



**Aerospace  
Systems Division**

February - March System Safety Progress  
Report - ALSEP Array E

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This ATM documents the progress of the System Safety Program for ALSEP Array E through March 1972.

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### 1.0 IDENTIFIED HAZARDS

No new hazards inherent to the ALSEP Array E Experiments have been identified since the last progress report.

### 2.0 DESIGN CHANGES

ALSEP Array E design changes are reviewed prior to their incorporation into the hardware. No safety significant design changes have been presented for review since the last report.

### 3.0 IDENTIFIED SAFETY DISCREPANCIES

No safety discrepancies have been identified during the reporting period.

### 4.0 TESTS AND OPERATIONAL PROCEDURES

Since hazardous material is contained in the ALSEP LSP Experiment, all procedures and changes to procedures involving the LSP Experiment are reviewed for safety impact.

A total of 52 procedures have been reviewed of which 10 contain hazardous sequences. Four (4) new procedures containing hazardous sequences have been identified during this reporting period and are listed below.

- (1) TP 2365360 Explosive Package Assembly Functional Test Procedure No. 1
- (2) TP 2365388 Test Procedure, EDC Bridgewire Resistance Measurement for LSP Inert Explosive Packages
- (3) TCP 2368938 Assembly of Operational Explosive Packages and Installation in LM
- (4) TCP 2368939 EPTM/LM Fit Check KSC

In addition, procedures pertinent to other portions of the ALSEP hardware are reviewed regularly. No safety significant sequences have been identified in any procedures other than those for LSP.

### 5.0 SYSTEM SAFETY DOCUMENTS

No new system safety reports have been released since the last reporting period.



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6.0 RESIDUAL HAZARD LIST

At this time there are no residual hazards on the ALSEP Array E.

7.0 NARRATIVE

7.1 LSP Prototype Field Test

During field testing of the second set of four explosive packages, System Safety assisted in setting up sites for ease of dud recovery and for package protection from animals and high winds. The System Safety Engineer acted as visual observer during countdown. Two packages detonated and two packages dudded. The failed packages were safely recovered, disassembled and the E&SA assemblies were returned to Bendix for failure analysis.

7.2 Array E Flight System Ground Safety Plan, ALSEP TM- 840

The Array E Flight System Ground Safety Plan provides a plan for answering the safety of personnel, flight hardware during the handling of those ALSEP items containing hazardous material. The plan is presently in the in-house review cycle and will be submitted in April for NASA review and approval.

7.3 March BxA/MSC Timer Review Meeting

System Safety provided support for the Timer Review Meeting held at MSC on March 29 and 30, 1972.