1. SUMMARY

This project involves a comparative study of two statistical quality control techniques, namely the $\bar{X}$ chart and the cumulative sum method.

The comparisons were carried out in the following ways :

1) Using different sample sizes.

2) Sample values with varying deviations between the desired process mean values and the actual process mean value.

3) Economic comparison of both methods at different sample size.

The following results were obtained :

1) Both the cusum and $\bar{X}$ chart showed increasing sensitivity with increasing sample size.

2) The cusum method was able to detect changes from the desired process mean more quickly than the $\bar{X}$ chart; but the reverse did not appear to be true for large changes.

3) The cost of quality control per unit produced increased with sample size for both cusum and

$\bar{X}$ chart and for any given sample size the cost of quality control per unit produced for the cusum was greater than for the $\bar{X}$ chart.