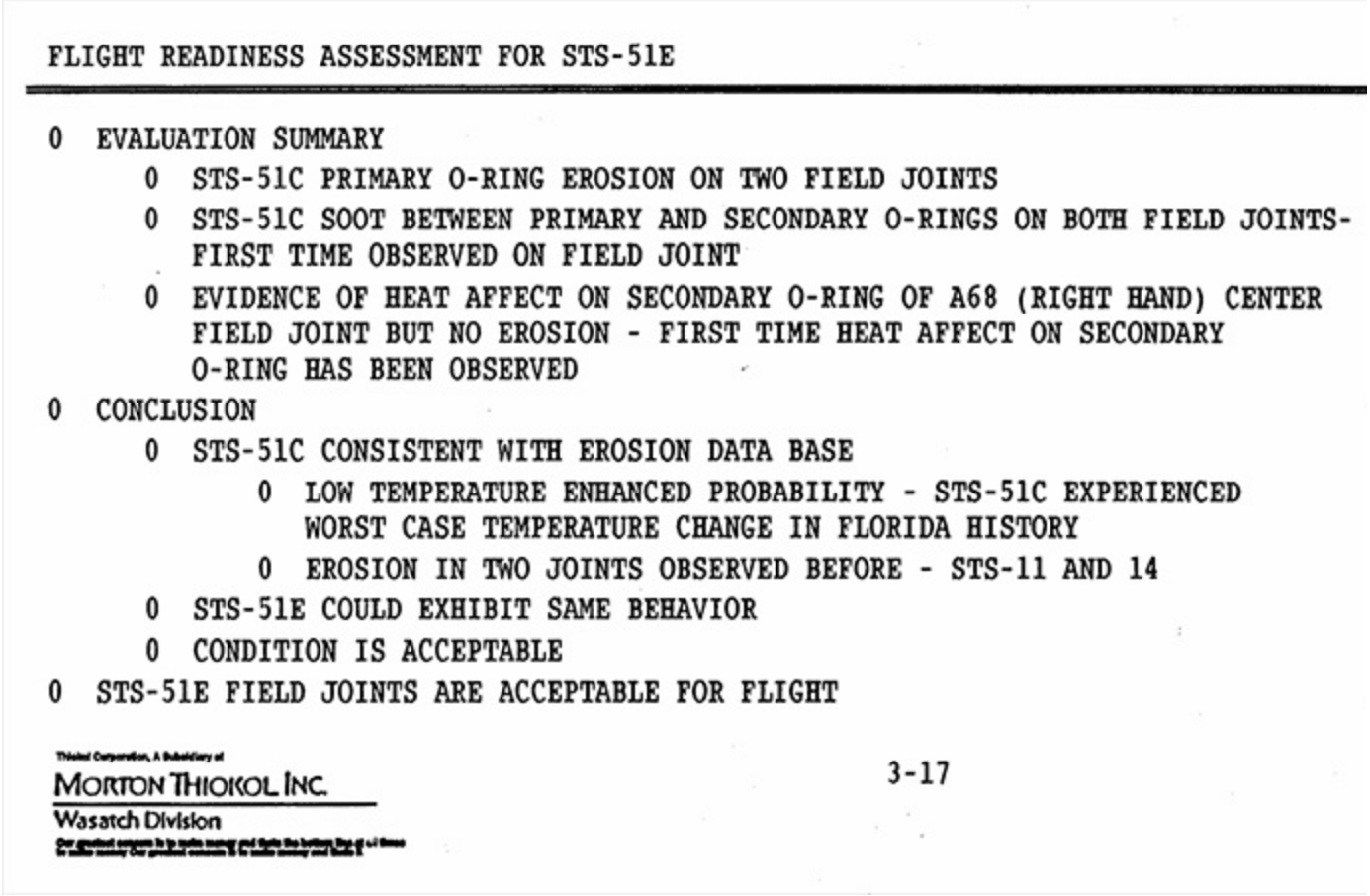
Ethikos Volume 36, Number 1. January 01, 2022
Appendix 3a: Three flight readiness review viewgraphs on the post-flight assessment of Mission 51-C (January 1985, 53°F); and Appendix 3b: What might account for NASA's reluctance to accept Thiokol's original launch recommendation for a 53°F threshold?

Appendix 3a: Set of three flight readiness review viewgraphs related to the postflight assessment of Mission 51-C (the January 1985, 53°F launch)

Level III Review (Feb. 8, 1985)



FLIGHT READINESS ASSESSMENT FOR STS-51E

- 0 EVALUATION SUMMARY
  - 0 STS-51C PRIMARY O-RING EROSION ON TWO FIELD JOINTS
  - 0 STS-51C SOOT BETWEEN PRIMARY AND SECONDARY O-RINGS ON BOTH FIELD JOINTS- FIRST TIME OBSERVED ON FIELD JOINT
  - 0 EVIDENCE OF HEAT AFFECT ON SECONDARY O-RING OF A68 (RIGHT HAND) CENTER FIELD JOINT BUT NO EROSION - FIRST TIME HEAT AFFECT ON SECONDARY O-RING HAS BEEN OBSERVED
- 0 CONCLUSION
  - 0 STS-51C CONSISTENT WITH EROSION DATA BASE
    - 0 LOW TEMPERATURE ENHANCED PROBABILITY - STS-51C EXPERIENCED WORST CASE TEMPERATURE CHANGE IN FLORIDA HISTORY
    - 0 EROSION IN TWO JOINTS OBSERVED BEFORE - STS-11 AND 14
  - 0 STS-51E COULD EXHIBIT SAME BEHAVIOR
  - 0 CONDITION IS ACCEPTABLE
- 0 STS-51E FIELD JOINTS ARE ACCEPTABLE FOR FLIGHT

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Wasatch Division

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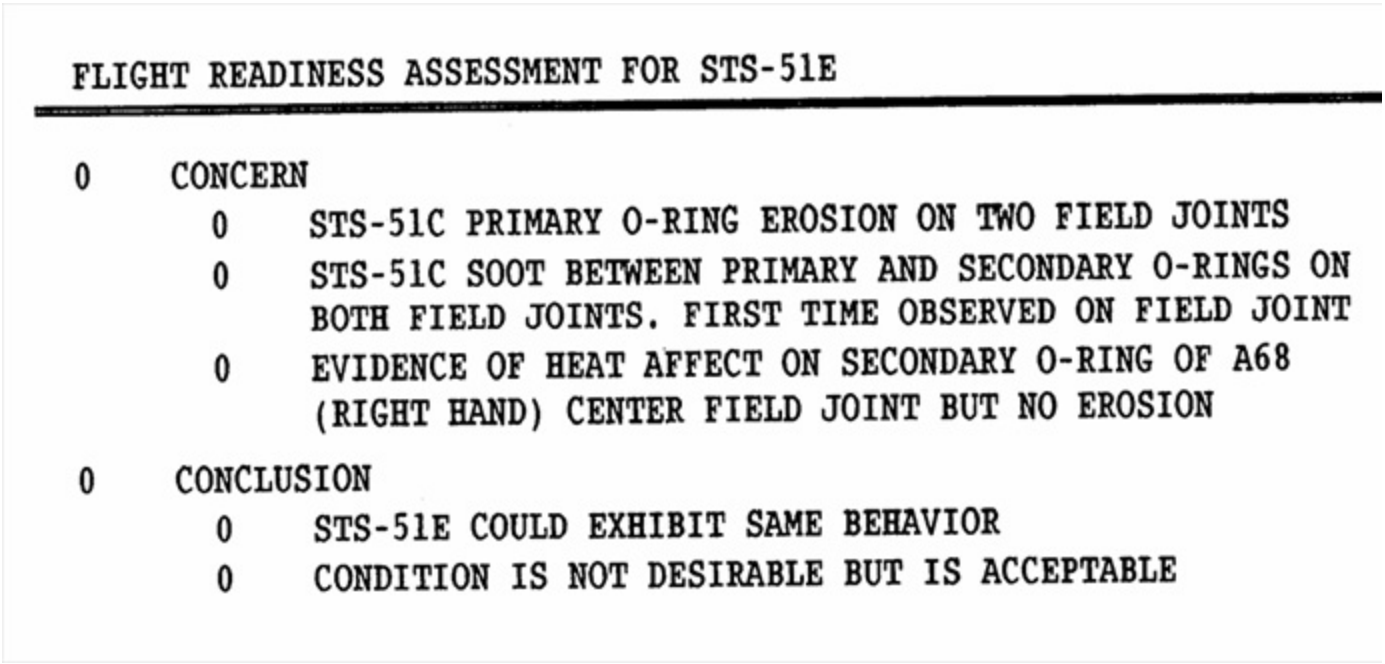
Level II Review (Feb. 12, 1985)



FLIGHT READINESS ASSESSMENT FOR STS-51E

- CONCERN
  - STS-51C PRIMARY O-RING EROSION ON TWO FIELD JOINTS
  - STS-51C SOOT BETWEEN PRIMARY AND SECONDARY O-RINGS ON BOTH FIELD JOINTS. FIRST TIME OBSERVED ON FIELD JOINT
  - EVIDENCE OF HEAT AFFECT ON SECONDARY O-RING OF A68 (RIGHT HAND) CENTER FIELD JOINT BUT NO EROSION
- CONCLUSION
  - STS-51E COULD EXHIBIT SAME BEHAVIOR
  - CONDITION IS NOT DESIRABLE BUT IS ACCEPTABLE

Level I Review (Feb. 21, 1985)

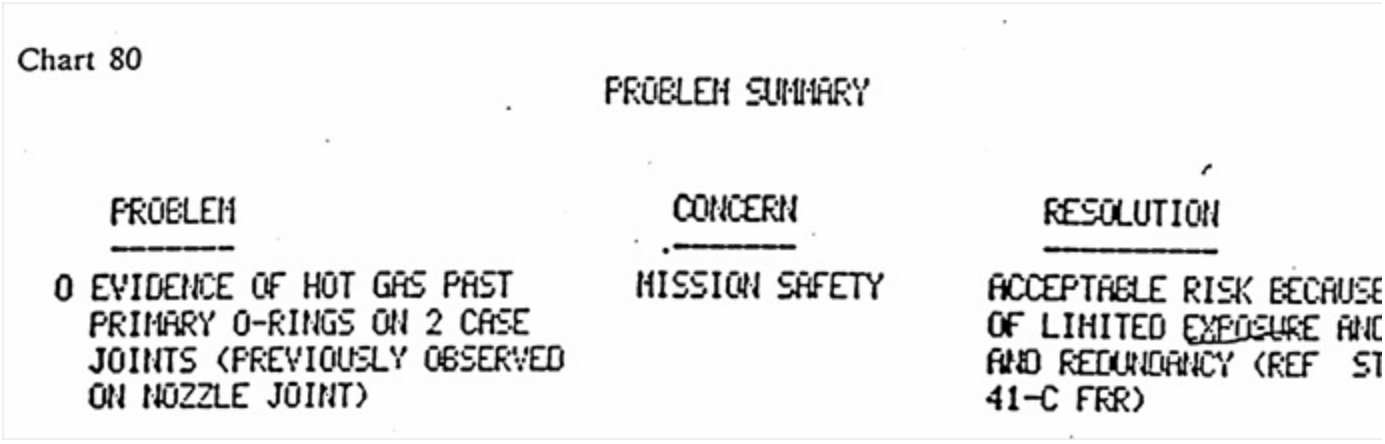


Chart 80

PROBLEM SUMMARY

PROBLEM	CONCERN	RESOLUTION
EVIDENCE OF HOT GAS PAST PRIMARY O-RINGS ON 2 CASE JOINTS (PREVIOUSLY OBSERVED ON NOZZLE JOINT)	MISSION SAFETY	ACCEPTABLE RISK BECAUSE OF LIMITED EXPOSURE AND AND REDUNDANCY (REF ST 41-C FRR)