VI. LESSONS LEARNED AND RECOMMENDATIONS

The Gulf War and its veterans' subsequent unexplained symptoms have increased awareness of "dirty battlefield" hazards and their possible impacts on the health and readiness of deployed forces. In the aftermath of the conflict, retrospective investigations and analyses, including this one, have identified deficiencies and gaps in how DoD and the services recognized and responded to non-traditional or unanticipated risk factors, such as toxic industrial materials (including DU). This awareness in turn has produced a major new emphasis on improving medical readiness and force health protection programs aimed at protecting the health, safety, and wellness of deployed US personnel.

While Gulf War exposures to depleted uranium (DU) have not to date produced any observable adverse health effects attributable to DU's chemical toxicity or low-level radiation, the requirement to prevent or minimize unnecessary exposures still stands. DU munitions' and armor's success in the Gulf War has confirmed DU's place in the US arsenal -- and increased the likelihood enemy forces will employ DU munitions in future conflicts. Accordingly, DoD and the services need to ensure that all deployable personnel know what DU is, how it is used, how they might encounter it on the battlefield, the potential effects of overexposure, and how to prevent or minimize personal exposures to comply with the principle of keeping exposures as low as reasonably achievable. This training requirement extends to non-combat medical personnel who could find themselves treating DU casualties or working inside DU-contaminated combat vehicles.

This investigation has identified several findings and observations indicating deficiencies and gaps in both Gulf War policies and procedures dealing with DU and across the readiness domains (doctrine, organizations, training, materiel, or leadership development). OSGAWI's Lessons Learned Implementation Directorate is working with the services and Joint Staff lessons learned programs to remedy past weaknesses and identify and help implement corrective actions to support current medical readiness and force health protection goals.

The formal military "Lessons Learned" process distinguishes between "system failures" (incidents or events that point to significant flaws in policies, procedures, guidance, and training) and "individual failures" (deviations from established guidelines). While it is important to recognize and correct both types of failures, the "system failures" are of greater significance, since they may require fundamental changes to policies, procedures, and the readiness domains listed above. Accordingly, this Section categorizes the described findings, observations, and problems across these domains and as applicable also recommends and summarizes corrective actions and strategies aimed at implementing (and institutionalizing) necessary "fixes."

A. Doctrine and Policy

Military doctrine provides the conceptual and operative guidance governing US forces' operations. At the unit level, tactics, techniques, and procedures (i.e., the ways and means units use to carry out their assigned missions an