

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:

PRIVATE FUEL STORAGE, LLC
(Independent Spent Fuel
Storage Installation)

)
) Docket No. 72-22-ISFSI
)
) ASLBP No. 97-732-02-ISFSI
)
) July 22, 1999

**DECLARATION OF MARTIN D. GRAY REGARDING MATERIAL FACTS IN
DISPUTE WITH RESPECT TO CONTENTION K**

Under penalty of perjury, I, Martin D. Gray, declare as follows:

1. I am the manager for the State of Utah, Division of Solid and Hazardous Waste, Chemical Demilitarization Section. As such, I have management responsibilities to regulate and oversee the identification and clean up of past disposal sites and current hazardous waste management operations at the Dugway Proving Ground (DPG). Prior to my current position, I also had similar management responsibilities and regulatory duties with respect to past disposal sites and hazardous waste operations at DPG. Thus, to the extent that information is available, I am familiar with the type and hazard of contaminated sites from past DPG disposal practices. In addition, I am familiar with the methodology to identify and characterize a contaminated area and its hazards, and with methods used to stabilize such areas. My resume is attached.
2. I am a witness for the State of Utah on Utah Contention K, regarding credible accidents involving chemical, biological, or explosive impacts from DPG. I am familiar with the State's position regarding Utah Contention K with the respect to impacts from DPG.
3. I am familiar with the Private Fuel Storage, L.L.C. ("PFS") Safety Analysis Report in this proceeding regarding the analysis of military and industrial facilities.¹
4. I have reviewed the Applicant's Motion for Partial Summary Disposition of Contention K — Inadequate Consideration of Credible Accidents — regarding impacts from DPG, as well the Statement of Material Facts and the declaration of George Carruth.

¹ The relevant portion consists of approximately three and a third pages, SAR 2.2-1 to 2.2 4.

5. The Applicant incorrectly argues that "[b]y virtue of the distance between the PFSF and location on DPG where the ostensibly hazardous activities take place, the nature of the activities, and the safety precautions that are taken with respect to all potentially dangerous activities at DPG, those activities would not pose a significant hazard to the PFSF." Applicant's Motion for Partial Summary Disposition at 10. Potentially contaminated sites may be found in a sufficiently close proximity of the proposed ISFSI to pose a significant hazard. Moreover, it is not possible at this time to estimate risk or establish worst-case conditions for as-yet undiscovered sites where contaminants were disposed of because the quantity of the contaminants, an essential factor in determining risk, cannot be known.
6. Weapons and munitions were disposed of at and around DPG between 1942 and 1989. DPG is required by law to identify, assess, and clean up any contamination from their past disposal practices.² DPG began identifying past potentially contaminated sites in 1988. Since then, DPG has identified 216 sites on DPG premises and three privately-owned sites off of DPG premises which were contaminated from past DPG disposal practices.
7. Many of the potentially contaminated sites contain buried chemical agents, biological agents, and/or explosives and propellants. Chemical or biological agents may be dispersed in the soil, air, or water when leaking or uncontainerized. If the contaminate is an explosive munition, the potential exists that the explosive is unstable and the munition cannot be moved. If the explosive is unstable, then the munition must be detonated in place. *See*, Applicant Motion, Carruth Aff. ¶ 21. Prior to detonating a munition, the down wind direction and impact zone is determined. The impact zone is then evacuated. Additional explosives are added to the munition if needed, then the munition is detonated in place. *See Id.* Depending upon the location of the detonation, the amount of explosives, the type of chemical or biological agent, if any, and the meteorological conditions, the detonation could significantly impact the proposed ISFSI with either overpressure force, flying debris, or toxic fumes. Toxic fumes were detected following similar detonations at the U.S. Army's Aberdeen Proving Grounds (APG) in Maryland.
8. Contrary to the Applicant's statement of material facts, not all biological agents and munitions were destroyed in 1969. *See* Applicant's Motion, Statement of Material Facts, Dugway Proving Ground, ¶ 8. *See also*, Carruth Aff. at ¶ 25. In 1999, buried biological munitions were discovered at DPG. One munition was removed and

² Section 19-6-105(1)(d), Utah Code Ann.

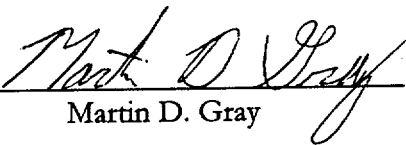
destroyed. The remaining biological munitions have not yet been destroyed. Thus again, depending upon the location of the newly discovered biological munition, the amount of explosives, the type of biological agent, and the meteorological conditions, the detonation and agent could significantly impact the proposed ISFSI with either overpressure force, flying debris, or toxic fumes.

9. It is important to understand that all potentially contaminated sites have not been identified. Because of DPG's large land area and its past disposal and record keeping practices, there is a significant potential that additional biological agents and munitions may be found. Although DPG has been assessing the area for more than 11 years, DPG is currently still locating potentially contaminated sites. New sites are continually being discovered. Moreover, every time the Army looks at an area they identify something new. In 1998 alone, 17 new sites were identified. In addition, over the past two years, chemical agent munitions were discovered, including a potential GA round, two HD rounds, one GB round, and M55 rocket pieces.³ Also, a biological munition was found at yet another contaminated site in 1999. It is possible that undiscovered contaminants will explode spontaneously, and that may in turn cause sympathetic explosions of other contaminants. The APG has experienced such explosions. DPG has no record of such explosions, but it is possible they are occurring in remote areas and are simply not being detected.
10. Although DPG has a continuous obligation to identify all potentially contaminated sites, it has been difficult to fully evaluate the area for contaminated sites because of 1) the large area, including off DPG land, 2) the poor quality of historical record keeping, 3) the limited access to many military records, and 4) the erosion and vegetation that have masked the sites. It is highly probable that additional sites and hazards both on site and off site will be identified in the future. Thus, the potential exists to find buried chemical or biological agents, or explosives and propellants in the proximity of the proposed ISFSI.
11. The Applicant's expert claims that the "Army has specifically determined with respect to the CBR Target Area that there is unlikely to be any buried ordnance located there because of the hard, rocky nature of the terrain." Applicant's Motion, Carruth Aff. at ¶ 35. The CBR Target area is near Wig Mountain, approximately 15 miles from the proposed ISFSI. However, to my knowledge the Army has not conducted a detailed investigation to determine whether area surrounding the CBR Target area does not in fact have unidentified buried munitions. Any such formal investigation and determination of the presence or lack of contamination must be

³GA and GB are nerve agents. HD is a blister agent.

submitted to my section, the State of Utah, Division of Solid and Hazardous Waste, Chemical Demilitarization Section, for review and approval. In addition, the Army has not performed a detailed assessment of the area off-DPG surrounding the proposed ISFSI.

12. 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 professional judgment and 11 years of regulating hazardous waste activities at the Dugway Proving Ground.


Martin D. Gray

Dated: July 22, 1999