MEMORANDUM

SPS/AC/BdeR/EEK

DRAFT

30th January, 1978

To : All AC Group Leaders; c.c. M.C. Crowley-Milling, B. Milman

From : B. de Raad

Subject: Microprocessors and the SPS computer control system

The above subject is discussed in the attached note by F. Beck, which can be summed up as follows:

i) The fact that our computer control system works well and can be serviced efficiently by the ACC group is to a large extent due to its homogeneous conception and the consistent application of a number of design criteria which are recalled in Frank's note.

ii) Since it is only natural to take advantage of technical progress, several groups have started the study of projects which would insert microprocessors in between the existing computer control system and their equipment.

iii) However, such a project should only be carried out if it solves a real need which cannot be satisfied by improvements to the existing computer control system, such as discussed in Frank's note.

iv) In order not to diminish the performance and serviceability of the controls system, any equipment which incorporates (a) microprocessor(s) and which is connected to the controls system must adhere to the design criteria recalled in Frank's note.

Since it is essential that our computer control system continues to work with a minimum of down time, its serviceability must continue to depend on a minimum number of experts outside the ACC groups. For this reason and to preserve the health of our control system in general, I propose that we adopt the following rules.

a) Whenever a group wants to connect equipment incorporating (a) microprocessor(s) to the computer control system, this shall be discussed early in the design stage with F. Beck.

b) F. Beck will appoint a linkman, usually J. Altaber, M. Collins or R. Rausch who will discuss with the group concerned the justification of the proposed equipment and the implementation of a design which is compatible with the design criteria of the computer control system.

c) After the discussions under (b) have led to a firm proposal, this will be described, before construction starts, to the CCCC except in those cases, where there is mutual agreement that this is not worthwhile.
Before construction starts, the standards of construction and the expected reliability must be discussed and agreed with R. Rausch.

At the same time it must be discussed with me if, with regard to standardisation, available manpower and expertise, it would be preferable that part or all of the proposed equipment is built by the ACC group rather than by the group which needs it to control better its equipment.

During the construction stage the ACC group will provide, wherever appropriate, hardware and software advice, usually channelled via the linkman, to the group which constructs the microprocessor equipment.

Since I have great interest in the health of our computer control system, I would like to discuss this matter at the next Group Leaders' Meeting.