the Intervenor to file and serve an amended motion that is to include both the relief sought in the Intervenor's January 19 motion and the additional relief thought to be warranted in light of Addendum 4 and any other new Licensee disclosures. Order (Scheduling Further Proceedings), January 29, 2007.

On February 23, 2007, STV filed its amended motion, which proffered a single contention supported by seven bases. See Motion.

#### DISCUSSION

STV's motion of February 23, 2007, seeking admission of amended Contention B-2 and its seven bases should be denied.

##### A. Admissibility of Contentions

Section 2.309(f)(1) incorporates the Commission's longstanding contention requirements for an admissible contention. Final Rule, *Changes to Adjudicatory Process*, 69 Fed. Reg. 2182, 2221 (Jan. 14, 2004). No contention will be admitted for litigation in any NRC adjudicatory

proceeding unless these requirements are met. *Id.*

Section 2.309(f)(1) states:

A request for hearing or petition for leave to intervene must set forth with particularity the contentions sought to be raised. For each contention, the request or petition 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.

10 C.F.R. § 2.309(f).

These requirements are deliberately strict, and the Commission will reject any contention that does not satisfy the requirements. *USEC Inc. (American Centrifuge Plant)*, CLI-06-09, 63 NRC 433, 437 (2006).

Failure to comply with any of these requirements is grounds for the dismissal of a contention. *Dominion Nuclear Conn., Inc. (Millstone Nuclear Power Station, Units 2 & 3)*, CLI-04-36, 60 NRC 631, 636 (2004). The NRC does not look with favor on amended or new contentions filed after the initial filing. *Id.* A petition must "[d]emonstrate that the issue raised in the contention is within the scope of the proceeding." 10 C.F.R. § 2.309(f)(1)(iii). Any

contention that falls outside the specified scope of the proceeding must be rejected. *USEC, Inc.* (American Centrifuge Plant), LBP-05-28, 62 NRC 585, 596 (2005); *aff'd ACP*, CLI-06-09, 63 NRC 433 (2006); *aff'd USEC, Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451 (2006).

To be material within 10 C.F.R. § 2.309(f)(1)(iv), a petitioner must demonstrate that the contention asserts an issue of law or fact that is material to the findings the NRC must make to support the action that is involved in the proceeding; that is, the petitioner must demonstrate that the subject matter of the contention would impact the grant or denial of a pending license application. *Id.* Materiality requires that the petitioner show why the alleged error or omission is of possible consequence to the result of the proceeding. *Id.* This means that there must be some significant link between the claimed deficiency and either the health and safety of the public or of the environment. *Id.* All contentions must show that a genuine dispute exists with regard to the license application in question, challenge and identify either specific portions of, or alleged omissions from the application, and provide supporting reasons for each dispute. *Id.* at 598. Any contention that fails directly to controvert the application, or that mistakenly asserts that the application does not address a relevant issue, may be dismissed. *Id.* Bare assertions and speculation are not enough to trigger a hearing. *GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 208 (2000).

Timeliness requirements are in 10 C.F.R. § 2.309(f)(2):

Contentions must be based on documents or other information available at the time the petition is to be filed, such as the application, supporting safety analysis report, environmental report or other supporting document filed by an applicant or licensee, or otherwise available to a petitioner. . . . Otherwise, 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 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 C.F.R. § 2.309(f)(2)

B. Staff Response to Contention B-2

1. STV Contention B-2

STV now seeks admission of the Contention B-2 and the following seven bases ("Bases A-G"):

Contention B-2: The Army's implementation of the Field Sampling Plan (FSP) is inadequate to achieve its objective of appropriate characterization of the Jefferson Proving Ground (JPG) Depleted Uranium (DU) Site.

Basis [A]. The Fracture Trace Analysis as implemented is inadequate to serve its intended purpose.

Basis [B]. The Electrical Imaging Survey as implemented is inadequate to serve its intended purpose.

Basis [C]. The Soil Verification Survey as implemented is inadequate to serve its intended purpose.

Basis [D]. The well location selection methodology for ground water conduit and overburden characterization as implemented under FSP Addendum 4 is inadequate to serve its intended purposes.

Basis [E]. The implementation to date of the stream and cave gauging program as described in the WLS Report is inadequate to serve the program's intended purpose.

Basis [F]. The field collection and analytical methods planned and used to document and evaluate data yielded by FSP implementation are inadequate to serve their intended purposes.

Basis [G]. The initial Deer Tissue Sampling Study as implemented is inadequate to serve its intended purpose.

Motion at 1, 2, 7, 12, 17, 22, 25, 37.



The proffered implementation Contention B-2 is beyond the scope of the licensing proceeding and is therefore inadmissible. In addition, it is not material in that the information was not part of the granting of the license amendment. Furthermore, the contention does not show that a genuine dispute exists regarding specific portions of the application.

2. Proffered Contention B-2 is Beyond the Scope Already Defined by the Board

The Board discussed the scope of the proceeding:

[T]he scope of this proceeding is limited to whether the Licensee's proposal for characterizing the JPG site during the alternate schedule period – i.e. the next five years – is: (1) “necessary to the effective conduct of decommissioning operations”; (2) will “present[] no undue risk from radiation to the public health and safety”; and (3) “is otherwise in the public interest.” 10 C.F.R. § 40.42(g)(2).

JPG, LBP-06-27, 64 NRC at \_\_\_ (slip op. at 12)

The Board discussed admissibility requirements:

In order for a contention to be considered “within the scope of th[is] proceeding” (10 C.F.R. § 2.309(f)(1)(iii)), it must challenge one of these three criteria. Intervenor's Contention B-1 was admitted by the Board because it challenged the adequacy of the Licensee's FSP, by which the Licensee will ultimately characterize the site and eventually produce an effective decommissioning plan. Any other contention submitted by Intervenor that is not similarly addressed to one of the three factors in 10 C.F.R. § 40.42(g)(2) will be deemed inadmissible.

*Id.* at 12-13

STV's stated that the requirements of 10 CFR s 2.309(f)(1) were met because

[T]he issue raised in the contention is within the scope of the proceeding because it relates only to implementation of the FSP, which the Board ruled in its December 20, 2006 Memorandum and Order [LBP-06-27] on STV's original contentions defines the scope of this proceeding,

Motion 48-9.

STV incorrectly interpreted the order. STV asserted that implementation of the FSP was within the scope of the proceeding, whereas the Board discussed adequacy of the FSP, not implementation.

In addition, despite the Board's clear requirement to address at least one of the three factors in 10 C.F.R. § 40.42(g)(2) to be deemed admissible, STV's motion fails to make such an effort. Nowhere in STV's motion is 10 C.F.R. § 40.42(g)(2) even mentioned. STV's Contention fails the admissibility requirements set forth in the Board's order; STV has failed to demonstrate that Contention B-2 is within scope.

3. Proffered Contention B-2 is not Material to the Granting of the Amendment

The future and continuing implementation of the FSP, whether adequate or not, is not material to the granting of the license amendment allowing the Army to submit its decommissioning plan at the end of 2011. Information and data collection provided to the NRC regarding results of the implementation of the FSP in 2007, 2008, 2009, 2010, and 2011 will not be of consequence to a granting of a license amendment in 2006. Such future information simply is not material.

If STV has site-specific claims regarding the safety of ongoing activities at JPG, or if STV has in hand information requiring license modification or other protective measures at JPG, it may petition the NRC for relief under 10 C.F.R. § 2.206. See *Amergen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-07-08, \_\_ NRC \_\_ at \_\_ (slip op. at 10) (Feb. 26, 2007).

If STV is alleging that the licensee failed to comply with its license, regulations or commitments, then separate NRC enforcement action may be the remedy. See *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), 43 NRC 1, 9 (1996).

A request for agency enforcement action is not suitable for a license amendment adjudication but perhaps suitable for consideration under 10 C.F.R. § 2.206. See *Entergy*

*Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station) *Entergy Nuclear Vermont Yankee, LLC, & Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), CLI-06-26, 64 NRC 225, 226-7, (Oct. 10, 2006).

If the Board were to conclude that the FSP was inadequate, as alleged in admitted Contention B-1, then how well the FSP was implemented would be irrelevant. If instead the Board determines the FSP is adequate, then compliance with the FSP would be an enforcement issue. The Board's final decision on Contention B-1 eliminates Contention B-2.

4. Proffered Contention B-2 Does Show a Dispute with the Application

The petition proffering Contention B-2 does not meet the requirements of 10 C.F.R. § 2.309(f)(1)(vi) to include references to specific portions of the application 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. 10 C.F.R. § 2.309(f)(1)(vi). Throughout its motion, instead of citing disputes with the application, STV's motion uses the FSP as a standard, then alleges that the Army's implementation departed from the FSP based upon documents and data collection provided by the Army *after* the granting of the alternate schedule amendment. See e.g. Motion at 2. In its bases, STV alleges omissions from various documents (e.g. Motion at 42), but does not show that the documents were part of the application. Absent such a showing, STV fails to demonstrate a dispute with the application, so fails to satisfy 10 C.F.R. § 2.309(f)(1)(vi) and will not be admissible.

5. Discussion of Bases

Additional NRC Staff response to each basis follows:

Basis A.

The Fracture Trace Analysis as implemented is inadequate to serve its intended purpose.

Motion at 2.

Staff Response to Basis A

Basis A cannot support admissibility of Contention B-2 because it is concerned with implementation of the FSP, which was part of the application, rather than the application itself, so it fails to satisfy 2.309(f)(1)(vi) by not identifying specific portions of, or alleged omissions from the application.

In support of Basis A, STV relies on the fracture trace analysis which was completed in June of 2006. Motion at 2 (*citing Fracture Trace Analysis (FTA) Report for Jefferson Proving Ground, June 2006* (ADAMS ML061670091)). The June 2006 document was not part of the Army's application, and did not exist when the amendment 13 was granted in April of 2006, and was not material to the Staff's findings.

STV states that the Army departed from the Army's FSP by 1) considering only linear features on the air photos, 2) providing no comparison or integration of the results of the new air photo interpretation to previous USGS work, 3) providing no evaluation or field verification of the aerial photography analysis based upon a site walkover, and 4) failing to incorporate other available data to aid in identifying and interpreting mapped features. Motion 2-3. Basis A simply does not present a licensing issue, since STV has not identified a disagreement with the application or inadequacy of the FSP. Instead of the application, or documents used to support the application, STV's Basis A discussion alleges omissions from the post-licensing fracture trace analysis (Motion 2-4), a document showing implementation results for the FSP which does not support admission.

Regarding the first alleged departure, STV said that the "FSP (page 5-1) anticipated mapping the traces of both linear traces . . . and semi-linear traces," (Motion at 3) but the FSP actually said "Bedrock fracture locations and orientations are often able to be interpreted from linear or semi-linear features." FSP 5-1. The paraphrasing of "anticipated" in place of "are often able to be" and concluding that the Army departed from the FSP distorts the record, and fails to support the proffered basis. For the second issue, STV has not indicated where the FSP required a comparison of the air photo integration to previous work, so it has not shown how the alleged decision not to compare was outside of the FSP. The FSP actually says, "If available, the [USGS] fracture trace work . . . will be reviewed and incorporated to the extent possible." FSP 5-1. Furthermore, the FSP notes,

The USGS fracture trace study was conducted over a large area that included JPG, but was not specific to JPG or the DU penetrator testing range area; therefore, the results of the USGS study may be of limited use or relevance.

FSP 5-1, 5-2.

This weakens any argument by STV regarding the Army departing from the FSP by not using or incorporating USGS data, since the FSP noted the study may be of limited relevance. STV's discussion of the third issue asserts that if a site walkover was not performed, it needs to be, or if it was, then its performance and results need to be properly documented. Motion at 5. STV has not indicated where in the FSP this walkdown or its documentation was explicitly required, so it does not support an implementation deficiency. Again, the actual FSP lists no requirement to document this walkdown. FSP 5-2. In its last issue, STV says that the FTA did not incorporate all available data, including data that would be useful to validate the FTA's results, and STV suggests a particular Jefferson Proving Ground karst study for comparison. Motion at 6. If STV is arguing that this study should have been included as part of plan, STV is late, as should have been filed with the other FSP contention.

STV's fails to support an implementation problem by failing to show how the Army departed from the FSP.

In the last part of Basis A, the STV states, "These four inadequacies are significant, both individually and collectively, to proper FSP implementation and site characterization because the information derived from the FTA (along with information from other procedures, notably the Electrical Imaging survey (EI)) was used to determine the number and placement of FSP conduit well pairs. See discussion in Basis b below, which is incorporated here by reference." To the extent that the Board permits incorporation by reference of discussions in Basis B as part of Basis A, the Staff's corresponding response is incorporated.<sup>5</sup>

Basis B.

The Electrical Imaging Survey as implemented is inadequate to serve its intended purpose.

Motion at 7.

Staff Response to Basis B

STV asserts what it believes are the methodologies in the FSP for an electrical imaging (EI) survey. Motion at 7. Then, based on the final *Well Location Selection Report*, January 2007 (WLS Report), STV asserts that inadequacies in the EI and departures from the FSP are

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<sup>5</sup> It is unclear to the staff what argument STV is attempting with an "incorporat[ion] by reference" of Basis B, which is already in the same petition in support of the same contention. Such incorporation works to frustrate the requirements in 10 C.F.R. § 2.309 that the petition set forth with particularity the fact to be controverted with a brief explanation for the contention, and should be not be allowed. See *Tennessee Valley Authority* (Browns Ferry Nuclear Plant, Units 1 and 2), LBP-76-10, 3 N.R.C. at 216 (1976) (Noting that incorporation by reference of about 3,000 pages of material did not shed any light on the basis or validity of contentions already expressed elsewhere in Petitioner's multiple pleadings.) (See also *Consolidated Edison Co. Of New York and Entergy Nuclear Indian Point 2, LLC, and Entergy Nuclear Operations, Inc.* (Indian Point, Units 1 and 2), CLI-01-19, 54 N.R.C. 109, 132-3 (2001) (Noting that the Commission will not permit incorporation by reference of other petitioners' contentions where the effect would be to circumvent specificity requirements.)

apparent. Motion at 9. STV also refers to presentations from a meeting in October of 2006.

*Id.* at 9.

Basis B cannot support admissibility of Contention B-2 because it is concerned with implementation of an application, rather than the application itself, so it fails to satisfy section 2.309(f)(1)(vi) by not identifying specific portions of, or alleged omissions from the application. The WLS report and the October 2006 was not material to the findings the NRC made to support the April 2006 license amendment. It was not part of the application.

Basis B simply does not present a licensing issue, since STV has not identified a disagreement with the application. STV is using the FSP or application as the standard, then alleging that the FSP is not being followed, based on documents that were not part of the application.

In the last part of Basis B, the petition states, "That gross inadequacy is compounded when neither of the phenomena that are used for locating the wells can identify existing conduit features with locations that are known and have previously been mapped in the same area. See discussion in Basis A above, which is incorporated here by reference." Motion at 12.

To the extent that the board permits incorporation by reference of discussions in Basis A as part of Basis B, the Board should consider the Staff's response to Basis A incorporated into the Staff's response to Basis B.

Basis C.

The Soil Verification Survey as implemented is inadequate to serve its intended purpose.

Motion at 12.

Staff Response to Basis C.

Basis C cannot support admissibility of Contention B-2 because it is concerned with implementation of an application, rather than the application itself, so it fails to satisfy section 2.309(f)(1)(vi) by not identifying specific portions of, or alleged omissions from the application.

STV's discussions in Basis C concerns omissions from the WLS report which was created in January of 2007, and was not part of the license amendment application. See e.g., Motion at 16. STV fails to allege that the WLS report was material to the granting of the license amendment.

STV asserts what it believes the FSP "anticipated" would be done as part of the soil verification survey (SVS), then alleges that "the SVS departed from the anticipated program in a number of significant ways." Motion at 13. STV also claims that transects for borings were not taken along where the FSP indicated they would "typically" be taken. *Id.* at 13. Anticipations do not equal requirements; statements about what is typical imply that some items will be atypical.

STV states that the Army chose to lump soil series together across the site, and has proposed a "broader brush" for fate and transport modeling. *Id.* at 16. STV adds that the approach is inadequate and will impact the eventual modeling. Motion at 16. Since the concern is with eventual modeling, it is not supportive of the implementation contention. If STV is asserting that the plan should have had such modeling, STV is late. In Basis C, STV has not identified an omission in the application or supporting documentation.

Basis C for implementation contention B-2 simply does not present a licensing issue, since STV has not identified a disagreement with the application. Instead, STV is using the FSP as a standard and alleging that the FSP is not being followed. The adequacy of the FSP is already an admitted contention. Allegations of failure to follow the FSP are simply beyond the scope of the hearing.



STV erroneously states:

According to the website, JPG received 2.00 inches of rain on August 28, 2006, with more than one inch falling between 6:00pm and 7:00pm. See [http://raws.wrh.noaa.gov/cgi-bin/roman/meso\\_base\\_past.cgi?stn=BIGI3&unit=0&time=LOCAL&day1=28&month1=01&year1=2006&hour1=0](http://raws.wrh.noaa.gov/cgi-bin/roman/meso_base_past.cgi?stn=BIGI3&unit=0&time=LOCAL&day1=28&month1=01&year1=2006&hour1=0).

Motion at 14.

The website shows that 1.38 inches, not 2.00 inches, of rain fell on August 28, 2006.

Mesowest Station Interface at [http://raws.wrh.noaa.gov/cgi-bin/roman/meso\\_base\\_past.cgi?stn=BIGI3&unit=0&time=LOCAL&day1=28&month1=08&year1=2006&hour1=24](http://raws.wrh.noaa.gov/cgi-bin/roman/meso_base_past.cgi?stn=BIGI3&unit=0&time=LOCAL&day1=28&month1=08&year1=2006&hour1=24) (visited March 9, 2007) ("Weather Conditions at August 28, 2006 - 23:45 EST . . . Precipitation accumulated since midnight: 1.38", in 24 hours: 1.38"). STV fails to support its contention by having erroneous information. See 10 C.F.R. § 2.309(f)(1)(v).

STV alleges that the soil verification survey is inadequate because it did not verify how close to native conditions the soil was, but does not specify of this was due a plan departure. Motion at 16-17. If STV is alleging that the FSP was inadequate for not including this specific condition, then STV is late.

#### Basis D.

The well location selection methodology for ground water conduit and overburden characterization as implemented under FSP Addendum 4 is inadequate to serve its intended purposes.

Motion at 17.

#### Staff Response to Basis D.

Basis D cannot support admissibility of Contention B-2 because it is concerned with implementation of an application, rather than the application itself, so it fails to satisfy section 2.309(f)(1)(vi) by not identifying specific portions of, or alleged omissions from the application.

In discussing Basis D, STV states

The FSP hypothesizes that conduits will be likeliest in areas where a) there is an identifiable lineament trace on aerial photography, b) there is discharging ground water to surface water associated with a mapped lineament trace, c) there is greater depth to bedrock and weathering based on the electrical imaging survey, and d) the electrical imaging survey identifies potential karst features.

Motion at 17.

But STV claims that the FSP was not followed, in that

The full complement of the four elements that are identified in the FSP as indicative of where ground water conduits would be likeliest, and listed as a)- through d) above, were not the criteria that resulted in the selection of well locations based upon the discussion in the WLS report.

Motion at 18.

STV is using the FSP as a standard, then alleging that the FSP is not being followed.

In its discussions of Basis D, STV states,

These locations were chosen based on the coincident proximity of mapped lineaments from the FTA and low-resistivity anomalies from the EI Survey. The inadequacies and limitations of the interpretations from these activities are respectively discussed in Basis a and Basis b above, and are incorporated here by reference.

Motion at 17.

To the extent that the Board permits incorporation by reference of discussions in Basis A and Basis B as part of Basis D, the Board should consider the staff's responses incorporated.

In addition, STV asserts that to "the extent that Addendum 4 parallels the original FSP, the inadequacies that are described in Contention B-1, Bases a through h, apply equally to the procedures, methods and protocols detailed in Addendum 4 and the bases and discussions are included by reference." Motion at 15. However, STV offers no further support for its assertion and provides no clarifications on what methods, protocols, and procedures in Addendum 4 are allegedly inadequate.

The STV has not shown how adequacy of Addendum 4 is within the scope of the proceeding, so section 2.309(f)(1)(iii) is not met. See *USEC*, LBP-05-28, 62 NRC 585, 595-6. STV has made no showing that Addendum 4 is material to the findings the NRC must make to support the action. See *Id.* at 596. Addendum 4 was not part of the application, nor is it listed in the issued license amendment. STV has not provided portions to specific sections of the application, but just generally asserted that Addendum 4, which was not part of the application, is inadequate, so section 2.309(f)(1)(vi) is not met. See *Id.* at 598

To the extent that STV is alleging that Addendum 4 alters the FSP well plan (e.g., Motion at 20), then a 2.206 petition may be a better choice. See *Pilgrim*, CLI-06-26, 64 NRC at 226-7.

Basis E.

The implementation to date of the stream and cave gauging program as described in the WLS Report is inadequate to serve the program's intended purpose.

Motion at 22.

Staff Response to Basis E.

Basis E cannot support admissibility of Contention B-2 because it is concerned with implementation of an application, rather than the application itself, so it fails satisfy 2.309(f)(1)(vi) by not identifying specific portions of, or alleged omissions from the application.

It is difficult to discern from STV's discussions of Basis E exactly how the implementation of the stream and cave gauging program is inadequate. STV first states that, "The FSP provides no stated rationale for the purpose or design of the stream and cave gauging program." Motion at 22. STV concedes that, "The SWG [surface water gauging] was expanded relative to that laid out in the FSP." *Id.* STV does not explain how going beyond the FSP demonstrates inadequate implementation of the FSP.

STV states that "Although data have been collected since September 2006 from the gauging system of the SWG program, none of those data have been released in the WLS report

or otherwise publicly disclosed." Motion at 23. The fact that the data were allegedly collected in September demonstrates that the data were not material to the April licensing decision, and are not material per section 2.309(f)(1)(iv). Also, how the data will be used in the future does not support STV's Bases E about inadequate use in the past.

STV said that the use of the gauging data is to compute stream flow rates from the gauge data and then use those flow rates to estimate recharge quantities and characteristics of the aquifer, but adds that the objective for which those data will be used is inadequate and inappropriate, regardless of the data themselves. Motion at 23. To the extent that STV is arguing that the use of the WLS report or SWG program data is inappropriate, STV's argument is late. STV was on notice as early as February 9, 2006 that the stream and cave gauging program would be used to assess recharge and precipitation relationships. See Letter from Alan Wilson, Garrison Manager, to Tom McLaughlin, February 9, 2006 (ADAMS ML060590379); *See also Safety Evaluation Report For Issuance Of Amendment No. 13 to Materials License No. Sub-1435, Department of the Army, Jefferson Proving Ground at 6-7 (ML053320014)*. The intended use of the data described in the WLS report cited by STV is the same as was discussed in the Army's response in the February 9 letter. STV cites to no new information, therefore their basis is not timely, and should be dismissed. See 10 C.F.R. §§ 2.309(f)(2)(i-ii).

STV concludes the Basis E discussion with the conclusion that the gauging data cannot appropriately be used until detailed gain-loss studies have been done and initial assumptions tested -- that Big Creek and Middle Fork are not losing streams. Motion at 24-25. STV fails to show or specify where the FSP required such studies and tests, so STV has not supported inadequate implementation basis. In Contention B-1, Basis A, STV already expressed concerns about FSP design including stream gauging studies. *STV Petition* at 17. STV now cites no new

information regarding adding the tests of the initial assumptions to the plan, so STV is late, and this basis should be dismissed.

Basis F.

The field collection and analytical methods planned and used to document and evaluate data yielded by FSP implementation are inadequate to serve their intended purposes.

Motion at 25.

Staff Response to Basis F.

Basis F cannot support admissibility of Contention B-2 because it is concerned with implementation of an application, rather than the application itself, so it fails to satisfy 2.309(f)(1)(vi) by not identifying specific portions of, or alleged omissions from the application.

Furthermore, STV admits

The Army has expressly proposed *not* to define formally at this time its procedures or methodologies for data analysis and evaluation for yet-to-be collected or released data sets

Motion at 25.

STV then speculates as to what methods might be used, then attacks those methods. Motion 25-37. Such speculation about what the licensee might do in the future simply cannot logically support the Contention B-2's concern about past implementation. Bare assertions and speculation are not enough to trigger a hearing. *GPU Nuclear, Inc., Jersey Central Power & Light Company And Amergen Energy Company, LLC* (Oyster Creek), CLI-00-6, 51 NRC 193, 208.

To the extent that STV is challenging the FSP and other portions of the application for not expressing defining procedures or methodologies for data analysis and evaluation, STV is late. 10 C.F.R. § 2.309(f)(2)(i).

In the absence of any definite plans, STV declares that "the procedures and methods being used to evaluate ERM data will be cited to illustrate the inadequacies of the formally

undisclosed but clearly contemplated evaluation techniques for the FSP data." Motion at 25. STV considers the assumed methods to be inadequate. *Id.* at 26. STV states they want to correct inadequate planned data evaluations. *Id.*

STV claims problems with DU Recognition in Environmental and Characterization Samples, and cites ERM sampling results as support. *Id.* at 27. STV alleges various departures from the Standard Operating Procedure (SOP), provided as Appendix A to the April 2006 ERM data report. *Id.* at 28-31. This argument appears to be an attempt to revive the inadmissible Contention A-1 regarding the ERMP. See *JPG*, LBP-06-27, 64 NRC at \_\_\_ (slip op. at 13-15) (Dismissing Contention A-1). STV is attempting to introduce issues challenging the adequacy of the EMRP, which the Board has already ruled is beyond-scope. *Id.* at 15.

Second, to support Basis F, STV has concerns with the variability of U-238/U-234 activity ratios. Motion at 31. Again, STV attacks interpretation of ERM and characterization data. Motion at 31. This appears to be an attempt to revive Contention A-1, which is beyond scope. *JPG*, LBP-06-27, 64 NRC at \_\_\_ (slip op. at 15).

Third, in support of Basis F, STV expresses concerns about samples with mixed sources of uranium. Motion at 33. STV asserts that "A further inadequacy in the evaluations that are performed for the ERM if applied to FSP data is the refusal to consider the effects of mixing when evaluating the data." *Id.* at 33. "10 years before the Army's categorical dismissal of DU as a possibility in environmental surface water samples at *JPG* in April, 2006, Ebinger and Hansen saw patterns in the data of surface water samples that were consistent with mixtures of natural and depleted uranium." Motion at 35. The Staff disagrees with STV's implication that surface water samples had depleted uranium. As accurately quoted by STV (*Id.*), Ebinger and Hansen wrote in part, "the isotopic ratios from surface water data cannot be used to

demonstrate reliably the source of the U." Motion at 35. The Staff observed that the previous paragraph in the same document stated:

Figure 9 shows that about 84% of the samples have U activities of 1 pCi/L or less. The low concentrations and the relatively large error terms in measurements with small values explain part of the trends observed in the isotopic ratios. *The measured concentrations could be due to natural U weathering and transporting to surface waters, U from fertilizers applied upstream and flowing to the surface water sampling sites, weathering and transport of DU munitions, or a combination of all or some of these sources. . . . the concentrations were not high enough for accurate determination of the  $^{234}\text{U}/^{238}\text{U}$  ratio.*

Michael H. Ebinger and Wayne R. Hansen, Jefferson Proving Ground Data Summary and Risk Assessment, Environmental Science Group, Los Alamos National Laboratory, February 1996, at 13 (available at [http://www.jpqbrac.com/documents/admin\\_record/site%20identification%20characterization/jpg%20data%20summary%20and%20risk%20assessment.pdf](http://www.jpqbrac.com/documents/admin_record/site%20identification%20characterization/jpg%20data%20summary%20and%20risk%20assessment.pdf)) (emphasis added)

Last, STV presents concerns with alternative analytical methodologies and protocols. Motion at 35. But, once again, STV's true concern is with the ERM sampling. "Substantial ambiguity has resulted from the ERM field sampling protocols, particularly with the departures from the SOPs, which produce low concentrations and high analytical uncertainty." Motion at 35-36. Again, these do not support admissibility of Contention B-2.

STV also states:

Collecting and analyzing larger samples than specified in the FSP, and running longer count windows would improve the utility of the current methodology. . . . The Army's failure to include this alternative methodology, even for purposes of further investigation of samples whose alpha activity ratios it considers ambiguous, is a major flaw in the FSP as it is currently being implemented.

Motion at 36.

Both of those statements appear to support admitted contention B-1 that the FSP is inadequate, and are not material to Contention B-2 (despite use of the word "implementation" (Motion at 36). To the extent STV is alleging the sampling and counting in the FSP were inadequate, STV is late.

In Basis F, STV says that the comments in this basis reflect relevant evaluations of FSP data yielded by the hydrogeology sampling programs discussed in Bases A through E above, and also from the initial Deer Sampling program as discussed in more detail in Basis G, which is incorporated here by reference. Motion 26-27. To any extent that the Board permits incorporation of other bases into Basis F, all in support of Contention B-2, the board should consider the staff's relevant discussions also incorporated by reference.

Basis G

The initial Deer Tissue Sampling Study as implemented is inadequate to serve its intended purpose.

Motion at 37.

Staff Response to Basis G

Basis G cannot support admissibility of Contention B-2 because it is concerned with implementation of an application, rather than the application itself, so it fails to satisfy 2.309(f)(1)(vi) by not identifying specific portions of, or alleged omissions from the application.

At the outset, STV admits that the deer sampling was for a limited purpose, and notes that the adequacy is already challenged as Contention B-1 Bases n and o. (Motion at 37).

The deer sampling plan, including sample volumes, types, preservation requirements, and data use was discussed in the FSP Addendum dated November 2005. Letter from Corinne Shia, to Tom McLaughlin dated November 16, 2005 (ADAMS ML053350356) To the extent that STV is currently again arguing that the plan was inadequate, STV is late. 10 C.F.R. § 2.309(f)(2).

In STV's discussions of sampling methods inadequacies, STV claims the deer were likely not native to the DU area. STV also expresses concern that baiting impacted the data collected and the meaning of the results. (Motion 37-38). STV offers no interpretation as to the significance. STV also does not say if these actions met or departed from any plans of the



licensee. (Motion 37-38) STV's arguments do not even support Basis G, in that they do not demonstrate an implementation problem.

STV also says "There are number of inadequacies, as well, in the collection, management and interpretation of the data collected in the Deer Tissue Sampling Study." (Motion at 38). STV alleges "The results of the Deer Tissue Sampling Study indicate that penetrator-derived uranium has probably moved into the deer population, directly counter to the conclusions of the tissue study," Motion at 39. STV uses this conclusion to argue that proper implementation of the FSP required follow-up testing, which did not occur. (Motion at 39). STV's conclusion, even if true, does not demonstrate identify or challenge portions of the application. 2.309(f)(1)(vi). Instead, it holds the FSP up as a standard and alleges non-compliance. That is beyond the scope of the hearing as defined by the board. *JPG*, LBP-06-27, 64 NRC at \_\_\_ (slip op. at 12).

Second, STV argues that chemical analysis of the deer tissue was inadequate. Motion at 39. STV says,

According to Table A3-1 on page A3-3 of the FSP, all duplicate samples are supposed to have less than a 50% difference in value to be considered acceptable. In fact, in the results of the first deer sampling event, as released in the August 2006 report, many of the duplicate sample sets have a measurement difference of 50% or greater, with some showing differences as great as an order of magnitude ( i.e. ten-fold).

Motion 39-40

Once again, STV's conclusion, even if true, does not demonstrate identify or challenge portions of the application. 2.309(f)(1)(vi). Instead, it holds the FSP up as a standard and alleges non-compliance, so it is not admissible.

Third, STV alleges that deer sample information was not properly collected based on log book entries. Motion 41-42. STV fails to allege what procedure or regulation made log book

completion mandatory, but just says how such data can be useful without showing how the data would be of consequence to the proceeding. *Id.*

In support of Basis G, STV next claims,

The fourth inadequacy is the failure to fully collect, preserve, and analyze information about the deer sampled so that a more accurate assessment of potential ecological impacts could be made. . . . Yet this kind of information and analysis would be useful in documenting differences in radiation-related effects

between the populations and needs to be consistently noted and collected in all regions in all future sampling events.

Motion at 42.

STV's fourth set of arguments in support of Basis G fail to discuss how implementation did not match the plan, so fail to support the proffered implementation contention. In addition, the argument is for an omission of information that was not part of the application, so fails to show a dispute with the application under 2.309(f)(1)(vi). Instead, STV asserts that that deer from the DU area are larger, states that monitoring and tracking of deer population is needed to address the size difference. (Motion at 44).

STV alleges a fifth deficiency in that another analysis needed to be conducted on the deer sampling data, but was not performed in the Deer Tissue Sampling Study, namely an assessment of bioaccumulation. Motion at 45. However, STV immediately concludes such an endeavor would be futile due to the very poor reliability of the data compiled in the initial study, such an assessment using its data would be equally unreliable. Motion 45-46. This vague argument does not reveal if "needed" was in the context of should-have-been-planned, or if it represented an implementation problem, in which case it needed to specify how implementation deviated from the plan. The argument does not support admission of Contention B-2.

STV concludes the Basis G section with "In view of these multiple, significant deficiencies, the Deer Sampling Study must be redone and supplemented by additional biota

sampling in order to have any utility for its intended purpose within the FSP." Again, no dispute with the FSP is revealed. Instead, again, the FSP is the standard, so STV has identified no dispute with the application and not supported admission under 2.309(f)(1)(vi).

CONCLUSION

For the reasons set forth above, the Licensing Board should not admit Contention B-2.

Respectfully submitted

*/RA/*

David Roth  
Counsel for NRC Staff

Dated at Rockville, Maryland  
this 15th day of March 2007

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of )  
U.S. ARMY ) Docket No. 40-8838-MLA  
(Jefferson Proving Ground Site) )  
)

CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF RESPONSE TO AMENDED MOTION OF SAVE THE VALLEY, INC., TO ADMIT FOR HEARING ADDITIONAL CONTENTION B-2" in the above captioned proceeding have been served on the following by electronic mail with copies deposited in the Nuclear Regulatory Commission's internal mail system as indicated by a single asterisk or by U.S. Mail, first class, as indicated by a double asterisk, and by e-mail, this 15<sup>th</sup> day of March 2007.

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