

January 1994. This document resulted in a Finding of No Significant Impact (FONSI) for the interim storage of up to 12,000 pits in Zone 4.

At that time, the frequency of an aircraft crash into the storage bunkers, which could result in plutonium release, was reported to be  $6.6 \times 10^{-7}$ , and thus termed “incredible”. However, an Unreviewed Safety Question Determination (USQD) for the analysis contained in the Zone 4 SAR was issued in the spring of 1995. This determination questioned the validity of the aircraft overflight data used in the analysis. Additionally, the USQD found that the study used an incorrect application of the Solomon model. As part of the USQD, a corrected analysis was presented which gave a new probability of hitting a Zone 4 facility of approximately  $2 \times 10^{-5}$ .

To obtain up-to-date aircraft overflight data for the study presented herein, DOE, with cooperation from the Federal Aviation Administration (FAA), installed a Radar Airspace Monitoring System (RAMS) at the Amarillo International Airport. This system collects data on the number and type of aircraft operations in the vicinity of Pantex Plant. These new data were used in this EIS to help evaluate the likelihood of an aircraft impact into Pantex Plant nuclear facilities. The new data are also being used to close out the USQD. The results

of the past and current aircraft crash studies are presented in Table 4.15.1.3–1. As can be seen from these results, the trend for aircraft crash hit probability is in the low to mid  $10^{-5}$  range.

From a risk perspective, the hit and release probabilities (Table 4.15.1.3–1, Hit and Release Probability column) are the values of interest rather than the hit probabilities alone. Analyses of this type tend to be conservative in nature due to the inherent uncertainties. It is difficult to quantify these conservatisms and as a result, the hit and release probabilities for the Final EIS should be considered a conservative point estimate. The issue of conservatism is discussed in section 4.15.7.

**4.15.1.4 DOE Initiatives to Reduce and Monitor Pantex Overflights**

Due to public concern regarding the risk of aircraft crash at Pantex Plant, the Secretary of Energy committed DOE officials to meet with the City of Amarillo, FAA, the U.S. Air Force, and other stakeholders to discuss alternative civilian and military flight patterns. An Overflight Working Group was formed to address ways to reduce the number of aircraft flying over Pantex Plant. Their recommendations are listed below (DOE 1995h:12, 13, 18).

**TABLE 4.15.1.3–1.—Results of Past Pantex Plant Aircraft Crash Analyses**

STUDY	HIT PROBABILITY	HIT AND RELEASE PROBABILITY
SAND 76-0120 (entire site)	$4.7 \times 10^{-5}$	—
Zone 4 SAR (DOE 1992f) (an incorrect value)	$1.85 \times 10^{-6}$	$6.63 \times 10^{-7}$
Zone 4 USQD (Pantex 1995a) (corrected analysis)	$1.95 \times 10^{-5}$	—
Pantex Plant Pre-Draft EIS (Zone 4, Solomon)	$4.0 \times 10^{-5}$	—
Pantex Plant Draft EIS (Zone 4, DOE Draft Standard, July 1995 version)	$2.4 \times 10^{-5}$	$9.0 \times 10^{-6}$
Pantex Plant Final EIS (Zone 4, DOE Draft Standard, July 1996 version)	$1.3 \times 10^{-5}$	$1.2 \times 10^{-6}$

Sources: Studies as listed in table.