The following is the suggested modification to the proposal, "Microdensitometer Support" submitted by [   ] Changes **STATINTL** to Section 3 will also result from these modifications, but the proposed contractor can redetermine that section.

SECTION 2

PROPOSED PROGRAM

The program will be carried out in two Phases with four Sub-phases under Phase II. Generally speaking, Phase I comprises a familiarization, .test, training and calibration period whereas Phase II includes specific applications in several areas.

PHASE I: INITIAL PHASE

This Phase of the program will consist of the· necessary familiarization with equipment, on-site and in-plant training, and equipment validation. These procedures will be largely of a calibration and diagnostic nature. It is proposed that the following be included in Phase I:

1. Basic Operator training at the contractor's plant, consisting of a two-week period for two operators.

STATINTL
2. Equipment Familiarization and test at customer's facility and at [   ] This step will include test runs, diagnostic measurements, overarm stability tests, etc., with data to be gathered on site and reduced at the contractor's plant. A test report will be issued.

PHASE II: PROBLEM PHASE

Phase II will include the provision of solutions and procedures which are specifically oriented toward operational problems. This Phase will include four Sub-phases, defined below:

1. Sub-phase A

This step will consist of the establishment of detailed calibration, mensuration, and diagnostic procedures, suitably defined and published. Operator aids in the form of nomographs, charts, etc., will be provided. Basic color techniques will be devised, with particular emphasis on balance and aperture size for various materials. Training will be provided where required. Standard practice handbooks, forms design, logging recommendations, and recommendations for quality control and maintenance programs will also be provided.

Procedures requiring computer treatment will be defined to the point where programming could begin and test data for computer program analysis will be generated.

2. Sub-phase B

This Sub-phase will include the generation of reports giving detailed procedural information for programming the following.

a. Modulation transfer function (MTF) generation, utilizing estimating filter techniques.

b. A general "one-shot" MTF technique.

c. Noise study procedures, including statistical analysis, auto-correlation analysis, power spectral density computation, etc., including trend correction, window selection, and other techniques designed to improve confidence in results. A running auto-correlation procedure and a piece-wise p.s.d. estimator will be provided also.

d. Table generation and data conversion procedures for effective exposure and generation synthesis.

e. Comparison techniques, including mean square difference, cross-correlation, and other methods.

f. Mensuration data handling procedures.

3. Sub-phase C

This Sub-phase will be devoted to the preparation of problem solutions and procedural recommendations specifically related to the exploitation aspects of microdensitometry and to the problems of a system diagnostic nature. Training will be included as required and reports will be generated giving step by step procedures for diagnosing exploitation system anomolies. Procedures for determining confidence factors in the diagnosis will also be established. Application of the microdensitometer to display techniques including density contouring will be considered, with particular emphasis on the detailed study of small scale objects.

4. Sub-phase D

This Sub-phase will consist of investigations into color microdensitometry. Detailed procedures for tri-color operations will be published. Advanced studies of color microdensitometry will be conducted with emphasis on computerized data treatment. Training will be provided as required.