

**MEMORANDUM**

Lyndon B. Johnson Space Center

**NASA**

REFER

TO: CB-86-402

DATE

November 17, 1986

INITIATOR

CB/WETHornton:trd:11/17/86:3506

ENCL

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TO: AL3/E. K. Fein, JD.

CC

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FROM: CB/W. E. Thornton

SIGNATURE

*W. E. Thornton*  
William E. Thornton

SUBJ: IWCS Patent Application Reivew

I have made my corrections and comments on the draft which was well done on a reasonably complex system. Some mechanical details were left to Mr. Whitmore. It seems a bit too specific in places, e.g., weightless operation is specified repeatedly, but it works well in one-g, specifying paper as the piston cover when in fact we use plastic and paper, piston, cylinders need not be rectangular.

I am also concerned that we cover the following essential features in claims.

a. Cylinder and piston for collection/compaction with disposable facing. This cleaned the volume and by using plastic properties of feces and other waste it provided positive stowage. The system shown, i.e., a single sheet, is not the only scheme for protecting piston and cylinder from soiling.

b. Air circulation systems to:

(1) collect and maintain waste in collection area with system to remove gases and particulates.

(2) To remove evolved gases while stowed.

(3) To aid in removal of fecal bolus from user.

c. An automatic occlusion valve to prevent waste being forced into air system.

d. An automatic seat valve to render system essentially closed when not in use.

e. Means of maintaining pressure on compacted contents when not in use.

f. System also provides separation of and if need be, means to identify individual defecations.

I have enclosed the original corrected form. Hope we can get this in soon for this scheme has suddenly become popular with a number of contractors.