J.P. CNOF

DON'T SAY IT—WRITE IT

To S. M. MORRIS Date 12/21/81

From A. R. Baszczuk

SUBJECT: HEIAN LONG STOCK MACHINING ECONOMICS

File model bolt action carbine

Please prepare an economic evaluation of a proposal to perform bottom inletting and secondary machining on all M/700 ADL, BDL, M/788 and the BAC long stocks using a Heian CNC 4 axis machining center.

Attached are process sequence sheets and engineering estimates for this proposal.

When evaluating this proposal, please consider the following factors:

- Reduced floor space (Heian required floorspace: 200 sq. ft.)
- Reduced inprocess inventory
- Reduced material handling requirements
- Reduced scrap and repair rates due to handling
- Reduced labor and tooling requirements
- Reduced machine setting time
- Reduced sanding requirements due to the "blending" nature of the CNC machining operations
- Availability by June 1982 timed for BAC introduction.

The Heian machine will consist of a dual turret, six spindles per turret system capable of machining two stocks simultaneously. The machine will cost approximately $218,000 pluS $15,000 for fixturing and tool costs.

For purposes of the estimate use the following machine cycle times:

M/700 BDL	1.4 Min.
M/700 ADL	1.4 Min.
M/788	1.2 Min.
BAC	1.3 Min

assume a 65% machine efficiency.

The machine cycle times do not include load and unload of stocks.

If desirable, two additional fixtures can be added to provide longer time duration between operator attention. This would require an additional estimated $12,000.

This estimate, when complete, will be compared to F.T.P.D.'s proposal to purchase a six turret Heian and perform top & bottom inletting and secondary machining cuts for the BAC, M/700, M/780, M/540X, 541-S & 581 stocks.

Please consider the implementation time between the two proposals and effect on savings. Approximately $20,000 additional tooling would be needed if present process equipment were used for start up of BAC long stocks. Also to be considered is tooling costs based on requirements to hold tools in sets of 2 vs. 6, machine set up (12 tools vs 36 tools) gaging frequencies based on 2 stocks vs 6 stocks/cycle and expected operating efficiency.

ARB:hf

TO BE SAFE; FIRST THINK YOU MIGHT NOT BE