

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

---

In the Matter of:	)	Docket No. 72-22-ISFSI
	)	
PRIVATE FUEL STORAGE, LLC	)	ASLBP No. 97-732-02-ISFSI
(Independent Spent Fuel	)	
Storage Installation)	)	July 20, 1999

---

**DECLARATION OF MAJOR GENERAL JOHN MATTHEWS, U.S. AIR FORCE,  
(RETIRED) REGARDING MATERIAL FACTS IN DISPUTE WITH  
RESPECT TO CONTENTION K**

Under penalty of perjury, I, Major General John L. Matthews, U.S. Air Force (retired), declare as follows:

1. I am the Military Advisor to the Governor of the State of Utah. As military advisor for the State of Utah, I am familiar with the military operations in the state, including operations at Dugway Proving Ground (DPG), Hill Air Force Base (HAFB), the Utah Test and Training Range (UTTR), and Utah National Guard. I was a member of the Air Force for 4 years where I flew various military aircraft and was an Air Force flight instructor. I was also a member of the Utah Air National Guard for almost 36 years. From 1979 to 1981, I served as Commander of the Utah Air National Guard which included overseeing the Air National Guard's duty to control and manage the air traffic over the UTTR. During 1984 to 1992, I served as the Adjutant General of the Utah National Guard. As Adjutant General I also oversaw the management of both the Utah Army and Air Force National Guard, including UTTR air traffic control. My other duties as Adjutant General included management of attack helicopter troops, artillery, special forces, engineering, medical, and linguist operations. As the former Adjutant General I am familiar with the various types of military training activities that occur on the UTTR, including the types of weapons and target areas. During my years of military service, I have flown F-16s, T-33s, F-86s, C-97, KC-97s, C-124s, KC-135s, B-52s, EC-135s, AH-64s and C-130s, including numerous flight training missions initiating out of HAFB on the UTTR. I have also flown in the Sevier B Military Operating Area, which is directly over the proposed ISFSI. A copy of my resume is attached.
2. I am the State of Utah's expert witness on Utah Contention K, regarding credible accidents involving aircraft, air launched weapons, and military training activities. I am familiar with the State's position regarding Utah Contention K with the respect to

- risks from aircraft and military activities.
3. I am familiar with Private Fuel Storage, L.L.C.'s ("PFS's") Safety Analysis Report in this proceeding regarding analysis of military and industrial facilities.<sup>1</sup>
  4. I am also familiar with PFS's February 10, 1999 response to RAI No. 2, SAR and PFS's June 30, 1999 Submittal of Commitment Resolution Letter #7 Information.
  5. I have reviewed the Applicant's Motion for Partial Summary Disposition of Contention K - Inadequate Analysis of Credible Accidents, as well the Statement of Material Facts Not in Dispute, the declaration of James Cole Jr., and the affidavit of George Carruth, and materials submitted in support of the motion.
  6. The Applicant's expert, General Cole, recognizes that commercial aircraft utilizing high altitude airway J-56 pass within 10 miles of the proposed ISFSI at approximately 50 statute miles from the Salt Lake City International Airport. Applicant's Motion for Partial Summary Disposition for Utah Contention K, Cole Dec., Exhibit 2 at 3, 5. In assessing the likelihood of commercial aircraft crashes during flights on this path, General Cole only considers the probability of an airplane crash during in-flight/cruises. *Id.* at 6. He does not consider the risks from descent from cruising altitudes. *Id.* When planes are making descents, they have a higher risk of crashing than when they are in-flight.
  7. There a number of formulas used to determine when to start initial descent. Each formula has similar results. One formula commonly used to determine the distance to initiate ones descent in miles from the designated airport is equal to three times the thousands of feet of the aircraft's altitude plus ten (initiate descent in miles from airport = (thousands of feet of altitude x 3) + 10)).
  8. General Cole incorrectly states that airway J-56 has a minimum enroute altitude of 33,000 feet. Applicant's Motion, Cole Dec. at 3. In fact, high altitude airway J-56 has a minimum en route altitude of 18,000 feet MSL. IFR Enroute High Altitude - US map. One could calculate when an aircraft should initiate descent into the Salt Lake International Airport by multiplying the altitude in thousands of feet (18) times three then add ten. Thus, an aircraft would initiate its descent at 64 miles from the Salt Lake International Airport, about ten to fifteen miles beyond the proposed ISFSI.
  9. If General Cole were correct that a minimum altitude of J-56 is 33,000 feet, an aircraft would begin its descent 109 miles from the Salt Lake City International Airport, which is an even greater distance before reaching the vicinity of the ISFSI

---

<sup>1</sup>Consisting of approximately three and a third pages, SAR 2.2-1 to 4.

10. Colonel Carruth, the Applicant's expert, asserts that military ground training exercises at Dugway Proving Ground would not impact the proposed ISFSI because munitions are fired away from the proposed ISFSI and the range of munitions will not reach the ISFSI. Applicant's Motion, Carruth Aff at ¶ 8. The U.S. Army and various National Guard units conduct training exercises in the northeastern portion of Dugway Proving Ground (DPG), near Wig Mountain. See Applicant's Motion, Carruth Aff., Exhibit 2. The northeastern border of DPG is approximately 8 miles southwest of the proposed ISFSI. *Id.* at ¶ 4.
11. Colonel Carruth argues that stray munitions could not reach the proposed ISFSI because the range of munitions fired near Wig Mountain do not exceed 11 miles and the firing positions would be further than 15 miles away. However, various Army and National Guard units fire a multiple launch rocket system with an unclassified range of 30 kilometers or 18.64 miles at the Wig Mountain targets.<sup>2</sup> Thus, there is a potential that a multiple launch rocket system may misfire and impact the proposed ISFSI.
12. Skull Valley and the proposed ISFSI is located within the Sevier B MOA. See Applicant's Motion, Cole, Dec., Exhibit 2, map following page 9. The Sevier B MOA begins at 100 feet above ground level to 9,500 feet mean sea level. See Exhibit 1, Memorandum for Air Force Representative, Annual Operating Area Usage Report. The activities conducted in the Sevier B MOA include low altitude (LOWAT) training, cruise missile testing, and major exercises. *Id.* In federal fiscal year 1998, 3,878 air operations occurred in Skull Valley. *Id.* The following aircraft are allowed to operate in the Sevier B MOA: F15, F16, F111, F4, B52, B1, A10, KC135, EC135, EC135, RC135, C130, C141, A4, F18, F117, A6, A4, H1, C117 and B2. *Id.*
13. In my professional view, the Applicant has not adequately examined the risk that aircraft will drop live or inert ordnance on the ISFSI. The Applicant argues that the military aircraft overflight over the proposed ISFSI is limited to flights to and from Michael Army Air Field.. However, there is a considerate potential that military aircraft ingressing and egressing the UTTR will also overfly the proposed ISFSI. Aircraft en route to the UTTR South range from Hill AFB ingress the range through the Sevier B Military Operating Area (MOA). Aircraft egressing fom both the UTTR North and South ranges may recover to Hill AFB through the Sevier B MOA using the Stansbury/Moser Recovery See Exhibit 2, Applicant's Response to RAI 8-2, Attachment D. The Stansbury/Moser Recovery traverses directly through Skull Valley.

---

<sup>2</sup>Telephone conversation with Mike Merrit, Dugway Proving Ground and Major Paul Harrell, Division of Plans and Training, Utah National Guard on July 20, 1999.

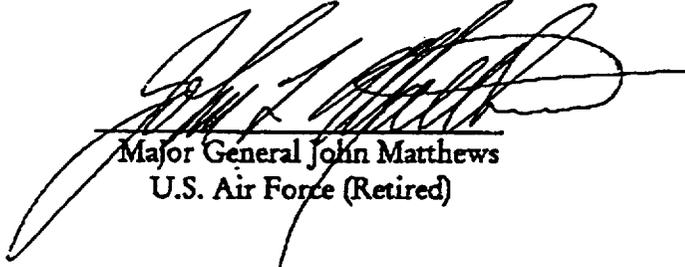
14. The Applicant claims that "[a]ircraft en route to the UTTR South Area from Hill AFB fly down the east side of Skull Valley, approximately five miles from the PFSF." Applicant's Motion, Applicant Statement of Mat. Facts for Hill Air Force Base, the Utah Test and Training Range, and Michael Army Air Field at ¶ 6. First, the Applicant's statement contradicts its response to RAI No. 2, SAR 8-2 paragraph (b) which states "[t]he Aircraft departing Hill AFB use the Island 420 Departure (IR 420) for the South Range low level missions." See Exhibit 2 at 1. The coordinates for IR 420 follow a path to the middle of Skull Valley, near the proposed ISFSI, not along the east side of the valley. Second, the Applicant's expert witness stated "[t]here is no fixed corridor that they [F-16's] fly through." See, Exhibit 3, Cole Dep. at 41, line 11 and 12. Moreover, in describing his analysis in which he assumed the F-16s flew down the east side of Skull Valley, the Applicant's expert stated that "I had to put them into an artificial pipe that they don't fly in" *Id.*, at 45, line 11 and 12. The Applicant's expert also stated that assuming that the F-16's fly down the east side of Skull Valley "doesn't realistically reflect where the airplanes actually fly." *Id.* at 46 line 3, 4. Also, military aircraft en route to the Sevier B MOA may be allowed to fly under visual flight rules or anywhere within Skull Valley.<sup>3</sup> Although military aircraft may, they don't always fly down the east side of Skull Valley. In fact, the aircraft may directly overfly the proposed ISFSI site.
15. The military aircraft en route to the UTTR South range for training missions may carry either live or inert weapons. Live ordnance include 2,000 lb Mk 84s (net explosive weight of 945 lbs), 1,000 lb Mk 83s (net explosive weight of 445 lbs), and 500 lb Mk 82s (net explosive weight of 192 lbs). See Exhibit 2 at 2. Inert weapons are designed to simulate the size and weight of live weapons. Thus, inert weapons consist of 2,000, 1,000, and 500 lb concrete bombs. Many of the inert weapons are fitted with steel nose cones designed to penetrate concrete and steel.
16. The majority of military aircraft flying in the Sevier B MOA are F-16 fighter jets. F-16s may reach a maximum speed of approximately 1,600 miles per hour. It is reasonable to assume that F-16's transiting the Skull Valley will travel at least at a speed of 600 miles per hour.
17. The Applicant argues that "aircraft overflying Skull Valley are not allowed to have their armament switches in a release capable mode." Applicant's Motion, Cole Dec., Exhibit 2 at 22. It is true that standard operating procedure require the armament

---

<sup>3</sup>Telephone conversation with Major John Teter, 299<sup>th</sup> Range Control Squadron on July 8, 1999 that military aircraft often will be allowed to fly under visual flight rules at any point along flight path IR 420, prior to entering Skull Valley. See Exhibit 3, Attachment C.

switches to be a position not to allow a munition release. However, the Applicant has failed to address the very real potential for equipment failure and/or pilot error. In addition, emergency procedures during an F-16 engine problem require the pilot to immediately pull up and jettison all stores, including fuel tanks and munitions. Thus, because of the number of engine problems that F-16s have recently experienced there is a potential that live, inert, or other objects may be dropped on the proposed ISFSI.

18. The UTTR South range conduct a number of cruise missile tests. Several of the cruise missiles have crashed. See Exhibit 4, Missile Crashes Between 1 January 1988 and 31 December 1998 and Applicant's Motion, Cole Dec., Exhibit 3. Although cruise missiles which leave Department of Defense property must have flight termination systems, there is still the potential for human error or equipment malfunction. See Applicant's Motion, Cole Dec., Exhibit 3 which provides an example in which human error allowed a cruise missile to destroy civilian property.
19. The technical facts presented above are true and correct to the best of my knowledge, and the conclusions drawn from those facts are based on my best professional judgment.



Major General John Matthews  
U.S. Air Force (Retired)

Dated: July 20, 1999

**John L. Matthews Major General USAF (Ret)**

116 State Capitol  
Salt Lake City, UT 84114  
801-538-1640 (W)

**Present Assignments**

**MILITARY ADVISOR TO THE GOVERNOR OF UTAH  
DEFENSE CONSULTANT**

**Career Summary**

General Matthews retired on 30 September 1994 after nearly 40 years of service. He was commissioned a 2nd Lieutenant in the United States Air Force on 17 December 1954. He graduated from Flight School in June of 1956 and was assigned as an Instructor Pilot at Laredo AFB, Texas. During his flying career he flew T-33s, F-86s, C-97s, KC-97s, C-124s, KC-135s, and had brief experiences flying B-52s, EC-135s, F-16s, AH-64s, and C-130s. His flying career took him throughout the world, and included an assignment as Aircraft Commander of an around the world flight. His last assignment was Adjutant General of Utah, which he held from 1982-1994, serving under three different governors. During that period he was elected President of the Adjutants General Association of the United States and later President of the National Guard Association of the United States. He served as Chairman, Board of Advisors, of the Air National Guard Professional Military Education Center in Knoxville, Tennessee. He received several appointments from the Secretary of Defense, including: Chairman, Air Reserve Forces Policy Committee; Readiness Chairman, Reserve Forces Policy Board; Advisor to the DOD Task Force on Quality of Life; and a member of the Army Offsite Committee on Force Structure. He led the National Guard Delegation at the 50th anniversary commemoration of D Day in France which included a personal presentation to President Francois Mitterand at the Elysee Palace in Paris. Following his retirement he was appointed by President Clinton as a Commissioner, Commission on Rolls and Missions of the Armed Forces.

General Matthews holds a Masters Degree from Brigham Young University and is a graduate of the Air War College. He presently serves as Chairman of the Citizen's Advisory Commission for the Tooele Chemical Demilitarization Facility and Chairman of the Dugway Technical Review Committee.

His 21 medals include the Air Force Distinguished Service Medal, Legion of Merit, Republic of Vietnam Service Medal, and the Utah Medal of Merit. He has recieved the Distinguished Service Award and the Eagle Award from the National Guard Bureau and the Legion de Lafayette from the National Guard Association.

He holds a TS SBI clearance.