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## FACSIMILE COVER SHEET

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TO Steve Peters  
CBITSCDATE October 6, 1994  
FAX NUMBER  
OFFICE NUMBERNUMBER OF PAGES (including this cover sheet): ~~2~~ 3FROM Larry K. Jones  
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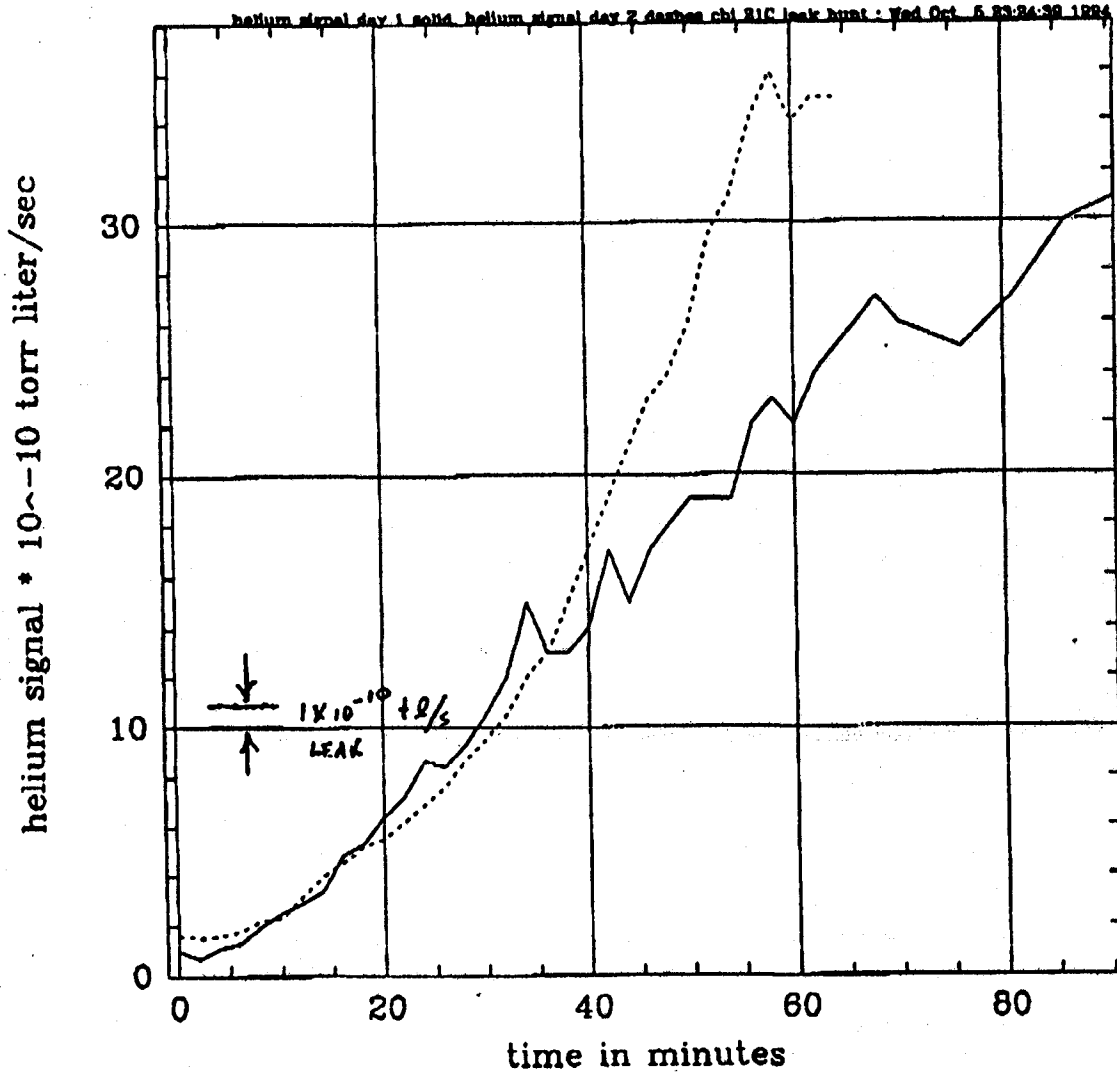
A couple of HMS plots from your tests of the first 60' QT tube section. We do not agree that acceptable leakage has been demonstrated on this section for the following reasons:

1. Bagged vs. sprayed: notice the size of the allowable  $1E-10$  tl/s leak versus the variation between tests: there is no way of detecting the absence (or presence) of this magnitude of leak between these two curves. Besides, there was no control of helium in the atmosphere surrounding the end cap seal in either test.
2. Bagged test: HMS signal rise occurred at approximately the time that the bag was 57% filled with helium (at the  $O_2$  sensor probe location), giving less than a minute hold time with 50% or more helium content.

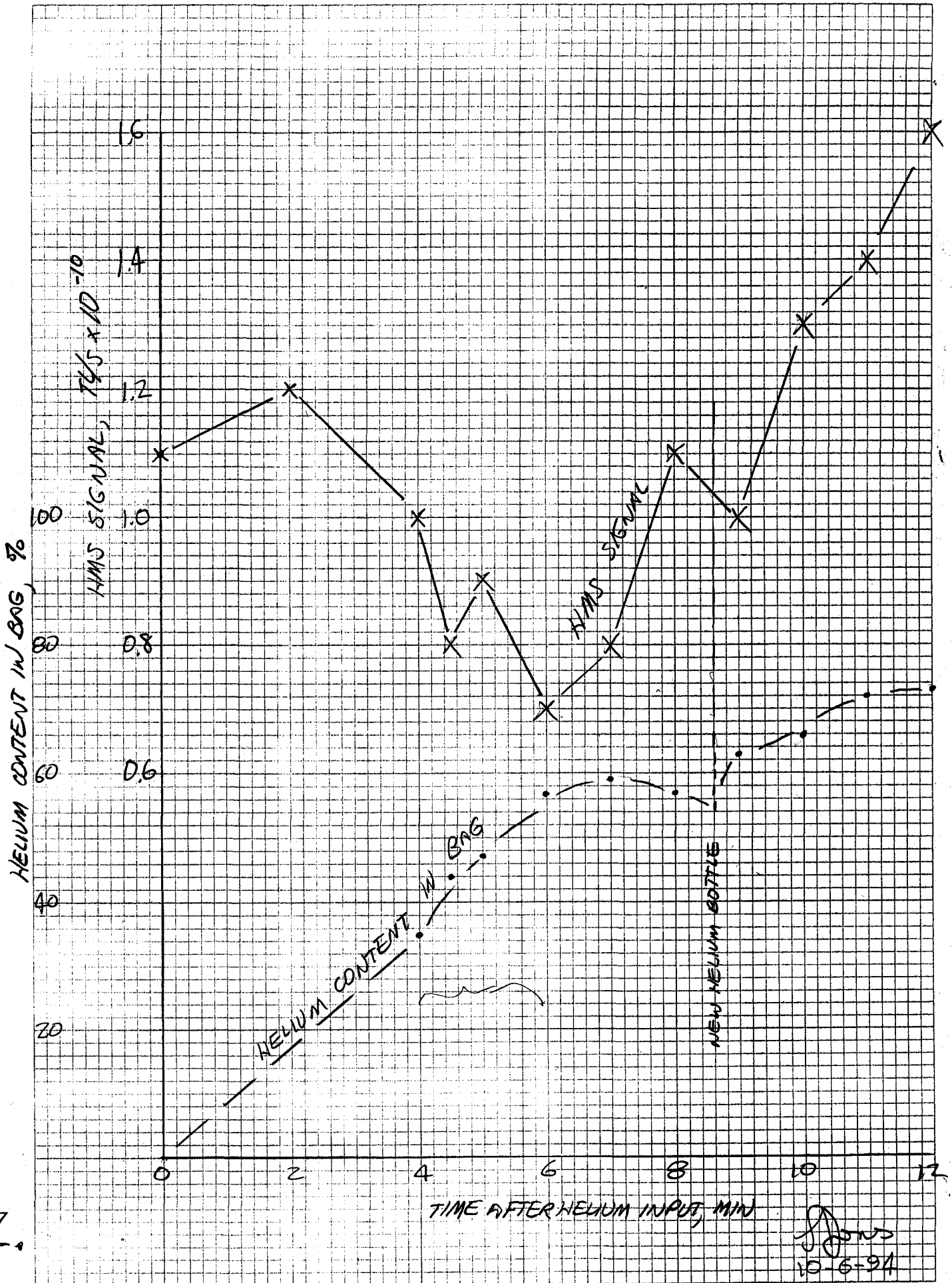
We are not claiming that the tube section has an unacceptable leak, but that its acceptance has not yet been demonstrated.

As I mentioned by telephone yesterday, you may choose to demonstrate the acceptability of this tube section by performing a bag test of the complete QT tube module once it is assembled. The general concept of the slip-on end cap design must yet be demonstrated, either by the third tube section, or by subsequent testing.





— ZIC FIRST DAY, TUBE BAGGED  
 - - - ZIC SECOND DAY, END SPRAYED



J. J. Jones  
10-6-94

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