

UNITED STATES GOVERNMENT

Memorandum

Thornton

TO : Memorandum for Record

DATE: Sept. 19, 1969

FROM : CB/A. W. England

SUBJECT: Apollo lunar aseptic sampler (ALAS)

It won't upset anyone here to know that ALAS has probably flunked its second try at qualification. The first try was on the 20th and 21st of August in Chamber B at SESL. The failure was caused by an "error in machining." A slot was to have beveled edges, and it did not. This resulted in a sample tube that could not be freed from the operator.

The second set of qual runs were held on the 17th and 18th of Sept. The hot case went well as did the cold case until the plastic jacket was to be twisted after extracting the sample tube. The aluminum strip was welded improperly to the plastic sleeve, and the plastic sleeve broke free after $1\frac{1}{2}$ twists of the required three. Since the break was above the twist, the end of the sample tube was exposed; i.e., no biological barrier.

Even if ALAS had passed its qual test, it should not be flown. The gadget is poorly engineered, and it is much too easy to blow the whole experiment through an inadvertent handling error during deployment.

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