

MEMORANDUM

Lyndon B. Johnson Space Center



REFER TO: CB	DATE August 6, 1985	INITIATOR CB/WETHornton:ms:8/6/85:3721	ENCL
TO: AL3/E. K. Fein		CC	
FROM: CB/W. E. Thornton		SIGNATURE <i>W. E. Thornton</i> W. E. Thornton	

SUBJ: Workable WCS

Apropos a workable WCS for space; firstly, the fundamental ideas for both male urine collection and fecal collection have been experimentally examined and appear to be sound. At the same time, in spite of millions of dollars and years of effort, other efforts to date have been failures as regards Shuttle and Space Station needs. I have been involved in an extensive review of such efforts, including piston devices which did not work because they rapidly fouled the piston.

The simple idea of covering the piston with a disposable cover which then becomes an element of the compacted waste is a good one and was certainly not obvious to the engineers of some of the world's most advanced technological concerns. Sorry to differ with you, but it sure looks like invention to me-- to say nothing of the other features.

I should like to get the disclosure in a bit better format and send it to Walt Guy and others for review, now that I have a bit of time (at nights and on weekends). The urinals should be separated and the following added to the functions of the fecal collector: Biomedical collection and sampling may be simply accomplished with the system by simply adding a marker such as individually colored toilet paper. The piston cover which remains between each defecation provides a barrier as well as providing individual identification with the colored paper. Alternatively, the barrier could be marked for each defecation with subject and time. N.B. After spending large sums on trying to perform this, the effort was abandoned for lack of a suitable scheme.

Additional details on the urinals will be sent to you. This scheme looks better and better and may be simple enough to be useful on earth; but in any event, should NASA not want to pursue this, I will be happy to do so on a personal basis.

Ed, don't know whether this was sent or not but sending it now for completeness of the file - g.f.s.