

January 4, 2006 (8:15am)

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

OFFICE OF SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

In the Matter of

U.S.ARMY

(Jefferson Proving Ground Site)

Docket No. 40-8838-MLA  
ASLPB No. 00-776-04-MLA  
SUB-1435

January 3, 2006

**REPLY IN SUPPORT OF  
PETITION TO INTERVENE AND REQUEST FOR HEARING  
OF SAVE THE VALLEY, INC.**

Pursuant to 10 CFR § 2.309, the notice published by the Nuclear Regulatory Commission ("NRC" or "Commission") at 70 Fed. Reg. 36,964 (Jun. 27, 2005), and the Commission's Memorandum and Order, CLI-05-23, 62 NRC \_\_\_\_ (October 26, 2005), Petitioner Save the Valley, Inc. ("STV") petitioned to intervene and requested a hearing in the above-captioned proceeding on November 23, 2005. On December 16, 2005, the Department of the Army ("Army") filed its Response, opposing STV's Petition and Request in its entirety on the grounds that STV had not sufficiently asserted even one admissible contention. On December 19, 2005, the NRC Staff filed its Response, conceding that STV had standing and had sufficiently asserted one admissible contention supported by three sufficient bases and thus was entitled to intervention and a hearing but challenging the admissibility of STV's other two contentions and the sufficiency of the additional bases STV cited for the one contention Staff conceded to be admissible. As demonstrated below, however, all of STV's contentions are admissible on all of the bases claimed and thus warrant further investigation and hearing

TEMPLATE = SECY-037

SECY-02

in this proceeding as requested by STV.

The Army's and the Staff's challenges to STV's contentions and associated bases fall into two general categories. Moreover, most of the challenges apply to more than one contention and/or multiple bases, so STV will organize its Reply on the basis of the Army's and the Staff's challenges while indicating parenthetically to which contentions and/or bases they apply.

#### **I. STV'S CONTENTIONS ARE WITHIN THE SCOPE OF THIS PROCEEDING.**

The NRC Staff claims that STV's contentions regarding both the Army's most recent Environmental Radiation Monitoring Plan (ERMP) and its Health and Safety Plan (HASP) are inadmissible because those plans are outside the scope of this proceeding. (Staff Response, pp. 13, 37). As discussed below, these claims are contradicted by both the administrative record underlying this proceeding and the logical inter-relationship between the ERMP and the HASP and the Army's Field Sampling Plan (FSP) as necessary, integral components of the Army's JPG Site Characterization Project, which is the sole basis for the Army's request for an alternate schedule for submittal of a Decommissioning Plan for the JPG DU site. Accordingly, STV maintains that its contentions regarding the ERMP and HASP are clearly within the scope of this proceeding and the noticed hearing opportunity to which STV's Petition and Request responded. Alternatively, should the ASLB conclude that the Army's 2003 ERMP proposal has been withdrawn, STV requests leave to restate its ERMP contention to address the need for a replacement proposal.

The NRC Staff also contends that STV's contentions regarding the timeliness of and financial assurance for the JPG Site Characterization Project are outside the scope of the proceeding. (Staff Response, pp. 46, 52). As discussed below, Staff conveniently forgets both that this proceeding results

from the Commission reinstating a prior proceeding the scope of which includes the ultimate decommissioning of the JPG DU site and that the Army has previously withdrawn its prior decommissioning plans for the JPG DU site. Moreover, these contentions are clearly within the scope of the current hearing opportunity in this proceeding, even if that opportunity is limited to the Army's request for an alternate schedule for submittal of a decommissioning plan. Accordingly, STV maintains that its contentions regarding timeliness and financial assurance are within the scope of *this proceeding* and *the current hearing opportunity*. Alternatively, should the ASLB conclude that the STV contentions are beyond the scope of the *current hearing opportunity* although within the scope of *this proceeding*, STV requests leave to restate its timeliness and financial assurance contentions to limit their applicability to the JPG Site Characterization Project only.

**A. The Scope of This Proceeding.**

In his Memorandum and Order of September 12, 2005, in Docket No. 40-8838-MLA-2, ASLBP No. 04-819-04-MLA, the Presiding Officer, subject to Commission approval, reinstated this proceeding as the forum in which to address the Army's May 25, 2005 POLA request. *See* LBP 05-25, at 8-9. In taking this action, Judge Rosenthal found that the Army had confirmed that it "was abandoning its POLA application and was now seeking instead 'NRC approval of an alternate schedule for submittal of a decommissioning plan . . . and one 5 year period for the execution of appropriate site characterization, with the Licensee presenting the NRC a definitive license termination plan at the end of that period.'" *Id.*, at 4. As a result, he reinstated this proceeding because decommissioning of the JPG DU site was once again being planned by the Army within a finite time period:

It is equally apparent that the same marked difference does not exist between the new proposal and what was on the table in the form of decommissioning plans [in Docket 40-8838-MLA, ASLB 00-776-04] before the Licensee reached the conclusion, now rescinded, that further site sampling could not be done with an acceptable degree of safety. To be sure, the course of action that the Licensee now would follow does not conform precisely to what was provided in the [License Termination Plan (LTP) filed in that Docket], just as the LTP did not conform precisely to the decommissioning plan that it replaced in June 2001. The fact remains, however, that once again affirmative measures are being taken looking to the decommissioning of the site in a reasonably finite time period.

Id., at 7-8. The Commission approved the reinstatement of this proceeding on October, 26, 2005.

See CLI-05-23. In so doing, the Commission expressly characterized the reinstated proceeding as

“the Army’s new decommissioning proceeding”:

Further, as the Presiding Officer indicated, it is apparent that the Army’s new decommissioning proceeding raises substantially the same issues as the license termination plan proceeding he dismissed without prejudice in 2003. If the 2003 proceeding could not be “revived” when the Army returns to its original plan to decommission the site, the term dismissal “without prejudice” would be meaningless. In short, we see no reason to disturb the Presiding Officer’s decision to revive the earlier license termination plan proceeding rather than force Save the Valley to file a fresh intervention petition.

Id., at 3.

Thus, there can be no doubt that the scope of this reinstated proceeding includes the entire decommissioning process for the JPG DU site,<sup>1</sup> not merely the next step in that process, namely the review of the Army’s May 25, 2005 request for an alternate schedule to submit a decommissioning plan. Indeed, even if ASLB determines that the current hearing opportunity in this proceeding is limited

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<sup>1</sup>There can also be no doubt that the original scope of this reinstated proceeding included the ultimate decommissioning of the JPG DU site. See Notice of Consideration of Amendment Request for U.S. Army Jefferson Proving Ground Site in Madison, Indiana, and Opportunity for a Hearing, 64 Fed. Reg. 70294 (December 16, 1999) and Memorandum and Order, March 23, 2000, LBP-00-09.

to the Army's May 25, 2005 request for an alternate schedule to submit a decommissioning plan, the Army's ERMP, FSP, and decommissioning timetable, budget, and financial assurance are within the scope of that hearing opportunity.

Contrary to the Staff position, such a result is completely consistent with the Commission's decommissioning rules, particularly its Timely Decommissioning Rule. Indeed, the Staff itself has in the past said as much. On April 11, 2000, the Staff forwarded to the Commission a Standard Review Plan (SRP) entitled "Licensee Requests to Extend the Time Period Established for Initiation of Decommissioning Activities." (ADAMS ML003691766). In that SRP, the Staff expressly provided that, to support a proposal for extending the time period established for initiation of decommissioning activities at a site like the JPG DU site, a licensee would be required to demonstrate (among other matters) that the delay is not a threat to "the public health and safety" and is "otherwise in the public interest" – the precise same showings as the second and third requirements in 10 CFR § 40.42(g)(2). (SRP §§ 4.1.2, 4.1.3, p. 3).

To make the required public health and safety showing, the licensee is required by the SRP to:

- a. Submit the health and safety plan that will be in effect during the standby period. If the current health and safety plan will remain in effect during standby, state when it was submitted and when the NRC approved Health and Safety Plans will be reviewed in accordance with Section 10 of the SRP for Decommissioning.
- b. Discuss its record of regulatory compliance. This may be accomplished by presenting the results of NRC, U.S. Environmental Protection Agency, and State inspections for the past 5 years, at the site.

(SRP § 4.1.2, p. 3). To make the required public interest showing, the licensee is required by the SRP to provide the following information:

a. The reason the licensee is requesting an extension of the time period for initiation of decommissioning schedule, and an explanation of how the public's interest will be served by NRC approval of the extension. For example . . .

Operators of Federal facilities could explain how an extension of the time period for initiation of decommissioning would better take into account a broader Federal plan for decommissioning, that establishes priority, funding, and schedules, thereby reducing the public funds needed for decommissioning the facility;

b. A discussion of the current decommissioning cost estimate and the potential for increased decommissioning costs if the extension of the time period is approved. The licensee should also provide evidence of adequate financial surety for the ultimate decommissioning of the site. Financial surety documentation will be reviewed in accordance with Section 15 of the SRP for Decommissioning;

c. A discussion of: (1) the extent and nature of contamination and the potential for migration by airborne or groundwater pathways and (2) the plan for monitoring and maintaining the site, separate building, or outdoor area during the extension period. The plan should be sufficiently detailed to demonstrate that public and worker health and safety and the environment will not be negatively affected during the extension period. The operating maintenance and radiation protection programs previously approved by NRC may be continued during the extension period. The plan should also demonstrate that the applicant will conduct sufficient monitoring, during the extension period, to assure that residual contamination does not become a public nor a worker health and safety issue.

(SRP § 4.1.3, p. 4).

In addition, the SRP provides that the Staff's review should "verify that sufficient information has been provided in the licensee's request to satisfy the requirements of the Timeliness Rule and the information is consistent with the guidance in this SRP. (SRP § 5.1, p. 4). In particular, the Staff should make findings regarding:

- (2) the rationale for accepting or rejecting licensee's evidence that public health and safety will be adequately protected;
- (3) the rationale accepting or rejecting the licensee's demonstration that an extension of the time period for initiation of decommissioning is in the public's interest; and
- (4) the basis for concluding that there will be sufficient financial assurance to complete decommissioning at the time of license termination.

(SRP § 5.1, p. 5).

## **B. ERMP**

The Staff Response contends that the Army's 2003 ERMP proposal is not part of its current alternate schedule request because it was withdrawn along with the Army's 2003 POLA request. As a result, the Staff says that the ERMP approved in 1999 is currently in effect at the JPG DU site. (Staff Response, at 11). The Army's Response describes the situation differently: According to the Army, its 2003 ERMP proposal has not been withdrawn but has not been approved, either. Instead, the proposal has undergone revision in response to a November, 2004 Staff request for additional information and will undergo further revision in response to the result of the site characterization activities being proposed in conjunction with the current alternate schedule request. As a result, the ERMP currently being implemented at JPG is one defined by a Standard Operating Procedure for DU Sampling approved in March, 2000, with three later updates. (Army Response, at 2-3).

STV admits to some confusion regarding the status of the Army's 2003 ERMP. As noted in STV's Petition and Request (p. 12, n. 3), STV's President and Counsel had a teleconference with Staff and Army representatives on November 9, 2005, to clarify certain legal and regulatory policy matters in preparation for filing the STV Petition and Request on November 23, 2005. In that teleconference, STV specifically inquired whether the Army's 2003 ERMP was part of its current request or had been withdrawn along with its 2003 POLA request. STV was expressly advised that the ERMP submitted by the Army with its 2003 POLA request was also part of its current request and remained "on the table" in this proceeding. Indeed, the Staff stated that it had issues of its own with the Army's 2003 ERMP that it planned to pursue.

This advice seemed completely reasonable to STV in November and it still appears reasonable to STV now, even though the Staff seems to have changed its view of the matter in the interim. There are concededly significant deficiencies in the ERMP approved in 1999 and currently in force at the JPG DU site. Yet, the ERMP is the principal means by which the Army will assure that the requested alternate schedule for submittal of its decommissioning plan for the JPG DU site will present no undue risk from radiation to the public health and safety, an express requirement of 10 CFR § 40.42(g)(2). The alternate schedule being requested by the Army requests a five-year delay in the submittal of its decommissioning plan, which will necessarily entail an even longer delay (e.g., seven years) in the actual completion of decommissioning. Thus, it would seem essential that the Army's deficient 1999 ERMP be modified as part of its alternate schedule request to assure protection of the public during the lengthy period required to implement it.

The Army's 2003 POLA, as the Staff suggests, did request an indefinite delay in decommissioning, but required Commission review and approval of that delay in five-year increments. The delay in decommissioning contemplated by the Army's current request is therefore essentially identical to the first and only certain increment of delay contemplated in its 2003 POLA request. Thus, it seems completely logical to STV that if a modified ERMP was a necessary part of the Army's 2003 alternate schedule request, it would be a necessary part of its 2005 alternate schedule request also.

According to the Staff, "The proposed alternate schedule, *including the site characterization plan contained in the FSP and HASP*, does not require any change, or reference, to the existing ERMP." Staff Response, at 12 (emphasis supplied). However, the documentary record leading up to and supporting the Army's May 25, 2005 alternate schedule request disputes this assertion and lends



credence to the conclusion that the 2003 ERMP *is* part of the current request.

On March 22, 2005, the Staff sent a letter to the Army requesting clarification of its intent regarding its then pending 2003 POLA request. In that letter, the Staff specifically requested that the Army provide, among other information, “comprehensive details . . . on the proposed revisions to the ERM program.” (ML050820134). In its May 25, 2005 response to this Staff letter which first the Staff and later the Commission considered to be a new POLA request superseding the Army’s 2003 alternate schedule request, the Army stated expressly that one of the objectives of its new request was “to provide the basis for modifying the current monitoring program within the next 2 to 3 years.” (ML051520319).

To support its new POLA request, the Army has developed a comprehensive Work Breakdown Structure (WBS) for what it calls “the JPG site characterization project.” This WBS is generally described in Chapter 4 of the FSP and summarized in Table 4-1. (FSP, pp. 4-1 thru 4-10). One of the stated objectives for the JPG Site Characterization Project is to “[p]rovide the basis for modifying the current monitoring program within the next 2 to 3 years.” (FSP, p. 4-1). The entirety of WBS Section 3.0 is ERM Sampling, with WBS Tasks 3.1 to 3.10 being the semiannual ERM sampling to be performed in FY 2005-09. In addition, WBS Task 3.11 is specifically entitled “Recommendation for Revised ERM Program Plan.” Its description expressly states that a project “deliverable” will be a “Draft and final ERM Program Plan anticipated to revise the sampling program proposed in the draft ERM Program Plan (U.S.Army 2003b).” It shows that this task will be completed in FY 2009 and the resulting recommendations will be implemented in ERM Sampling Event 10 in the spring of FY 2010. (FSP, p. 4-4). The overall schedule for the JPG Site Characterization

Project is presented in Figure 4-1. It also shows the entire ERM Sampling Program as a component of the Project for its entire duration, culminating in "Recommendations for Revised ERM Program Plan between 1/11/10 and 2/19/10. (FSP, p. 4-10).

Thus, it appears to STV that the Army's 2003 ERMP proposal is both logically and practically intertwined with its JPG Site Characterization Project, especially but not exclusively its FSP component. In particular, it appears to STV that the Army and the Staff (as well as STV) have recognized that the Army's current monitoring program is inadequate to assure protection of the public health and safety from the dangers of radiation during the JPG Site Characterization Project and therefore requires revision as soon as reasonably possible to correct its acknowledged deficiencies. Based on its November 9 conference call with the Army and the Staff, STV understood that the Army sought to revise its monitoring program pursuant to its 2003 ERMP proposal in conjunction with its current alternate schedule request. Given that understanding, STV has sought to use the opportunity it currently has to be heard regarding deficiencies in the 2003 ERMP proposal.

Alternatively, if the ALSB finds that the 2003 ERMP proposal has actually been withdrawn along with rest of the Army's 2003 POLA request as asserted by the Staff, then STV expressly reserves any right it may subsequently have to request a hearing on any replacement ERMP subsequently submitted by the Army, much as it did in its Petition and Request with respect to any revised Decommissioning Plan subsequently submitted by the Army. (Petition and Request, p. 12 n. 3). In that event, STV also requests leave to restate its Contention A-1 as follows:

**Contention A-1: The Army's May 25, 2005 alternate schedule request is inadequate because it does not propose a timely revision to its Environmental Radiation Monitoring**

**Program (ERMP) to protect public health and safety from any undue risk from radiation as required by 10 C.F.R. § 10.42(g)(2) during the lengthy period required to implement the alternate schedule request.**

**a. Basis. The ERMP approved in 1999 and currently in effect at the JPG DU site has material deficiencies which have been identified by the NRC Staff and acknowledged by the Army which require correction to assure protection of the public health and safety from undue risk from radiation.**

**b. Basis. The Army submitted a proposal for a revised ERMP as part of its 2003 POLA request to address the material deficiencies in the ERMP currently in effect, but that proposal has now been withdrawn.**

**c. Basis. The Army did not submit a new proposal for a revised ERMP as part of its current alternate schedule request. Instead, the Army plans to delay submitting a new proposal for a revised ERMP until the conclusion of the fourth year of its JPG DU site characterization project, i.e. late 2009 or early 2010 at the earliest. Thus, the acknowledged deficiencies in the current ERMP will not be corrected on a timely basis.**

**d. Support. STV relies on the expert opinions of Charles Norris and Diane Henshel, whose resumes were previously provided, as well as the assertions made and documents cited in the Staff Response and this Reply, to support its alternate ERMP Contention and Bases.**

### **C. HASP**

**In a letter dated March 25, 2005, the Army advised the Staff that it had concluded that site characterization of the JPG DU site was currently feasible, notwithstanding the presence of the UXO**

which had been the basis of the Army's 2003 request for indefinite postponement of JPG site characterization. Specifically, the Army stated:

There does remain risk to human safety in placing wells and gathering additional site specific data in areas with unexploded ordnance (UXO). However, based upon further Army review (including the efforts recently conducted by the Army Environmental Center at JPG) and the use of explosive ordnance disposal personnel to identify areas acceptable for soil intrusive activities, the Army believes the risk can be reduced to a point where wells can be placed and other site specific data can be obtained in certain areas within the zone of UXO. If approved by the NRC, and contingent upon funding, the Army plan is to begin implementing these additional actions in fiscal year 2006, with an estimated 5 to 7 years being required to complete the additional actions. The details of that plan are being prepared by the Army and will be submitted to the NRC in accordance with the request from the NRC dated March 22, 2005.

(ML051520319).

In its subsequent May 25, 2005 letter actually proposing the JPG Site Characterization Project to the Staff, the Army expressly stated that it was requesting "an alternate schedule submittal of a Decommissioning Plan for the JPG license SUB-1435 in accordance with 10 CFR 40.42(g)(2) as supported by the details in the enclosed plans ("Field Sampling Plan for Depleted Uranium (DU) Impact Area Site Characterization, Jefferson Proving Ground, Indiana" and "Health and Safety Plan for DU Impact Area Site Characterization, Jefferson Proving Ground, Indiana"). The Army also explained the need for the HASP:

There is still risk to human health and safety in placing the wells and in engaging in the gathering of site-specific data in the areas with unexploded ordnance. However, monitoring and information gathering processes employed to date have left gaps in the information gathered, and the Army will now have to assume those risks in order to fill in the gaps in information to ensure that its future decommissioning plan provides the maximum safety to the local populace.

(ML051520319).

Both the FSP and the HASP were forwarded to the Staff with the Army's May 25, 2005 letter. In defining the scope and objectives of the JPG Site Characterization Project in the FSP, the Army explained that "plans for this project are defined in detail in this FSP and the HASP (SAIC 2005a) for the first year (2005-2006) of the project. Subsequent year tasks and associated activities will be planned and detailed as addenda to the FSP and HASP." (FSP, p. 4-1).

Contrary to the Staff's surprising view, the Army itself (correctly) considers the HASP to be an integral part of the JPG Site Characterization Project. As the Army has explained, "The presence of UXO and DU penetrators presents a potential H&S risk to field personnel. *Site investigation plans will be adjusted, as appropriate and necessary, to ensure that H&S of all field personnel are always protected.*" (FSP, p. 4-1) (emphasis added). As a result, there is necessarily a complex, iterative interplay between the HASP and the FSP by which the nature and location of site characterization activities are determined in such a manner as to achieve concurrently two different and somewhat conflicting objectives, namely accomplishing adequate site characterization through performance of the necessary site characterization activities defined by the FSP while assuring the safety of personnel performing site characterization activities by implementing the provisions of the HASP. Achievement of these dual objectives is essential *both* to obtain the data necessary for an accurate Conceptual Site Model for the JPG DU site *and* to avoid a detonation of UXO within the DU area which could threaten the health and safety of SAIC personnel.

The most critical implications of this interplay for the actual conduct of the FSP and thereby the ultimate adequacy of JPG site characterization are discussed in more detail below in the course of addressing Army and Staff objections to particular bases for STV's FSP and HASP contentions. But,

patently, the HASP is not and cannot be outside the scope of this proceeding given its critical implications for the actual conduct of the FSP and the ultimate adequacy of JPG site characterization.

#### **D. Timeliness of and Financial Assurance for Decommissioning**

Having shown that the scope of this proceeding includes the entire JPG DU site decommissioning process, STV also maintains that the timeliness of and financial assurance for the entire decommissioning process are unquestionably within the scope of the current hearing opportunity. Indeed, STV submits that the current status of the JPG DU site decommissioning process is such that *now* is clearly the time to address the issues of timeliness and financial assurance.

In his Memorandum of March 31, 2005, Judge Rosenthal referred the entire matter of the unacceptable status of the JPG decommissioning process to the Commission, a referral which resulted in the Commission Memorandum and Order of October 26, 2005 reinstating this proceeding. In that March 31 Memorandum, Judge Rosenthal summarized the status of the JPG decommissioning process as follows:

[S]ome eleven years have now elapsed since the Licensee terminated testing activities on its JPG site that left behind an accumulation of DU munitions. Perhaps more to the point, this past March 23 was the fifth anniversary of the grant of the hearing request of Petitioner, an organization with members who live in proximity to that site and who profess concern about the site's condition – a concern scarcely unreasonable given that, according to what the Licensee apparently represented to the Staff, the site cannot now be even characterized without subjecting its personnel and that of contractors to an unacceptable safety risk.

Over the course of the past five and a half years, the Staff has been favored with one proposed decommissioning plan; then a second one that was so deficient as submitted that the Staff would not commence a technical review of it; and, lastly, a proposal that the Licensee be granted a POLA, to be renewable until such time, if ever, that the Licensee should conclude that a site characterization can be safely accomplished. Close to eighteen months have elapsed since the POLA proposal was

accepted for technical review. Nonetheless, not only has the Staff not completed its technical review and issued the required EA and SER, but also, we are now informed that it is unable to provide at this time any estimate as to when that might be accomplished. This is said to be because of its endeavor to obtain information from the Licensee that is deemed necessary to complete the review but has not as yet been produced.

We find it difficult to believe that what is involved in passing judgment on a POLA proposal is so complex that it should take years to obtain from the Licensee required information. We have not, however, endeavored to explore that matter further. As we understand it, our jurisdiction in proceedings such as this does not extend to superintending the Staff's discharge of its review functions. See Duke Energy Corporation (Catawba Nuclear Station, Units 1 and 2), CLI-04-06, 59 NRC 62, 74 (2004). Apparently, the Staff is satisfied with allowing the technical review to remain in limbo while it continues its efforts – to this point far from totally successful – to get from the Licensee the information it considers necessary in order to complete the technical review. Although we might have our doubts as to the warrant for such an approach, as we see it we are foreclosed from either calling upon the Staff to justify it or directing the Licensee to furnish a full explanation regarding its default in furnishing to the Staff the information sought from it.

At the same time, this much is readily apparent. As a result of its failure over an extended period – justified or unjustified – to provide the information the Staff requested, the Licensee has, in effect, possessed the very POLA that is the subject of the present proceeding. Indeed, it might be reasonably said that it has had the equivalent of such a license for the entire eleven years or so since it ceased the testing of the DU munitions. It seems highly unlikely that such was the contemplation of the Staff or the Commission at the time of the grant of the materials license under which the testing was performed – to the contrary, we think it most probable that the expectation was that, upon cessation of operations at the JPG site, a decommissioning plan would be forthcoming in relatively short order.

LBP 05-09, at 6-8.

Nine more months have now past since Judge Rosenthal wrote his March 31 Memorandum. In that period, the Commission has learned that the Army is seeking an additional *five years* to characterize and submit a decommissioning plan for the JPG DU site, *in addition to* the time required for the Commission to review, modify as appropriate, and approve the Army's characterization plan.

Thus, if the Army's current alternate schedule request is approved, it could easily be 2011 before the Army would even submit a decommissioning plan for the JPG DU site, with an additional, unknown number of years required to review, modify, approve and implement that plan before the site would actually be decommissioned.

Moreover, budgetary considerations are indisputably a significant reason for the protracted delay in the decommissioning of the JPG DU site. At the time that decommissioning of the JPG DU site was initially proposed in 1993, the Army estimated that it would cost only \$17,462,500 to decommission the site for unrestricted use and stated its intent that "funding will be available sufficiently in advance of decommissioning to prevent delay of required actions." (ML003685261). By contrast, in its current proposal in 2005 for an alternate schedule to submit a decommissioning plan in 2010 (or, more likely, 2011), the Army provides no updated cost estimate for its plan to decommission the site only for restricted use, includes no budget even for the Site Characterization Project phase of the decommissioning process, and (through its contractor SAIC) admits that "schedule accelerations are desirable and possible technically if there are no budget constraints on an annual basis." (FSP, at 4-1).

Under these circumstances, this is clearly the appropriate time to require the Army to provide an updated timetable, projected budget, and financial assurance for the recently reinstated decommissioning process at the JPG DU site in its entirety. While preliminary planning for the decommissioning process has been taking place since 1993, no meaningful decommissioning activity has yet been initiated at the JPG DU site because of the protracted delays previously described which have taken place in the intervening twelve-plus years. Moreover, the Army's most recent proposal seeks an additional delay to submit a new decommissioning plan for another five to six years. As a



result, the circumstances here are essentially comparable to those contemplated in the SRP for Licensee Requests to Extend the Time Period for Initiation of Decommissioning Activities, under which a timetable, cost estimate, and financial assurance would be required.

Alternatively, should the ASLB determine that issues relating to timeliness and financial assurance are limited during this hearing opportunity to those related to the Army's JPG DU Site Characterization Project, STV would request leave to restate its timeliness and financial assurance contentions as follows:

**1. Contention D-1. The alternate schedule being proposed fails to meet the requirements of 10 C.F.R. § 40.42(g)(2) for a *timely* characterization of the JPG DU site.**

**a. Basis. The Army has proposed a further delay in the submittal of its decommissioning plan for the JPG DU site until a date five years after Commission approval of its alternate schedule request and supporting site characterization project.**

**b. Basis. The Army has proposed a five-year delay in the submittal of its decommissioning plan because of the time allegedly required to perform its JPG DU site characterization project. However, the Army's principal contractor for its site characterization project has admitted that "schedule accelerations are desirable and possible technically if there are no budget constraints on an annual basis." (FSP, p. 4-1).**

**c. Basis. The Army has failed to provide either the technical or the financial information necessary to identify, describe, and evaluate the site characterization schedule accelerations which are desirable and possible technically or the budget constraints which apparently preclude the Army from adopting those schedule accelerations.**

**2. Contention D-2: The financial assurance provided for the Army's alternate schedule is insufficient to meet the requirements of 10 C.F.R. §§ 40.36 and 40.42(g)(2) for a *complete, definite and quantified* financial commitment for the characterization of the JPG DU site.**

**a. Basis.** The Army says in its May 25, 2005 alternate schedule request, "All actions under the plan are subject to funding of course." However, there is no specific budget for the overall JPG Site Characterization Project, its principal components, or the individual years in the five-year implementation period included with any of the supporting materials submitted by the Army.

**b. Basis** There was no formally expressed or executed Statement of Intent on the part of an Army official with the authority to approve or even to request the necessary funds for the JPG Site Characterization Project submitted with the Army's alternate schedule request.

**c. Basis.** In response to a Request for Additional Information from the NRC Staff following submission of its May 25, 2005 alternate schedule request, the Army belatedly submitted a purported Statement of Intent on September 14, 2005. *See* ADAMS Document ML052710071. However, this Statement does not satisfy the requirements of 10 C.F.R. § 40.36(e)(4) for Statements of Intent by government agencies such as the Army. In the first place, the Statement of Intent contains no cost estimate to conduct the JPG DU Site Characterization Project, let alone to perform eventual site decommissioning as required by the rule. There is also no information accompanying the Army's Statement as to what effect,

if any, the requested delay in submitting a decommissioning plan will have on the eventual cost of decommissioning. In particular, there is no information regarding the effects, if any, of the additional time built into the schedule for the Site Characterization Project beyond that which is technically desirable and feasible due to annual funding constraints. NRC guidance puts the Army on specific notice that this is significant information to be submitted in support of an alternate schedule request of the length and nature of the one here. *See, e.g.,* NUREG-1757, Vol.3, Section 2.6 (requiring "discussion of the current decommissioning cost estimate and the potential for increased decommissioning costs if an extension of the time period is approved") and Vol.1, Section 5.4 (stating "waste disposal costs have, in the past, increased at rates significantly higher than the rate of inflation and therefore delaying remediation will result in higher costs to the public.") In the second place, the Army's Statement of Intent does not provide adequate documentation that the funds required to perform , whatever the amount may be, will be requested when necessary to permit timely implementation of the JPG Site Characterization Project. There is also no documentation whatsoever of the authority of the letter's signator to request and approve disbursement of the funds necessary for these actions, let alone decommissioning of the site. *See* NUREG-1757, Vol. 3, Sections 4.3.1 and 4.3.2.13 and Appendix A-16.

3. Support. In addition to the documents cited in this Reply, STV relies on the legal opinions of its attorney, Michael A. Mullett, whose resume was previously provided, to support its timeliness and financial assurance contentions and bases.

**II. THE SPECIFIC BASES WHICH STV CITES IN SUPPORT OF ITS CONTENTIONS (A) DO RAISE ISSUES WHICH ARE MATERIAL TO THE THREE FINDINGS WHICH THE COMMISSION MUST MAKE WITH RESPECT TO THE ARMY'S CURRENT REQUEST FOR AN ALTERNATE SCHEDULE FOR SUBMITTAL OF A DECOMMISSIONING PLAN, (B) DO RAISE GENUINE ISSUES OF LAW OR FACT WITH THE ARMY'S PROPOSAL, AND/OR (C) DO RAISE PROPERLY SUPPORTED ISSUES WITH THE ARMY'S PROPOSAL.**

STV agrees with the Staff that NRC regulations state that an alternate schedule for the filing of a decommissioning plan may be approved only if it meets three general requirements:

1. It is necessary to the effective conduct of decommissioning operations;
2. It presents no undue risk from radiation to the public health and safety; and
3. It is otherwise in the public interest.

10 CFR § 40.42(g)(2). However, STV believes that NRC regulatory and guidance documents elaborate and explain what subsidiary findings and evidentiary submissions are entailed by these general requirements. STV also agrees that, pursuant to the Commission's October 26, 2005 Memorandum and Order that, to be admissible on the bases cited, its contentions must satisfy the requirements of 10 CFR § 2.309. In particular, STV agrees that its cited bases must raise issues which are (a) material (b) genuine, and (c) supported by facts or expert opinions. However, for the reasons discussed in detail below, STV disagrees with the Staff and the Army and asserts that virtually all of the bases it cites for its contentions meet the requirements of 10 CFR § 2.309, as explained below.

**A. Bases for ERMP Contention.**

In addition to the Staff's challenge as to whether STV's ERMP contention is within the scope of this proceeding, the Staff and the Army both challenge the bases for that contention on multiple grounds. As shown below, these challenges lack merit and should be rejected.

**1. Contention A-1: The Army's most recent Environmental Radiation Monitoring Plan is still inadequate in several material respects to meet the requirements of 10 C.F.R. § 10.42(g)(2).**

**a. Basis.** The ERMP states with respect to the monitoring results for the various environmental media that, at 50% of Action Level, SBCCOM will conduct an "independent assessment" of the results and any trends. *See* ERMP, Table 3-1. Yet, there is no specification of the assessment which will be performed and no explanation offered as how an assessment, however specified, will be "independent" if it is performed by the Army. The ERMP should further define and explain the "independent assessment."

**(1) Staff Response.** The cited basis does not raise a genuine issue with the 2003 ERMP because STV has not explained why the Army's review is not "independent" of its contractor. (Staff Response, p. 14).

**(1) Army Response.** "Independent" means the normal multi-level review process, where the Army contractor submits its results to the Army for its review and the Army then forwards the results to NRC Staff for its review. (Note: The triggering Action Levels are those specified in the 2000 SOP, not the 2003 ERMP proposal.). (Army Response, p. 4).

**(3) STV Reply.** The ERMP is the principal means by which the Army provides assurance that there is no undue risk to public health and safety from radiation originating at the JPG DU site. Monitoring results reaching 50% of Action Level, by their very nature, indicate an unusual and potentially threatening situation. Indeed, that is the very reason for conducting a special assessment of the results and making a situation-specific determination of whether they show a trend. But, the review

process described by the Army response appears to be no more than forwarding a report through the normal channels for its routine review. If there is, in fact, some respect in which the review at the 50% action level is different from what normally occurs, then the particular respects that make it "independent" and "special" should be defined and explained.

**b. Basis.** The ERMP also states with respect to the monitoring results for the various environmental media that, if an Action Level is reached and that result is confirmed by additional sampling, specific remedial actions and timetables "may" be defined. *See* ERMP, Table 3-1. But, the whole point of an "Action Level" is to establish a monitoring result at which defined remedial action "shall" occur. Otherwise, the concept becomes meaningless. The ERMP should define and commit to perform remedial actions at specified "action levels."

**(1) Staff Response.** The cited basis raises no genuine issue with either the proposed 2003 ERMP or the 1999 ERMP currently in effect. The current 1999 ERMP requires additional sampling, investigation, NRC notification, or decontamination for readings above specified levels. *See* 1999 ERMP, section 5(e). Similarly, the superseded 2003 ERMP proposal stated that, for readings exceeding specified limits, the Army "will" complete NRC notification and additional sampling within stated deadlines. *See* 2003 Proposed ERMP, at 3-3, 3-4 (Table 3-1). STV does not explain why these steps are inadequate or what other pre-set remedial actions it believes are necessary. (Staff Response, p. 15).

**(2) Army Response.** Rather than pre-determine remedial actions, "[t]he Army has elected to retain a flexible process defined to respond specifically to the event that incorporates key decision-makers, including the NRC, into defining appropriate follow-on actions." (Army Response, p. 5).

**(3) STV Reply.** The ERMP is the principal means by which the Army provides assurance that there is no undue risk to public health and safety from radiation originating at the JPG DU site. Monitoring results reaching 100% of Action Level, by their very nature, indicate a highly unusual and actually threatening situation. Indeed, that is the very reason for defining an "action level" in the first place, to trigger action to address the situation. But, the process described by the Army response appears to require no more "action" than convening a meeting or a teleconference. At the very least, it would appear that monitoring results at "action" levels should trigger a standard response protocol intended not only to notify the NRC and replicate the monitoring results but to warn and protect the public in the event that the reported results are actually accurate.

**c. Basis.** The ERMP incorrectly denies the existence of neighbors who use private wells for drinking water:

Onsite and offsite human and ecological receptors could be impacted by DU leaching through soil to the underlying aquifer. Contaminated groundwater can enter the human or ecological food chain indirectly (e.g., livestock drinking water) or directly (e.g., drinking water supply). Direct exposure of humans to drinking water is unlikely given that the aquifer is not a drinking water source and is of poor quality (Rust 1998).

*See* ERMP, at 3-4. However, it has previously been established that two of the original STV affiants who live directly west of JPG get their drinking water from a private well, as do some other nearby residents. The Training Range Site Characterization and Risk Screening, Regional Range Study, JPG Madison, IN, Final (CHPPM, August 2003) (hereafter "Regional Range Study") also acknowledges that "[t]here are limited numbers of private wells in the area surrounding JPG (Ebasco, 1990)." *See* Regional Range Study, Section 6, at 4. The ERMP should acknowledge and address this fact.

**(1) Staff Response.** The cited basis does not raise a genuine issue with the 2003 ERMP proposal because it described direct drinking water exposure to humans as “unlikely” but nevertheless incorporated a sampling program intended to monitor migration into groundwater or surface water. *See* 2003 Proposed ERMP, at section 3.3.1. (Staff Response, p. 16).

**(2) Army Response.** The final Regional Range Study did acknowledge the existence of private wells for domestic water use, but only one of those wells was downgradient from the area south of the JPG firing line. During the site characterization, the Army will confirm the presence or absence of private wells and later use that information to support a revised Conceptual Site Model and RESRAD modeling in conjunction with the preparation of a revised Decommissioning Plan. (Army Response, p. 6).

**(3) STV Reply.** Private wells for domestic use clearly constitute a potential exposure pathway for any DU contamination migrating from the JPG DU site by way of groundwater. As such, their location and proximity are important information to support a revised Conceptual Site Model and RESRAD modeling for the JPG DU site. *See* FSP Contention C-1, Basis b.

**d. Basis.** The aquifer underlying the JPG site is not sufficiently characterized to demonstrate its extent and gradient – as the Army itself has previously conceded. *See* Regional Range Study, Section 6.5.2.3.2, Hydrogeology, at 35 (“Monitoring wells near and within the Delta Impact Area south of Big Creek are too widely spaced to construct a meaningful ground-water elevation contour map.”) The ERMP should acknowledge and address this critical fact.

**(1) Staff Response.** The cited basis does not state sufficient facts to raise a genuine issue with the 2003 ERMP because, even assuming that the extent and gradient of the groundwater aquifer



underlying the JPG site remains uncertain, STV does not explain why the ERMP does not properly compensate for this uncertainty. (Staff Response, p. 17).

**(2) Army Response.** "The ERMP will be revised after completion of site characterization activities to reflect the then current understanding of site hydrogeology." (Army Response, p. 7).

**(3) STV Reply.** The cited basis raises an obvious issue with the 2003 ERMP, an issue which the Army response recognizes even if the Staff's inexplicably does not: the ERMP should be revised as soon as possible based on the results of an adequate site characterization. The FSP appears to contemplate the revision of the 2003 ERMP at the end of its Year Four, but offers no real explanation as to why that is the earliest opportunity to do so. Indeed, the FSP itself (p. 4-1) indicates that schedule acceleration would be both desirable and feasible technically if the Army relaxed its annual budget constraints on site characterization activities.

**e. Basis.** The entire monitoring data history for the JPG site is not used in the ERMP's trend analyses. Most of the trending analyses begin in 1994 or 1996, with some beginning as late as 1998. The absence of discernable trends over the selected time period is then cited as the justification for not performing expanded sampling. *See, e.g.* ERMP, at 3-6. Examination of the entire data history, i.e. 1984/85 to present, would provide a more complete picture for analysis purposes. Moreover, the ERMP characterizes historic data trends (or the absence thereof) in narrative terms, but the actual data are not included for review and confirmation of the Army's conclusions. The ERMP should acknowledge and address the entire monitoring history of the JPG site.

**(1) Staff Response.** The cited basis does not raise a genuine issue with the 2003 ERMP because "STV's statement that including data from additional years in the site history would 'provide a

more complete picture' is not a cognizable dispute, but only STV's opinion that past studies may or may not shed light on site trends." (Staff Response, p. 18).

**(2) Army Response.** Data underlying the 2003 ERMP are available, upon request. However, the revised ERMP being prepared in conjunction with the JPG Site Characterization Project will include historic data trends based on the complete site monitoring history, including the data collected during the Project. (Army Response, p. 7).

**(3) STV Reply.** In fact, it is the considered opinion of both STV's hydrogeologic expert and its environmental risk modeling expert that the failure of the 2003 ERMP to be based on a complete and adequate site monitoring history raises the fundamental issue of whether the ERMP can serve its purpose of assuring that the JPG DU site poses no undue risk from radiation to the public health and safety. Under 10 CFR § 2.309, an expert opinion is sufficient support for an admissible basis.

**f. Basis.** The ERM dismisses the need for air monitoring during future prescribed burns. *See* ERMP, at 3-10 to 11. It also denies the need for future biota sampling. *See* ERMP, at 3-12. However, this conclusion is based on insufficient site-specific information and general references to other studies at other sites which are not representative of JPG. The ERMP should either provide for air monitoring during future prescribed burns or support its absence with site-specific information. The ERMP should also be updated to reference the future biota sampling included in the Army's Field Sampling Plan ("FSP") filed May 25, 2005, as it may be modified in response to NRC Staff comments and/or STV's contentions below regarding the FSP.

**(1) Staff Response.** The cited basis is insufficient to raise a genuine issue with the 2003 ERMP because it does not explain why the Army's site specific air sampling data are inadequate or

why future biota sampling needs to be included in the ERMP as well as the FSP. (Staff Response, p. 18).

**(2) Army Response.** Air sampling was conducted on four occasions in the 1980s at four locations under worst possible conditions. There was not any detectable uranium in any of the samples. The air sampling results were evaluated in two separate studies, both of which concluded that DU was not migrating from the JPG site through the air. These results and conclusions were reviewed and accepted by the NRC in conjunction with license renewals in 1986 and 1989. The revised ERMP to be submitted at the end of Year Four of the Site Characterization Project will reference the biota sampling done during that Project to that time. However, it will not continue the biota sampling in the future. (Army Response, pp. 8-9)

**(3) STV Reply.** It is the considered opinion of STV's environmental risk modeling expert that four samples conducted twenty years ago are not sufficient to rule out today or in the future the air pathway as a potential source of human exposure to radiation, especially during and following controlled burns affecting the JPG DU site. There is a need to update those results to see if they have changed at all with the passage of a substantial period of time. With respect to biota sampling, collecting data in a continuing time series over an extended period is critical to understanding differential uptake, bioaccumulation, and other aspects of environmental contamination which take place in small increments over long periods of time. Continuing the biota sampling performed under the FSP in the revised ERMP would serve this purpose.

**B. Bases for FSP Contention.**

The Army challenges, in one way or another, all of the bases for STV's contention regarding

the FSP. The Staff finds three of the bases admissible, but challenges all of the others. For the reasons explained below, these challenges should be rejected and STV's cited bases for the FSP contention should be admitted, except in those instances where additional information provided by the Army has resolved the issues raised in particular bases.

**1. Contention B-1: 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.**

**a. Basis.** 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.

**(1) Staff Response.** The Staff considers this basis admissible (Staff Response, p. 22.)

**(2) Army Response.** The Army response consists of two parts. The first part is a summary of the types of data that are to be collected under the FSP as written, the locations of which are based on the EI that results from the fracture analysis study. The second part is a discussion of the STV

assertion that the process of identifying such sampling locations should include the collection and integration of surface flow data with the fracture analysis study and the EI survey. The Army acknowledges that the STV approach is not part of the FSP. It also enumerates the advantages of such an integrated approach, *e.g.*, identifying and/or validating the locations of groundwater discharge or recharge to streams, better locating surface water sampling locations and sediment sampling locations, and integrating with the fracture analysis study to better locate stream gauging locations. (Army Response, pp.12-13)

(3) STV Reply. The Army correctly recognizes “[t]he type of stream gauging that the STV recommends was not proposed in the FSP and would require a much different and additional level of effort than what was proposed.” (Army Response, p. 13). That is precisely why STV’s hydrogeology expert strongly recommends this type of stream gauging; in his opinion, the Army was remiss in not proposing this type of gauging because it requires additional effort. The purpose of this type of gauging is to assist in locating the conduits that are the objective of the well program. Without this type of gauging, the process of locating the wells is relying solely on remote sensing methods to detect conduits. With this type of gauging, direct observation can be used to assist, refine, and more precisely locate wells where conduits are identified with remote sensing methods, as well as find conduits that are not observed with remote sensing. The suggestion by the Army that this additional effort and type of gauging may be considered after the wells are installed negates the primary objective of this effort, that of making sure the wells are placed where they should be from the outset to adequately characterize the site.

The Staff considers this basis admissible. In doing so, it necessarily and implicitly

acknowledges the admissibility of other bases that derive from the inadequacy of the FSP characterization sequence that begins with, and is dependent upon, the identification of conduits for groundwater flow based on only the fracture analysis study and the EI survey which is dependent upon it. By admitting Basis (a), the Staff acknowledges the definite possibility that the limited methods in the FSP for identifying conduits will prove inadequate, particularly depending on water levels during the time period in which such identifications are made. The location of conduits and the selection of well locations is not a minor or side element of the characterization; it is critical to every characterization activity which follows. The following are examples of subsequent issues that are directly raised by the admissibility of Basis (a). New groundwater chemistry sampling locations will be unjustifiably restricted to sites selected by the remote sensing component of the FSP. The sampling of water migrating to wells used for drinking supplies will also be unjustifiably restricted to the well sites selected pursuant to this component of the FSP. Additionally, the location of staging wells will be unjustifiably restricted by this component of the FSP. Finally, the re-location, if any, of surface water monitoring and gauging locations will be improperly determined based upon the sites selected by this component of the FSP.

**b. Basis.** The discussion in section 6.2.1 is disturbing in its failure to set out the chemistry of the monitoring system at this stage and its cavalier dismissal of ground water as a direct exposure route to humans due to its supposedly "poor quality." The "poor quality" that is being cited is, in part, a function of existing data being sampled from wells that are definitely not in "conduits" that would presumably flush frequently and carry good water. Instead, the "poor quality" data are drawn often from tight, clayey wells and wells that may well have had multiple types of contaminating material falling into them due to poor maintenance.

**(1) Staff Response.** The Staff finds the basis inadmissible because “it fails to state facts to support the petitioner’s position and fails to raise a genuine dispute with the Licensee on a material issue of law or fact.” The Staff makes no response to the stated belief of STV’s expert of the need for specification of the chemistry that will be analyzed as part of the groundwater monitoring system. Instead, the Staff argues, “STV does not state that off-site human consumption of affected groundwater is an actual concern, nor does it explain how the Army’s selection of wells for its sampling data relates to any risk of contamination transport or exposure through off-site human consumption. In short, STV does not clearly explain why ground water is, in fact, a likely direct exposure route to humans that the sampling plan must consider.” (Staff Response, pp. 22-23)

**(2) Army Response.** The Army supplements the FSP with a partial enumeration of water chemistry parameters that are needed as part of the FSP and indicates that they will be added in addenda. The Army re-cites the Draft Final RI by Montgomery Watson, 2002, as evidence of inherently poor water quality. In its response, the Army modifies its assertion in the FPS that “the aquifer is not a drinking water source.” The Army now states that “. . . there are few wells in the vicinity of the JPG that are used for domestic supplies . . .” (Army Response, p. 14)

**(3) STV Reply.** As discussed in the final paragraph of STV’s response to Basis (a), the admissibility of Basis a, above, confirms the admissibility of Basis b,. Moreover, the Staff chooses not to respond to STV’s statement of the need for defining the chemical analyses that will be part of the groundwater, implicitly conceding the need to assess the water chemistry which will control contaminant migration from the DU site.

This response of the Army to the issue of poor water quality and low productivity is to cite the

Draft Final RI by Montgomery Watson, 2002. In doing so, the Army cites a document that STV's hydrogeology expert believes does *not* support the perceptions of either "low quality" or "low productivity." The perception of "low productivity" is certainly inconsistent with the Army's expressed confidence that it will be able to find conduits of ground water flow in a ground water system of karst enhancement. The Army acknowledges in its response what STV has repeatedly documented, that there are wells in the vicinity of the JPG that are used for domestic supplies, although the Army dismisses them as "few" and specifically references only areas to the south, rather than to the west of the JPG.

The Staff response to water quality issues and potential migration to human consumers of groundwater attempts to put the burden of proof on STV by objecting, "STV does not state that off-site human consumption of affected groundwater is an actual concern . . ." STV cannot state that such consumption *is* a concern because the Army *has never collected the data* that would allow such a determination. Indeed, until its current response, the Army has never previously acknowledged that groundwater exposure was a possibility. Even now, under the FSP as proposed, the Army would not be collecting the data to evaluate the potential for such exposure.

Therein lies an essential point of the STV critique of the FSP. There are domestic consumers of groundwater in the vicinity of the JPG DU site, as now acknowledged by the Army. The FSP must, therefore, outline a characterization program that can determine whether those consumers of groundwater (among other receptors) can be exposed to DU contamination through that pathway and, if so, at what levels.

c. Basis. The wells to be used for staging should not be limited *by assumption* to six wells, as



proposed in section 6.2.2. Six may be enough, but it also may not be. The actual number should be a function of results achieved, not assumptions made. (It is hoped that the last sentence in this section mistakenly left an "s" off the word "well."

(1) **Staff Response.** The Staff finds the basis inadmissible. The Staff reasons, "Because it does not articulate any specific problem with the Army's proposed number of wells, STV's claim that the proposal 'may' be inadequate or could be better does not amount to a meaningful dispute." (Staff Response, p. 23)

(2) **Army Response.** The Army states that the number of staging wells will not be limited to the six wells that constrain the FSP, rather that the eventual number of wells will be determined, "when additional information becomes available." (Army Response, pp. 13-14)

(3) **STV Reply.** The admissibility of Basis (a) confirms the admissibility of this Basis, as discussed in the final paragraph of the STV reply supporting Basis (a).

Furthermore, the Staff holds STV to a higher standard with respect to this basis than it does the Army with respect to the FSP. The Staff wants STV to provide a firm number of needed staging wells based upon hard data. The Army provided no data for its choice of six wells, explicitly stating twice that the number was based upon *assumption*.

The Staff finds STV's basis inadmissible because STV does not state the number of staging wells that are needed, an impossible task until sufficient data have been collected to determine when, where, and how many such wells are needed to characterize the site. In its response, the Army fully confirms STV's position that it is inappropriate to constrain the FSP to six staging wells. It states that six was a number that was used for purposes of budgeting, planning, and scheduling, and that the

number will change. However, as written today, the FSP states that there will be six staging wells, and that is inappropriate and should be changed in the manner suggested by STV and conceded by the Army.

**d. Basis.** The FSP specifies in section 6.2.4 that the "conduit" wells will be paired, but does not describe or explain the reason(s) for the relative positions of the two wells at each well site. Presumably, the objective is to provide a means of measuring vertical gradients at each site, but that is not explained or discussed. Nor is there an indication of whether the "paired" well will be above or below the "conduit" well or whether that relative position would change depending upon unspecified geologic or hydrogeologic conditions.

**(1) Staff Response.** The Staff finds the basis inadmissible. This finding is justified first, "... because it fails to state facts to support the petitioner's position" and "[s]econd, STV fails to raise a genuine dispute with the Licensee on a material issue of law or fact." The Staff asserts that some of the missing information that is the foundation of this basis can be found at FSP "6-4 and 6-12". (Staff Response, page 24)

**(2) Army Response.** In its response, the Army supplements FSP section 6.2.4 with a description of various geometries that may be used in positioning the paired wells, depending upon geologic and hydrogeologic conditions, and a statement that the positioning of the pairs relative to each other and the geology and hydrogeology will in part be a dynamic decision based upon conditions observed at the time of well installation. (Army Response, pp. 15-16)

**(3) STV Reply.** STV might be prepared to accept the Army's explanation and representation in its response to resolve the issue originally raised in this Basis, except that the Army's response to

Contention C-2, Basis d, expressly puts in issue *whether* and, if so, *when* the Army will be using Electrical Imaging at the JPG DU site. (Army Response, p. 41). This uncertainty, in turn, places in doubt the Army's plan described in its response regarding this basis to use EI to pair wells at each site in such manner as to assure measurement of vertical gradients. The evolution of this issue highlights the complex interplay between the FSP and the HASP which is of special concern to STV's hydrogeologic and UXO experts as reflected especially but not exclusively in Contention C-2.

e. Basis. The FSP also specifies in section 6.2.4.3 that a boring that does not produce enough water for a well will be abandoned. If lack of production occurs because the system is "tight" (i.e., impermeable), that makes some sense. However, the nature of karst terrain is such that conduits may not produce water because the flow is highly transient and, unless there is a new flow event at the time of drilling and/or testing, a well may be dry even though it has been placed in an appropriate and important location. To ensure the problem is a temporary lack of water, rather than a permanent lack of permeability, it is necessary to monitor the boring for enough time to be sure it never produces before abandoning it.

(1) Staff Response. The staff finds this basis inadmissible. The Staff criticizes, and rejects, the basis for three reasons. First, the response states, "STV has failed to show why the Army's criteria for assessing the functionality of its boreholes raises any significant question about the quality of the sampling plan. Second, the response states, "STV's suggestion that a well abandoned under the Army's criteria might be 'in an appropriate and important location' is entirely speculative." Third, the response states, "STV provides no grounds to believe the Licensee will be unable to site an alternative monitoring well that will be as, or more, effective in obtaining the necessary data." (Staff Response, p.

25)

**(2) Army Response.** The Army's response is that the "intent" of the conduit wells is "... not to build dry wells inside caves that occasionally flood." It also states that water draining through caves will be monitored as surface water discharges from caves or as surface water in streams. (Army Response, p.16)

**(3) STV Reply.** The Army response either misses or ignores the concerns of STV's hydrogeologic expert which underlie this basis. It also overstates the effectiveness of the FSP's proposed stream and cave stream sampling programs, as is described in other bases. Water table(s) in karst terrain are often highly variable. Even preliminary assessment of existing USGS gauging stations in the area suggests that will be the case for the JPG site. The instrumentation of some of the wells as staging wells with continuous water level measurements for correlation with precipitation monitoring confirms that the Army fully expects highly variable water table response (FSP section 6.2.2). There is a significant hydrologic difference between a boring interval that exhibits some, unspecified and unquantified, indication of "insufficient groundwater" at the time it is being drilled, and "caves that occasionally flood." Before a boring with "insufficient groundwater" is abandoned, the location, depth, season, and condition of the borehole should be evaluated with respect to the potential for that boring to support a well to monitor ground water during seasonally high water levels. Monitoring only conduits that are continuously below the water table is the precise inadequacy that is the issue raised by this basis.

The Staff response, as in the case of other responses to other bases, demands that STV meet an impossible standard. First, the Staff demands STV provide a demonstration of the inadequacy of

the Army's criteria for abandonment of a borehole, when the Army provides no criteria for that abandonment beyond a qualitative conditions of "insufficient groundwater" (FSP, section 6.2.4.3, page 6-12).

Second, the Staff dismisses this basis as purely speculative. However, STV does not speculate that an important location will be missed. The basis does not represent that important locations will be missed. The Army has no borings, no wells, no characterization data upon which to base such a representation by STV. The basis simply asserts the considered opinion of STV's hydrogeologic expert that, based on his professional skill, training and experience, the FSP, if implemented as written, presents a real risk of missing important locations, that the FSP can be changed to avoid that risk, and therefore should be changed.

Finally, the Staff asks STV to prove that the Army can't find an equivalently important monitoring point somewhere else. In this instance, the Staff is being critical because STV is *not* attempting to speculate. Further, this criticism carries the implicit assumption that the Army will conduct such a hunt for a replacement location. Section 6.3.4.3, however, provides no indication at all that such a hunt is to be undertaken. Indeed, the only additional action described is deepening the boring until "sufficient" groundwater is found, and even that action is solely at the discretion of the Army Project Manager.

**f. Basis.** The FSP states in section 6.2 that all new wells to be completed will be in "conduit" settings in bedrock. This placement is too limited. Certainly, most off-site transport is likely to occur through bedrock karst features. But, the projectiles and the DU reside in the till and/or the weathered bedrock/colluvium. Simply because good, shallow wells were not completed in the original set of JPG

wells does not mean that properly located and completed shallow wells are not necessary to characterize properly the hydrogeology of the site.

**(1) Staff Response.** The Staff finds this basis admissible. (Staff Response, pp. 25-26)

**(2) Army Response.** The Army response proposes that the FSP will be modified at some future point with addenda that will add potential wells in the unconsolidated sediments where conditions are appropriate. (Army Response, p. 17)

**(3) STV Reply.** The Staff finds this basis admissible. The Army proposes changes to the FSP to address this basis. Until such changes are made to the FSP, however, the issue raised by STV remains genuine and material and the basis remains admissible..

**g. Basis** The FSP states in section 6.2.4.4 that the new wells will not be tested for permeability. Granted, if a particular well is sunk into a well-developed conduit, it will not be feasible to measure permeability. But, the nature of karst features is to be hard to locate precisely, so it is likely that at least some of the wells will simply be in bedrock with some enhanced permeability, which should be measured if it can be. Moreover, the conductivity of the rock adjacent to and feeding the conduit is a major determinant of flow through the system. The same holds true for aquifer testing. If pumping the aquifer shows interconnection among two or more of these conduit pairs, that result will provide very valuable information about the system transporting DU from the site.

**1) Staff Response.** The Staff considers this basis inadmissible. This finding is based upon the Staff characterizing the STV basis as being speculative with respect to performing permeability tests on individual wells. The Staff represents STV as asserting that "many (if not all)" monitoring wells will not be able to be tested for permeability." The Staff interprets this basis as being applicable in some way to

the Army's proposed plan for groundwater sampling, as opposed to site characterization. (Staff Response, p. 26)

**(2) Army Response.** The Army response recognizes the two elements of the basis; that of testing individual monitoring wells and that of testing the aquifer with pumping tests. With respect to the former, the Army states that it is "generally not useful in this hydrogeologic setting." With respect to the latter, the Army believes that aquifer connectivity "is important", and that pumping tests "may be useful, and will be planned in the future." (Army Response, page 18)

**(3) STV Reply.** The admissibility of Basis (a) confirms the admissibility of this Basis, as discussed in the final paragraph of the STV reply in support of Basis (a). The only arguments for allowing well installations and site characterization without permeability and aquifer testing are predicated on the adequacy of a population of wells that are located using the narrow criteria of a fracture analysis that locates a subsequent EI survey. When conduits are located using alternative criteria, as proposed in Basis (a), that comfort level is necessarily lost.

Contrary to the assertions of the Staff, there is nothing speculative about this basis. The FSP states that there will be no testing for hydraulic properties in the new wells, without qualification. STV maintains when an individual well is completed in geologic materials that will allow for the testing of those properties, such testing should be performed.

The Army does not propose to add permeability testing of individual wells at this time. The Army does not, however, maintain that such testing would be without value, only that it is "generally not useful" in karst terrain. The Staff response misrepresents the STV position with respect to testing of individual wells. STV understands that not all wells will be completed in geologic materials that allow

such testing, but certainly does not maintain, as characterized by the Staff, that "many (if not all)" will be incapable of such testing. It is meaningless at the current level of site characterization for anyone to attempt to project which or what proportion of the wells will be or will not be individually testable. It is noted as well that the FSP as written would not test individual wells that are completed in the unconsolidated sediments and have no karst characteristics. The need for such wells is deemed an admissible basis by the Staff and such wells are now proposed by the Army.

The Army response erroneously asserts that drilling information and water level monitoring are sufficient to establish aquifer connectivity. The Army, however, does acknowledge merit in adding multi-well aquifer pumping tests, and proposes to add such testing to the FSP at some point in the future. The Staff chose not to address the issue of multi-well aquifer pumping tests. Until aquifer and individual well testing of hydraulic properties are added to the FSP, it remains inadequate.

The inadequacy of the FSP is that it proposes to do no aquifer characterization of any kind, even when the wells are completed in materials that can be tested. That generates a characterization deficiency that is artificially self-imposed and that cannot be overcome. The evaluation of aquifer properties, to the extent it is possible, should be a focused and integral part of the evaluation at each of the wells, and evaluations of connectivity between well locations and/or discharge points should expressly be part of the site characterization.

**h. Basis.** Contrary to section 6.2.4.3, geophysical testing and video taping of all of the well drilling should be required in intervals where it is physically possible. The understanding obtained from cuttings, particularly air-drilled cuttings, what material has been drilled through and in which a well is being completed is extremely limited. Logging and videoing the borings as they are being drilled



actually records what the boring encountered and provides much valuable information for reasonably interpreting the water data that is later collected over time. If turbidity precludes video taping of a boring, televue logging is a valuable alternative. Where boring logs cannot safely be run, logging through the casing can be done.

**(1) Staff Response.** The Staff considers this basis inadmissible. That finding is predicated, at least in part, on the Staff's perception that STV limits its basis to a consideration only of the logging that is discussed in section 6.3.4.3. As with other bases, the Staff dismisses this basis due to its perception of the STV position as being speculative. (Staff Response, pp. 26-27).

**(2) Army Response.** In its response, the Army acknowledges that geophysical and video logging can be useful, but dismiss it as impractical due to potential drilling conditions. The Army explains at length the successful experience it perceives from this contractor using this completion technique, without any logging under any circumstances, in completing in zones identified using fracture analysis studies to locate EI surveys that in turn control the location of conduit wells. (Army Response, pp. 18-20).

**(3) STV Reply.** The admissibility of Basis (a) confirms the admissibility of this Basis, as discussed in STV response to Basis (a). The only arguments for allowing well installations and site characterization without coring and logging are predicated on the adequacy of a population of wells that are located using the narrow criteria of a fracture analysis that locates a subsequent EI survey. When conduits are located using alternative criteria, as proposed in Basis (a), that comfort level is necessarily lost.

Contrary to the assertions of the Staff, there is nothing speculative about this basis. The FSP

states that there will be no coring and no geophysical logging in the new wells, without qualification. STV maintains when an individual well is completed in geologic materials that will allow for the coring and/or logging of those materials, such data should be collected. STV maintains that when such logging is not practical in open holes due to drilling conditions, alternative geophysical techniques, such as cased-hole logging can be performed. STV further maintains that when alternative drilling methodologies are considered, such as mud-drilling in conjunction with coring, alternative logging techniques can be used to image the rock around the boring, *e.g.*, when opaque mud in the hole precludes video logging, borehole televue logging (a sonic, rather than optical, method) can be used to collect much of the same information.

The Army does not propose to add logging and/or coring of any of the new wells at this time. The Army does not, however, maintain that such testing would be without value; if fact, the Army acknowledges geophysical and video logging as "useful tools". The lengthy rationalization by the Army is centered on the experience and perceived success in karst terrain of its proposed program, methods, contractor, and failure to log. That rationalization is, at best, applicable only to boring locations that can be identified from EI surveys that are positioned based upon fracture analyses. It may also be a self-fulfilling measure of success because, without logging the borings, without coring the rock, and without performing hydraulic testings of the intervals (see discussion for basis (g)), the Army and its contractor have no basis for comparison and no way independent way to measure the adequacy, let alone the success, of its program.

The inadequacy of the FSP is that it proposes to do no coring and no geophysical logging to provide physical characterization of the materials drilled or within which the well is completed, even

when the wells are completed in materials that can be tested. That generates a characterization deficiency that is artificially self-imposed and that cannot be overcome. The confidence that the Army has for its method of identifying its preferred subset of "conduits" cannot be extrapolated blindly to conduits that are identified using alternative methods, as proposed in Basis (a). It is axiomatic that one tends to find only that for which one looks.

**i. Basis.** Specifying the exact number and precise locations of the surface water sampling and gauging points at the outset of FSP implementation, as proposed in section 6.4.1, is not a good idea. Until the ground water data show where to look for discharges, such points cannot be reasonably selected. There is no scientific reason why the surface water sampling locations and the sediment samples need be in the same location(s). Each medium should be sampled at locations that are appropriate for that medium. Sediment buildup has nothing to do with the location of base flow connections between ground and surface water. Similarly, the FSP concept in section 6.4.2 of putting in only five gauging stations which are sited before the ground water system is better understood is both too limited in number and may well be counter productive in location.

**(1) Staff Response.** The Staff considers this basis inadmissible. The basis of this finding is that STV is not perceived to have provided a statement of facts in its basis and it failed to raise issues in genuine dispute. The Staff also objects to STV not noting that there is an evolutionary aspect of the surface and sediment sampling program in the FSP. (Staff Response, pp. 28-29).

**(2) Army Response.** The Army response asserts that the 14 specific sample locations referenced by STV in this basis are not the final surface water and sediment sampling locations. Rather, they are only used for purposes of program planning, scheduling and budgeting. The Army emphasizes

the evolutionary nature of the surface and sediment sampling program, and that it will change as understanding of the conditions change. The Army response also discusses how the existing proposed stream gauging sites are located at areas easily and cheaply accessed, at existing bridges and culverts, *etc.*, while acknowledging that locations may be moved or new locations added later. (Army Response, pp. 20-22)

(3) STV Reply. Neither the Staff nor the Army responses address the concerns or deficiencies underlying this basis. The Army simply reiterates its intention to persist with what STV believes is inadequate characterization. Much of the text of this response is a cut and paste of the text from the response to (a.), and is subject to the same inadequacies that resulted in that basis being admissible. As with the response to (a.), the description of activities would be reassuring if they were activities that were being done at locations and times that were selected based upon geologic and hydrogeologic data collected in a meaningful sequence. But, they are not. The activities are being performed at locations that are being picked based upon the existing inadequate site characterization, convenience, and economics. For example, the selection of locations for continuous gauging should be the result of an adequate site characterization, not an initial pick and an initial task.

The Army and the Staff are also unresponsive to the principle concern of STV with respect to the surface water and sediment sampling programs, regardless of how it may evolve with time. At no time does either party address the co-location of surface water and sediment monitoring stations. As discussed in the basis, there is no scientific reason why the optimum surface water sampling points will have a one-to-one correspondence with the optimum sediment sampling points. It may well be less "cost-effective" to have two independent networks of sampling locations. But, the objective should be

the technically appropriate characterization program for each medium, not the one that is the easiest to implement.

**j. Basis.** The entire Kd exercise described in section 2.3.4.3 is inaccurate, unreliable, and, particularly when it forms such a key element of the modeling, rife with opportunities for abuse. It is described in the FSP text as “an important input parameter” for the results of exposure calculations. But, the exercise does not yield a real number and its functionality is based upon assumptions that are known to be invalid. The biggest erroneous assumption is the one spelled out in the text: “the underlying assumption is that rapid equilibrium is reached between the dissolved and sorbed concentrations of a chemical species, and that these two concentrations are linearly related through the Kd factor.” At best, there are an infinite number of Kd values based upon the infinite number of combinations of soil types, sorbent contents, ground water compositions and oxidation states that may exist along the flow path from any individual DU projectile. USEPA tried to use the Kd approach in its modeling for solid wastes, and only recently completed spending almost five years to find an alternative way because Kds just do not work. They don’t even work for such simple, monovalent contaminants as lead or cadmium; it is preposterous to rely on the Kd approach for something that is so pH-Eh dependent as the uranium system. Field observations should be used to calibrate geochemical modeling with a program on a par with Geochemist’s Workbench, with a lot of soil analyses to identify the abundances of sorbents in the soil that will control the mobility of the uranium. And, if the exposure program that SAIC is using requires the Kd approach, it should also be replaced with one that has more sophistication.

**(1) Staff Response.** The Staff considers this basis admissible. (Staff Response, p. 30)

**(2) Army Response.** The Army response is limited to the observation that the Kd methodology is acceptable to the NRC and if the NRC wants something in the alternative, it would be addressed at that time, along with budget and scheduling considerations. (Army Response, p. 23)

**(3) STV Reply.** The Army response does not address the inadequacy of linear Kd as a predictive tool for contaminant migration, and, therefore, risks of exposure. If NRC requires such a calculation, the calculation should be made. However, a legitimate attempt to predict actual migration using the more reliable method described in STV's basis should be required as well.

**k. Basis.** The FSP lacks any plan for analysis of penetrators for transuranics such as plutonium, americium, technetium and neptunium or other impurities such as uranium-236. Table 4-1, p. 4-3 of the FSP indicates that 24 penetrators will be collected to establish a "corrosion/dissolution rate." However, there is no mention in the plan to assay the rounds for these other elements. This failure was challenged in previous Army plans by the NRC Staff (Sept. 27, 2001) and ATSDR (Oct. 30, 2002), but has not been corrected in the FSP.

**(1) Staff Response.** This basis does not raise a genuine issue of material fact with the FSP because STV fails to demonstrate that TRU is a potentially significant source of radiation at the JPG DU site. (Staff Response, p. 28).

**(2) Army Response.** The Army does not plan to analyze penetrators for transuranics because of their low activity levels, slow degradation rates, and low contribution to total annual exposure. This determination is supported by studies performed by other organizations at multiple other sites. It is confirmed by the Army's own analysis of one transuranic in penetrators, plutonium. (Army Response, pp. 24-25).

**(3) STV Reply.** It behooves the Army (and the NRC) to recognize that the studies which it cites assess the potential health impacts of the penetrators now. JPG will be impacted in virtual perpetuity by the depleted uranium penetrators not removed from the site, if the Army's plan for restricted release of the DU site is ultimately approved. Thus the concern of Save the Valley is both the people (and animals) living here now, as well as their future progeny who may use the site essentially forever.

Degradation of penetrators may increase over time as the surface begins to change and active chemical processes alter future surface interactions. As this degradation occurs, the uranium and transuranics do not metabolize to water and carbon dioxide and oxygen, as is true for the organics. Exposure to water can increase chemical erosion processes, transport processes, and concentration processes. Merely because a transuranic metal has low concentration in a penetrator does not preclude geochemical processes creating high local concentrations in soil or bioaccumulation in the food chain. Uranium continues to exist in its environment as a heavy metal, strongly radioactive or not. Transuranics each have their own decay rates and products, each of which has its own toxicity independent of radioactivity.

It is not clear from the WHO and other Kosovo-related studies that the increased degradation from water exposure has been separated out in the evaluations. Yet at JPG seasonal flooding does occur, at least once if not twice a year. Further, erosion processes at JPG have had longer to progress compared to such equivalent processes in Kosovo. The erosion and degradation of penetrators found in Kosovo is an excellent starting point to evaluate such considerations at JPG, but should not be taken as the final model for what has occurred at JPG, nor for what will occur over the next many thousands

of years. Accordingly, it remains STV's position that there should be provision made to address penetrator transuranics in the characterization of the JPG DU site.

**I. Basis.** The background levels being proposed in sections 6.2.3, 6.3.1, and 6.6.1.4 of the FSP are inappropriate. There is an assumption that natural uranium could exist in the rock and geological formations of JPG. This could be true. However, given the nature and chronology of DU use at JPG, standard fate and transport theory would say that DU onsite but away from the DU area and even offsite would have increased since DU was first used at JPG. Conditions such as the air and water dispersal of aerosolized or particulate DU that occurs when the DU projectiles land on hard objects (rocks, other DU and UXO projectiles, etc.), and the physical movement of DU fragments due to flooding that occurs especially in the spring would all contribute to this increase.

Risk Assessment Guidance for Superfund (RAGS) and eco-risk texts (e.g., Suter, G.W. II, et al) say that a monitoring site is inappropriate for background if it is potentially contaminated by the contaminant of concern. Therefore, two alternatives could be used for the "background" readings that are required for accurate assessments and reliable models:

1) Data obtained from USGS cores, or any other soil, water and air data obtained prior to the start of DU testing (i.e. 1983 or earlier) is preferred.

2) For fill-in data, potential "background" samples (air, water, and soil) that clearly do not have the DU isotope ratio signature could be used. However, it is better to be conservative in what is considered to be a background isotope ratio.



**(1) Staff Response.** The Staff asserts that this basis has insufficient factual support because it cites no evidence that the sampling locations identified in the FSP as the sources of background data have been contaminated by DU. (Staff Response, p. 29).

**(2) Army Response.** The FSP provides for the determination of background levels at locations which have not been impacted by DU testing at JPG, including offsite locations. The Army will also use historical data from JPG before DU testing began, if available. Consequently, this basis does not raise a genuine issue with the FSP. (Army Response, p. 26-27).

**(3) STV Reply.** STV accepts the Army's representation that background determinations will be made in areas (and, of course, from biota) "that have not been impacted by DU activities at JPG" and that background determinations will preferably include samples from off-site locations and time periods preceding DU use at JPG. Accordingly, the specific issues underlying this basis has been resolved by the additional information provided by the Army.

Nonetheless, since background determination affects so many other decisions to be made, and since the decisions have such long lasting implications (millions of years), STV's environmental risk modeling expert maintains that the selection of background data should be very conservative and should not include *any* data that might have been affected by site DU activity.

**m. Basis.** Air remains a potential exposure pathway as evidenced by the air sampling requirements to be implemented for the field workers (Health and Safety Plan, Section 4.2.2.1). If short-term air exposure is a concern for the workers, long-term air exposure is a concern for residents in surrounding communities, as well as for the animals living in the JPG ecosystem. Thus, the FSP is deficient for purposes of adequate site characterization in providing for no air sampling whatsoever.

**(1) Staff Response.** STV has shown no correlation between air exposures by field workers at the JPG site and air exposures for residents of surrounding communities so this basis has insufficient factual support. (Staff Response, p. 30).

**(2) Army Response.** There is no correlation between the risk of occupational exposures through air pathways of field workers onsite and the risk of long-term exposure by air pathways for residents of surrounding communities. Accordingly, STV's request for air sampling not planned in the FSP is not adequately supported in the cited basis. (Army Response, p. 27).

**(3) STV Reply.** STV's environmental risk modeling expert continues to believe that the FSP should provide for air sampling, at least during controlled burns affecting the DU site.

In any situation of soil contamination, the issue of airborne contamination from soil dispersement into the air must always be addressed. As STV has pointed out on numerous prior occasions, its primary concern is the potential for movement of soil into the air (becoming airborne dust) during the burns. Two factors contribute to this phenomenon: First, the heat removes the vegetative cover and dries the soil, making the soil more prone to becoming dust. Second, the fires create mini-windstorms, typically at ground level, which can pull the now-revealed, now-dried soil into the air. Once the soil is airborne, it, and all the contaminants therein, can be carried shorter or longer distances depending on the air currents and the size and density of the dust particles, among other factors.

However, STV's expert does not have any new studies or additional data to cite in support of its belief. Accordingly, STV will simply agree to disagree with the Army regarding this matter until such time as new studies or other information become available which would warrant revisiting the matter again.

n. **Basis.** In order to really do a site-specific environmental and human health risk assessment, understanding the fate and transport (F&T) of DU within the JPG ecosystem is critical. In order to develop such a model, standard eco-risk-associated field sampling practices specify samples from different parts of the ecosystem within the same approximate period of time and definitely within the same field season in order to identify the distribution of the contaminant (DU) at that time. Further it is best to take multiple samples from these different locations over time. Thus, to truly model F&T within the JPG ecosystem (which is NOT the Yuma or Aberdeen Proving Ground ecosystem), a particular sample taken at a particular time should include all media and relevant biota and each of these media and biota should be sampled on multiple occasions. Ideally, samples should also be taken under different types of field conditions, as appropriate for the changes that occur at the site of concern. For example, at a site that floods, as JPG does, samples should be taken from all media and biota at high flow (flood season) and low flow. Similarly, in a seasonal environment like JPG, samples should be taken from all media and biota in different seasons. When reproduction is seasonal for the biota of potential concern, seasonal sampling is of special concern. Thus, the much more limited sampling described in section 6.3 of the FSP is deficient for purposes of adequate site characterization.

**(1) Staff Response.** STV fails to provide sufficient factual support for this basis because it cites no specific regulatory or technical requirement for the broad sampling regime it proposes. Moreover, it fails to demonstrate a genuine issue of material fact with the FSP because if the initial deer sampling results warrant, the Army will sample additional biota and deer a second time. (Staff Response, p. 31).

**(2) Army Response.** The FSP is being proposed within the decommissioning and decontamination regulatory regime of the Nuclear Regulatory Commission, not the CERCLA regime of the EPA. The sampling plan proposed in the FSP complies with the relevant regulatory regime. While the FSP does contemplate that its biota sampling will all be done within the same season of the year, it provides for the results of one sample from deer to be evaluated before decisions are made whether to sample other biota or to sample deer again. At most, deer and other biota will be sampled twice. Combined with other sampling, the Army believes that this amount of biota sampling is sufficient to determine whether DU is migrating from the JPG DU site. (Army Response, pp. 28-29).

**(3) STV Reply.** NEPA is the relevant regulatory regime for assessing the biota sampling component of the FSP. NEPA is vague at best on how to evaluate impacts on health and the environment. NEPA has bred over the decades hundreds of articles, monographs, texts, and guidance that have attempted to clarify the intent of NEPA. NEPA is not regulatory guidance per se, NEPA provides a statutory directive only. Virtually all of the regulatory guidance under NEPA has been developed from the same evolving core of work, and generally tries to be consistent among the the different agencies whose regulatory actions are subject to NEPA review. This is clearly indicated by the delineation of what MARS SIM, as guidance, includes and what it excludes.. This is also clearly indicated by the repeated references in MARS SIM to maintaining consistency with other guidance, especially with EPA guidance that could be relevant to the same site. Further, MARS SIM repeatedly says that if what is included in MARS SIM does not fully address the guidance needed for a specific site, analogies may be drawn to other similar guidance documents.

In any event, in the considered professional opinion of STV's expert in environmental risk modeling, the proposed biota sampling plan needs to be sufficient for a complete modeling of fate and transport of the DU from the site, especially if the DU will remain onsite indefinitely. The DU is of concern for present and future generations for both radiological (chronic low dose exposure to an ionizing radiation source) and chemical (DU being a persistent, bioaccumulative, toxic [PBT] heavy metal) reasons. Therefore, the proposed sampling plan, as specified in MARS SIM, needs to be sufficient for a complete site characterization, even if this means using guidance not explicitly developed for radiological soil and building surveying (i.e. MARS SIM). In this regard, STV's expert maintains that the biota sampling plan *must* include *multiple* samples of the same biota over time, i.e., that there be *a requirement* and not merely *an option* for such additional samples.

o. **Basis.** Although deer are not the most representative biota to sample, they are the only biota proposed for sampling by section 6.3 of the FSP. Nonetheless, when data from samples early and late in DU testing are not combined, it is evident that DU levels in even the deer are increasing. This result in deer clearly mandates sampling other, more representative biota as well. Based on what little data is available, the bioaccumulation factors (BAFs) for vegetation and the aquatic filter feeders such as crayfish (both of which are eaten by higher animals and humans) are relatively high, on the order of  $10^2$  to  $10^3$  times as high as the BAFs for persistent, bioaccumulative, and toxic chemicals (PBTs) listed as being of concern by the U.S. EPA and the Persistent Organic Pollutants (POPs) Treaty. Clearly, vegetation and aquatic filter feeders are better indicators of DU migration into the eco-food chain than are deer and they should be sampled.

**(1) Staff Response.** STV fails to provide sufficient factual support for this basis because its cites no specific regulatory or technical requirement for the broad sampling regime it proposes. Moreover, it fails to demonstrate a genuine issue of material fact with the FSP because if the initial deer sampling results warrant, the Army will sample additional biota and deer a second time. (Staff Response, p. 32).

**(2) Army Response.** The Army does not assert that deer are being sampled because they are the most representative biota. Instead, deer are being sampled because they have been shown to ingest DU and are potential sources of human exposure which both the NRC Staff and STV have identified in the past. The Army agrees that it would be helpful to sample other, more representative biota, but only if the initial round of deer sampling warrants. (Army Response, p. 30).

**(3) STV Reply.** STV's expert in environmental biology and toxicology agrees that it is important to evaluate deer, as requested by the NRC. Deer are eaten by hunters and their families and, as such, contamination of the deer tissue is of great environmental concern. However, STV's expert maintains that deer are not the best indicators of whether DU is entering either the human or the plant and animal food chains. As she has previously pointed out, other biota show a much greater tendency to bioaccumulate the DU, and are therefore better biological indicators of DU migration into environmental media and the food chain for use in site modeling. Since the decision about decommissioning or license termination or whatever clean up might be required will be based on such a site model, it behooves the Army to ensure that the most appropriate samples are taken to support this modeling. In this context, STV's expert maintains that the biota sampling plan *must* include *multiple*

biota and not just deer over time, i.e., that this be *a requirement* and not merely *an option* as contemplated in the FSP.

The FSP proposes a grid system for deer sampling. MARS SIM specifically recommends using a grid system for all sampling. STV's environmental risk modeling expert strongly recommends using such a grid system and to sample the multiple biota recommended, i.e. aquatic (if present), soil invertebrates such as earthworms, terrestrial vertebrates – small mammals and birds – and amphibians and reptiles as found, and vegetation of various types.

**p. Basis.** Several non-standard data gathering and modeling tools are not being employed in the FSP, but should be. These would help the future risk modeling. For example, GIS modeling of individual data points (all samples) will help identify migration and will better pinpoint movements of DU into and through JPG and its surrounding ecosystem. Identification of individual vegetation samples will also help identify whether there is preferential uptake of DU into specific types of plants – a potentially significant phenomenon which can be detected by the relatively new phyto-remediation technologies being developed at Purdue with EPA funding.

**(1) Staff Response.** This basis is too vague to raise a genuine issue with the FSP because it does not make clear what sampling tools it proposes that will not be used in implementing the FSP, or why those tools are preferable to those that will be used for purposes of implementing the FSP. (Staff Response, p. 34).

**(2) Army Response.** While it was not mentioned expressly in the FSP, GIS is a tool which the Army's contractor plans to use in implementing the FSP. Moreover, the contractor is

technologically sophisticated and employs innovative data gathering and modeling tools on an ongoing basis and will do so at JPG. (Army Response, pp. 30-31).

**(3) STV Reply.** STV accepts the representation of the Army and the reputation of its contractor to resolve the issue raised in this basis regarding the use of GIS and other state-of-the art technologies in implementing the FSP.

**q. Basis.** DU dissolution rates should be calculated for different soils and under different site-specific wetness and temperature regimes in order to measure accurately DU dissolution at JPG. However, Table 4-1 and related text of the FSP do not specify such multiple measurements.

**(1) Staff Response.** This basis does not raise a genuine issue with the FSP because it does not explain why the samples of penetrators tested under the FSP would not be representative of those to be found at the JPG DU site. (Staff Response, p. 35).

**(2) Army Response.** Penetrator dissolution rates will be calculated for the two different soil types present at JPG. Laboratory tests will provide a controlled environment to compare with the field results. (Army Response, p. 31).

**(3) STV Reply.** The Army's response resolves the issue of dissolution rates with varying soil types, but leaves unresolved the issue of dissolution rates with varying moisture conditions. Given the range of moisture conditions at the JPG site, this variable should also be addressed in order to accurately measure DU dissolution at JPG.

**r. Basis.** The Independent Technical Review Team Leader for the HSP and FSP is the same person as the Project Manager (Corinne Shia, SAIC). See FSP, Certification 4- Contractor Certification of Independent Technical Review, and HSP, Certification 4 - Contractor Certification of



Independent Technical Review. To assure "independent" technical review, these roles should be performed by different individuals.

**(1) Staff Response.** This basis lacks sufficient factual support because it does not cite any specific facts to show why the same person cannot perform the two roles contemplated by the FSP. (Staff Response, p. 35).

**(2) Army Response.** The reviewer is "independent" not in the sense that she is employed by someone other than the Army's principal contractor, but in the sense that she is not the primary author of the FSP. The reviewer was selected because her education, training and experience provide her with knowledge and expertise regarding the various technical components of the FSP and their inter-relationships. There is no regulatory requirement that the reviewer be "independent" in the sense of being employed by someone other than the Army's principal contractor. (Army Response, p. 32).

**(3) STV Reply.** Notwithstanding the Army's position, STV's environmental risk modeling expert maintains her professional experience teaches that the Project Manager cannot be an "independent" reviewer of the FSP simply because she is very knowledgeable regarding many of the technical matters addressed in the Plan. Because of her personal involvement in managing the Project and her personal stake in its perceived success, she cannot be objective and impartial when it comes to assessing its strengths and weaknesses. Moreover, STV's environmental biology and toxicology expert notes that, in her experience, mechanical engineers are rarely sufficiently versed in biology and toxicology to assess those components of the site modeling regime, especially for a site as large and complex as JPG.

### **C. Bases for HASP Contentions.**

In addition to the Staff's challenge as to whether STV's HASP contentions are within the scope of this proceeding, the Staff and the Army have both challenged all of the bases for both of STV's HASP contentions. However, as explained below, these challenges are unwarranted and should be rejected.

**1. Contention C-1: The HASP is very generic and not site-specific in nature, without identification of the particular UXO hazards to be addressed or the specific locations in which they are found.**

**a. Basis.** Table 2-1, "DU Impact Area Site Characterization Project Onsite Tasks" (page 2-2), lists "Installation of 10 multi-well clusters ...", "Collect 24 samples (penetrators) from the DU Impact Area", and an optional task to sample "other biota (plants, earthworms, birds, mammals, and fish)" as project tasks that will be accomplished. It is possible that UXO may be encountered while performing these operations, but there is very little specific information on the UXO safety precautions required to be followed during these activities. For example, common industry practice is to have a UXO specialist locate a clear entry and exit pathway for the drill rig and then ensure that no subsurface metal objects are located at the well location. Then, the UXO specialist usually performs downhole geophysical avoidance surveys during the well drilling operation (this is usually done by hand boring the cleared area as far as possible and then removing the drill from the well at 2-ft. increments to check that no metal objects are in the path of the drill until a specified depth is reached).

**(1) Staff Response.** Citing Section 8-13 of the HASP, the Staff asserts that this basis raises no genuine issue with the Army's proposal. (Staff Response, p. 38-39).

**(2) Army Response.** The Army concedes that Section 8-13 discusses only general UXO avoidance procedures, but asserts that “[f]uture addenda will expand on the procedures and protocol in the HASP as appropriate.” (Army Response, p. 34).

**(3) STV Reply.** See Reply under Basis d below.

**b. Basis.** In section 8.12, “Drill Rig Operations,” there are also no specific precautions described for UXO. The text in this section appears to be standard drill rig precautions and should be modified to emphasize the potential UXO hazards that may be encountered during this intrusive operation and what specific UXO avoidance measures will be used to ensure the safety of the drillers.

**(1) Staff Response.** Citing Section 8-13 of the HASP, the Staff asserts that this basis raises no genuine issue with the Army’s proposal. (Staff Response, p. 39).

**(2) Army Response.** The Army concedes that Section 8-13 discusses only general UXO avoidance procedures, but asserts that “[f]uture addenda will integrate the two protocols to ensure that field personnel will implement procedures correctly .” (Army Response, p. 34).

**(3) STV Reply.** See Reply under Basis d below.

**c. Basis.** Section 8.13 on “Unexploded Ordnance” is more general boilerplate. There is no site-specific information presented. This is highly unusual for field operations on a known UXO contaminated site. In what specific locations are the samples going to be collected? What is the type and density of UXO that is expected to be encountered in these locations? How deep are these UXO expected to penetrate (important information for the drillers)?

**(1) Staff Response.** The Staff again asserts that this basis raises no genuine issue with the Army’s proposal. In particular, the Staff asserts, “Even if advance mapping of sampling activities

against projected UXO density were germane to the HASP and within the NRC's jurisdiction, STV simply poses general questions; it states no basis to believe that further detail in the HASP itself is necessary, or that the Army's operations will not account for these concerns properly." (Staff Response, p. 40).

**(2) Army Response.** The Army concedes that Section 8-13 discusses only general UXO avoidance procedures, but asserts that "[f]uture addenda will expand on the procedures and protocol in the HASP as appropriate." (Army Response, p. 36).

**d. Basis.** Appendix B is an "Example Activity Hazard Analysis." However, since this HASP is intended to be a site-specific health and safety plan it would be most appropriate to include the completed activity hazard analyses instead of just an example. Since this HASP does not contain the site-specific activity hazard analyses, when will they be completed and how will they be presented to the site personnel? This question was addressed to Army and SAIC personnel during a conference call on September 8, 2005. The only response was that the HASP would be subsequently supplemented with the necessary site-specific hazard analyses. To date, no such supplementary analyses have been supplied.

**(1) Staff Response.** Again citing Section 8-13 of the HASP, the Staff claims that this basis does not raise any genuine issue with the Army's proposal. In particular, the Staff argues:

Section 8-13 of the HASP describes UXO-specific training and surveying practices that apply to all on-site activities. *See* HASP, at 8-6, 8-7. To contend, as STV does, that it would be better to include a complete analysis rather than just an example does not constitute an actual dispute about the present adequacy of the HASP. STV has failed to articulate clear grounds to believe the Army has not anticipated and will not account for relevant activity hazards.

(Staff Response, p. 41).

(2) Army Response. The Army again concedes that Section 8-13 discusses only general UXO avoidance procedures, but asserts that “addenda are planned to address specific field elements of the program and are anticipated to include activity specific hazard analyses and associated detailed H&S procedures beyond the protocol specified in the HASP.” (Army Response, p. 37).

(3) STV Reply. The HASP fails to cite let alone apply in detail *the definitive USACE guidance document on the subject of performing environmental sampling in UXO contaminated areas*, namely EP 75-1-2, U.S. Army Engineering and Support Center, Huntsville, Alabama, *Munitions and Explosives of Concern (MEC) Support During Hazardous, Toxic, and Radioactive Waste (HTRW) and Construction Activities*, August 1, 2004. The information contained in this technical guidance document is *absolutely critical* for planning and coordinating field sampling and UXO avoidance activities at site like JPG in order to establish an efficient and maintainable schedule, develop a cost-effective and realistic budget, and minimize the risk of an unplanned detonation of UXO for a site characterization project like the FSP.

EP 75-1-2 provides specific guidance for performing the following sampling tasks at sites contaminated with UXO:

- Basic UXO safety procedures including planning and required staffing requirements and qualifications (*re* Contention C-1, Basis a.): *see* EP 75-1-2, Chapter 3.
- Specific UXO safety procedures for drill rig operations at UXO contaminated sites (*re* Contention C-1, Basis b.): *see* EP 75-1-2, Section 5-10.
- Guidance on preparing plans for performing environmental sampling in UXO contaminated areas which demonstrates the inadequacy of HASP Section 8.13 (*re* contention C-1, Basis c): *see* EP 75-1-2, Chapter 3.

- Specific UXO safety procedures for performing geophysics in UXO contaminated sites (*re* Contention C-2, Basis d.): *see* EP 75-1-2, Section 5-6.
- Specific UXO safety procedures for sampling groundwater (Contention C-2, Basis e.) and soil and sediment at UXO contaminated sites (*re* Contention C-2, Basis f.): *see* EP 75-1-2, Section 5-7.

As filed, the HASP simply does not apply the detailed guidance in EP 75-1-2 to develop detailed plans for UXO avoidance with respect to each of the principal field sampling activities described in the FSP. The subsequent addenda referenced by the Army *may* correct this glaring deficiency in the HASP, but there is no way to determine at this time whether that will prove to be the case. Consequently, in the opinion of STV's expert, the HASP is grossly deficient as it stands.

It is also the opinion of STV's expert based on his personal experience, professional judgment, and knowledge of practices observed on other projects that inadequate planning which does not comply with EP 75-1-2 will delay the implementation and increase the cost of both HASP and FSP field activities. It is also likely to increase the risk of an accidental detonation, which will not only endanger on-site personnel but further delay and increase the cost of both the HASP and the FSP.

## **2. Contention C-2: The HASP is not effectively integrated with the FSP.**

**a. Basis.** The person identified in Table 3-1 to serve as Field Manager for the FSP (Seth Stephenson) possesses the training and experience required to serve as the UXO expert on the project. However, he is the only UXO support person listed for the project. One UXO specialist is only able to monitor one field operation at a time, such as one sampling team or one drill rig. It is not likely that he will be able to perform any additional duties associated with being the Field Manager when sampling operations are being conducted because his presence will be required at the sampling site as the UXO

expert. It is likely to be much more efficient to have the project Field Manager and UXO support specialist(s) be different people.

**(1) Staff Response.** STV provides no basis to believe that the Army's assignment of the roles of Field Manager and UXO Safety Specialist to the same person "does not account appropriately for either UXO risks or for the management resources necessary for the project." (Staff Response, p. 41-42).

**(2) Army Response.** Initial studies suggest that one person can perform both roles, but SAIC will evaluate workloads prior to actual commencement of on-site activities and obtain authorization for additional personnel if needed. (Army Response, p. 38).

**(3) STV Reply.** The cited basis is drawn from the definitive USACE technical guidance on the subject of performing environmental sampling in UXO contaminated sites previously cited by STV, namely EP 75-1-2, U.S. Army Engineering and Support Center, Huntsville, Alabama, *Munitions and Explosives of Concern (MEC) Support During Hazardous, Toxic, and Radioactive Waste (HTRW) and Construction Activities*, August 1, 2004.

As currently written the HASP is not in compliance with Section 5-2 of EP 75-1-2, which requires:

For anomaly avoidance on an HTRW site with known or suspected MEC, the contractor shall provide a UXO team consisting of a minimum of two personnel, one of whom must be a UXO Technician II. This individual will be the UXO team leader. The UXO team must be on-site during all sampling activities. The UXO team may include additional UXO-qualified personnel, geophysicists, or any other team member, depending on site- and task-specific conditions/requirements.

The HASP does *not* specify the two-person UXO team, making it *not* in compliance with this requirement of EP 75-1-2.

It is also the opinion of STV's expert based on his personal experience, professional judgment, and knowledge of practices observed on other projects that failing to comply with the staffing requirements of EP 75-1-2 for these critical positions will delay and increase the cost of both HASP and FSP field activities. It is also likely to increase the risk of an accidental detonation, which will not only endanger on-site personnel but further delay and increase the cost of both the HASP and the FSP.

It is critical that the NRC require the Army to comply with USACE technical guidance for performing environmental sampling in UXO contaminated sites because NRC is the only regulatory agency providing oversight on the JPG Site Characterization Project. On other projects this technical function is usually provided by state regulators or the EPA. But, as the lead regulatory agency for this project, NRC cannot simply abdicate its oversight responsibility to the Army.

**b. Basis.** The last bullet in Section 4.0 notes that UXO is present at the site and also states that, "Site investigation plans will be adjusted, as appropriate and necessary, to ensure that the H&S of all field personnel are always protected." This type of statement shows an almost complete lack of knowledge and concern for UXO on the project. Accepted safety procedures on UXO sites require plans to be developed to safely perform sampling operations before beginning work, thereby minimizing the need to adjust the plans to maintain safety once sampling has begun. There is an virtually no planning for UXO safety incorporated into the sampling procedures included in the FSP.



**(1) Staff Response.** "STV does not identify what accepted safety procedures on UXO sites it is referencing, much less whether such procedures necessitate greater detail or assurances than are provided, for example in Section 8.13 of the HASP." (Staff Response, p. 42-43).

**(2) Army Response.** The Army's contractor SAIC is knowledgeable of EP 75-1-2 and other DA guidance documents regarding UXO avoidance and will follow that guidance in developing future addenda to the HASP to further elaborate Section 8.13. (Army Response, pp. 38-39).

**(3) STV Reply.** See the STV Reply in support of Contention C-1, Basis d, above, for a detailed discussion of the failure of Section 8.13 of the HASP to comply with the requirements of EP 75-1-2.

It is the opinion of STV's expert based on his personal experience, professional judgment, and knowledge of practices observed on other projects that failure to comply with the planning requirements of EP 75-1-2 will delay and increase the cost of both HASP and FSP field activities. It is also likely to increase the risk of an accidental detonation, which will not only endanger on-site personnel but further delay and increase the cost of both the HASP and the FSP.

**c. Basis.** Section 4.2 on "Applicable Regulations/Standards" does not mention any of the guidance documents covering UXO avoidance and safety procedures for environmental sampling projects. These documents are available on the website of the U.S. Army Corps of Engineers Engineering and Support Center, Huntsville, Alabama.

**(1) Staff Response.** "STV does not identify what substantive information might be in the guidance documents it mentions, nor does it state whether that information is already addressed in the

Army's proposal. Furthermore, STV fails to explain why the absence of these references has any consequences for the NRC's analysis." (Staff Response, p. 43).

(2) **Army Response.** The Army's contractor SAIC is knowledgeable of EP 75-1-2 and other DA guidance documents regarding UXO avoidance and will follow that guidance in developing future addenda to the HASP to further elaborate Section 8.13. (Army Response, pp. 39-40).

(3) **STV Reply.** The Staff is shifting to STV a burden which properly belongs to the Army. To put it bluntly, the HASP fails to even cite let alone apply in any detail *the definitive USACE guidance document on the subject of performing environmental sampling in UXO contaminated areas*, namely EP 75-1-2, U.S. Army Engineering and Support Center, Huntsville, Alabama, *Munitions and Explosives of Concern (MEC) Support During Hazardous, Toxic, and Radioactive Waste (HTRW) and Construction Activities*, August 1, 2004. The information contained in this technical guidance document is *absolutely critical* to developing a health and safety plan and integrating it with a field sampling plan at a UXO contaminated site like JPG. In the opinion of STV's expert, the HASP's failure to cite and comply with the requirements of EP 75-1-2 is a strong signal and clear sign that the degree of advance planning required to coordinate sampling and UXO avoidance in the field in the manner required to establish an efficient and maintainable schedule, develop a cost-effective and realistic budget, and minimize the risk of accidental detonation has not yet occurred with respect to the Army's JPG DU Site Characterization Project.

d. **Basis.** Section 6.1 describes the field procedures that will be accomplished during "Geophysics (Electrical Imaging)." This process involves driving electrodes into the ground and transmitting electrical current between the electrodes. This involves UXO hazards caused by driving

the electrodes into the ground and also by emitting electromagnetic radiation which may be a potential initiation source for electrically initiated ordnance. UXO safety procedures must be specified to support this sampling procedure and the issues involved with electromagnetic radiation must be incorporated in the plan.

(1) Staff Response. "STV does not identify any support for its claim that the EI process may be a potential initiation source for electrically initiated ordnance, nor does it explain whether that risk is relevant to any of the types of ordnance present at JPG." (Staff Response, p. 44).

(2) Army Response. The Army concedes that it does not yet know whether any of the munitions used at the JPG DU site had the type of fuses which could be detonated by electromagnetic imaging (EI). However, its contractor is researching the matter and another agency within the Defense Department is conducting a study to determine how susceptible these fuses are to EI. Until the Army is assured that use of EI will not risk detonation of UXO at JPG, that field sampling technique will not be used. (Army Response, p. 41).

(3) STV Reply. STV does and can not know if any of the ordnance types present at JPG are susceptible to detonation from electromagnetic radiation (EMR) *precisely because* the HASP does not identify the types of UXO that are expected to be found on the site. The importance of this inadequacy of the HASP is obvious when considering its implications. If the HASP does not identify the types of UXO expected to be found, it is not possible to properly plan the project *precisely because* such considerations as the effect of EI on the UXO cannot be evaluated. This is a prime example of the gross deficiencies in the HASP as submitted.

Notwithstanding the failure of the HASP to disclose and discuss the types of ordnance present at JPG, the Army's response concedes that there is a credible risk which must be addressed before EI may be used at JPG. Further support for STV's claim that the EI process can be a source for the unplanned detonation of UXO is found in Section 3.8c of EP 75-1-2:

#### Hazards of Electromagnetic Radiation to Ordnance

(1) Some ordnance items and other electro-explosive devices (EEDs) are particularly susceptible to electromagnetic radiation (EMR) in the radio frequency (RF) range originating from devices such as radio, radar, and television transmitters. The presence of antennas and communication and radar devices will be noted on initial site visits and/or preliminary assessments of eligibility. In addition, active and passive subsurface detection devices emit EMR/RF. Each type of equipment producing EMR/RF must be reviewed and a hazard analysis completed. The level of EMR/RF susceptibility and potential hazard is a result of the design and type of MEC or EED that may be present. Therefore, a knowledge of what MEC is normally unsafe in the presence of EMR/RF is important so that preventive steps can be taken if such MEC is encountered. The MM CX will be consulted when geophysical investigations are planned in areas potentially containing electric-fuzed ordnance.

(2) As part of the hazard analysis, the MSD between an EMR/RF emitting device and potential EEDs will be calculated. This calculation is based on the characteristics of the transmitting device and the potential EEDs. The important characteristics of the EMR/RF source device include:

- (a) The transmitter frequency ( $f$ , in MHz).
- (b) The peak envelope transmitting power ( $P_t$ , in W).
- (c) The transmitter gain (GdB).

(3) Minimum safe distances from EMR/RF sources are listed in Tables 2-2, 2-3, and 2-4 of TM 9-1375-213-12.

As can be seen from this text, the hazards of electromagnetic radiation to UXO is a perfect example of why significantly more planning than reflected in the HASP is required to comply with EP 75-1-2.

Again, it is the opinion of STV's UXO expert based on his personal experience, professional judgment,

and knowledge of practices observed on other projects that failure to comply with the planning requirements of EP 75-1-2 prior to commencement of field work will delay and increase the cost of both HASP and FSP field activities. It is also likely to increase the risk of an accidental detonation, which will not only endanger on-site personnel but further delay and increase the cost of both the HASP and the FSP.

**e. Basis.** Section 6.2 on sampling "Groundwater" contains no information on UXO avoidance or safety even though this section describes drilling wells. For example, Figure 6-1, the "Drill Rig Operational Checklist," lists numerous safety requirements including fire extinguishers, grounding the drill rig, watching for electrical lines, etc. However, there is *nothing* on the safety requirements for drilling in an area contaminated with UXO. Also, page 6-14 references setting three or four steel well guards in concrete 2-ft. into the ground around each well. But, again, there is no mention of having UXO safety support for this intrusive operation.

**(1) Staff Response.** Citing HASP Section 8-13, the Staff argues that "STV states no basis to believe that the Army's plan does not account for these risks appropriately." (Staff Response, p. 45).

**(2) Army Response.** "Future addenda will integrate [field sampling and UXO avoidance] protocols to assure that field personnel will implement procedures correctly." (Army Response, p. 42).

**(3) STV Reply.** *See generally* the STV Reply in support of Contention C-1, Basis d, above. Well-drilling is a prime example of an intrusive field sampling activity where the vague generality of Section 8-13 is especially inadequate to minimize the risk of accidental UXO detonation. By comparison, EP 75-1-2, Section 5-10, Subsurface Soil Sampling and Monitoring Well Installation, provides as follows:

Subsurface soil sampling is defined as the collection of samples below a nominal depth of approximately 6 inches by means of a split-spoon, Shelby tube, or bucket auger soil sampler using drilling techniques. Drilling techniques are also used to install groundwater monitoring wells for HTRW investigative sampling. The following paragraphs describe anomaly avoidance procedures for subsurface soil sampling and monitoring well installations on an HTRW site with known or suspected MEC.

- a. The UXO team must conduct an access survey of the routes to and from the proposed investigation site as well as an area around the investigation site, as described in paragraph 5-6.
- b. Utilities will be cleared and dig permits will be obtained in accordance with the procedure outlined in paragraph 5-4c.
- c. The UXO team must complete a subsurface geophysical survey of the proposed drill hole location(s). If an anomaly is detected, HTRW sampling personnel must select a new drill hole location. Any anomalies detected will be prominently marked with survey flagging or pin flags for avoidance. If the subsurface sampling or well installation depth is greater than the geophysical instrument's detection capabilities, the UXO team must incrementally complete the geophysical survey as outlined below.

(1) Pilot Hole/Incremental Geophysical Survey. Once an access survey has been completed, the UXO team will install a pilot hole at each proposed drill hole location. While the UXO team is completing their geophysical survey remaining project personnel must withdraw out of the immediate area.

(a) If an anomaly is detected, the pilot hole will be backfilled in accordance with site-specific procedures and HTRW sampling personnel must select a new drill hole location. Any anomalies detected will be prominently marked with survey flagging or pin flags for avoidance.

(b) As long as no anomalies are detected, the pilot hole will be advanced to the maximum reach of the auger or to the maximum depth of the proposed drill hole, whichever is less. During the excavation of the pilot hole the drill rig's auger will be withdrawn and the hole checked for anomalies every 12 inches. The pilot hole will also be inspected upon reaching the final depth, providing a total clearance depth equal to the pilot hole depth plus 12 inches. If no anomalies are detected to the total depth of the proposed drill hole, the drill rig may be brought on-site and utilized.

(c) In cases where the pilot hole does not reach the full depth of the proposed boring (e.g., the proposed depth of the drill hole is more than the maximum depth of the auger, or the UXO team cannot penetrate the soils using the auger), the drill rig may be

brought on-site and advanced in 12-inch increments beyond the clearance depth of the pilot hole. At the end of each 12-inch increment, the drill rig's auger must be withdrawn from the hole so that the UXO team may screen for anomalies as described above. As necessary with loose soils, a polyvinyl chloride (PVC) pipe (minimum 3 inches inner diameter) will be inserted to keep the hole open and to allow for incremental geophysical screening.

(d) When working in impact areas, the UXO team may discontinue incremental screening once the drilling has extended to depths of 30 feet below ground surface, the depth of penetration of the MEC has been exceeded, or the planned depth of drilling has been reached, whichever is less.

(e) For all other areas, incremental screening will be determined based on an assessment of the site's characteristics and history.

As can be seen from these very detailed requirements from the definitive reference that is not even cited as applicable in the HASP, the process of performing UXO avoidance support for well drilling requires detailed planning and analysis in advance of field activities and strict adherence to established equally detailed procedures once in the field. None of the required planning or detailed procedures are included in the HASP, which makes the HASP inadequate to support the sampling program described in the FSP in the opinion of STV's expert.

f. **Basis.** Sections 6.5 and 6.6 relate, respectively, to "Soil Sampling" and "Sediment Sampling." These sections contain no information on or references to specific UXO safety procedures for performing these two operations, both of which are intrusive and would be expected to encounter UXO.

(1) **Staff Response.** Citing HASP Section 8-13, the Staff argues that "STV states no basis to believe that the Army's plan does not account for these risks appropriately." (Staff Response, p. 45).

(2) **Army Response.** "Future addenda will expand on the principles and protocol in the HASP as appropriate." (Army Response, p. 42).

(3) **STV Reply.** *See generally* the STV Reply in support of Contention C-1, Basis d, above. Sub-surface soil and sediment sampling are other intrusive field sampling activities where the vague generality of Section 8-13 is especially inadequate to minimize the risk of accidental UXO detonation. *See* STV Reply to Contention C-2, Basis e, above. Additional technical guidance containing planning requirements for soil and sediment sampling are contained in EP 75-1-2, Section 5-7.

#### **D. Timeliness and Financial Assurance Contentions**

In addition to the Staff's objection that STV's timeliness and financial assurance contentions are beyond the scope of this proceeding, both the Staff and the Army have raised additional objections to the individual bases cited by STV in support of these contentions. While some of these objections have some merit, they should not preclude the admissibility of any of STV's contentions and bases, at least as restated.

**1. Contention D-1.** The alternate schedule being proposed fails to meet the requirements of 10 C.F.R. § 40.42 of a *definite* schedule for *timely* decommissioning of the JPG site.

**a. Basis.** A major STV concern with the Army's 2003 POLA request was that the indefinite postponement of decommissioning and decontamination at JPG would be inimical rather than essential to the conduct of effective decommissioning operations. The whole purpose of 10 C.F.R. § 40.42 is timely decommissioning and decontamination. In particular, the NRC said in proposing the rule in 1993:



The lack of definitive criteria as to when licensees shall commence and complete decommissioning their facilities has resulted in instances where the Commission has had to issue orders to establish schedules for timely decommissioning. Because timeliness in decommissioning is a generic issue, the Commission is proposing to amend its regulations to clearly delineate the licensee's responsibility for timely decommissioning. The proposed rule would provide the needed regulatory basis for compelling decommissioning in a timely manner. In addition, the proposed rule would place a limit on the time permitted to decontaminate and decommission and place the burden of proof directly on the licensee to demonstrate that a longer period of time is required for completing decommissioning.

See 58 Fed. Reg. at 4100 (emphasis added).

Here, the alternate schedule being proposed fails to "place a limit on the time permitted to decontaminate and decommission" the site, as required by the Timely Decommissioning Rule. The Army's May 25, 2005 letter does not state when decommissioning will start nor when it will end. Instead, it simply requests approval to extend the time for submission of a DP by five years following approval of the current POLA request. In effect, the current five-year POLA request, as filed, represents no more than the first installment of the indefinite POLA with five year renewals previously proposed and supposedly withdrawn by the Army.

(1) Staff Response. To the extent that it relates to the time required to complete a decommissioning plan, the cited basis does not raise an issue material to the findings which the NRC must make in order to approve the Army's request for an alternate schedule to submit a decommissioning plan. To the extent it relates to the time required to submit a decommissioning plan, the cited basis does not raise a genuine issue with the Army's request for five years. (Staff Response, pp. 47-48).

(2) **Army Response.** The cited basis does not raise an issue material to any of the three findings which the NRC must make in order to approve the Army's request for an alternate schedule to submit a decommissioning plan. (Army Response, p. 44).

(3) **STV Reply.** Timeliness is clearly an issue which goes to the first of the three findings which the Commission must make under 10 CFR § 40.42(g)(2) in order to approve the Army's alternate schedule request, namely that the requested delay is necessary to the effective conduct of decommissioning.

STV agrees with the Staff that the Army has not currently requested an extension of the time *to complete* its decommissioning plan, so STV's reference in the cited basis to the 24-month time limit for that activity is in error. Furthermore, STV agrees with the Army and the Staff that performance of additional site characterization activities is a necessary prelude to the submittal of a decommissioning plan for the JPG DU site.

However, STV does believe that there is a genuine issue raised on the record with respect to the length of time required to perform those activities. That issue is raised by the FSP's express acknowledgment that, although the planned schedule for the JPG site characterization project is five years, "schedule accelerations are desirable and possible technically if there are no budget constraints on an annual basis. For instance, acceleration of the planned schedule would allow time before the end of the 5-year timeframe to address additional regulatory requirements." (FSP, p. 4-1).

The Timely Decommissioning Rule clearly puts the burden on the Army to justify the five-year timeframe, not on STV to show what shorter time period would be feasible. Accordingly, whether the five-year timeframe to implement the site characterization project is necessary to the effective conduct

of decommissioning at the JPG DU site is a genuine and material issue supported by sufficient facts to constitute an admissible basis for STV's timeliness contention.

**b. Basis.** The current proposal also fails to "place the burden of proof directly on the licensee to demonstrate that a longer period of time is required for completing decommissioning" as required by the Timely Decommissioning Rule. The Army's May 25, 2005 letter does not even commit to completing decommissioning with twenty-four months of DP approval. Instead, it effectively places the burden on STV (or any other concerned group in the future) to demonstrate that a shorter, more definite period is required. This effectively turns the Timely Decommissioning Rule on its head and creates precisely the type of situation which the rule was adopted to correct and prevent: the indefinite postponement of the decommissioning and decontamination of licensed sites. And, it does so at a former SDMP site at which there have already been multiple, lengthy delays in decommissioning.

**(1) Staff Response.** To the extent that it relates to the time required *to complete* a decommissioning plan, the cited basis does not raise an issue material to the findings which the NRC must make in order to approve the Army's request for an alternate schedule *to submit* a decommissioning plan. To the extent it relates to the time required to submit a decommissioning plan, the cited basis does not raise a genuine issue with the Army's request for five years. (Staff Response, pp. 48-50).

**(2) Army Response.** "The Army, in writing and discussion with the NRC Staff, has demonstrated that [the] length of time required to complete the studies and tests required to formulate the decommissioning plan is necessary and reasonable." (Army Response, p. 46).

**(3) STV Reply.** See STV's Reply to Basis a, above.

c. **Basis.** The Army's current proposal provides no description of its regulatory history, especially but not exclusively at the JPG site, to establish a pattern of compliance with Commission decommissioning rules and guidance which would instill confidence that timely decommissioning will actually occur at JPG. Such a showing is especially critical in a situation in which the Army is once again requesting an extended period of delay in decommissioning and decontamination at a former SDMP site at which there have already been multiple, lengthy delays in decommissioning. Such a showing is also expressly contemplated by Commission guidance on the evidence required for an alternate schedule for decommissioning. In particular, NUREG-1757, Vol.3, Section 2.6, provides, in pertinent part: "To demonstrate that delaying the start of decommissioning will not be detrimental to public health and safety, a licensee should submit the following: A discussion of its record of regulatory compliance, particularly its compliance with NRC regulations."

(1) **Staff Response.** To the extent that it references a regulatory requirement to support an alternate schedule *to initiate decommissioning*, the cited basis does not raise an issue material to the findings which the NRC must make in order to approve the Army's request for an alternate schedule *to submit a decommissioning plan*. To the extent it relates to the time required to submit a decommissioning plan, the cited basis does not raise a genuine issue with the Army's request because the Army has discussed its regulatory history in the FSP. (Staff Response, pp. 50-52).

(2) **Army Response.** There is no need for the Army to describe its regulatory history, because the Staff and STV are both intimately familiar with it and the Staff has never expressed any concern regarding the Army's ultimate compliance. (Army Response, pp. 46-47).

**(3) STV Reply.** The regulatory history which supports this basis is the history cited earlier in this Reply and described in Judge Rosenthal's March 31, 2005 Memorandum and Order referring to the Commission the Army's then-pending request for an indefinite delay in the submittal of a decommissioning plan for the JPG DU site. In effect, this regulatory history shows that the Army has created a regulatory "Neverland" in the middle of the decommissioning process for the JPG DU site where regulatory time stands still. Having long-since initiated the decommissioning process in 1993, the Army has created a situation in which it has delayed actual decommissioning for twelve years and now seeks to delay it yet another five years. It has done this by submitting and then withdrawing, after substantial time, effort and resources had been expended on their development and review, two different decommissioning plans, succeeded by two different requests for alternate schedules to submit a third decommissioning plan, the first seeking an indefinite delay in five-year increments and the second a single five-year delay in submittal.

This regulatory history certainly provides a strong factual basis for questioning whether the Army will actually see its current request through to conclusion. It also provides an additional factual basis (beyond the statements previously quoted from the FSP regarding both the desirability and the feasibility of schedule acceleration) to question whether the JPG DU site characterization project should require five years to complete.

**2. Contention D-2: The financial assurance provided for the Army's alternate schedule for decommissioning is insufficient to meet the requirements of 10 C.F.R. §§ 40.36 and 40.42 for a *complete, definite and quantified* financial commitment for the decommissioning of the JPG site.**

a. **Basis.** The indefiniteness of the Army's alternate schedule is compounded by the vagueness of its funding. All the Army says in its May 25 letter to the NRC Staff is, "All actions under the plan are subject to funding of course." There is no specific budget for the overall plan, its principal components, or the individual years in the five-year implementation period. There is no formally expressed or executed statement of intent on the part of an Army official with the authority to approve or even to request the necessary funds. This effectively turns the relationship between the NRC as regulator and the Army as licensee on its head, making the Army the ultimate authority with respect to JPG decommissioning by virtue of its budgeting decisions and funding requests determining whether and when the site is characterized, decommissioned and decontaminated in accordance with NRC regulations. This inverted relationship promises nothing other than continuation of the pattern of repeated delays and changes in plans which has characterized the Army's decommissioning activities regarding the JPG site over the past ten years and recently resulted in the establishment of this docket following the referral of this unacceptable situation to the Commission for its consideration and action.

(1) **Staff Response.** To the extent that it references a regulatory requirement applicable at the time decommissioning is initiated, the cited basis does not raise an issue material to the findings which the NRC must make in order to approve the Army's request for *an alternate schedule to submit a decommissioning plan*. To the extent it relates to a regulatory requirement applicable at the time a decommissioning plan is submitted, the cited basis also does not raise a material issue to the findings which the NRC must make in order to approve the Army's request for an alternate schedule to submit such a plan. Even assuming a regulatory requirement applicable to a request for an alternate schedule

to submit a decommissioning plan, the cited basis does not raise a genuine issue with the Army's request. (Staff Response, pp. 52-54).

(2) Army Response. See Response to Contention D-2, Basis b.

(3) STV Reply. See Reply to Contention D-2, Basis b.

b. Basis. In response to a Request for Additional Information from the NRC Staff following submission of its May 25 letter, the Army belatedly submitted a purported Statement of Intent on September 14, 2005. See ADAMS Document ML052710071. However, this Statement does not satisfy the requirements of 10 C.F.R. § 40.36(e)(4): "In the case of Federal, State, or local government licensees, a statement of intent containing a cost estimate for decommissioning . . . and indicating that funds for decommissioning will be obtained when necessary."

In the first place, the Statement of Intent submitted by the Army contains no cost estimate to conduct the FSP and implement the HASP, let alone to perform eventual site decommissioning as required by the rule. There is also no indication in the Army's Statement as to what effect, if any, the requested delay in decommissioning will have on the eventual cost of decommissioning. NRC guidance puts the Army on specific notice that this is significant information to be submitted in support on an alternate schedule request. See, e.g., NUREG-1757, Vol.3, Section 2.6 (requiring "discussion of the current decommissioning cost estimate and the potential for increased decommissioning costs if an extension of the time period is approved") and Vol.1, Section 5.4 (stating "waste disposal costs have, in the past, increased at rates significantly higher than the rate of inflation and therefore delaying remediation will result in higher costs to the public.")

In the second place, the Army's Statement of Intent does not provide adequate documentation that the funds required to perform decommissioning, whatever the amount may be, will be obtained when necessary. The stated intention to seek and secure funds is limited to the actions contemplated in the Army's May 25 letter to support an alternate schedule, namely conducting the FSP and implementing the HASP; it does not include eventual decommissioning itself. There is also no documentation whatsoever of the authority of the letter's signator to request and approve disbursement of the funds necessary for these actions, let alone decommissioning of the site. Indeed, there is no express reference or other evidence in the Army's statement of any conscious effort to follow the Commission's written guidance for a statement of intent which would meet the applicable regulatory requirements. See NUREG-1757, Vol. 3, Sections 4.3.1 and 4.3.2.13 and Appendix A-16.

**(1) Staff Response.** To the extent that it references a regulatory requirement applicable at the time decommissioning is initiated, the cited basis does not raise an issue material to the findings which the NRC must make in order to approve the Army's request for *an alternate schedule to submit a decommissioning plan*. To the extent it relates to a regulatory requirement applicable at the time a decommissioning plan is submitted, the cited basis also does not raise a material issue to the findings which the NRC must make in order to approve the Army's request for an alternate schedule to submit such a plan. Even assuming a regulatory requirement applicable to a request for an alternate schedule to submit a decommissioning plan, the cited basis does not raise a genuine issue with the Army's request. (Staff Response, pp.54-56).

**(2) Army Response.** The Army has submitted Statements of Intent identical to the one submitted September 14, 2005 on numerous occasions in the past without criticism by the Staff. The



regulatory requirements cited by STV do not apply to the Army because to comply with them would violate the Anti-Deficiency Act. (Army Response, pp. 49-50).

(3) STV Reply. As previously discussed in Section I.c. of this Reply, above, one of the findings which the Commission must make to approve the Army's alternate schedule request under the Timely Decommissioning Rule is whether the request is "otherwise in the public interest." As the April, 2000 Standard Review Plan entitled "Licensee Requests to Extend the Time Period Established for Initiation of Decommissioning Activities" makes clear, material issues associated with the "public interest" finding include what impact, if any, the requested delay will have on the current decommissioning cost estimate and the continued adequacy of financial assurance for the ultimate decommissioning of the site.

Speaking *ex cathedra*, without citation to any controlling Commission or judicial authority, the Staff argues that updated decommissioning cost estimation and financial assurance documentation are only material regulatory considerations at the *two other stages* of the decommissioning process contemplated by the Timely Decommissioning Rule – the original initiation of the process and its completion through implementation of an approved decommissioning plan. But, such a strained argument effectively adopts and endorses the Army's interpretation of the Rule which turns the middle of the decommissioning process into a regulatory "Neverland" in which the public interest in *both* the timeliness of *and* the financial assurance for decommissioning is suspended, apparently for as long as the Staff's unfettered discretion will allow. This argument conflicts with the Staff's SRP regarding alternate schedules for initiation of decommissioning, which cites the Statement of Considerations associated with the Timeliness Rule for the express proposition that regulatory considerations applicable

to one stage of the decommissioning process may be applied in another stage “to the extent applicable to the situation.” (SRP, § 4.0, p. 3). The argument also conflicts with the Staff’s own recent request in an RAI related to the Army’s alternate schedule request for the September 14, 2005 Statement of Intent, the particulars of which STV is challenging in this Basis. The Staff’s argument also conveniently overlooks the indisputable fact that the two decommissioning plans previously submitted by the Army have been withdrawn in favor of the pending alternate schedule request to submit a third plan. The Army’s previous cost estimates and financial assurance documentation are effectively “dead letters,” with no pending decommissioning plan or timetable to which to apply.

As the Commission itself ruled in its October 26, 2005 Memorandum and Order, this is a “new decommissioning proceeding” for the Army. In practical terms, the Army’s request for an alternate schedule has effectively started the JPG DU site decommissioning process over. As a result, it is clearly an appropriate time to require the Army to submit a new decommissioning cost estimate and updated financial assurance documentation associated with that new estimate.<sup>2</sup> It is also the appropriate time for the Commission to review the apparent tension between technical and financial considerations associated with the requested five-year schedule for the JPG DU site characterization project revealed in the FSP. (FSP, p. 4-1).

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<sup>2</sup>The Staff apparently agrees about the timing if not the regulatory context for submission of a new JPG decommissioning cost estimate, representing that it has requested the Army to submit a new estimate in 2006. (Staff Response, p. 54). However, STV was not able to locate in ADAMS the letter on which the Staff bases its representation, by either the cited author name (Roller) or accession number ( ML053530173).

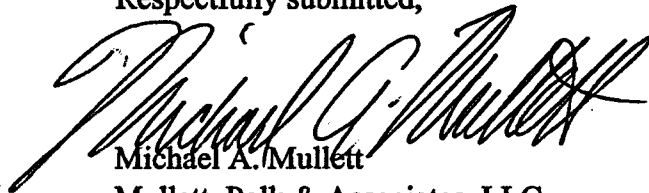
The Army's argument that imposing such a requirement would violate the Anti-Deficiency Act is utterly without merit. In the first place, STV is seeking only the cost estimation and financial assurance documentation which is specified in Commission regulations and guidance. There is a real and significant issue between STV on one hand and the Army and the Staff on the other regarding whether the Commission's rules and guidance documents should be interpreted to require submission of that documentation *in this regulatory context*. There is also a related dispute with respect to whether the September 14, 2005 Statement of Intent, as submitted, is sufficient documentation to comply with the relevant Commission rules and guidance. *But*, STV is *not* challenging the applicable Commission regulations and guidance regarding the *nature and content* of the information and assurances required. In the second place, Commission's rules and guidance regarding financial assurance do *not* require the Army or any other federal government licensee *to expend or obligate funds* for decommissioning activities in advance of Congressional appropriations; instead, they require the Army's authorized representatives *to request* the necessary appropriations on a timely basis so that funds are available when needed to support approved decommissioning plans and activities. The federal courts have made clear time and again that agreements with government agencies should not be interpreted to violate the Anti-Deficiency Act when alternative constructions are possible. *See, e.g., Cray Research, Inc. v. United States*, 44 Fed. Cl. 327, 333 (1999).

### III. CONCLUSION

STV has standing in this matter. It has submitted multiple contentions complying with the Commission's regulations regarding form and content which identify, describe and support with particular facts and/or expert opinions material deficiencies in the Army's submissions supporting its

request for an alternate decommission schedule which are clearly within the scope of this proceeding and relevant to its outcome. Most of these contentions raise triable issues of fact; the others disputed issues of law and/or regulatory policy. For these reasons, STV respectfully requests that the Commission admit all of its contentions (or alternate contentions) on all of the bases still being cited in this Reply, approve its request for a hearing, and grant any other relief which may be appropriate under the circumstances.<sup>3</sup>

Respectfully submitted,



Michael A. Mullett

Mullett, Polk & Associates, LLC  
309 West Washington Street, Suite 233  
Indianapolis, IN 46204  
Phone: (317) 636-5165  
Fax: (317) 636-5435  
E-mail: mmullett@mullettlaw.com

Attorney for Save the Valley, Inc.

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<sup>3</sup>If the requested hearing is granted, STV requests that, consistent with its previously filed motion that the hearing be held in abeyance pending completion of the Staff's technical review and the hearing record.

Consistent with its concurrently filed motion, STV also requests that the Commission grant it leave to supplement and/or amend its contentions in light of the Army's recently filed and planned future Addenda to the FSP and HASP.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

DOCKETED  
USNRC

January 4, 2006 (8:15am)

OFFICE OF SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

In the Matter of

U.S.ARMY

(Jefferson Proving Ground Site)

Docket No. 40-8838-MLA

ALSBP No. 00-76-04

January 3, 2006

**MOTION FOR LEAVE  
BY SAVE THE VALLEY, INC.  
TO AMEND/SUPPLEMENT CONTENTIONS/BASES AT SUBSEQUENT TIME**

Pursuant to 10 CFR § 2.309(f), Petitioner Save the Valley, Inc. (STV) respectfully requests leave to amend and/or supplement the Contentions/Bases which it has previously filed in this matter in response to multiple Addenda which the Department of the Army (Army) has represented it intends to file with respect to its Jefferson Proving Ground (JPG) Depleted Uranium (DU) Site Characterization Project. STV requests leave to file such amendments/supplements at the same time it would amend and/or supplement its Contentions/Bases to address the Staff's Environmental and Safety Reports.

In support of its motion, STV represents to the Commission:

1. On November 23, 2005, STV timely filed and served by regular and electronic mail its Petition to Intervene and Request for Hearing in this matter in which it set forth its Contentions/Bases in support of its hearing request.
2. STV's Contentions/Bases all relate to one aspect or another of the JPG DU Site Characterization Project, which the Army has proposed in support of its pending request for an alternate schedule to submit a decommissioning plan for the JPG DU site.

3. In its Responses to many of STV's Contentions/Bases, the Army has represented that it will be submitting multiple Addenda in the future to further elaborate in detail its plans for the JPG DU Site Characterization Project.

4. Based on the Army's representations, it appears to STV that the Army's future Addenda will almost certainly require STV to amend and/or supplement most if not all of its previously filed Contentions/Bases.

5. Apparently, the Army does not intend to file all of its Addenda at one time, but over a period of time, the length of which is currently unknown to STV. Indeed, although the Army did not provide it with a copy, STV discovered during a recent review of JPG documents on ADAMS that the Army's first Addendum has just recently been posted to the Commission's website.

6. As STV reads the provisions of 10 CFR § 2.309(f)(2), it would need to amend/supplement its Contentions/Bases on multiple occasions within a reasonable time after the posting of *each* of the Army's Addenda, absent leave from the Board.

7. Rather than amend/supplement its Contentions/Bases on multiple occasions, STV would prefer to amend/supplement its Contentions/Bases to address *all* Addenda filed prior to the conclusion of the Staff's technical review on a single occasion, namely on the same occasion when it would amend/supplement its Contentions/Bases to address the Staff's Environmental and Safety Reports.

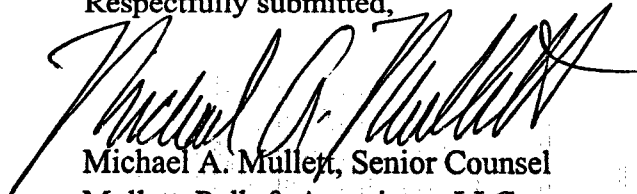
8. Economy is a principal reason for STV's preference. The other primary reason is that STV expects the Addenda to be complex, voluminous and inter-related to one another. For example, the Army's first Addendum is quite lengthy (1.5 MB in HTML; 18.6 MB in PDF) and amends both its Field Sampling Plan and its Health and Safety Plan in inter-related ways. Because of their length and complexity, the Addenda themselves may be subject to further amendment. Thus, from STV's

perspective, it simply makes more sense to respond to all of the Addenda at once rather than piecemeal over time.

9. The undersigned counsel certifies that, on Tuesday, January 3, 2006, he contacted counsel for the Army and the NRC Staff by electronic mail regarding this motion. Counsel for the Staff has advised that it will oppose the motion because it believes that STV should follow the provisions of 10 CFR § 2.309(f)(2) as written, i.e. seek leave to amend its Contentions/Bases within a reasonable time after *each* of the Army's Addenda becomes available to STV. As of 5:00 p.m. this date, STV has not heard back from counsel for the Army.

WHEREFORE, STV respectfully requests that the Commission grant it leave to amend and/or supplement at a subsequent time the Contentions/Bases which it has previously filed in this matter in order to address multiple Addenda which the Department of the Army (Army) has represented it intends to file with respect to its Jefferson Proving Ground (JPG) Depleted Uranium (DU) Site Characterization Project, with such subsequent time corresponding to the time when STV would otherwise amend and/or supplement its Contentions/Bases to address the Staff's Environmental and Safety Reports.

Respectfully submitted,



Michael A. Mullett, Senior Counsel  
Mullett, Polk & Associates, LLC  
309 West Washington Street, Suite 233  
Indianapolis, IN 46204  
Phone: (317) 636-5165  
Fax: (317) 636-5435

Attorney for Save the Valley, Inc.

**In the Matter of**

(Jefferson Proving Ground Site)

ASLBP No. 00-776-04-MLA

**January 3, 2006**

**Adjudicatory File  
Atomic Safety and Licensing Board  
U.S. Nuclear Regulatory Commission  
Mail Stop: T-3-F-23  
Washington, D.C. 20555**



Frederick P. Kopp  
U.S. Army Garrison - Rock Island Arsenal  
Office of Counsel (AMSTA-RI-GC)  
One Rock Island Arsenal  
Rock Island, IL 61299-5000

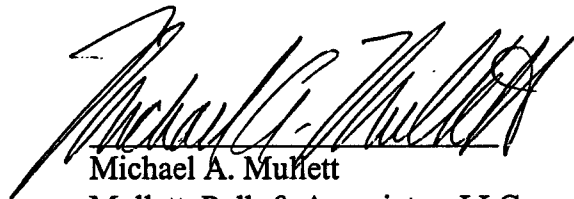
Office of the Secretary  
ATTN: Rulemaking and Adjudications Staff  
U.S. Nuclear Regulatory Commission  
Mail Stop: O-16-G-15  
Washington, D.C. 20555-0001

Patrick A. Moulding  
Marian L. Zobler  
Sara E. Brock  
Margaret J. Bupp  
Office of the General Counsel  
U.S. Nuclear Regulatory Commission  
0-15D21  
Washington, DC 20555-0001

Office of Commission Appellate Adjudication  
U.S. Nuclear Regulatory Commission  
Mail Stop: O-16-G-15  
Washington, D.C. 20555-0001

Tom McLaughlin, Decommissioning Branch  
Division of Waste Management  
Office of Nuclear Materials and Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Richard Hill, President  
Save The Valley  
P.O. Box 813  
Madison, IN 47250



Michael A. Mullett  
Mullett, Polk & Associates, LLC  
309 West Washington Street, Suite 233  
Indianapolis, IN 46204  
Phone: (317) 636-5165  
Fax: (317) 636-5435  
E-mail: mmullett@mullettlaw.com

Attorney for Save the Valley, Inc.

**MULLETT, POLK & ASSOCIATES, LLC**

**ATTORNEYS AT LAW**  
**Old Trails Building, Suite 233**  
**309 West Washington Street**  
**Indianapolis, Indiana 46204-2721**  
**Tel:(317) 636-5165 / Fax: 317-636-5435**

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*Michael A. Mullett, Senior Counsel*  
*Jerome E. Polk, Lead Counsel*

January 3, 2006

Secretary  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001  
ATTN: Rulemakings and Adjudications Staff

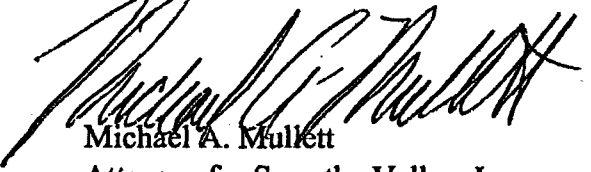
Re: Reply of Save the Valley, Inc. in Support of Petition to Intervene and Request for Hearing Motion of Save the Valley, Inc., for Leave to Amend/Supplement Previously Filed Contentions/Bases at Subsequent Time - In the Matter of the U.S. Army (Jefferson Proving Ground Site), Docket No. 40-8838-MLA

Dear Secretary:

Enclosed please find for filing in the above-referenced docket the original and two conformed copies of the Reply of Save the Valley, Inc. in Support of Petition to Intervene and Request for Hearing Motion of Save the Valley, Inc., for Leave to Amend/Supplement Previously Filed Contentions/Bases at Subsequent Time.

Thank you for your assistance in this matter.

Respectfully submitted,



Michael A. Mullett

Attorney for Save the Valley, Inc.

cc: Service List – Docket No. 40-8838-MLA