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DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
Washington, D.C. 20523

PROJECT PAPER

Proposal and Recommendations
For the Review of the
Development Loan Committee

EGYPT: Mehalla Textile Plant

AID-DLC/P-2181

UNCLASSIFIED

DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C. 20523

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June 18, 1976

MEMORANDUM FOR THE DEVELOPMENT LOAN COMMITTEE

SUBJECT: EGYPT - Mehalla Textile Plant

Attached for your review is the recommendation for authorization of a loan to the Arab Republic of Egypt ("Borrower") of not to exceed Ninety-Six Million Dollars (\$96,000,000), such funds to be made available by subloan to Misr Spinning and Weaving Company ("the Company") a publicly owned Egyptian corporation, to assist in financing the foreign exchange costs of materials, equipment and services for the modernization, improvement and construction of company facilities in Mahalla, Egypt.

No meeting has been scheduled for this project; however, if any member wishes to have a meeting, please advise us immediately and one will be scheduled.

Please note that your views are requested by close of business on Thursday, June 24, 1976. If you are a voting member a poll sheet has been enclosed for your response.

Development Loan Committee
Office of Development Program Review
and Evaluation

Attachment:
Summary and Recommendations
Project Analysis
Annexes

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METRIC AND CURRENCY CONVERSIONS

Currency Equivalents

Official Rate (the rate used throughout this paper)

1 Egyptian pound (LE)	= U.S. \$2.56
1 U.S. dollar	= LE 0.391
1 millime	= .001 Egyptian pound

Parallel Market Rate

1 Egyptian pound (LE)	= U.S. \$1.55
1 U.S. dollar	= LE 0.65

Weights and Measures

<u>Metric</u>	<u>U.S.</u>
1 meter	= 3.28 feet
1 kilometer	= 0.62 mile
1 square kilometer	= 0.3861 square mile
1 metric ton	= 1.10 U.S. short tons

Fiscal Year

Effective January 1, 1973, the Egyptian fiscal year became identical with the Gregorian calendar year.

EGYPT - MISR SPINNING AND WEAVING COMPANY

Summary and Recommendation

1. Borrower: The Government of Egypt (GOE)
2. Executing Entity: The Misr Spinning and Weaving Company
3. Amount of Loan: \$96,000,000 (Ninety-Six Million Dollars)
4. Loan Terms: (Two-step loan arrangement)
 - To the Government: Forty (40) years, including a 10-year grace period, on the repayment of principal with interest at 2% per annum during the grace period and 3% per annum thereafter.
 - To Misr Spinning & Weaving Co.: Fifteen (15) years maturity, including a 5-year grace period, on the repayment of principal with interest of 10% for the entire 15-year period.
5. Description of Project: The purpose of the project is to rehabilitate and expand the Misr Spinning and Weaving Company (Mehalla) located at Mehalla El-Kubra, Egypt. The project will provide for a substantial increase in cotton, wollen, blends and garment production both for the domestic and export market with attendant increases in foreign exchange earnings. A.I.D. will provide foreign exchange to be used for the procurement of textile machinery and parts, power station equipment and parts, workshop and miscellaneous equipment, as well as training and technical assistance. The rehabilitation and expansion will (a) increase machine and labor productivity, (b) improve product quality, (c) increase Mehalla's capability to produce blended yarns and fabrics, ready-made garments and wider fabrics, and (d) ensure sustained and continuous low cost power.

6. Loan Application: The Government of Egypt has requested A.I.D. to provide U.S. \$96 million to finance the U.S. share of the foreign exchange costs of the project.
7. A.I.D. Representative View: USAID/Cairo has recommended authorization of the proposed loan.
8. Source of U.S. Funds: Fiscal Year 1976 Supporting Assistance.
9. Statutory Criteria: Satisfied. See Statutory Checklist, Annex D.
10. Recommendation: That a loan in the amount of \$96,000,000 be authorized on terms and conditions set forth in the Draft Loan Authorization, Annex B.
11. Project Committees:

USAID/Cairo

Chairperson	Robert N. Bakley
Loan Officer	Domenick J. Scarfo
Economist	Robert J. Maushammer
Engineer	Philip R. Lewis
Legal Advisor	James R. Phippard

AID/Washington

Chairperson	Thomas A. Sterner
Loan Officer	Michael C. Egan
Desk Officer	James R. Roberts
Engineer	James Cooperman
Legal Advisor	Robert B. Meighan

I. INTRODUCTION

1.01 In late 1975, the Government of the Arab Republic of Egypt (GOE) requested a loan from A.I.D. for \$96 million to finance the dollar costs of goods and services required to rehabilitate and modernize the Misr Spinning and Weaving Company (Mehalla) textile plant. The government's application is attached as Annex A. Subsequent to a series of discussions between Mission personnel and representatives of the General Organization for Industrialization (GOFI)^{1/} and from Mehalla, it was agreed that the GOE would become prime obligor for the A.I.D. loan. It was further agreed that Mehalla, in turn, after receiving a loan for \$96 million from the GOE, would repay the GOE on commercial terms (fifteen years to maturity, five years grace period with a 10 percent rate of interest).

1.02 The project is a result of interest generated in the Egyptian textile industry by a "Department of Commerce Textile Machinery Trade Mission" which visited Egypt in May 1975. The project will have a major impact on the U.S. textile machinery industry, one of our most depressed industrial sectors. The total capital budget for all U.S. textile firms for purchases of textile machinery in CY 1976 is estimated to be \$800 million, of which \$200 million will be purchased outside the U.S. This project, therefore, will represent more than a 10 percent increase in sales by the U.S. textile machinery industry.

1.03 The Project is extremely important to the GOE for two reasons. First, it assists Egypt's most important industry--textiles--which accounts for 50 percent of Egypt's industrial sector employment, 25 percent of its industrial output, and 60 percent of its foreign exchange earnings. Second, Mehalla, the beneficiary of the loan, is the largest textile company in Egypt employing over 35,000 persons.

1.04 The Project is aimed at improving the quality, quantity and efficiency of output of the Mehalla textile plant through expansion and rehabilitation. To accomplish this, A.I.D. will provide the necessary foreign exchange to be used for the procurement of textile machinery and related training and technical management assistance programs.

^{1/} GOFI is an organization within the Ministry of Industry responsible for approving and coordinating all new industrial investment in Egypt, whether public or private sector.

1.05 A contracted textile industry consultant team from Kurt Salmon Associates, Inc. (KSA) was funded under the Egypt Feasibility Studies Grant (263-11-995-003) to report on the technical and economic feasibility of the rehabilitation and expansion of the Mehalla textile plant. KSA's objective in studying the Mehalla operation was to determine: (a) technical feasibility of a rehabilitation plan prepared by the Mehalla staff; (b) the suitability of the proposed equipment; (c) the adequacy of projections for supervision, labor complements and skill requirements; (d) the efficiency and adequacy of current and proposed utilization of space; and (e) adequacy of auxiliary facilities and equipment.

1.06 In addition, the KSA team was tasked with development of: (a) recommendations for alternate equipment; (b) requirements for technical assistance where necessary; (c) cost estimates for proposed equipment; and (d) an economic analysis of the proposed project.

1.07 During their visit to Mehalla, they interviewed key management and supervisory personnel, observed individual manufacturing units, obtained historical and current data on operating performance, obtained sales, product and market data projections, discussed rehabilitation plans and logical alternatives to proposed plans, and reviewed tentative conclusions with the Mehalla management staff.

1.08 The KSA team report was completed and forwarded to A.I.D. in April 1976. A thoroughly complete and professional report by KSA concluded that the proposed investment program for the Mehalla textile plant was technically, economically and financially sound based on the past and projected financial performance of the company.

1.09 This will be the United States' first assistance to Egypt's textile industry since the resumption of aid to Egypt. We are, however, considering two project loans in our FY 1977 program: a loan of \$15,000,000 to increase synthetic fiber production, and a loan of \$40,000,000 to increase the ability of the Egyptian textile industry to meet growing domestic demand for cheaper fabrics. The latter funding will be used to establish a plant for the production of dimethylterephthalate (DMT), the raw material for the production of polyester staple and filament.

1.10 This paper will provide a detailed description of the proposed investments. Differences from the investments proposed by the Misr Spinning and Weaving Company in their "Study on Prospective Extensions and Renewals" presented to A.I.D. in January 1976, compared to those recommended by KSA, were resolved; and the investments recommended in this paper have been agreed to by Mehalla.

II. BACKGROUND

A. Cotton Spinning and Weaving Industry - Historical Development

2.01 The first vestiges of what might be called modern textile manufacturing in Egypt date back to the first decades of the 19th century when the monopolization of weaving and trading activities occurred. In the early 1800's, the introduction of long staple cotton gave heightened stimulus to government investment in the industry. In the late 1800's, a second significant event toward establishing a textile industry took place. The Egyptian Cotton Mills Company built a spinning mill with 20,000 spindles. Although the mills were protected by an 8 percent customs duty applied to textile imports, the mills themselves were forced to pay an excise tax on all imports (i.e., raw cotton, coal, dyes and machinery) forcing their shutdown in 1907. In the early 1900's, cotton spinning was virtually non-existent outside of the large mills previously mentioned. In 1927 the industrial census listed only 27,184 people occupied in the textile industry as a whole.

2.02 Up to World War II, the cotton industry consisted of very small firms with only two considered modern--Misr Spinning and Weaving and Filature Nationale. During World War II, the industry was expanded and enjoyed an enormous improvement in its financial position. The textile companies were for the most part able to write off their equipment within a short period (six years in the case of the Misr Spinning and Weaving Company).

2.03 After the war, the large spinning and weaving mills were subjected by the Government to a system which required them to produce specified quantities of low-grade cloth and sell it at fixed low prices to satisfy domestic demand for cheap cotton cloth. In 1950, a high tax on the export of raw cotton was dropped in favor of a high tax on textile product exports. In the late 50's, the textile export tax was eliminated, with subsidies for textile exports being financed by an excise tax of 2.5 to 6.0 percent on the value of raw cotton consumed by the mills.

2.04 Recent growth of Egyptian cotton textile exports has been due primarily to the opening of large Eastern European markets. Bilateral trade accounted for 48 percent of Egypt's total exports of cotton yarn and fabrics in 1970-71. Although these bilateral trading agreements have hiked nominal Egyptian export prices, it is difficult to calculate the real prices received by the industry because they depend upon the commodities received in exchange.

B. Structure of the Textile Industry

2.05 During nationalization of industrial enterprises in 1961, most of the existing textile companies became state-owned and were until the end of 1975 incorporated into the Egyptian General Organization for Spinning and Weaving (EGOSW). EGOSW was a holding company reporting to the Ministry of Industry, and was responsible for operating, coordinating, supervising and developing the textile sector. In 1974, the 27 textile companies in the public sector had combined sales of LE 401 million (U.S. \$1,027 million) and employed 266,000 persons (Annex F). Although some of the companies had a small number of residual private shareholders, over 95 percent of the shares were owned by EGOSW.

2.06 By Presidential Decree No. 111 dated September 4, 1975, all General Organizations, including EGOSW, were dissolved effective December 31, 1975 and all shares of the former subsidiary companies were transferred from EGOSW to the Government. The decree removed EGOSW as an intermediary and made the companies directly responsible to the Ministry of Industry. EGOSW has been replaced by the Higher Council which is presided over by the Minister of Industry. The Council members comprise the Chairmen of the Boards of all the 30 textile public sector companies, as well as representatives of the Ministries of Finance, Agriculture, Planning and Economy. The Higher Council has advisory rather than line responsibilities, and while the purpose of the decree is to give greater freedom and flexibility to the managements of the individual companies and hence to permit them to act in a more competitive manner, specific policies in these areas will still have to be determined. The management and the structure of the individual companies have not been affected by the abolishment of EGOSW.

C. Organization, Operation and Financial Performance of the Textile Industry

2.07 Organization. The textile industry covers a wide range of activities such as spinning, weaving, converting, knitting and garment manufacturing. Since nationalization in 1963, all spinning and converting, as well as 70 percent of weaving, 45 percent of knitting and 30 percent of garment manufacturing have been part of the public sector, the balance being carried out by several hundred small companies in the private sector. Because of the dominant position of the public sector and because only limited statistical data are available about the private sector, the historical situation of the textile industry can best be described in terms of data on public sector firms.

2.08 The 27 public sector companies formerly controlled by EGOSW produce mostly cotton textiles but also manufacture synthetic fibers, jute products, carpets and spare parts for textile machinery. Each

of these companies had and still has a similar organizational structure with Boards consisting of a Chairman, four executive directors representing the management, and four members elected from and by the employees.

2.00 Operations. In the last eight years (1968-75), the number of spindles and looms increased by about 40 percent and 30 percent, respectively. Also, output per loom increased by 15 percent as modern equipment was installed. Nevertheless, investments in new facilities and the rate of replacement of obsolete equipment during this period have been far from adequate since--despite full capacity utilization of the industry and a good potential for exports--domestic consumption of textiles showed only a modest increase and textile exports decreased. All mills operate four shifts, 350 days per year. Consequently, regular repairs and maintenance have to be carried out during working hours, affecting adversely efficiency and actual capacity utilization. The mills are operated by local management and technicians and, in view of the age of the equipment--more than half is over 25 years old--and a continuous shortage of spare parts that makes working conditions and maintenance particularly difficult, the performance of management and supervisory personnel for most of the companies must be rated as highly satisfactory. At the same time, because of Government employment policies, the mills are heavily overstaffed. These factors combine to make labor productivity substantially lower than in the U.S. and Western Europe, but still higher than in most other developing countries.

2.10 Domestic cotton is the industry's major raw material and accounts for 96 percent of fiber input. In 1975, 48.7 percent (218,000 tons) of domestic cotton production was consumed locally by the textile mills; the rest was exported and continued to constitute Egypt's most valuable single export crop. In 1974, the last year for which complete export data are available, exports of cotton and cotton products accounted for about 70 percent of the value of all Egyptian exports. In the same year, exports of cotton yarn and fabrics accounted for 43 percent of exports of semi-finished and finished products.

2.11 Financial Position of the Textile Industry. An analysis of the consolidated income statements and balance sheets for EGOSW for the years 1968-74 (Annex F) reveals that a careful control of input and output prices has been exercised since all operating ratios have stayed remarkably constant.

TABLE 1

EGOSW - Key Historical Financial Data
(In Million LE)

	<u>1968</u>	<u>1970</u>	<u>1972</u>	<u>1974</u>
Sales	243	258	308	401
Profit after Tax	18	21	25	44
Gross Fixed Assets	183	203	236	269
Total Assets	323	354	401	514
Profit after Tax as % of Sales	7.4	8.1	8.1	11.0

During the same period, internal cash generation of the EGOSW companies was of the order of LE 269 million (U.S. \$689 million) while total investment was only about LE 137 million, or about half. Of the difference, some 25 percent was paid to the workers and the remaining 75 percent went to the Government's budget in the form of dividends as required by law. Leverage is quite low with a debt/equity ratio of 23/77 for EGOSW as a whole as of the end of 1974. The foreign exchange for purchasing textile machinery has come mostly from bilateral sources and from the Government's reserves.

2.12 Overall, the industry has a good financial record--the problem being not generation but inadequate retention of earnings for maintenance and new investment. The substantial transfers by the industry to the Government required by law and the shortage of foreign exchange have limited the ability of the individual companies to replace obsolete equipment and invest in new facilities. Since the majority of Egypt's textile machinery is very old, there is no doubt that the textile industry will require substantial investments.

2.13 A related matter is the complete financial dependence of the individual companies on the Government. Up to now, the companies have had no freedom in using their self-generated funds and the only vehicle of obtaining funds has been the annual budget. As a sequel to the abolishment of the General Organizations, the Ministry of Finance is now in the process of developing a new financial policy for all public sector companies. This is expected to allow the companies more freedom in making use of their own funds and in borrowing from banks. At this time, however, it is difficult to predict when this new policy will become effective and what specific form it will take.

D. Mehalla

2.14 Brief History. Mehalla is one of the world's larger textile companies and its mills at Mehalla El-Kubra comprise the largest

textile complex in the world at one single location. Mehalla is located midway between Cairo and Alexandria. Production started in 1931 with cotton spinning and weaving. Wool mills were added in 1939 and garment manufacturing started in 1957.

2.15 During its early period, the company concentrated its efforts on establishing its products in the domestic market. During World War II, the company benefitted from the reduction of imported textiles to further expand and solidify its position in the domestic market. Around 1950, the company began to export its products, and exports today are an important contribution to the company's sales and profits.

2.16 Nationalization of the company was started in 1961 and completed in 1963.

2.17 Products. Today, Mehalla is a vertically integrated textile company, from fiber to finished product. The primary products currently produced are as follows:

(a) Cotton Yarns

Coarse, medium and fine counts. Greige, mercerized, bleached and dyed. Singles, doubled and cabled. Used for weaving, knitting, sewing thread and fish nets.

(b) Cotton Fabrics

Fabrics of various widths, constructions and weights for apparel, industrial uses and home furnishings. Greige, piece dyed, yarn dyed and printed.

(c) Woolen, Worsted and Wool Blend Yarns

Yarns for weaving and knitting.

(d) Woolen, Worsted and Woolen Blend Fabrics

Yarn dyed and piece dyed for use in apparel.

(e) Ready-made Garments

Including shirts, pajamas, trousers, work suits, military uniforms, aprons, shop coats and other miscellaneous apparel products.

(f) Home Furnishings

Towels, blankets, tablecloths, napkins, sheets and pillowcases. Cotton/wool, gauze bandages and surgical dressings.

2.18 In 1975, the company produced approximately 34,800 tons of cotton yarn and 141 million meters of cotton fabric. Approximately 41 million meters of the fabric were dyed and 57 million meters were printed. Approximately 1,880 tons of woolen and worsted yarns and 2,880,000 meters of woolen and worsted fabrics were produced. Blanket production was approximately 70,000 units and approximately 6 million units of apparel and textile consumer products were fabricated.

2.19 Physical Size and Structure. The company covers an area of approximately 640 acres. Within this complex are located the following manufacturing facilities:

Cotton System Spinning Plants	6
Yarn Twisting Unit	1
Central Slashing Department	1
Waste Plant	1
Cotton Weaving Sheds	13
Integrated Cotton Bleaching, Dyeing, Printing and Finishing Plant	1
Woolen Plant comprising Woolen and Worsted Spinning, Weaving, Dyeing and Finishing	1
Cotton Wool Plant	1
Apparel Plant	1

2.20 Position within the Textile Industry. In 1975, the company's position within the Egyptian public textile sector was as follows.

- Produced 15 percent of the sector's production value
- Accounted for 17.8 percent of the sector's exports
- Accounted for 12.1 percent of the sector's domestic sales
- Accounted for 13.4 percent of the sector's total sales
- Employed 12.4 percent of the sector's total employees
- Paid 15 percent of the sector's total wages
- 1975 sales volume of the company was LE 54,881,000

III. THE PROJECT

3.01 The project will rehabilitate and expand the Misr Spinning and Weaving Company located at Mehalla El-Kubra, Egypt (Mehalla). Rehabilitation of the plant is designed to improve the quality, quantity and efficiency of output. To accomplish the above, A.I.D. will provide foreign exchange to be used for the procurement of textile machinery and parts, power station machinery and parts, workshop machinery, miscellaneous equipment, as well as training and technical assistance. This modernization and expansion will: (a) increase machine efficiencies; (b) improve product quality; (c) increase Mehalla's capability to produce blended yarns and fabrics, ready-made garments and wider fabrics; and (d) ensure sustained and continuous low-cost power.

3.02 Specifically, the proposed investments are focused on 12 categories:

(a) New Cotton Yarn Spinning Mill

Objective: To create additional capacity for producing medium-count yarns and to spin cotton/polyester cotton blends.

(b) New Looms, Warpings and Slashers and Auxiliary Equipment for Cotton Weaving

Objective: To expand cotton weaving capacity.

(c) Rehabilitation of Existing Equipment

Objective: To overhaul dated equipment to improve productivity and quality.

(d) New Twisting and Sewing Thread Equipment

Objective: To expand capacity and permit sewing thread manufacture for possible external sales.

(e) New Cotton Dyeing, Printing and Finishing Equipment

Objective: To increase capacity, to permit dyeing and finishing of a higher volume of cotton/polyester fabrics, permit expanded mercerizing, allow for wider sheet printing and improve overall quality levels.

(f) New Wool Mill Spinning Equipment

Objective: To expand capacity, replace obsolete equipment, improve quality and permit special finishes for fabrics.

(g) New Apparel Unit Plus Auxiliary Equipment

Objective: To increase labor productivity, improve quality and expand capacity.

(h) An Addition to Mehalla's Existing Power Plant Consisting of a 20-Megawatt Turbine Generator, a 150-Ton Per Hour Boiler plus Auxiliary Equipment

Objective: To provide additional power and steam capacity and update existing equipment.

(i) New Foundry, Heat Treatment Shop and Related Equipment

Objective: To improve quality of cast iron for making replacement parts.

(j) Overall Materials Handling System

Objective: To reduce labor requirements and costs, improve materials flow, and to reduce bottlenecks and downtime.

(k) New Firetrucks and Related Fire Detection Equipment

Objective: To improve fire detection and fire-fighting capability.

(l) Technical Assistance

Objective: To provide Mehalla staff with training and assistance in modern textile management techniques and related topics.

3.03 The following sections in this paper provide a detailed account of each of the twelve investment areas. A logical framework is included as Annex E.

IV. MANAGEMENT AND LABOR

A. Mehalla's Organization

4.01 Mehalla's organization chart is presented in Annex G. Briefly, the Board of Mehalla is composed of a Chairman, four executive directors and four members elected from among the workers. There is no outside representation on the Board. Each of the four executive directors brings to the Board his knowledge and experience in his particular area of responsibility -- namely, Commerce and Marketing, Financing, Administration and Engineering.

4.02 Decisions on all important matters are taken by a majority vote during the Board's monthly meetings. It should be mentioned that, under Egyptian law, public sector companies must include representatives of labor. The Boards of private sector companies are selected freely, and the composition of the Board is a matter solely for the enterprise to determine.

B. Senior Management

4.03 In other developing countries, public sector companies are generally inefficient and are managed by a group of less than qualified civil servants. Mehalla's management, on the other hand, is capable, and each individual has at least 15 years' experience in the textile industry. A listing of Mehalla's management, including the individual's name, title, age, years of experience and level of formal education is found in Annex H.

4.04 Public Sector companies in Egypt operate under a disadvantage in that management salaries are fixed by the GOE. For example, Mehalla's senior management monthly salaries range from LE 100 to LE 250 (approximately \$250 - \$650), with the Chairman of Mehalla being the only one to receive LE 250. To attract capable mid and upper-level management personnel, Mehalla has instituted a fine fringe benefit program including, among other things, free housing and utilities, free medical care, free schooling and a bonus plan. Depending on annual profits, an annual bonus of LE 50 maximum can be paid to Mehalla's employees and a maximum of LE 100 to Mehalla's management.

4.05 The 42 managers of the company range in age from 40 to 59 and in experience, from 18 to 41 years. All of the managers have college degrees or vocational diplomas. Five of the managers have received additional education in the United Kingdom and one in the United States. Women hold several key management positions.

4.06 The managerial staff, for the most part, appears to be capable and dedicated. The esprit de corps among the managerial group appears to be very high. The top management leadership is outstanding.

C. Plant Staff

4.07 Mehalla employes approximately 35,400 persons. In 1975, 925 persons were hired and 1,067 persons left for all reasons; thus the annual labor turnover was only about three percent. Over the next five years, 2,992 employees are expected to retire; approximately eight percent of current employment. In 1975, absenteeism averaged about four percent when military training and service and annual leave are excluded; the figure is about 25 percent when these items are included. The distribution of employees by department is shown in Annex F, Page 1.

4.08 Average overall labor productivity at Mehalla compares rather unfavorably with textile companies in almost any country in the world; increasing labor productivity is the company's most pressing problem. Although older machinery is responsible to some degree, the primary problem is overstaffing. To illustrate the low productivity point, the following tables show averages in selected typical countries, for cotton spinning and weaving, as compared with Mehalla:

Cotton Spinning

<u>Country</u>	<u>Average Kilograms/ Man-Hour</u>
Egypt (Mehalla)	1.7
Turkey	4.0
European Common Market	10.0
Hong Kong	4.5
Pakistan	2.5
United States	18.0
Tunisia	4.5

4.09 As stated above, the age and condition of Mehalla's equipment contributes to the low labor productivity. This can be seen from the variances between two of Mehalla's six spinning mills. Mill No. 3 (1951) is equipped with older, more labor-intensive machinery; while Mill No. 6 is more modern, although not the most modern. In Mill No. 3, labor cost is 13.7 piasters per kg compared to 07.2 piasters per kg in Mill No. 6. In Mill No. 3, labor costs represent 21.2 percent of manufacturing costs, while only 12.4 percent in Mill No. 6.

4.10 To address the overstaffing problem, Mehalla has now ceased hiring new employees and, at the suggestion of the KSA Team, will continue to operate some units that it had planned to scrap. For example, Mehalla had planned to replace Mill No. 2, the least efficient, with the mill to be financed by this loan. It has now agreed to

continue operating Mill No. 2, producing products where quality is not a determining factor on sales, and bringing the new mill in as No. 7. The new mill will also be staffed with only 499 employees -- much below the present average. Annex I shows the proposed staffing for Mill No. 7 compared with (a) the average of Mehalla's two best mills, and (b) the ideal staffing.

D. Training Center

4.11 Mehalla operates a training center which provides prevocational training for approximately 600 persons each year; vocational training for about 1,000 persons; and various managerial, supervision, productivity and cultural programs for another 2,400. Additional training (to about 1,200 persons a year) is given to employees of other companies including foreign textile firms. The center's staff consists of 104 full-time employees and 105 part-time employees drawn from the operating departments. A summary of the training center and its activities is included as Annex J.

4.12 Section V of this paper includes a description of the technical assistance which is an integral part of this project. It is planned to carry out much of the instruction for the cost reduction programs from Mehalla's training center. Also, it is hoped that Mill No. 7 will serve as a model for staffing, operating and maintaining a modern spinning mill. It will also serve as a showcase for American equipment.

E. GOE Role in Mehalla

4.13 The GOE exercises substantial control on Mehalla and other public sector companies, mainly through the GOE's price-fixing mechanism. The Egyptian labor wage structure rests on legislation establishing minimum wage rates -- in January 1976 it was LE 12 (about \$31) per month -- in both public and private sectors. Wage increases are not formally linked to increases in productivity but tend to be awarded to keep up with the rising cost of living. In the past two years, price rises have exceeded wage increases and thus, there has been a fall in average real wages of about 1.5 percent. One hundred percent of the raw cotton required by the public sector textile companies is furnished by the GOE at a fixed price. Quantities and prices of "rationed" goods (cotton fabrics) to be sold on the local market are established by the GOE, as are textile products for export. These areas are covered in some depth in the Pricing Policy section of this paper. All plans for rehabilitation, expansion or modernization also require the approval of the GOE. The GOE, however, does not interfere at all with Mehalla's internal policies and operations.

V. TECHNICAL ANALYSISA. Cotton and Raw Materials

5.01 Egypt is a major producer of cotton. Production increased until 1970 when 541,000 tons were produced, accounting for 4.7 percent of world production. By 1975, production of cotton decreased to 448,000 tons; while in the period 1970-75, domestic consumption of cotton fabrics increased from 117,000 to 146,000 tons. In the period 1967-1973, Egyptian cotton exports, ninety percent of which is long and extra-long staple in which Egypt has a dominant position, averaged 288,000 tons per annum. In 1974, exports dropped to 260,000 tons and in 1975, to 207,000 tons. The following tables show the statistics in tabular form.

EGYPT RAW COTTON PRODUCTION

<u>Year</u>	<u>Thousand Tons</u>	<u>% of World Production</u>
1950-54	382	4.8
1955-59	374	4.0
1960-64	436	4.2
1965-69	473	4.1
1970-74	515	4.1
1970	541	4.7
1971	511	4.3
1972	512	4.0
1973	516	3.8
1974	492	3.6
1975	448	3.2

EGYPT RAW COTTON EXPORTS

<u>Season</u>	<u>Thousand Tons</u>
1966/67	302
1967/68	261
1968/69	237
1969/70	320
1970/71	302
1971/72	294
1972/73	303
1973/74	260
1974/75	207

5.02 The World Bank has estimated the supply/demand for cotton, other fibers, yarn and fabrics as follows.

PRODUCTION/OUTLET FLOW FOR FIBERS, YARN AND FABRICS*
(in thousand metric tons)

	<u>1975</u>	<u>1980</u>	<u>1985</u>
Cotton Crop	448	431	412
Cotton Export	230	169	116
Cotton Consumption	218	262	296
Fibers other than Cotton	15	42	67
Fiber Consumption	233	304	363
Cotton Type Yarn Production	186	255	305
Other Yarns	17	13	23
Total Yarn Production	203	268	328
Yarn Export	46	46	46
Yarn Consumption	157	222	282
Fabric Production	147	211	268
Fabric Imports	18	-	-
Fabric Exports	19	21	23
Fabric Consumption	146	190	245
Fabric Consumption in kg per Capita	3.9	5.1	6.5

*Annex K shows Production by type of textile and end user for each year, in chart four.

5.03 The supply/demand balance for cotton and cotton production indicates that by 1985 Egypt will have available only 116,000 tons for export, less than half of the current average. The prime reason for this decrease is the increase in population which has had a two-fold effect. On one hand, the limited amount of arable land has to accommodate an increased demand for food/crops; while on the other hand, more cotton is required to clothe the growing population. Another factor is Egypt's desire to increase the export of fabrics, thereby earning the added value required to convert fiber fabric.

5.04 For Egypt to maximize its foreign exchange revenues, it can import cheaper short staple cotton and release more valuable long and extra-long Egyptian cotton for export. The traditional price relationship between short staple and Egyptian long and extra-long cotton has been \$0.71 and \$0.56, respectively. Import of foreign cotton has been considered on several occasions by the Government and, until recently, rejected on the advice of Egyptian agriculture experts, who feared that imported cotton could carry diseases capable of infecting and destroying the local crop. However, trials indicate that short staple cotton can be imported and utilized safely in the area of the city of Alexandria.

5.05 Another measure to alleviate the shortage of fibers would be importation and/or local production of polyester fibers in Egypt to release long staple cotton for export. Polyester can be easily blended with cotton. Polyester-cotton (65/35) blended fabrics are superior to 100 percent cotton in terms of durability, dimensional stability, and easy-care characteristics. Use of synthetic fibers in Egypt is economically sound as polyester staple can be landed in Alexandria at \$0.50 per pound FOB compared with Egyptian cotton which, even at current depressed prices, commands between \$0.80 and \$1.25 per pound (average \$0.90) FOB Egyptian port. The long-range price trend also favors polyester. Since 1966, the price of cotton has increased from \$0.29 to \$0.64 per pound while the price of polyester, despite the quadrupling of oil prices, dropped in the U.S. domestic market from \$0.80 to \$0.55 per pound. The trend toward polyester is worldwide, both in developed as well as developing countries. In the period 1967-1971, world imports of man-made fabrics increased from \$682 to \$1,263 million; i.e., by 85 percent, or twice the rate of growth of cotton fabrics. While in 1960 cotton accounted for 68 percent of all fibers used in the world, by 1972 this figure had decreased to 52 percent, and it is estimated that by 1985 the cotton share may be as low as 44 percent. On the other hand, the share of polyester increased from one percent in 1960 to 11 percent in 1972 and is expected to reach 25 percent in 1985.

B. Facilities

1. Processing

5.06 Production facilities consist of two completely integrated systems for cotton and wool -- going from fiber to finished products -- and supporting facilities consisting of a 44 MW captive power plant, foundry and workshops, fire fighting equipment and an administrative and housing complex.

5.07 Mehalla's cotton system consists of six spinning mills with a total of approximately 280,000 spindles; 13 weaving sheds with a total of 4,854 looms; and dyeing, printing and finishing facilities capable of processing 128 million meters of fabric a year.

5.08 Mehalla's wool system consists of nine woolen cards; 3,636 woolen spindles and 10,984 worsted spindles; 176 looms; 16 combers; and related equipment (shearing, dyeing, etc.).

5.09 At various points in both processes, products are either sold or further processed to a more finished state, including the manufacture of household items (blankets, towels) and garments. The flow of the material may be seen from the following table.

Mehalla's 1976 Production Plan

	<u>Cotton</u>			<u>Wool</u>		<u>Finished Garments</u>
	<u>Cotton Yarn (MT)</u>	<u>Cotton Fabrics (000 Meters)</u>	<u>Cotton Gauze (MT)</u>	<u>Wool Yarn (MT)</u>	<u>Wool Fabrics (000 Meters)</u>	<u>(000 Units)</u>
Export	7,000	45,000	650	-	-	2,283
Domestic	<u>1,700</u>	<u>83,500</u>	<u>1,000</u>	<u>540</u>	<u>2,560</u>	<u>4,239</u>
	8,700	128,500	1,650	540	2,560	6,522
Internal	<u>26,500</u>	<u>20,000</u>	-	<u>1,390</u>	<u>760</u>	-
Total	35,200	148,500	1,650	1,930	3,320	6,522

5.10 For Mehalla's cotton system this project will (a) add one new spinning mill of 54,078 spindles, with flexibility to spin cotton/polyester blends; (b) increase weaving capacity by a net addition of 214 looms (670 new, 456 scrapped) and the rehabilitation of 894 weaving looms, 3,570 winding spindles and 144 combing heads; (c) increase the capacity to produce twisting and sewing thread by adding new twistors, reeling machines, winders and mercerizing equipment; and (d) a wide range of equipment for dyeing, printing and finishing facilities.

5.11 Upon completion of the addition and renovations to the cotton system, production will increase as follows:

Cotton System1976 vs 1980

	<u>Cotton Yarn (MT)</u>		<u>Cotton Fabrics (000 meters)</u>		<u>Cotton Gauze (MT)</u>	
	<u>1976</u>	<u>1980</u>	<u>1976</u>	<u>1980</u>	<u>1976</u>	<u>1980</u>
Export	7,000	12,000	45,000	55,000	650	650
Domestic	<u>1,700</u>	<u>1,000</u>	<u>83,500</u>	<u>85,800</u>	<u>1,000</u>	<u>1,000</u>
	8,700	13,000	128,500	140,800	1,650	1,650
Internal	<u>26,500</u>	<u>29,200</u>	<u>20,000</u>	<u>22,800</u>	-	-
Total	35,200	42,500	148,500	163,600	1,650	1,650

5.12 For Mehalla's wool system, this project will provide new woolen spinning equipment, new worsted spinning equipment, three new warpers, new weft winding equipment, 151 new looms and fabric finishing and inspection equipment. Upon completion of the project, production will increase as follows.

Wool System1976 vs 1980

	Wool Yarn (MT)		Wool Fabrics (000 Meters)	
	<u>1976</u>	<u>1980</u>	<u>1976</u>	<u>1980</u>
Export	-	-	-	-
Domestic	<u>540</u>	<u>720</u>	<u>2,560</u>	<u>2,655</u>
Internal	<u>1,390</u>	<u>2,264</u>	<u>760</u>	<u>1,775</u>
Total	<u>1,930</u>	<u>2,984</u>	<u>3,320</u>	<u>4,430</u>

5.13 The other major investment in processing equipment in this proposed project will be in the garment plant, where 435 sewing and finishing machines will be scrapped and new ones added; plus the purchase of a range of auxiliary equipment (cutting tables and knives, spreading machines, drills, etc.) With this new equipment in production, output is expected to increase as follows.

Garment Plant
(000 units)

	<u>1976</u>	<u>1980</u>
Export	2,283	3,000
Domestic	<u>4,239</u>	<u>4,772</u>
	<u>6,522</u>	<u>7,772</u>

2. Power Plant

5.14 Mehalla's textile plant requires steam at various stages of its manufacturing process. Given the fact that Mehalla must generate this steam, it is more economical to pass the steam through a turbine generator, prior to utilizing it in manufacturing, and generate electric power. Also, Mehalla's plant operates 350 days a year, 24 hours a day. Given the critical nature of the manufacturing process, a reliable, continuous power supply is a must. Purchasing and selling power to the Electric Authority is accomplished by a connection with the national grid.

5.15 Mehalla's power plant was erected in two stages and was started in 1948. Initially installed capacity was 20,000 KW, delivered by two turbogenerators of 10,000 KW each built by Metropolitan Vickers. Two standby units of 2.5 Megawatts each completed the initial generating section. In 1948, three oil-fired boilers were erected, followed in 1956 by a fourth boiler -- oil-fired but convertible to coal. Each

one of these four boilers, part of the initial stage, has a rated capacity of 45 tons per hour. The initial power plant was built on a 3,000-square meter area, not including smoke stacks and cooling towers. Another 2,400 square meters were added to the second stage in 1959 to install two Skoda turbogenerators of 12,000 KW each, raising the total generating capacity to 44,000 KW. The second stage included two oil-fired boilers, each of 110 tons per hour capacity. Maintenance problems caused primarily by the age of the equipment have seriously affected generating capacity, and Mehalla obtains a portion of its daily consumption from the grid.

5.16 The present average power consumption is estimated at 26,000 KW and peak consumption at 29,500 KW. Since the complex includes very many individual consumption points, mostly operating in three shifts, the peak consumption is not significantly different from the average and approximately fifteen (15) percent higher.

5.17 Aside from the present need for additional power, this project will further increase demand. The new spinning plant (No. 7), including refrigeration (for polyester), is estimated to consume 4,000 KW per hour. The expansions in wool and garment manufacturing will account for another 1,500 KW per hour. In addition, the more modern equipment replacing old equipment requires a higher power consumption (but lower labor cost).

5.18 In summary, after implementation of the project, power requirements will increase from an average 26,000 KW to about 33,000 KS; peak requirements are approximately fifteen (15) percent over average. To cover peak and to average an economic load, a reserve of thirty (30) percent will be required -- or generating capacity will need to be about 47,000 KW.

5.19 To meet Mehalla's increased power requirements, one 20,000 KW turbine generator and one 150-ton per hour boiler, plus ancillary equipment, will be purchased from the proceeds of this loan. This will bring installed generating capacity to 60,000 KW, slightly more than will be required after the completion of this project. Given, however, the age of the generating equipment -- and that Mehalla will continue to replace outdated equipment, the 20,000 KW addition is justified.

3. Foundry and Workshops

5.20 Mehalla's central maintenance department includes sheet metal, steel and woodwork shops, a foundry and electric repair facilities. The mechanical section produces some 1,400,000 parts a year representing more than 90 percent of the metallic spares for the entire complex. The woodwork shop's annual output is 1,500,000 pirns, 175,000 miscellaneous wood parts, and 17,000 packing cases for yarn export. The department employs 1,093 people including 64 supervisors, 712 skilled and 262 unskilled workers, and 55 clerical staff.

5.21 In a textile mill in a developed country, facilities would be much smaller than at Mehalla. Foreign exchange, however, has been available in only limited amounts and to maintain production, Mehalla has been forced to manufacture most of its spare parts. Mehalla's success in this endeavor has been spotty with the poorest performance in wooden parts.

5.22 Considering, however, the size and vulnerability of Mehalla's operation, and based on past, and possible future, foreign exchange constraints, it is logical and desirable that Mehalla maintain a certain degree of self-reliance in spare parts manufactured. Mehalla, however, will review regularly with the GOE the desirability of importing the more complicated parts and those where quality and tolerances have a bearing on machine performance or product quality.

5.23 To increase the quality and the quantity of the spare parts, Mehalla will continue to manufacture, KSA has recommended that Mehalla purchase two new furnaces (one cupola and one induction) and replacement equipment for heat treating, forging and measuring and calibration with the proceeds from this loan.

4. Fire Protection

5.24 As with any firm handling inflammable material, the possibility of a fire is great; and for a textile company would be disastrous if one occurred. Mehalla's last major fire was in 1975 in an open cotton storage area. The loss was estimated at LE 3,000,000. Since then, Mehalla has improved its fire protection system including its addition of two fire trucks in 1972 to bring its fleet to three. It still, however, needs additional fire trucks, one of which must be capable of use in multi-story buildings. And two critical areas still need fire detection equipment -- the open cotton warehouses and the garment plant. It is proposed that two fire trucks, fire detection equipment, plus some miscellaneous items be financed from this loan.

5. Material Handling

5.25 The size and complexity of Mehalla requires that yarn and cloth be moved among various facilities continuously; particularly in cotton operations where six spinning mills feed 13 weaving locations. Improper, or poor, material handling has a major, or disproportionate effect on manufacturing cost primarily through scheduling disruptions, product damage and product soilage. At Mehalla most of the material is moved manually -- individuals pushing and pulling yarn trucks among various locations, often outside. Also, the movement of material is not logically planned; a result of Mehalla's growth in stages over a fifty year period. For example, central collection and dispatch of material is rarely used, despite the obvious advantages in certain areas, with each sub-operation having its own individual system to treat this problem, and hopefully correct it, Mehalla will employ a U.S. consulting firm to survey the entire system and prepare a plan for the improvement of the system. The study will be conducted in three phases -- an analysis and conceptual design phase, a detailed design phase, and an implementation stage.

C. Technical Assistance

5.26 Technical assistance proposed to be included in this project fall into two categories; (a) those directly connected with project expenditures (e.g., materials handling study, new plant start-ups assistance) and (b) those concerning existing operations (e.g., industrial engineering, waste control program). Cost-wise the assistance will more than pay for themselves through cost reductions and increased production.

The Technical Assistance Program

Master Development Plan
 Materials Handling Study
 Equipment Specifications
 Bid Evaluations
 Survey of Cotton Spinning and Weaving
 Waste Control Program in Cotton Spinning
 Production Control Program in Cotton Spinning
 Cost Reduction Program in Cotton Spinning
 Start-up Assistance in New Yarn Mill
 Engineering of Warping and Sizing
 Waste Control Program in Cotton Weaving
 Production Control Program in Cotton Weaving
 Cost Reduction Program in Cotton Weaving
 Garment Factory - Training and Reorganization

D. Cost Estimate

5.28 The capital cost has been estimated by KSA and reviewed by Mehalla and A.I.D. Most costs were based on market prices effective in March and April of 1976. The total capital cost, expressed in dollars at the official exchange rate, is \$133,799,762 of which \$38,164,414 is Egyptian pound costs and \$95,635,548 is foreign exchange cost. The base cost estimate is equivalent to \$106,211,698 (\$30,169,497 in Egyptian pounds and \$76,042,192 in foreign exchange) of which \$81,683,289, of 77 percent, is for textile machinery; \$21,799,400 of 21 percent is for service equipment and facilities; and \$2,729,000, or two percent, is for technical assistance. The base cost estimate has been increased by ten percent for contingencies, or \$10,410,689 and the base cost estimate plus contingencies has been increased by 15 percent for inflation.

5.29 We and Mehalla consider the cost estimate to be reasonable. A summary of the capital cost, showing Mehalla's original investment plan and the final investment plan based on the KSA study follows in the Summary Table. Details of each cost category are included as Annex M.

SUMMARY OF PROPOSED AND SUGGESTED INVESTMENT PLAN

Item No.	Investment Plan	Investments As Projected By Mehabla			Investments As Suggested By KSA			Original A.I.D. Request Ref. Annex 13
		Foreign Exchange in US \$	Local Currency in US \$	Total US \$	Foreign Exchange in US \$	Local Currency in US \$	Total US \$	
1.	Cotton Yarn Mill 7	13,560,300	3,633,000	17,193,300	20,423,000	7,891,500	28,314,500	Table 1
2.	Cotton Weaving	18,099,200	1,538,400	19,637,600	12,253,740	2,546,800	14,800,540	Table 2
3.	Rehabilitation Cotton Equipment	Not Requested			1,386,750	180,500	1,567,250	None
4.	Twisting and Sewing Thread	Not Requested			875,250	119,000	994,250	None
5.	Cotton Finishing	9,082,880	—	9,082,880	9,156,210	7,942,869	17,099,079	Table 3
6.	Woolen and Worsted	17,258,000	384,600	17,642,600	12,106,716	3,762,486	15,869,202	Tables 6 — 12
7.	Apparel	2,564,000	—	2,564,000	3,310,526	351,942	3,662,468	Table 13
8.	Power Station	6,758,000	2,564,000	9,322,000	10,763,000	6,829,500	17,592,500	Table 4
9.	Foundry and Shops	880,000	—	880,000	878,000	119,800	1,047,800	Table 5
10.	Materials Handling	1,000,000	—	1,000,000	2,440,000	330,400	2,770,400	Table 14
11.	Fire Protection	1,000,000	—	1,000,000	344,000	44,700	388,700	Table 14
	Subtotal	70,202,380	8,120,000	78,322,380	73,937,192	30,169,497	104,106,689	
	Freight + Insurance	7,020,000	—	7,020,000	Included in Individual Plans			
	Import Duties	—	9,346,000	9,346,000	Included in Individual Plans			
	Clearing + Local Transport.	—	1,756,000	1,756,000	Included in Individual Plans			
	Erection	377,000	690,000	1,067,000	Included in Individual Plans			
	Grand Total Before Contingencies	77,599,380	19,912,000	97,511,380	73,937,192	30,169,497	104,106,689	
	Contingencies (15.5% Mehabla/ 10% KSA)	12,038,000	3,028,000	15,066,000	7,393,719	3,016,950	10,410,669	
	Inflation (15% After Contingencies)	—	—	—	12,199,637	4,977,967	17,177,604	
	Total With Contingencies and Inflation	89,637,380	22,940,000	112,577,380	93,530,548	38,164,414	131,694,962	
	Proposed Technical Assistance				2,105,000	—	2,105,000	
	Total				95,635,548	38,164,414	133,799,962	

VI. MARKET ANALYSIS

A. Past and Present Textile Situation in Egypt

6.01 Production, consumption, imports and exports of textiles, by major groupings, for the years 1970 - 1975 are shown in Annex N. Since 1970, domestic consumption of fabrics has been rising at an average rate of four percent, or by about two percent on a per capita basis. While much lower than in industrialized countries, textile consumption in Egypt is higher than in countries with a comparable income per capita. This is mostly due to the existence of a sizable domestic textile industry based on local cotton and the Government's policy of subsidizing the prices of utility fabrics, by which a certain quantity is allocated to each individual. These fabrics, which are referred to as "rationed" fabrics, account for about 35 percent of domestic consumption and are frequently sold below production costs (see Annex O).

6.02 Egypt has essentially a tropical climate and cotton products meet 95 percent of consumer textile requirements. Textile imports were almost non-existent until 1975 when fifty million meters of fabric were imported from China. Lately, easy care polyester cotton blended fabrics have become popular; and while local production in 1974 was only 5.5 million meters (0.7 percent of total production), three million meters were imported and an estimated seven million meters were smuggled into Egypt.

B. Textile Fabric Forecast

6.03 There are no comprehensive Government projections of textile demand in Egypt, and actual domestic consumption will largely depend on overall economic developments in the country, the priority given to exports of yarn and fabrics, the level of investment in the textile industry, and Government policy regarding price and wage controls. Supply and demand forecasts for the years 1980 and 1985 were estimated by the World Bank as follows.

	<u>Supply Demand Balance of Textile Fabrics</u>			
	(Million m ²)			
	<u>1970</u>	<u>1975</u>	<u>1980</u>	<u>1985</u>
	(Actual)	(Estimated)	(Forecast)	
Production	813	879	1,005	1,050
Imports	6	61	-	-
Exports	<u>152</u>	<u>123</u>	<u>138</u>	<u>152</u>
Available for Home Market	667	817	867	898
Total Consumption/Demand	<u>663</u>	<u>812</u>	<u>1,059</u>	<u>1,371</u>
Balance (Deficit)	4	5	(192)	(473)
Population (million)	33.3	37.2	42.4	46.1
Apparent Consumption per capita (m ²)	19.9	21.9	25.0	29.7

6.04 Production forecasts for textiles were based on the assumption that existing mills would operate at present levels of efficiency and capacity utilization. Output of the Mehalla project is included as well as other expansions in progress or already approved. It was also assumed that the predictable future drop in production due to deterioration and attrition of obsolete facilities would be compensated by purchase of new equipment.

6.05 Demand projections were made using 1975 as a base year and assuming a population growth of 2.2 percent per annum ^{1/}, and a 6.5 percent GDP per capita growth up to 1980 and six percent thereafter. Income elasticity of demand for textiles implied in these projections is 0.5 -- somewhat lower than the 0.7 average for developing countries as a whole.^{1/} It was also assumed that by 1985, Egypt's fabric exports would have increased at 2.1 percent per annum from 1975 to 1985, the same rate at which cotton consumption in the world is expected to grow, and by 1985, return to the level achieved in 1970.

6.06 Comparing the estimated demand and supply projections, it appears that, unless additional production facilities are provided, in 1980 demand will exceed supply by about 190 million square meters -- and in 1985 by about 470 million square meters. Even when assuming a more modest growth of demand equal to about that in the last five years (4 percent per annum), demand will exceed supply in 1980 by about 120 million square meters -- and in 1985 by about 300 million square meters.

C. Marketing of Textiles

1. Distribution

6.07 Fabrics from the factories are sold either to public sector wholesalers (80 percent), private wholesalers (15 percent), or private garment manufacturers (5 percent). There are eight public wholesale organizations, six of which are department stores with about 300 retail branches throughout the country, and the remaining two sell to 30,000 private retailers. Terms are either cash or 90 days, with L.E. 10,000 credit limit per account. Rationed fabrics account for about 35 percent of total consumption, with each individual entitled to purchase six meters a year -- but not more than 26 meters per family. Most of the rationed and cheaper fabrics (up to L.E. 0.3 per meter) are distributed in roughly equal proportion by the department stores and the two wholesale companies. The bulk (85 percent) of so-called "novelty fabrics" (over L.E. 0.3 per meter) is sold by the department stores. In 1974, Cairo,

^{1/} IBRD estimate

Alexandria and Tanta, the three largest cities (which accounted for 27 percent of the population), recorded 35 percent of the retail sales.

2. Pricing Policy

6.08 Ration Price (local market). Since 1968, ex-factory prices of rationed fabrics are determined by the Ministry of Industry in cooperation with the Ministry of Supply. There have been no increases in those prices since 1968; and on average, they are well below cost. It appears, however, that the consumer does not always benefit from such low prices, as a good portion of rationed fabrics is resold on the black market. Domestic ex-factory prices of non-rationed fabrics have increased during that period by 25 percent but are still about seven percent lower than world prices. Since it is easier to get an equitable official price fixed for new products than to raise the official price on existing products, there has been a proliferation of the number of fabrics beyond actual market requirements. Also, price controls do not provide any incentive to manufacturers to raise and/or maintain a high quality of domestic fabrics.

6.09 Other Local Sales. There is no Ministry of Industry or other GOE interference in establishing the price of the remainder of cotton fabric, finished goods or wool products. One hundred percent of woollen manufactures are sold locally. The local demand for cotton and wool products far exceeds the supply, so there seems to be no incentive for price fixing among the big four public companies.

6.10 Export Prices. The Cotton Textile Consolidation Fund (CTCF), created in October 1953 by a decree from the Minister of Industry, establishes all export prices on cotton goods so as to eliminate price competition between the various textile companies in Egypt. The CTCF is managed by a permanent committee of 12 members, all of whom are directly connected with trade and the textile industry.

Functions of the CTCF include:

- (1) the promotion of textile sales in export markets;
- (2) the control of export prices;
- (3) the control of the quantity of exports to countries which apply quota restrictions;
- (4) the establishment of standard specifications for textile products;
- (5) the operation of a central quality-control department for testing the quality of various textile products; and
- (6) the coordination of research and production planning activities in cotton textile industries.

6.11 The CTCF is also responsible for authorizing the payment of subsidies to an Egyptian textile firm when the export sale has been

successfully effected. Firms receive the actual sales price of the export product in Egyptian pounds converted at the official rate of exchange -- plus an export incentive or subsidy bonus. (The question of subsidies is addressed in a following section.)

3. Imports and Customs Duties

6.12 Imported fabrics are subject to customs duties ranging from 75 to 100 percent ad valorem. In addition, import licenses are very difficult to obtain and the procedure for the necessary foreign exchange allocation is very cumbersome. Imports of fabrics have therefore been negligible, amounting to only two percent of the market in 1974. More recently, Government policy has changed toward some liberalization of imports, but it is too early to say what effect this change may have on textile imports.

4. The Export Situation

6.13 Exports of cotton yarn and fabrics are a very important element in the national economy and provided, in the period 1970 - 1974, between 40 percent and 50 percent of the country's foreign exchange earnings in the manufactured products category. Exports of yarn account for about one-quarter of total yarn production and exports of fabrics for 10 to 15 percent of total fabric production. Constrained by the lack of modern equipment and growing domestic requirements, Egyptian exports have been largely restricted to yarn and grey fabrics destined for relatively unsophisticated markets in the Eastern Europe and Arab countries which, in the last five years, absorbed between 60 and 70 percent of exports. In 1974, only 30 percent of the yarn and 35 percent of the fabrics were exported to the EEC and other Western countries.

6.14 The proportion of Egyptian exports in world textile trade has been negligible. In 1972, total imports of textile products by developed market economy countries amounted to US \$14,265 million of which Egypt's exports (US \$268 million) accounted for only about 2 percent of the total. Also, in terms of volume, Egypt's share in world exports of cotton yarn and fabrics decreased from 6.5 percent in 1970 to less than 5 percent in 1974. Hong Kong remained the major exporter of textiles and clothing from developing countries, accounting for 43.5 percent of cotton and 40 percent of man-made textile exports. In cotton goods, Hong Kong was followed by India (9.7 percent), and Pakistan (7.9 percent), and in man-made textiles, Korea (18.4) percent and Yugoslavia (8.5 percent) were other major exporting countries. In the same year, the U.S. and the Federal Republic of Germany absorbed 52 percent of total cotton products and 69.2 percent of man-made textiles exported by developing countries.

6.15 In the European Economic Community and the U.S., Egypt's annual

quotas have not been filled for several years and therefore, a modest increase of Egyptian production to be exported as a result of the project should not present any significant marketing problems. A 1975 bilateral agreement with the U.S. established a textile quota for Egypt of 73 million square meters for 1976 (11,000 tons) and 105 million square meters for 1977 (16,000 tons), compared with average Egyptian shipments of 3,500 tons per annum for the 1971 - 1974 period.^{1/} If all additional fabric production financed by the project would be directed either to the EEC or the U.S. markets, the quotas would still remain unfulfilled.

5. Export Subsidy

6.16 All public sector textile firms prepare projections for the quantity of textile products they will export in the coming year. These projections are reviewed by GOFI and, if accepted, are included in the Foreign Exchange Budget and become the target export figure for that year. All exports which fall within that export figure are paid by the GOE to the exporting firm in Egyptian pounds, at the official rate of exchange, plus a 15-percent premium representing an export subsidy. If the exporting firm has an exceptional year and the quantity of its exports exceeds its target, it receives no subsidy on the excess; but one-half of the proceeds for the excess are either converted at the parallel market rate (a premium of 50 percent) or it can receive the amount in foreign exchange for financing allowable imports.

D. Mehalla

6.17 Sales of Mehalla's four major products, as compared with the entire sector, are presented below in tabular form for the year 1973. Figures for 1974 and 1975 are not available, but Mehalla's market share during these years should not differ significantly from 1973.

	<u>Mehalla</u>			<u>Egyptian Textile Industry</u>			<u>Mehalla's Share</u>		
	<u>Local</u>	<u>Export</u>	<u>Total</u>	<u>Local</u>	<u>Export</u>	<u>Total</u>	<u>Local</u>	<u>Export</u>	<u>Total</u>
	(percent)								
Cotton Yarns (tons)	1848	10611	12459	46273	44327	90600	4.0	24.0	13.8
Cotton Fabric (millions meters)	60	53	113	569	125	694	10.6	42.1	16.3
Ready-made Gar- ments (000's)	3429	2352	5781	3429	6079	9058	100.0	63.9	60.8
Cotton Gauze (tons)	1193	221	1414	1193	221	1414	100.0	100.0	100.0

^{1/} The "Textile Quota Agreement between the Government of Egypt and the United States of America" dated December 30, 1975 is repeated in its entirety in Annex P.

6.18 Mehalla has an active, competent marketing organization consisting of over 600 full-time employees. Over the years, Mehalla has established an excellent reputation in the domestic and foreign markets for its yarn and fabric products. Quality, however, has been deteriorating over the past few years; and without improvement, its image will tarnish. In the local market, Mehalla's products command a premium, and the name "Mehalla" is woven into each piece of fabric to prevent adulteration. For garments, however, Mehalla's quality is not much better than its Egyptian competitors which, as a whole, is not very good.

6.19 Mehalla's domestic products are priced and marketed as described in the earlier part of this section. For export products, Mehalla uses agents in all countries except the U.S. Commissions in these countries amount to 2-1/2 percent on cotton yarn and three percent on fabric. For the U.S. market, Mehalla uses brokers (New York and California) and sells at a net price. The percentage markup by the broker depends on the market and is not known nor monitored by Mehalla.

6.20 The incremental output produced when this project is complete is as follows.

Incremental Output

	<u>Cotton</u>		<u>Wool</u>		<u>Garments</u>
	<u>Yarn</u> (MT)	<u>Fabrics</u> (Meters) (000)	<u>Yarn</u> (MT)	<u>Fabrics</u> (Meters) (000)	(Units) (000)
Export	5,000	10,000	-	-	717
Domestic	<u>(700)</u>	<u>2,300</u>	<u>180</u>	<u>95</u>	<u>533</u>
	4,300	12,300	180	95	1,250
Internal ^{1/}	<u>2,700</u>	<u>2,800</u>	<u>874</u>	<u>1,015</u>	<u>-</u>
Total	7,000	15,100	1,054	1,110	1,250

6.21 Mehalla, to date, has had no problem in marketing its full output. For domestic sales, we do not expect that it will have a problem in the future if the supply/demand forecast is anywhere near accurate (see para 6.03). The export market will, however, present a challenge primarily for garments, where quality has been a major problem in gaining acceptability in more sophisticated markets (U.S., EEC). Sheets account for 65 percent of the export volume. This project

1/ Sold internally for further processing and additional value added.

will add two new products -- denim suits and summer/leisure suits -- both of which are subject to style preferences and trends. Mehalla will continue to study its marketing strategy throughout the life of this project and adjust accordingly. Fortunately, if export sales diminish, Mehalla should be able to sell all its product on the domestic market.

E. Mehalla's Export to the U.S.

6.22 The value of Mehalla's exports to the U.S. and the percentage of Mehalla's exports to the U.S. relative to its total exports for the period 1971-1975 are shown in the table below. All exports were of either cotton yarn or cotton fabrics.

<u>Year</u>	<u>Total Value of Exports (000)</u>	<u>Value of Exports to the U.S. (000)</u>	<u>Exports to the U.S. as a percentage of Total Exports</u>
1971	\$ 36,606	\$ 1,461	.04%
1972	40,465	2,728	.07%
1973	43,129	2,375	.06%
1974	53,736	1,767	.03%
1975	44,372	390	.009%

VII. FINANCIAL ANALYSIS

A. Historical Financial Performance

7.01 The financial position of Mehalla is very sound and is attributable to several factors. First, Mehalla's primary raw material--cotton--has not changed over the past 20 years while sales prices, particularly for exports, have increases significantly. Second, Mehalla has been unable to make significant expenditures for replacement or expansion of its asset base. It therefore has been converting its fixed assets to liquid assets, at least for accounting purposes, through annual depreciation charges. Third, and equally important, is Mehalla's management; other firms have been faced with the same circumstances but have not fared nearly as well.

1. Balance Sheet

7.02 Mehalla's assets at December 31, 1975 totaled \$204 million^{1/}, of which \$117 million were classified as current (for comparison purposes KSA estimates that the replacement cost of Mehalla's textile equipment alone would exceed its total assets); liabilities totaled \$61.7 million, of which \$11.2 were long term; and equity totaled \$142.2 million. Mehalla's current ratio was 2.32:1.00 and its debt to equity ratio was 30:70, both very conservative. Following are the summary balance sheet figures and ratios for the years 1971 to 1975; more detailed figures are shown in Annex Q-1.

Historical Balance Sheets

	-----in U.S.\$000,000-----				
	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>
Cash and Receivables	52.8	37.1	33.0	41.4	39.5
Total Current Assets	102.5	94.2	90.5	108.9	117.2
Total Assets	171.9	171.1	169.1	183.5	204.0
Current Liabilities	39.3	30.8	27.4	41.0	50.5
Total Liabilities	44.8	37.9	33.4	49.2	61.7
Total Equity	127.1	133.2	135.7	139.3	142.2
Current Ratio	2.61:1	3.06:1	3.32:1	2.66:1	2.32:1
Acid Test Ratio	1.34:1	1.20:1	1.20:1	1.01:1	.07.:1
Debt/Equity Ratio	26:74	22:78	20:80	26:74	30:70

^{1/} At the official exchange rate.

2. Income Statement

7.03 The results of Mehalla's operations for the years 1971 through 1975 with significant performance ratios; detailed statements are shown in Annexes Q-2 and Q-3.

	<u>Historical Income Statements</u>					<u>5-Year Total</u>
	In 1000 U.S.\$					
	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	
Net Sales	95,681	100,855	105,080	124,992	140,715	567,323
Cost of Sales	82,074	84,802	87,004	89,360	108,306	451,546
Gross Margin	13,607	16,053	18,076	35,632	32,409	115,777
Marketing Expense	2,228	2,523	2,574	2,523	2,444	12,292
Administrative Expense	4,620	5,984	6,162	7,238	6,948	30,952
Operating Profit	6,759	7,546	9,340	25,871	23,017	72,533
Subsidies	7,966	4,889	3,034	3,254	1,987	21,130
Other Income	1,290	1,354	3,043	1,964	1,297	8,948
Net Before Tax Profit	16,015	13,789	15,417	31,089	26,301	102,611

As a percent of net sales, the above represent the following:

Gross Margin	14.2	15.9	17.2	28.5	23.0	20.4
Marketing Expense	2.3	2.5	2.4	2.0	1.7	2.2
Administrative Expense	4.8	5.9	5.9	5.8	4.9	5.4
Operating Profit (Without Subsidies)	7.1	7.5	8.9	20.7	16.4	12.2
Subsidies	8.3	4.8	2.9	2.6	1.4	3.7
Operating Profit (With Subsidies)	15.4	12.3	11.8	23.3	17.8	16.5
Net Before Tax Profit	16.7	13.7	14.7	24.9	18.7	18.1

7.04 The above five years' average operating profit of 12.8 percent (or 16.5 percent after export subsidies) is substantially greater than experienced by the typical U.S. textile firm. For reference, following are the percent of operating profits for the major firms:

Burlington Industries	9.29
J. P. Stevens	7.29
West Point Pepperell	8.31
Springs Mills	9.02
M. Lowenstein	5.46
Dan River	5.09
Cone Mills	7.83
Cannon Mills	5.80
Collins & Aikman	8.62
Dominion Textiles	12.07
Fieldcrest	6.93
Riegel Textiles	7.50

3. Profit by Major Products

7.05 To provide a basis for evaluating the feasibility of new equipment purchases, below are cost of sales and profits by major product groups for the year 1974 and the first six months of 1975, in summary form. The detailed analyses are contained in Annexes Q-4 and Q-5.

Gross Margin and Operating Profit by Product

	1974			6 Months 1975		
	Cost of Sales	Gross Margin	Operating Profit	Cost of Sales	Gross Margin	Operating Profit
Cotton Yarn	54.3	45.7	37.8(1)	55.6	44.4	37.7(1)
Cotton Fabrics	79.2	20.8	13.0(1)	80.8	19.2	12.5(1)
Cotton/Wool	79.6	20.4	12.7	76.1	23.9	17.1
Garments	77.7	22.3	14.5	71.7	28.3	21.6
Carded Wool						
Yarn	83.0	17.0	9.4	93.3	6.7	.0
Worsted Wool						
Yarn	83.1	16.9	9.1	89.4	10.6	3.8
Wool Fabrics	62.6	37.4	29.6	71.0	29.0	22.2
Total	71.5	28.5	20.7	73.8	26.2	19.5

(1) The percents for cotton yarn and fabrics exclude export subsidies. In 1974, the subsidies amounted to a 6.9% of net sales for cotton yarn and 1.8% for cotton fabric. In the first six months of 1975, these subsidies amounted to 3.9% for cotton yarn and 1.0% for cotton fabrics. Overall, these subsidies amounted to 2.6% of total net sales in 1974 and 1.2% in the first six months of 1975.

The above ratios are provided for reference only. They are not used in subsequent evaluations because transfers between areas are based on costs. They do, however, indicate all product categories involved in the proposed investment plan are profitable.

4. Dividend Policy

7.06 Mehalla is a public sector corporation under control of the Ministry of Industry and, as such, is subject to GOE policy on the distribution of profits. In brief, this amounts to a distribution of almost all profits--75 percent to the GOE, through the Ministry of Industry, and 25 percent to the employees. Moreover, for the past few years, Mehalla has been prepaying dividends to the GOE based on estimated profits; a practice that is common in Egypt.

B. Project Financing Plan

7.07 It is proposed that this project be financed on a two-step basis; that is, that the GOE be required to relend the A.I.D. loan to Mehalla on commercial terms. Proposed terms to the GOE are recommended to be at A.I.D.'s lowest concessionary terms--principal repayment in 40 years with a ten-year grace period, with interest at two percent during the grace period and three percent during the repayment period. Proposed terms to Mehalla are principal repayment over a 15-year period including a five-year grace period with interest at 10 percent during the life of the loan. The latter terms are consistent with Egyptian private sector rates and equal to current rates for prime companies funding themselves from the international money market.

7.08 Interest payments over the life of the loan will total the equivalent of \$92.8 million. The total principal and interest payment from Mehalla to the GOE will total \$188.8 million, significantly more than the GOE will repay to A.I.D.--without considering time--and will represent an addition to Egypt's budget. Annex Q-6 shows the detailed interest and amortization expense computations for Mehalla.

7.09 Total project costs are \$133,799,962, of which \$95,635,548 are foreign exchange costs and \$38,164,414 are Egyptian currency costs. The A.I.D. loan will finance most of the foreign exchange cost and the local currency cost from Mehalla's internal cash generation. The cash flow analysis covered later in this section shows that Mehalla will generate the required funds.

C. Project Profitability

1. Sales

7.10 The incremental production resulting from this project is, priced at 1976 prices, equivalent to \$52.2 million, an increase of 35.4 percent over Mehalla's estimate for 1976 (which we have used throughout

as the base year). The projected increases are only those resulting from machinery--either new or replacement. No value was attributed to the extensive technical assistance program which is expected to materially increase output. Shown below are the 1976 and 1980 sales figures, by product, projected with and without the project. Annex Q-7 contains a more detailed analysis.

Project Incremental Sales
1976 vs. 1980

Product Category	In 1,000 LE			In 1,000 U.S.\$		
	Est. 1976	Proj. 1980	Increase	Est. 1976	Proj. 1980	Increase
Cotton Yarn	10,838	16,760	5,942	27,789	43,024	15,235
Cotton Fabrics	30,267	37,235	6,968	77,605	95,470	17,865
Cotton/Wool	1,064	1,064	--	2,728	2,728	--
Wool & Worsted Yarns	2,332	3,110	778	5,979	7,974	1,995
Wool & Worsted Fabrics	4,823	5,964	1,141	12,366	15,292	2,926
Garments	8,197	13,727	5,530	21,017	35,196	14,179
Total	57,521	77,880	20,359	147,484	199,684	52,200

2. Profit

7.11 Profits, before taxes and dividends (but after interest and depreciation) are estimated to increase from \$24.9 million in 1976 to \$29.5 million in 1980 and to \$39.2 million in 1990--ten years after completion of the project. Again, only the contribution to the project obtained through new and replaced machinery was considered. A summary of Menalla's profits for various years is shown below; a detailed analysis is included as Annex Q-8. The internal financial rate of return is 12.8 percent.

Mehalla's Profit by Years

Year	-----in Millions of U.S.\$-----		
	<u>Sales</u>	<u>Net Profit Before Taxes</u>	<u>Profits as a % of Sales</u>
1976	147.5	24.9	17%
1977	147.5	20.5	14%
1978	152.7	17.8	12%
1979	173.6	25.3	15%
1980	199.7	29.5	15%
1985	199.7	33.0	17%
1990	199.7	39.2	20%

7.12 The temporary decrease in profits during 1977 and 1978 is attributable to increased interest and depreciation expenses on new project assets before full utilization of the equipment. Annex Q-8 contains a detailed Projected Profit Schedule prepared by KSA. An estimated incremental operating profit of \$13.4 million due to this project, before the payment of interest and receipt of other income, was also prepared by KSA (see Annex Q-9).

D. Mehalla's Debt Service Capability

7.13 The cash flow analysis presented in Annex Q-13 shows that Mehalla will generate sufficient funds to satisfactorily service the project loan and its other long-term debt. In 1982, the year principal repayments commence, the debt service ratio is projected at 4.2:1.0. By 1987, it will drop to 2.9:1.0 and in 1990 to 2.2:1.0.

E. Cotton Prices

7.14 At the present time, Mehalla is paying a price for raw cotton that is approximately 40 percent of the world price. If the controlled price of cotton to Mehalla is increased by the Egyptian Government, it is possible that Mehalla may have to pay an additional amount for its cotton of between \$660 and \$990 per metric ton (\$.30 to \$.45 per pound). This would amount to between \$16,972,560 and \$25,458,840 increased costs (and decreased before-tax profits) per year.

7.15 However, after-tax profits (and cash flow) would be reduced only between \$6,279,847 and \$9,419,770 annually after application of 63 percent for taxes, dividends and mandatory investments.

7.16 Over the 16-year period between 1976 and 1991, this would amount to a reduction in cash flow of between approximately \$100,000,000 and \$150,000,000. This is 40 percent and 60 percent of the projected cash flow of \$250,000,000 that is indicated as available after debt repayment in Annex Q-13, Cash Flow Analysis.

7.17 It is to be pointed out that the above calculations do not provide for any government export subsidies such as are presently paid (\$3,250,000 in 1974 and \$1,987,000 in 1975). Undoubtedly, if the price for raw cotton paid by Mehalla were allowed to rise to worldwide prices, export subsidies of some sort would be continued. This would obviously improve the cash flow.

7.18 The above, however, does indicate that the project would still be viable even if cotton prices were allowed to rise to natural levels and no export subsidies were paid.

F. Financial Covenants

7.10 As previously discussed, Mehalla is a public sector corporation subject to the Government's cash depleting dividend policy. To help ensure the continued financial good health of Mehalla, A.I.D. will require that certain financial covenants be included in the loan agreement (see Section XII). The covenants are designed primarily to safeguard Mehalla's working capital, particularly cash, and to maintain it at a level which will allow Mehalla to operate at increased production levels.

7.20 Although Mehalla enjoys a strong financial position with respect to the ratio between debt and equity, its actual paid-in capital is low. At December 31, 1975, net worth amounted to \$142 million, of which \$10 million was paid-in capital and the remainder was earnings retained over the last 50 years. Such a position leaves the company vulnerable to Government requests for dividends. To protect Mehalla from a debilitating drain on its assets, during loan negotiations we will see an undertaking from the GOE and Mehalla that, within one year from loan signing, Mehalla's paid-in capital be increased to the equivalent of \$100 million (in terms of Egyptian pounds, an increase from 4.0 million to 40.0 million) by capitalizing retained earnings (in the U.S., a stock dividend).

7.21 As a further precaution, and to provide additional protection to working capital, we will also seek an undertaking that Mehalla restrict the source of its dividends to only accumulated adjusted net earnings and preclude the purchase or redemption of the company's capital stock. Further, during loan negotiations we will seek from Mehalla an undertaking to maintain a current ratio of 1.5:1 and a debt to equity ratio of 1.5:1. Dividends, borrowings and prepayment of debt will be restricted if Mehalla is in default of either ratio.

7.22 Finally, to ensure that sufficient local currency is available for the completion of the project, and to ensure that Mehalla does not start a new project until it has proven it can implement this project, during loan agreement negotiations, we will seek from Mehalla an undertaking to obtain A.I.D.'s approval for the acquisition of capital additions that exceed a total of three million Egyptian pounds in any one year.

7.23 The text of the financial covenants is included in Section XIII.

G. Egypt's Debt Service Capability

7.24 Egypt's outstanding medium and long-term debt as of December 31, 1975 was \$5.1 billion. An additional \$2,620 million of debt was owed in the form of bank credit facilities outstanding

(including unutilized credits). About two-thirds of the medium and long-term debt were repayable in convertible currency.

7.25 Egypt's repayment burden on medium and long-term debt and on suppliers is estimated at \$720 million in 1974 and \$753 million in 1975. This represents a debt service ratio of 32.3 percent and 35.5 percent in 1974 and 1975, respectively. In 1976 the debt service ratio is not expected to change appreciably.

7.26 In view of Egypt's heavy debt service burden, A.I.D. normal concessional loan terms are proposed--40 years, including a 10-year grace period, with an interest rate of 2 percent per annum during the grace period and 3 percent per annum thereafter. With these terms, particularly the 10-year grace period, the repayment prospects for this \$96 million loan appear favorable.

VIII. ECONOMIC CONSIDERATIONS

8.01 The problems confronting the Egyptian industrial sector and the textile industry within it are synonymous. They include, among other things, lack of investment due to a scarcity of foreign exchange, low labor productivity due to over-employment, GOE price controls, GOE subsidies, and GOE control over all major investments. Given these restraints, the Egyptian textile industry has not performed too badly overall. The IBRD has estimated that value-added in the textile industry increased in real terms in 1975 by about 7 percent.

8.02 It is our understanding that the GOE is considering a far-ranging economic liberalization program, with a goal of shifting from direct economic control to one that more closely resembles a free market system. The IMF has recently discussed with the GOE such issues as a unitary exchange rate and the elimination of subsidies. However, from past experience, it is generally felt that an economic reform program will be a slow process in Egypt, especially since it may well lead to internal conflicts. A considerable decentralization of decision-making is an essential condition of the liberalization process. This is likely to create inconsistencies with other, centrally determined, policy objectives. For example, if public enterprises are given a free hand, they may move toward reducing the overstaffing that is prevalent in these organizations. This may be contrary to GOE employment goals, particularly in the short run. Another area of competing aims may arise from the need to rationalize the exchange rate and fix it at a realistic level. In Egyptian circumstances, this would mean a significant devaluation of the exchange rate and is likely to result in an upward pressure on prices in the short term. The price effects resulting from a devaluation would be especially marked on items that are wholly imported or which possess a substantial foreign component. The vitally important raw materials consist almost entirely of imported items. If import prices increased with devaluation and prices to the final consumer were to be maintained at present levels, subsidies would have to be increased. Thus, both the GOE budget deficit and domestic resources required to service external debt would increase.

8.03 The GOE, however, has taken some positive steps, most notably those lifting the restriction on Egyptian citizens from holding foreign exchange and an attempt to reinvigorate the private sector. The ban on Egyptians holding foreign exchange was eliminated in February 1976. To attract external capital and technology, the GOE promulgated Law No. 43 in 1974, which provides an incentive package for foreign investment and guarantees against nationalization, except under due process of law.

8.04 In order to appreciate the complexities of the GOE textile industry and the financial and managerial factors entering into day-to-day decision making, it is necessary to understand Egypt's pricing, subsidies and exchange rate policy.

A. Pricing Policy

8.05 Ration Price (local market) - Since 1968, ex-factory prices of rationed fabrics are determined by the Ministry of Industry in cooperation with the Ministry of Supply. There have been no increases in those prices since 1968 and on average they are well below costs. It appears, however, that the consumer does not always benefit from such low prices as a significant portion of rationed fabrics is sold on the black market. Domestic ex-factory prices of non-rationed fabrics have increased during that period b: 25 percent but are still about 7 percent lower than world prices. Also price controls for these fabrics result in proliferation of the number of fabrics beyond actual market requirements and do not provide any incentive to manufacturers to raise and/or maintain a high quality of domestic fabrics.

8.06 Other Local Sales - Neither the Minister of Industry nor other GOE agencies intervene in establishing prices for other than rationed cotton fabrics, finished goods or wool products. One hundred percent of the woolen manufactures are sold locally. Since the local demand for cotton and wool products far exceeds the supply, there seems to be no incentive for price fixing among the big four public companies. (Mehalla, therefore, considers cost and normal market factors in arriving at its local price structure.)

8.07 Export Prices - The Cotton Textile Consolidation Fund (CTCF), created in October 1953 by a decree from the Minister of Industry, establishes all export prices on cotton goods and thus eliminates price competition between the various textile companies in Egypt. The CTCF is managed by a permanent committee of 12 members, all of whom are directly connected with trade and the textile industry. Functions of the CTCF include:

- (1) The promotion of textile sales in export markets;
- (2) The control of export prices;
- (3) The control of the quantity of exports to countries which apply quota restrictions;
- (4) The establishment of standard specifications for textile products;
- (5) The operation of a central quality control department for testing the quality of various textile products;

(c) The coordination of research and production planning activities in cotton textile industries.

The CTCF is also responsible for authorizing the payment of subsidies to an Egyptian textile firm when the export sale has been successfully effected. Mehalla receives the actual sales price of the export product, in Egyptian pounds converted at the official rate of exchange and, in addition, an "export incentive" or subsidy bonus.

B. Subsidies

8.08 Raw Materials. The price of raw cotton has been fixed by the GOE at well below world market prices since 1964. Mehalla has already purchased its CY 1976 raw cotton requirements (40,000 m/tons) from the GOE and the price per m/ton is still as it was in 1974. The cost to Mehalla of the CY 1976 cotton was LE 13.5 million (about \$34.6 million). It is difficult to know exactly what the world market price of this cotton purchase is because it includes many different grades; however, Mehalla estimates the world market price to be about 175 percent of the price it pays, or, in the case of this year's purchases, approximately \$60.0 million. Mehalla contends, with some justification, that this subsidy is partially offset by its loss of sales revenue on the sale of "rationed" goods. In 1975, Mehalla claims it lost the equivalent of about \$5.7 million on the sale of "rationed" goods. This loss represents merely the difference between the cost of sales and actual sales revenues and does not include the loss of profit.

8.09 In preparing its profit and loss projections through 1985, Mehalla has used the same price for raw cotton that it currently pays; it anticipates no change in the GOE's pricing policy for raw cotton in the foreseeable future. We agree that it is reasonable to assume that public sector textile companies may continue to enjoy this bonus for a number of years to come.

8.10 Export Subsidy. To encourage exports, the GOE has instituted another subsidy. In addition, the existence of the Parallel Foreign Exchange Market stimulates exports of such items as cement, cotton yarn, textiles and petroleum, all of which are exported by the public sector only. Mehalla prepares, as do the other public sector textile firms, projections for the quantity of cotton products it will export during the following year. These projections are reviewed by the General Organization for Industrialization (GOFI) and, if accepted, are included in the Foreign Exchange Budget and become the target export figure for that year. Any exports of cotton products which fall within that export figure are paid by the GOE to the exporting company in LE at the official rate of exchange (\$1.00=39P); supplemented by a 15 percent subsidy (15% x 39P = 5.85 P).

8.11 The Parallel Foreign Exchange Market. If Mehalla wishes to export cotton goods in excess of the target figure, it can reap some of the benefits of the parallel market, since it can receive payment in Egyptian pounds for a portion of the above target at the parallel market rate or Mehalla can keep a portion in FX to finance imports. There are no restrictions on the use by Mehalla of these funds paid at the parallel market rate. During the last three months of 1973 (parallel market instituted in September 1973), Mehalla earned nothing; in 1974, \$1.7 million; and in 1975, the amount was \$2.2 million.

8.12 It should be noted that subsidies are paid only on exports to hard currency countries, except exports to Jordan, Iraq, Sri Lanka, Bangladesh and Ghana which receive special treatment and for which Mehalla receives a 5 percent subsidy. No subsidy is paid on exports to soft currency countries or which are termed "clearing currency countries". In 1975, Mehalla's exports totaled LE 17.5 million and Mehalla's subsidy receipts totaled approximately LE 1.0 million.

C. Farm Price Policy

8.13 For the major field crops, the farmer has to sell a certain part of his crop to the GOE at a fixed price announced to the farmer in advance. The Agricultural Credit Bank (ACB) receives the quota from the farmer on the basis of grade and pays the farmer. Quotas established by the ACB differ from one crop to another. The average farm price for a given commodity is that price which, if multiplied by the total quantity of the commodity produced, would give the total value of the crop. It is a weighted average representing the prices received by all methods of sale. Quantities of the commodity kept for home consumption or used as seeds in the following year are given the same average price as for quantities which have been sold. The average farm price is calculated for each province taking into consideration the amounts of the crop going into different channels. The national average is calculated by taking the amounts produced in different provinces as weights. In 1968, the average price received by the farmer for 157.5 kilograms (one metric Kantar) was LE 17.46 and this price increased to LE 25.50 in 1975.

8.14 The farm price for cotton represents the weighted average price received by the farmer for all varieties and grades. This is defined by the GOE as the average prices farmers receive for their products sold at the farm, or to any point to which farmers deliver their product.

8.15 The farm price structure is further complicated in that the GOE subsidizes all the agricultural inputs. The farmers are provided with better variety and improved seeds at a price below cost. (In the case of cotton, the GOE has to provide seeds annually, while

for other crops they are provided every three years. The GOE has fixed the price of fertilizer at the cost of fertilizer in 1960. The GOE has not adjusted this subsidy even in light of the big increases in fertilizer prices experienced during 1973-75. Other minor subsidies include the cost of transportation of gypsum for improving soil conditions, subsidy of irrigation for sugar cane producers and for agricultural extension projects. In the case of cotton, the GOE shares the cost of controlling cotton leaf worms and the boll worm infesting the cotton crop.

8.16 The GOE policy on farm prices is that the farmer should receive a monetary return above cost to induce him to increase production. While Egyptian agriculturalists concede that the farmer does make a modest profit, they argue that for the major crops the price received by the farmer is no where near equitable.

D. Economic Return

8.17 In view of the complexity of Egypt's pricing, subsidy, rationing and exchange rate policies and practices, overall and in the textile industry specifically, we have not attempted to prepare an internal rate of return analysis based on a restructuring of prices, costs, subsidies, taxes, wages, etc., on a shadow price basis. Such an analysis is further complicated by the need to differentiate between the different yarns, fabrics and garments for cotton, wool and blends as well as intermediate products entering into the production stream. Such an IRR undertaking would take many months to prepare and the assumptions used would at best be rough estimates in many instances and thus subject to challenge. While it would be an interesting exercise to go through such calculations, its principal benefits would be a demonstration of the adjustments in Egyptian economic policies necessary to bring about a rational pricing structure. We doubt that in these circumstances an internal return analysis would be useful in assessing the merits of this particular project.

IX. SOCIAL ANALYSIS

A. General

9.01 Mehalla has always ensured the welfare of its employees and the benefits enjoyed by the employees are substantial--especially as they relate to workers in other parts of Egypt or other developing countries. Specifically, Mehalla has:

(a) Initially contributed to the expansion of the government hospitals in the city of Mehalla El-Kubra so that these hospitals could offer medical services to Mehalla's workers. In 1946, with the assistance of the Ministry of Health, the company built two hospitals for tuberculosis and epidemic fevers. And in 1947, it built and equipped a 257-bed hospital to provide complete medical treatment for employees and their families, at no cost to the employee;

(b) Financed the construction of a nursery school, two primary schools, two secondary schools and, in coordination with the Ministry of Education, an industrial preparatory school;

(c) Initiated the formation of a number of workers' cooperatives including housing, cottage industries (hand-made carpets, needle-work and upholstery items), poultry production and consumer goods (food products and household appliances). Each of the cooperatives is self-sustaining; and

(d) Provided a complete range of social services including a spacious, well-furnished recreation club, a lending library, playgrounds, theaters, and a sports complex.

9.02 Employees receive 25 percent of the surplus profit, of which 40 percent is distributed in cash and the remaining 60 percent is distributed indirectly through financing the benefit programs described above. The A.I.D. loan will have no immediate direct effect in improving the employees' social well-being beyond what is already more than satisfactory by any reasonable standards. However, as was demonstrated in the financial and economic analysis of this paper, the A.I.D. loan will impact directly on improving production and sales of Mehalla products. This, in turn, will increase Mehalla's profits and, if history is any judge, Mehalla's employees will continue to reap a share of that prosperity.

B. The Role of Women

9.03 Mehalla employs 2,900 women, which is eight percent of its total work force. In economic terms, women enjoy equality with the male work population, that is, if a woman is performing the same task as that

performed by a man, she will receive the exact same rate or amount of remuneration.

9.04 Complete equality for women in Egypt will more than likely take decades to realize. The same is true, to a much lesser extent, at Mehalla. In this semi-socialistic environment, women are treated with benign consideration. Women work only one shift (during daylight hours); without exception, they cannot work later than nine o'clock in the evening; they are released from work fifteen minutes before the end of the day shift to minimize the possible commingling of the sexes in the streets. Also, pregnant women are given special treatment. A pregnant woman is given one month's leave with pay to have her child. Thereafter, she is given one hour's leave with pay per day for the next two years. Once her child attains the age of two, she can enter her child in the nursery school, free of charge, where the child will be well cared for while the mother works.

9.05 The Chairman of Mehalla is a religious and enlightened individual. He points with pride, certainly with ample justification, at the humane treatment and respect that the female employees now receive. On the other hand, he feels that further major improvements in the role of women (e.g., working the night shift) will probably be a slow and long process. At any rate, Mehalla will certainly be in the vanguard in attempting to further improve the lot of women in a principally male-dominated Egypt.

X. ENVIRONMENTAL ANALYSIS

A. Textile Plants

10.01 This project does not introduce any environmental dangers. To the extent that this project is one of modernization and rehabilitation, the replacement equipment will decrease the noise level and the quantity of fibers and dust exhausted into the atmosphere because of the technological improvements made to these machines.

10.02 Equipment for expansion will generally be the most modern and its design will include the necessary safeguards to minimize disagreeable effects to the environment. For example, Mehalla's new spinning shed (Mill No. 7) will be equipped with air filters. The design of the new buildings provides for temperature control (i.e., air conditioning) for technical reasons--however, at the same time creating better working conditions. The design will also allow the noise level to be kept within reasonable bounds. Cards will be equipped with floor waste exhaust filters to minimize dust hazards.

10.03 The textile equipment financed by this project will not increase to any significant degree the amount of effluents currently being discharged. Fire-fighting equipment and technical teaching aids being financed under this project will enhance the safety to employees and the plant.

B. Power Plant

10.04 The new steam power plant facility will consist of a 20 MW addition to an existing 44 MW steam power plant. The original power plant was installed in 1948 and 1959 and has been in operation since that time. Actual increase in load for this project is estimated at about 20 percent, or from an existing load of 26 MW to a projected load of 31.5 MW. Since the new 20 MW units will be more efficient than the original units, actual increase in fuel consumption will be in the order of 10 to 12 percent.

10.05 In evaluating the impact on the environment, only the boiler stack discharge of flue gas to the atmosphere need be considered. Noise and water pollution are not a problem since the new units will operate at a lower decibel level, and forced draft cooling towers will be used. This is a closed cycle system and does not require an outside source of cooling water.

10.06 As with any steam power plant, exhaust gases discharged from the smokestack may cause unacceptable levels of pollution unless preventative measures are taken. This boiler will burn heavy fuel oil (Mazout) with an ash content of 0.3 percent, sulfur 3 to 5 percent, no nitrogen, and a vanadium content of 0.002 to 0.003 percent. The

major air pollutants as a result of combustion could consist of particulates and sulfur dioxide. Both of these pollutants can be effectively controlled by proper plant design. The design engineer will evaluate the environmental impact and air pollution will be controlled through the use of electrostatic precipitation, scrubbers, stack height and other environmental equipment as required.

XI. IMPLEMENTATION

A. Schedule

12.01 Given the complexity of this project, it is not possible at this time to provide a detailed implementation schedule. For example, certain procurement must be sequenced properly (the spinning plant must precede the weaving plant), and the lead time for some items is short, while that of others is long. Also, certain civil works construction must be completed prior to installation. We can, however, state that all procurement will be complete within three years and start-up of all operations will commence within $3\frac{1}{2}$ years.

12.02 A precise schedule will be prepared by a U.S. consultant and Mehalla, using CPM/PERT methodology and utilizing Mehalla's 32K, 1CL 1903 S computer. The U.S. consultant will be required to train a team of Mehalla's employees in CPM/PERT techniques and will make periodic supervisory visits during the life of the project. A notice inviting interested firms to submit their qualifications and their technical proposal for this work was published in the Commerce Business Daily on May 22, 1976 with a July 12, 1976 closing. See Annex R on PPT.

12.03 With the above qualifications, the overall project schedule will be as follows.

Loan Authorization approved	June 1976
Loan Agreement signed	June 1976
Preparation of IFB's	Jul./Dec. 1976
Consultant for Master Plan employed	August 1976
Project consultants employed	Sept. 1976
Conditions Precedent met	Sept. 1976
Project evaluation	June 1977
Project evaluation	June 1978
Final date for opening L/C	June 1979
All equipment installed	June 1979
All equipment test-operated	Sept. 1979
Consultant's final report	Oct. 1979
Final evaluation (end of project)	Oct. 1979
Terminal Disbursement Date	June 1980

B. Contracting Procedure/Procurement

12.04 Consulting services/technical assistance are planned to be divided into three contracts: (a) the Master Planning; (b) the Material Handling Study; and (c) all others. Mehalla will adhere to Handbook 11 (Country Contracting - Procurement of Professional Services) in selecting and contracting for all consultants.

12.05 The U.S. consultants will oversee Mehalla to insure that the procurement of equipment to be financed by A.I.D. is conducted in conformity with A.I.D. regulations. The responsibility, of course, will rest with Mehalla. A.I.D. has already provided some legal assistance to Mehalla in explaining A.I.D. requirements regarding the terms and conditions of IFB's and A.I.D. procurement regulations.

12.06 KSA has identified approximately \$20 million of textile machinery that is available from only one U.S. supplier. A.I.D. will review these procurement actions to ensure that competition is not available and, on the sole source procurement items, will ensure that prices are reasonable.

12.07 All equipment, materials and services will be of U.S. source and origin.

C. A.I.D. Financing Procedures

12.08 All procurement financed by this loan will be financed by Letters of Commitment (L/Comm), as will the cost of services performed by U.S. consultants. At the request of Mehalla, A.I.D. will either issue direct L/Comms for procurement and services to the U.S. firms or open L/Comms with a U.S. bank(s) selected by Mehalla. The procurement L/Comms will list the items eligible for loan financing, and appropriate Letters of Credit will be issued thereunder to eligible suppliers furnishing equipment and commodities.

D. Monitoring and Reporting

12.09 Upon signing of the Loan Agreement, USAID will issue an Implementation Letter which, among other things, will contain the necessary guidance and details on the types of reports (e.g., progress, shipping) and the reporting formats to be followed. Throughout the life of the project, the U.S. consultant will monitor the project to ensure satisfactory project progress. Any routine problems, together with corresponding suggested solutions, will be brought to the attention of USAID in the form of monthly reports from the consultants and Mehalla. Serious problems requiring immediate attention will be brought to the personal attention of the USAID Project Manager and his counterpart in Mehalla. Project progress will be determined by measuring actual results against master CPM/PERT network developed by the U.S. consultant and will be discussed at quarterly meetings between Mehalla, the U.S. consultant and USAID.

E. Evaluation

12.10 Mehalla will provide USAID with periodic reports on the delivery of inputs as specified in the logical framework. These reports will assess the progress achieved in the procurement, assembly and installation of textile machinery and related services.

12.11 One year after the execution of the Loan Agreement, a joint USAID Mehalla evaluation of the project will be conducted to examine whether:

- (a) the delivery of the project inputs is on schedule;
- (b) the assumptions made are still valid; and
- (c) the project outputs can be completed as originally scheduled.

12.12 Further, should items on the CPM, PERT network fail to be achieved within 90 days of the date indicated, USAID will internally evaluate the project to determine what corrective steps will be undertaken and if redesign is necessary.

12.13 One year after the first evaluation, a second evaluation will be conducted in the same manner and with the same scope as the initial evaluation. Upon project completion, USAID and Mehalla will conduct an "ex post facto" evaluation to determine that the end of project conditions have been established.

F. Eligibility Date

12.14 The eligibility date for financing any bona fide U.S. dollar project cost will be July 1, 1976, at which time the Loan Agreement will be signed by authorized representatives of the Arab Republic of Egypt, the Government of the United States of America, and Misr Spinning and Weaving Company (Mehalla).

G. Terminal Dates

12.15 Conditions Precedent. The terminal date for meeting Conditions Precedent to Disbursement will be 75 days from the date of Loan Agreement signing, the date by which funds will be needed to finance the services of the consultants who will prepare the Master Development Plan.

12.16 Letters of Commitment and Disbursement. The terminal date for opening letters of commitment will be June 30, 1979, the date by which all orders will be placed; and the terminal date for disbursements will be June 30, 1980, nine months after all equipment has been commercially operated, to allow for final payment after guarantee tests are complete.

XII. RECOMMENDATION, CONDITIONS AND COVENANTS

A. Recommendation

13.01 Subject to the conditions and covenants listed below, we recommend that A.I.D. authorize a loan to the Government of Egypt in the amount of \$96.0 million for rehabilitation and expansion of Mehalla's textile mills. We further recommend that the loan terms to the GOE be that the loan principal be repaid in 40 years, including a ten-year grace period, with interest at two percent (2%) per annum during the grace period and at three percent (3%) thereafter; and that the Government of Egypt relend the funds to Mehalla at an annual interest rate of ten percent (10%) with the principal to be repaid over a 15-year period, including a five-year grace period. Procurement of equipment and services shall be of United States source and origin.

B. Conditions Precedent to Disbursement

13.02 Prior to the first disbursement or to the issuance of the first Letter of Commitment under the loan, the GOE shall furnish to A.I.D. in form and substance satisfactory to A.I.D.:

(a) An opinion of the Egyptian Ministry of Justice or other legal counsel satisfactory to A.I.D. that the loan agreement and the corresponding sub-loan agreement have been duly authorized and ratified by, and executed on behalf of, the GOE and is a valid and legally binding obligation in accordance with its terms.

(b) An opinion of the Chief Legal Officer of the company, or other counsel acceptable to A.I.D., that the loan agreement and the corresponding sub-loan agreement have been duly authorized and/or ratified by and executed on behalf of the company, and that they constitute valid and legally binding obligations of the company in accordance with their terms.

(c) The names of the persons who will act as the representatives of the GOE and Mehalla, together with evidence of their authority and the specimen signature of each.

(d) Evidence that the loan proceeds will be made available to Mehalla at an interest rate of ten percent (10%) per annum with the principal to be repaid over a 15-year period including a five-year grace period.

(e) An executed contract for the services of a U.S. consulting firm for the preparation of a master plan for project execution.

The conditions (a) - (e) above shall be included in the loan authorization.

C. Covenants

13.03 The GOE and Mehalla will be required to covenant:

(a) Execution of the Project

(i) To carry out the project with due diligence and efficiency, and in conformity with sound engineering, construction, financial and administrative practices.

(ii) To cause the project to be carried out in conformance with all the plans, specifications, contracts, schedules, and other arrangements, and with all modifications therein approved by A.I.D. pursuant to this agreement.

(iii) To submit for A.I.D. approval prior to implementation, issuance, or execution, all plans, specifications, construction schedules, bid documents, documents concerning solicitation of proposals relating to eligible items, contracts, and all modifications to these documents.

(b) Funds and Other Resources to be Provided

(i) To make available on a timely basis any Egyptian currency and any foreign currency in addition to the loan, for the punctual and effective carrying out of construction, maintenance, repair and operation of the project.

(c) Operation and Maintenance

(i) To operate, maintain and repair the project in conformity with sound engineering, financial and administrative practices and in such manner as to insure the continuing and successful achievement of the purposes of the project.

(d) Management

(i) To provide qualified and experienced management for the project and to train such staff as may be appropriate for the maintenance and operation of the project.

(e) Continuing Consultation

(i) To cooperate fully with A.I.D. to assure that the purpose of the loan will be accomplished. To this end, the GOE, Mehalla and A.I.D. shall from time to time, at the request

of any party, exchange views through their representatives with regard to the progress of the project, the performance of the GOE and Mehalla of its obligations under the loan agreement, the performance of consultants, contractors and suppliers engaged on the project, and other matters relating to the project.

(f) Financial Planning

A.I.D. will seek during loan agreement negotiations the following undertakings from the GOE and Misr Spinning and Weaving. These undertakings are negotiable and thus are not being included in the loan authorization.

(i) Within one year from the date of this agreement, increase the Mehalla's paid-in capital from Egyptian pounds four million to Egyptian pounds forty million by capitalizing reserves.

(ii) Within one year from the date of this agreement, prepare a study of the pricing policy for textiles, taking into account A.I.D.'s observations on the subject as part of a continuous dialogue on the development of the textile sector.

(iii) To maintain a ratio of current assets to current liabilities of at least 1.5:1 (60:40) and not to incur or to have outstanding any long-term debt if the aggregate principal amount of Mehalla's outstanding long-term debt exceeds 150 percent of Mehalla's net worth.

(iv) Not to (a) declare any dividend or to make any other distribution with respect to its capital except out of accumulated adjusted net earnings; (b) purchase, redeem or otherwise acquire, directly or indirectly for any consideration, any such capital; or (c) otherwise reduce its capital or prepay any long-term debt, if, after giving effect to any such action the ratio of current assets to current liabilities would be less than 1.5:1 (60:40).

(v) Not to make expenditures, or commitments for expenditures, for capital additions in any one year which exceed Egyptian pounds three million (L.E. 3,000,000), except those expenditures and commitments required for carrying out the Project.

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ANNEX A

MINISTRY OF ECONOMY AND
ECONOMIC COOPERATION

Economic Cooperation Division
Office
of the Under Secretary

Mr. Wilbert R. Templeton
A.I.D. Representative
Embassy of the U.S.A.
CAIRO

Cairo, 29th April, 1976

Dear Sir,

May we refer to AID/CAIRO letter of 15/4/76 signed by Mr. R. N. Bakley and addressed to Mr. Hassan Abdel Fattah, Deputy-Chairman, General Organization for Industrialization, Cairo, for the project of rehabilitation and Modernization proposed for Misr Spinning & Weaving Company, Mehalla-Kubra, and which financing is contemplated to be made through AID funds from 1976. The relevant technical and economic studies were conducted by KSA (Management Consultants) as agreed upon with AID/Washington.

AID office in Cairo has communicated to Misr Spinning & Weaving Company, Mehalla Kubra, the content of a cable from AID/W stating that the consultants report has been finalized and recommending an investment of 96 million US Dollars including 2 million US dollars in technical assistance. The Egyptian side is therefore requested to submit an official loan application in compliance with the time-table agreed upon.

I hereby formally solicit the loan in question and am pleased to enclose herewith a brief report outlining the following:-

- I. General Description of the Company.
- II. General description of the proposed projects.
- III. Expected cost of the proposed projects.
- IV. General time table of projects.
- V. Estimated benefits.
Anticipated additional profits of return on investment.

-2-

I am looking forward to conclude the proposed project as scheduled and hope my request would be forwarded to the competent authorities as soon as possible.

Best regards,

Yours sincerely,

/s/ Gamal El-Nazer

Gamal El-Nazer
Under Secretary of State
for
Economic Cooperation

DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON

THE ADMINISTRATOR

LOAN AUTHORIZATION

Egypt: Misr Spinning and Weaving (Mehalla)

Provided from: FAA Section 532 ("Security Supporting Assistance Funds")

Pursuant to the authority vested in the Administrator, Agency for International Development ("A.I.D.") by the Foreign Assistance Act of 1961, as amended, ("the Act") and the delegations of authority issued thereunder, I hereby authorize the establishment of a loan ("the Loan") pursuant to Part 2 Chapter 4 Section 532, Security Supporting Assistance, of said Act to the Arab Republic of Egypt ("Borrower") of not to exceed Ninety-Six Million Dollars (\$96,000,000), such funds to be made available by subloan to Misr Spinning and Weaving Company ("the Company") a publicly owned Egyptian corporation, to assist in financing the foreign exchange costs of materials, equipment and services for the modernization, improvement and construction of company facilities in Mahalla, Egypt.

1. Terms of Repayment and Interest Rate. The Borrower shall repay the Loan to A.I.D. in United States Dollars within forty (40) years from the date of the first disbursement under the Loan, including a grace period of not to exceed ten (10) years from said date. The Borrower shall pay to A.I.D. interest in United States Dollars at the rate of two percent (2%) per annum during the grace period and three percent (3%) thereafter on the outstanding balance of the Loan and on any due and unpaid interest.
2. Source and Origin. Equipment, materials and services financed under the Loan shall have their source and origin in the United States.
3. Procurement Waiver. To the extent that equipment required for the project is determined to be available from only one eligible source, proprietary procurement is authorized from that source.

4. Conditions Precedent to Disbursement. Prior to the first disbursement, or to the opening of a letter of commitment under the Loan Agreement, the Borrower or the Company shall furnish, in form and substance satisfactory to A.I.D.:
- (a) A legal opinion of the Egyptian Minister of Justice, or other legal counsel satisfactory to A.I.D., that the Loan Agreement and the Sub-Loan Agreement have been duly authorized or ratified by, and executed on behalf of the Arab Republic of Egypt, and that they constitute valid and legally binding obligations thereof in accordance with their terms.
 - (b) A legal opinion of counsel for the Company satisfactory to A.I.D. that the Loan Agreement and the Sub-Loan Agreement have been duly authorized or ratified and executed on behalf of the Company, and that they constitute valid and legally binding obligations of the Company in accordance with their terms.
 - (c) The names of the persons who will act as the representatives of the Borrower and the Company for the Project, together with evidence of their authority and specimen signatures of each.
 - (d) Evidence that the Loan proceeds will be made available to Mehalla at an interest rate of ten percent (10%) per annum with the principal to be repaid over a fifteen (15) year period including a five (5) year grace period.
 - (e) An executed contract for the services of a U.S. consulting firm for the preparation of a master plan for project execution.
5. The Loan will be subject to such other terms and conditions as A.I.D. shall deem appropriate.

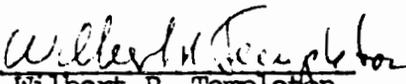
Daniel Parker

Date

June 9, 1976

EGYPT - MISR SPINNING AND WEAVING CO. PROJECT
CERTIFICATION PURSUANT TO SECTION 611 (e)
OF THE FOREIGN ASSISTANCE ACT OF 1961
AS AMENDED

I, Wilbert R. Templeton, the Principal Officer of the Agency for International Development, Egypt, having taken into account, among other things, the maintenance and utilization of projects in Egypt previously financed by the United States, do hereby certify that in my judgment Egypt has both the financial capability and human resources capability to effectively maintain and utilize the capital assistance to be provided for the rehabilitation and expansion of the Misr Spinning and Weaving Co.'s plant at Mehalla El-Kubra.



Wilbert R. Templeton
AID Representative

DATE: June 9, 1976

CHECKLIST OF STATUTORY CRITERIA

The following abbreviations are used:

FAA - Foreign Assistance Act of 1961, as amended.

FAA, 1973 - Foreign Assistance Act of 1973.

App. - Foreign Assistance and Related Programs Appropriation Act, 1974.

MMA - Merchant Marine Act of 1936, as amended.

COUNTRY PERFORMANCE

Treatment of U.S. Citizens and firms.

1. FAA § 620(c). If assistance is to a government, is the government liable as debtor or unconditional guarantor on any debt to a U.S. citizen for goods or services furnished or ordered where (a) a such citizen has exhausted available legal remedies and (b) debt is not denied or contested by such government?
None of the known claims of any U.S. citizen asserted against the GOE meets the criteria of this section. In any event, Egypt has agreed to participate in a Joint Commission to consider debts of Egypt to U.S. citizens and will seek to negotiate settlement of such debts.
2. FAA § 620(e)(1). If assistance is to a government, has it (including government agencies or subdivisions) taken any action which has the effect or nationalizing, expropriating, or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking steps to discharge its obligations toward such citizens or entities?
The Secretary of State has determined that Egypt's agreement to establish a Joint Commission to discuss compensation of American nationals constitutes taking appropriate steps for the purpose of this section.
3. FAA § 620(o). Fisherman's Protective Act § 5. If country has seized, or imposed any penalty or sanction against, any U.S. fishing vessel on account of its fishing activities in international waters,
No instance of any such seizure or imposition of such penalty or sanction is now known.

- a. Has any deduction required by Fishermen's Protective Act been made?
- b. Has complete denial of assistance been considered by A.I.D. Administrator?

- a. Not Applicable.
- b. Not Applicable.

Relations with U.S. Government and Other Nations

4. FAA § 620(a). Does recipient country furnish assistance to Cuba or fail to take appropriate steps to prevent ships or aircraft under its flag from carrying cargoes to or from Cuba.

No instance of any such present course of conduct is known.

5. FAA § 620(b). If assistance is to a government, has the Secretary of State determined that it is not controlled by the international Communist movement?

The Secretary of State has determined that Egypt is not controlled by the international communist movement.

6. FAA § 620(f). Is recipient country a Communist country?

No.

7. FAA § 620(i). Is recipient country in any way involved in (a) subversion of, or military aggression against, the United States or any country receiving U.S. assistance, or (b) the planning of such subversion or aggression?

The President has not determined that the recipient country is involved in such conduct.

8. FAA § 620(j). Has the country permitted, or failed to take adequate measures to prevent, the damage or destruction, by mob action, of U.S. property?

The President, in accordance with the requirement of section 620(j) has considered terminating assistance to Egypt and has determined that no sufficient reason exists not to furnish the assistance.

9. FAA § 620(l). If the country has failed to institute the investment guaranty program for the specific risks of expropriation, in convertibility or confiscation, has the A.I.D. administration within the past year considered denying assistance to such government for this reason?

Egypt has reactivated its Investment Guaranty Agreement with the U.S.

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10. FAA § 800(n). Does recipient country furnish goods to North Viet-Nam or permit ships or aircraft under its flag to carry cargoes to or from North Viet-Nam?
11. FAA § 620(q). Is the government of the recipient country in default on interest or principal of any A.I.D. loan to the country?
12. FAA § 620(t). Has the country severed diplomatic relations with the United States? If so, have they been resumed and have new bilateral assistance agreements been negotiated and entered into since such resumption?
13. FAA § 620(u). What is the payment status of the country's U.N. obligations? If the country is in arrears, were such arrearages taken into account by the A.I.D. Administrator in determining the current A.I.D. Operational Year Budget?
14. FAA § 491. Has the government of recipient country failed to take adequate steps to prevent narcotic drugs and other controlled substances (as defined by the Comprehensive Drug Abuse Prevention and Control Act of 1970) produced or processed, in whole or in part, in such country, or transported through such country, from being sold illegally within the jurisdiction of such country to U.S. Government personnel or their dependents, or from entering the U.S. unlawfully?

The recipient country is not known to be engaged in such a course of conduct.

No such default exists. Reconciliation is taking place between the books of AID and the Government of Egypt in regard to several very minor amounts.

Egypt severed diplomatic relations with the U.S. in 1967. Diplomatic relations have now been resumed. New bilateral assistance agreements have been entered into since such resumption. Egypt has paid all of its outstanding U.N. obligations.

No.

15. FAA § 659. If (a) military base is located in recipient country, and was constructed or is being maintained or operated with funds furnished by U.S., and (b) U.S. personnel carry out military operations from such base, has the President determined that the government of recipient country has authorized regular access to U.S. correspondents to such base?

There is no military base in Egypt within the definition of this section.

Military Expenditures

16. FAA § 620(s). What percentage of country budget is for military expenditures? How much of foreign exchange resources spent on military equipment? How much spent for the purchase of sophisticated weapons systems? (Consideration of these points is to be coordinated with the Bureau for Program and Policy Coordination, Regional Coordinators and Military Assistance Staff (PPC/RC).)

The President has taken into account each of the listed considerations as to current military expenditures by the GAO and has determined that these do not inhibit economic aid to Egypt but rather that the projected program contributes to the underlying intent of the FAA which seeks to reduce arms costs and to stimulate economic development.

CONDITIONS OF THE LOAN

General Soundness

17. FAA § 611(a)(1). Prior to signing of loan will there be (a) engineering, financial, and other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the United States of the assistance?
18. FAA § 611(a)(2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of the purpose of the loan.

The necessary plans and cost estimates are completed.

No further legislative action is required to implement the program than confirmation action pertaining to the signed loan agreement.

19. FAA § 601(e). If loan is for Capital Assistance, and all U.S. assistance to project now exceeds \$1 million, has the Director certified the country's capability effectively to maintain and utilize the project?

The A.I.D. Representative in Egypt has so certified.

Loan's Relationship to Achievement of Country and Regional Goals

20. FAA § 601(a). Information and conclusions whether loan will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture, and commerce; and (f) strengthen free labor unions.

The Grant will increase the flow of international trade and improve technical efficiency of industry, agriculture and commerce.

21. FAA § 619. If assistance is for newly independent country; is it furnished through multilateral organizations or plans to the maximum extent appropriate?

Egypt is not a newly independent country.

Loan's Effect on U.S. and A.I.D. Program

22. FAA § 601(b). Information and conclusion on how the loan will encourage U.S. private trade and investment abroad and how it will encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).

The great majority of funds expended are for goods and services from private U.S. concerns.

23. FAA § 601(d). If a capital project, air engineering and professional services of U.S. firms and their affiliates used to the maximum extent consistent with the national interest?

Yes.

24. FAA § 602. Information and conclusion whether U.S. small business will participate equitably in the furnishing of goods and services financed by the loan.

Procurement of goods and services will be pursuant to established AID regulations.

25. FAA § 620(h). Will the loan promote or assist the foreign aid projects or activities of the Communist-Bloc countries?

No.

26. FAA § 621. If Technical Assistance is financed by the loan, information and conclusion whether such assistance will be furnished to the fullest extent practicable as goods and professional and other services from private enterprise on a contract basis. If the facilities of other Federal agencies will be utilized, information and conclusion on whether they are particularly suitable, are not competitive with private enterprise, and can be made available without undue interference with domestic programs.

Technical assistance will be to the greatest practical extent from private enterprise on a contract basis.

Loan Compliance with Specific Requirements

27. FAA § 660. Will loan be used to finance police training or related program in recipient country?

No.

28. FAA § 114. Will loan be used to pay for performance of abortions or to motivate or coerce persons to practice abortions? No.
29. FAA § 604(a). Will all commodity procurement financed under the loan be from the United States except as otherwise determined by the President? Yes.
30. FAA § 604(b). What provision is made to prevent financing commodity procurement in bulk at prices higher than adjusted U.S. market price? Commodity procurement in bulk is not to be financed.
31. FAA § 604(d). If the cooperating country discriminates against U.S. marine insurance companies, will the loan agreement require that marine insurance be placed in the United States on commodities financed by the loan? Yes.
32. FAA § 604(e). If offshore procurement of agricultural commodity or product is to be financed, is there provision against such procurement when the domestic price of such commodity is less than parity? There will be no such procurement.
33. FAA § 608(a). Information on measures to be taken to utilize U.S. Government excess personal property in lieu of the procurement of new items. Consideration will be given to the use of excess property when practical.
34. FAA § 611(b), App. § 101. If loan finances water or water-related land resource construction project or program, is there a benefit-cost computation made, insofar as practicable, in accordance with the procedures set forth in the Memorandum of the President dated May 15, 1962? No water-related land resource is to be financed.

35. FAA § 611(c). If contracts for construction are to be financed, what provision will be made that they be let on a competitive basis to maximum extent practicable? **The Grant Agreement will so provide.**
36. FAA § 612(b); § 636(h). Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the United States are utilized to meet the cost of contractual and other services. **The agreement will so provide.**
37. Section 30 and 31 of PL 93-189 (FAA of 1973). Will any part of the loan be used to finance directly or indirectly military or paramilitary operations by the U.S. or by foreign forces in or over Laos, Cambodia, North Vietnam, South Vietnam, or Thailand? **No.**
38. Section 37 of PL 93-189 (FAA of 1973); App. § III. Will any part of this loan be used to aid or assist generally or in the reconstruction of North Vietnam? **No.**
39. FAA § 612(d). Does the United States own excess foreign currency and, if so, what arrangements have been made for its release? **Endeavor is being made for negotiation of an agreement for the release of U.S.-owned non-P.L. 480 pounds.**
40. FAA § 620(g). What provision is there against use of subject assistance to compensate owners for expropriated or nationalized property? **The agreement will not permit such use.**
41. FAA § 620(k). If construction of productive enterprise, will aggregate value of assistance to be furnished by the United States exceed \$100 million? **No.**

42. FAA § 636(1). Will any loan funds be used to finance purchase, long-term lease, or exchange of motor vehicle manufactured outside the United States, or any guaranty of such a transaction? No.
43. App. § 103. Will any loan funds be used to pay pensions, etc., for military personnel? No.
44. App. § 105. If loan is for capital project, is there provision for A.I.D. approval of all contractors and contract terms? Yes.
45. App. § 107. Will any loan funds be used to pay UN assessments? No.
46. App. § 108. Compliance with regulations on employment of U.S. and local personnel. (A.I.D. Regulation 7). Yes.
47. App. § 110. Will any of loan funds be used to carry out provisions of FAA § 209(d)? No.
48. App. § 112. Will any of the funds appropriated or local currencies generated as a result of AID assistance be used for support of police or prison construction and administration in South Vietnam or for support of police training of South Vietnamese? No.
49. App. § 113. Describe how the Committee on Appropriations of the Senate and House have been or will be notified concerning the activity, program, project, country, or other operation to be financed by the Loan.

The committees have been notified 15 days in advance of obligation.

50. App. § 601. Will any loan funds be used for publicity or propoganda purposes within the United States not authorized by Congress? No.
51. App. § 604. Will any of the funds appropriated for this project be used to furnish petroleum fuels produced in the continental United States to Southeast Asia for use by non-U.S. nationals? No.
52. MMA § 901.b; FAA § 640C.
(a) Compliance with requirement that at least 50 per centum of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed with funds made available under this loan shall be transported on privately owned U.S.-flag commercial vessels to the extent that such vessels are available at fair and reasonable rates. Yes.

Project Title & Number: Mehalla Textile Plant

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes:</p> <p>Provide necessary resource requirements in equipment, materials and manpower for establishing a dependable flow of high quality cotton and cotton blended products for export to generate GOE foreign exchange.</p>	<p>Measures of Goal Achievement:</p> <ul style="list-style-type: none"> - increased Spinning and Weaving Textile Industry sector GDP. - increased net export sales. 	<ol style="list-style-type: none"> 1. Mehalla Annual Reports 2. Cotton Textile Consolidation Fund records 3. Ministry of Economy Balance of Payments records. 	<p>Assumptions for achieving goal targets:</p> <ol style="list-style-type: none"> 1. No GOE policy instituted which is a disincentive to export. 2. No major world recession which may affect the market for textile products.
<p>Project Purpose:</p> <ul style="list-style-type: none"> - rehabilitate and expand the Mehalla Spinning and Weaving Textile Plant. - increase exports for foreign exchange. - supply local market with competitively priced textile products - protect employment of thousands of persons 	<p>Conditions that will indicate purpose has been achieved: End of project status.</p> <ul style="list-style-type: none"> - an annual additional operating profit (before taxes, interest and subsidies but including depreciation) of approximately \$18,000,000. - an increase in sales volume of approximately \$50,000,000 by 1980 over projected 1976 pre project volume. - utilization of existing labor force to staff new and expanded manufacturing operations. 	<p>Mehalla semi-annual and annual production reports</p>	<p>Assumptions for achieving purpose:</p> <ol style="list-style-type: none"> 1. Textile and related equipment will be operated and maintained satisfactorily by Mehalla. 2. Supply of raw materials (e.g., raw cottons, dyes, etc.) is uninterrupted. 3. Mehalla continues to possess and attract capable, experienced managers. 4. Future increased costs caused by inflation will be passed on to customers thereby maintaining profit margin.
<p>Outputs</p> <ul style="list-style-type: none"> - establishment of a more efficiently operating textile plant. - attainment of good financial return to insure future viability and profitability of the Mehalla company. 	<p>Magnitude of Outputs: *</p> <ul style="list-style-type: none"> - increased labor productivity - increased machine efficiencies - increased ability to produce standard yarns - increased ability to produce better fabric grades. - increased ability to produce ready made garments for export. - increased efficiency of woolen and worsted operations - increased capacity to produce quality yarns for export 	<p>Final report of U.S. Consultant and USAID field visit</p>	<p>Assumptions for achieving outputs:</p> <ul style="list-style-type: none"> - ability to improve product quality especially for exports. - attainment of labor productivity in order to staff expanded operations with current work force - continuation of strong, effective leadership - ability to generate profits and cash flow needed to pay back borrowings required for large scale improvement program.
<p>Inputs:</p> <ol style="list-style-type: none"> 1. Textile and related equipment and parts (A.I.D.) 2. Consulting services of a U.S. firm (A.I.D.) 3. Local services for transporting, assembling and installing equipment (Mehalla) 4. Testing of equipment (Mehalla) 	<p>Implementation Target (Type and Quantity)</p> <ol style="list-style-type: none"> 1. Equipment and parts on site by September 1978. 2. U.S. Consulting firm in country by October 1976. 3. Equipment and parts on site and installation completed by February 1979. 4. Final report of U.S. Consultant. <p>*Precise magnitude will be set by survey recommended under Technical Assistance portion of PP.</p>	<ol style="list-style-type: none"> 1. Monthly reports of U.S. firm and USAID spot visits. 2. Mehalla notifications to USAID. 3. U.S. Consultants reports and USAID field visits. 4. Final report of U.S. Consultant. 	<p>Assumptions for providing inputs:</p> <ol style="list-style-type: none"> 1. Equipment and parts available and no undue delays will be encountered in procurement and shipment. 2. No delays encountered in contracting with U.S. Consulting firm. 3. Mehalla provides financing of local currency costs in a timely manner. 4. No major defects in equipment and parts procured.

PUBLIC SECTOR TEXTILE COMPANIES

ANNEX V

Page 1 of 4

- 1974 -

MANAGEMENT AND WORK FORCE BY COMPANY AND FUNCTION

(This schedule includes all personnel employed within the public sector of the industry)

COMPANY	PRODUCTION	MAINTEN. & SERV.	MKTG	ADMINIS-TRATIVE	SOCIAL/ OTHER	TOTAL
1. MEHALLA EL KUBRA	22.552	4.810	627	1.696	5.603	35.268
2. ESCO	13.032	4.356	383	2.501	2.996	23.258
3. MISR - HELWAN	10.552	3.346	438	1.300	1.903	17.239
4. NATIONAL	8.747	3.947	325	1.002	1.962	15.983
5. EL SIOUF	7.002	2.668	94	719	1.069	11.552
6. EL NASR CO. "CHOURBAGUI"	3.750	887	176	421	522	5.233
7. ORIENT LINEN & COTTON	5.058	836	124	597	757	7.352
8. KAFR EL BAWAR	11.157	4.353	234	1.570	2.361	20.085
9. EL NASR - DAMIETTA	3.554	851	303	706	1.374	7.071
10. DAKAHLIA	7.29	705	127	782	1.959	7.102
11. UPPER EGYPT	7.38	368	48	214	571	2.889
12. CENTRAL EGYPT	5.52	1.108	249	697	2.402	10.478
13. MISR SHEBSIN EL KOM	4.024	2.272	141	922	2.366	9.725
14. ARAB & UNITED SP. & WEAVING	5.816	1.323	198	992	2.039	10.168
15. ALEXANDRIA SP. & WEAVING	4.090	1.155	127	550	977	6.899
16. THE DELTA SP. & WEAVING CO.	2.008	749	66	547	672	4.132
17. EL BEIDA	3.618	1.179	309	681	881	6.665
18. EL NASR DYEING & FINISHING	4.738	1.418	140	633	915	7.294
19. CAIRO SP. WEAVING & DYEING	4.991	1.829	233	768	917	8.738
20. MODERN TEXTILES	1.703	288	35	220	168	1.814
21. 'STIA'	5.983	1.671	317	882	1.048	9.881
22. WOOLTEX	6.274	1.293	129	834	870	9.400
23. EL NASR - PORT SAID	1.702	373	73	446	169	2.663
24. EL NASR CLOTHING	6.774	1.031	510	837	664	9.456
25. MISR KAYON	2.425	2.394	121	791	840	6.661
26. GENERAL JUTE PRODUCTS	3.752	1.868	8	358	808	6.324
27. ARAB CARPET UPPOLSTERY	1.559	252	84	271	410	2.076
T O T A L	153.110	47.300	5.606	21.937	37.396	265.819

Source : EGOT

BD

TEXTILE INDUSTRY - PRODUCTION AND SALES STATISTICS^{1/}

	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1975</u> ^{2/}
Number of Spindles ^{3/}	1,501 25.5	1,531 25.5	1,615 25.8	1,697 28.7	1,763 29.1	1,840 29.2	2,120 33.6
Number of Looms ^{3/}							
Production of Cotton Products:							
- Cotton Yarn ^{4/}	157.5	157.4	162.4	164.5	171.0	179.2	186.0
- Cotton Fabrics ^{4/}	92.7	102.3	106.1	110.3	113.6	115.9	141.0
- Average Count ^{5/}	24.2	24.5	24.7	25.1	25.3	26.2	n.a.
- Production per Spindle ^{6/}	105.0	103.0	101.0	97.0	97.0	97.0	87.7
- Production per Loom ^{7/}	4.5	4.0	4.1	3.8	3.9	4.0	4.2
Consumption of Cotton Products:							
- Cotton Yarn: % Local	76	75	72	73	76	74	79
% Export	24	25	28	27	24	26	21
Cotton Fabrics: % Local	81	81	79	80	81	82	90 ^{8/}
% Export	19	19	21	20	19	18	10

- 1/ Yearbook of the Federation of Egyptian Industries, 1973
 2/ Partially estimated
 3/ Thousands
 4/ Thousand metric tons
 5/ Cotton Count
 6/ Kg per spindle per annum
 7/ Metric tons per loom per annum
 8/ Including imports

HISTORICAL BALANCE SHEETS
EGYPTIAN GENERAL ORGANIZATION FOR SPINNING AND WEAVING
(in million LE)

	1968 ^{1/}	1969	1970	1971	1972	1973	1974
<u>CURRENT ASSETS:</u>							
Cash	13	16	18	15	15	17	26
Accounts Receivable	61	67	67	80	66	64	80
Raw Material Inventory	38	39	47	47	47	46	55
Finished Goods Inventory	50	36	34	31	31	32	35
Supplies Inventory	14	25	27	29	32	35	38
Work in Process Inventory	28	28	27	27	31	30	54
Total Current Assets	204	211	220	229	222	224	288
<u>FIXED ASSETS:</u>							
Machinery and Equipment	111	114	125	131	145	156	165
Other Fixed Assets	72	74	78	77	91	100	104
Gross Fixed Assets	183	188	203	213	236	256	269
Accumulated Depreciation	87	96	105	116	131	142	154
Construction in Progress	11	12	12	22	35	45	62
OTHER INVESTMENTS:	12	19	24	30	32	43	42
Total Assets	323	334	354	378	401	426	514
<u>CURRENT LIABILITIES:</u>							
Bank Overdraft	29	28	29	27	26	32	40
Accounts Payable	57	58	60	64	60	56	87
Taxes Payable and Accrued Expense	22	32	31	34	31	32	38
Total Current Liabilities	115	118	120	125	117	120	165
<u>LONG-TERM LIABILITIES:</u>							
Long-Term Debt	38	39	47	55	64	71	79
<u>EQUITY:</u>							
Capital	44	44	45	47	47	50	50
Retained Earnings (Reserves)	126	133	162	151	173	185	220
Total Equity	170	177	187	198	220	235	270
Total Liabilities	323	334	354	378	401	426	514

^{1/} Years 1968 to 1970 are ending June 30.
All other years are as of December 31.

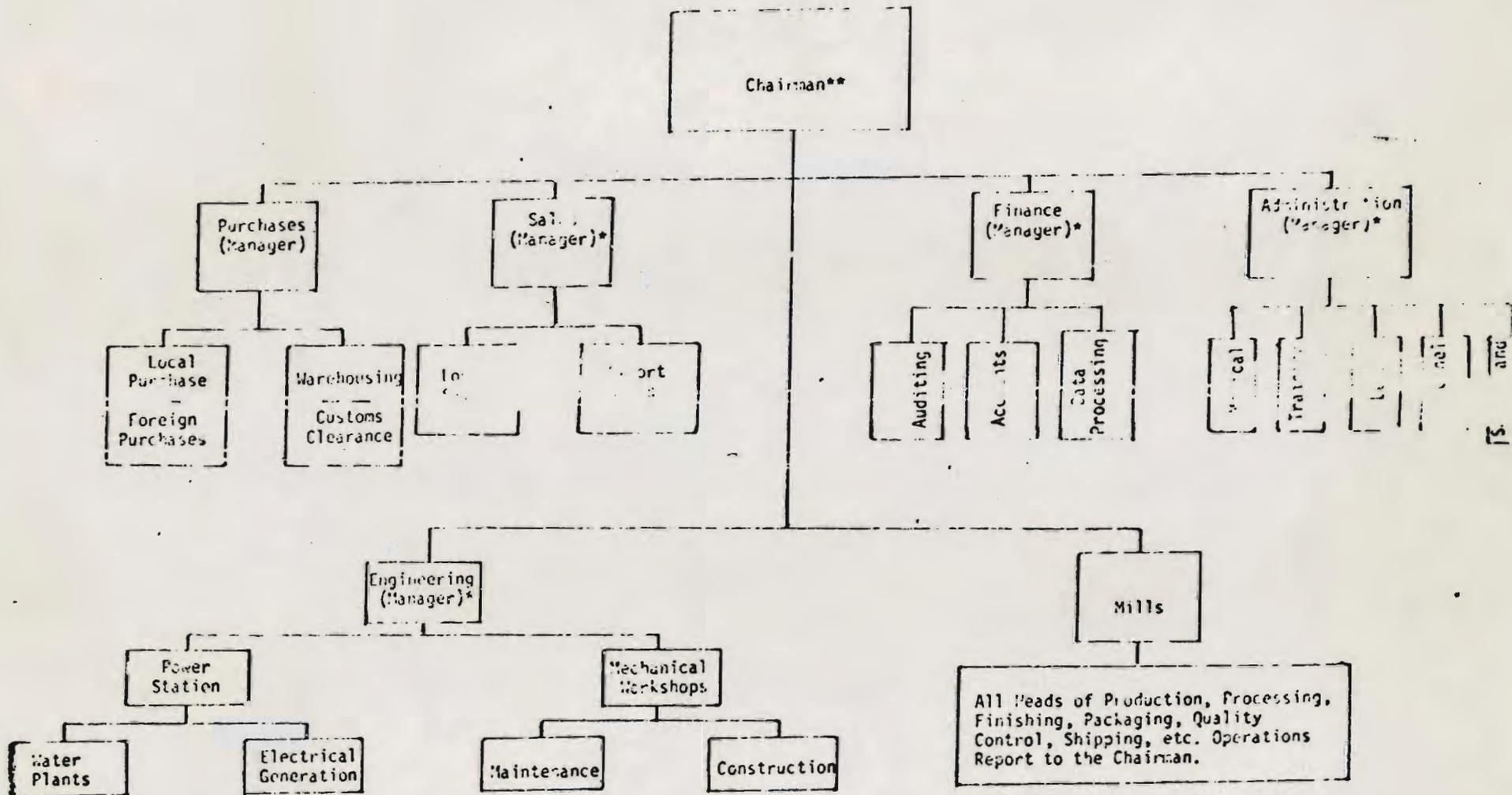
HISTORICAL INCOME STATEMENTS

EGYPTIAN GENERAL ORGANIZATION FOR SPINNING AND WEAVING
(in million LE)

	^{1/} 1967/68	1968/69	1969/70	1970/71	1972	1973	1974
Total Value of Production	<u>243</u>	<u>247</u>	<u>258</u>	<u>276</u>	<u>308</u>	<u>324</u>	<u>401</u>
Wages and Salaries	47	53	57	60	74	79	87
Materials & Commodity Inputs	125	123	127	135	148	153	163
Services & Non-Commodity Inputs	15	15	16	17	19	20	22
Depreciation	11	11	11	12	13	14	16
Indirect Taxes	<u>13</u>	<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>
Cost of Goods Produced	<u>211</u>	<u>215</u>	<u>225</u>	<u>239</u>	<u>270</u>	<u>283</u>	<u>306</u>
Operating Profit	32	32	33	37	38	41	45
Other Expenses	<u>8</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>5</u>	<u>3</u>	<u>27</u>
Profit Before Interest and Tax	24	26	28	33	33	38	68
Interest	<u>2</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>4</u>	<u>4</u>	<u>4</u>
Profit Before Tax	22	23	25	30	29	34	64
Tax	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>6</u>	<u>20</u>
Profit After Tax	<u>18</u>	<u>19</u>	<u>21</u>	<u>26</u>	<u>25</u>	<u>28</u>	<u>44</u>
Ratios							
Operating Profit as % of Sales	13.2	13.0	12.8	13.4	12.3	12.7	23.7
Profit Before Tax as % of Sales	9.1	10.5	9.7	10.9	9.4	10.5	16.0
Profit After Tax as % of Sales	7.4	7.7	8.1	9.4	8.1	8.6	11.0

^{1/} For years 1967/68 - 1970/71 fiscal year ended June 30.
Thereafter years ended December 31.

Mehalla
Table of Organization



Members of Mehalla's Board of Directors
Chairman of Mehalla's Board of Directors

MIRALLA
LIST OF MANAGERIAL OCCUPANTS

MARCH 1976

N A M E	AGE	YEARS OF EXPERIENCE	OCCUPATION	Education
<u>TOP MANAGEMENT:</u>				
- Dr. MOHAMED EL SAYED EL-GHORBARY	48	27	CHAIRMAN.	- B.Sc. Chemical Engineering Cairo University - 1943 - Ph.d. Textile Chemistry & Colour Chemistry Paris University - 1955.
<hr/>				
1) MOHAMED ABDEL MOHAMED EL HANAN	57	32	Finance General Manager & Director.	B.Com. - 1943.
2) MOHAMED EL HANAN	49	28	Sales General Manager & Director.	B.Com. - 1943.
3) MOUSLEH EL HANAN EL SHARAF	49	26	Engineering General Manager & "	B.Sc. Eng. - 1948.
4) SAAD EL HANAN MOHAMED AB. S.	56	35	Administrative General Manager & "	High Com. Studies - 1949.
<hr/>				
5) ABDEL HALIM ABDEL HAMID EL RIFAI	57	37	Mills General Manager.	Dipl. of Art & Industries - 1937.
6) FATMAHAI MOHAMED EL NOMANY	53	30	Purchasing General Manager.	B.Com. 1945.
7) MOHAMED MOHAMED EL MAHQI	59	39	Purchasing Manager.	Dipl. of Commerce - 1936.
8) MOHAMED HANZI RASLAN	44	20	Stores & Customs Clearance Manager.	B.Com. - 1954.
9) EL-MOGGAZ HILAH ABDEL MAKSOUH	39	18	Local Sales Manager.	B.Com. - 1956.
10) FAROUK ABDEL ALY HANAMA	40	18	Export Sales Manager.	B.Com. - 1956.
11) ISRAHEM FATRY EL FOULY	59	36	Cotton Affairs Manager.	Secondary Studies (Science) - 1937.
12) MOUSTAFA ALY EL-MHOGA	57	38	Statistics & Costing Manager.	High Com. Studies - 1948.

N A M E	AGE	YEARS OF EXPERIENCE	OCCUPATION	EDUCATION
13) MOHAMED ALY NEMEL	46	23	Auditing Manager.	- B.Com. - 1951. - M.Sc. Business Administration from U.S.A. - 1959.
14) AHMED FOUAD ISMAIL	54	37	Manager of Data Processing and Mages.	B.Com. - 1958.
15) ISMAIL SARRY SHOUYEB	54	27	Pharmacy Manager.	Pharmacist - 1947.
16) Dr. OMAR HUSSEIN EL BASSIGUNI	53	26	Medical Treatment Manager.	- B.Sc. Medicine & Surgery - 1943. - Dipl. Spec. Surgery - 1948. - F.R.C.S. - London - 1958.
17) AHMED AHMAD EL HAGAR	42	18	Vocational Training Manager.	B.Sc. - 1956.
18) HUSSEIN YOUSOUF AHMED AZM	41	37	Legislation General Manager.	Law Degree (B.A.) - 1946.
19) AHMED HASSAN YOUSSEF	52	17	Security & Discipline Manager.	Bachelor of Military Studies - 1946.
20) EMER HAD HANNA	56	33	Mechanical Workshop Gen. Manager	B.Sc. Eng. - 1942.
21) ISMAIL AHMED ISHALEM	44	17	Power Station General Manager.	B.Sc. Eng. - 1952.
22) MOHAMED TALAAT ABOU ARAB	46	21	Water Plant Manager.	B.Sc. - 1952.
23) EL SAID ATIA MOUTAFA	55	34	Electrical Manager.	Dipl. of Art & Industries - 1940.
24) SALAH MOSE MOHAMED	47	22	Maintenance Manager.	B.Sc. Eng. - 1952.
25) FAWZY HASSAN ISRAHEM RIZE	43	18	Building Dept. Manager.	B.Sc. Eng. - 1957.

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N A M E	YEARS OF		OCCUPATION	EDUCATION
	AGE	EXPERIENCE		
26) SHAKER HAMED ABDEL MALAK	58	40	Industrial Control Manager.	- Diploma of Art & Industries - 1935 - Dipl. Cotton Spinning, London - 1936
27) ABDEL MOHEM EL YAMANI	56	40	Wool Mill Manager for Production Design & Experiments.	Dipl. of Secondary Trade - 1937.
28) RIZK KHALIL EL DEBGOUI	59	37	Wool Manager for Spinning, Weaving & Maintenance.	Diploma of Art & Industries - 1937.
29) ABDEL KHALIL EL ARAD	43	21	Wool Finishing Manager.	- B.Sc. Industrial Chemistry - 1953. - Dipl. of Dyeing - London - 1960. - Fellow of Guild of Dyers, London - 1960.
30) ABDEL MOHEM BIPARS	45	22	Finishing Maintenance Manager.	- B.Sc. Eng. - 1952. - Dipl. in Spinning, Weaving & Finishing of Woolen Goods Manchester - 1957.
31) MOHAMED AHMED EL ZENY	41	20	Finishing Production Manager.	B.Sc. Eng. Chemistry - 1954
32) MOHAMED AHMED OUSHA	54	27	Confection Manager.	- Diploma of Art - 1941. - Dipl. High Institute of Art Professors - 1953.
33) SADEK HUSSEIN EL WAHIL	45	19	Weaving General Manager.	B.Sc. Eng. - 1955.
34) MOHAMED RASHAD ABDEL RAZEK	57	36	Weaving Maintenance Manager.	Diploma of Secondary Trade - 1937.
35) ABDEL FATTAH ABOU CFF	42	18	Weaving Manager.	- B.Sc. Eng. - 1957 - Weaving Dipl., London - 1960.

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N A M E	AGE	YEARS OF EXPERIENCE	OCCUPATION	EDUCATION
36) AHMED ALY EL DAKHS	39	18	Weaving Preparation Manager	- B.Sc.Eng. - 1957. - Weaving Dipl., London - 1960.
37) FARAG ZAYI BOGHODDI SOLEMAN	60	39	Spinning General Manager.	Dipl. of Art & Industries - 1935.
38) AHMED YASSIN MAHMOUD EL AFIFI	43	18	Spinning Manager.	- P.Sc.Eng - 1956. - M.Sc.Spining - U.S.A. - 1959.
39) AHMED SAMY HEMMAL	42	17	Spinning Maintenance Manager.	- B.Sc.Eng. 1957 - Weaving Diploma - London - 1960.
40) AHMED HANID HANAY IBRANDY	50	23	Processing General Manager.	- B.Sc. Ind. Chemistry - 1952. - Dipl. of Textiles - London - 1959.
41) HAYAL EL DIN ISMAYEL	53	31	Public Relations Manager.	B.Sc. 1950.

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LABOR COMPLEMENT
NEW YARN MILL PROJECT
(MEDIUM COUNTS - 54,000 SPINDLES)

Process	Staffing Required for Three Shifts At Levels of Labor Productivity		
	Present	Target	Ideal
<i>Direct and Indirect Variable Labor</i>			
Opening	32	15	} 20
Carding	17	10	
Combing	59	36	20
Drawing	64	36	15
Roving	66	28	16
Spinning	262	181	163
Winding	159	107	100
Subtotal	659	413	334
<i>Indirect Fixed Labor</i>			
Opening	20	8	} 15
Carding	27	13	
Combing	21	10	7
Drawing	16	6	4
Roving	12	8	6
Spinning	30	14	12
Winding	35	12	10
Clerks	3	3	3
Utility Workers	6	2	2
General	17	10	10
Subtotal	187	86	69
Grand Total	846	499	403
Overall Labor Productivity			
Kg./Man-Hour	2.51	4.25	5.26

MEHALLA TRAINING DEPARTMENT 1975

Established in 1956 in our mills to serve as a specialised training organ.

(A) OBJECTIVES:

- (1) Prevocational training for beginners.
- (2) Training for promotion, upgrading and updating for adults.
- (3) Supervisory training and managerial development courses.
- (4) Rehabilitation of handicapped workers.

(B) ACTIVITIES OF THE TRAINING DEPT.:

SERIAL	A C T I V I T Y	No. of trainees	T O T A L
1	Prevocational training for beginners	600	600
2	Vocational training (spinning, weaving, finishing, ready-made garments, mechanical and electrical workshops and quality control).		
	P R O D U C T I O N	500	1000
	M A I N T E N A N C E	500	
3	Supervisory and managerial training.	300	300
4	Adult education and literacy.	500	500
5	Productivity seminars.	400	400
6	Cultural and induction courses.	600	600
7	Out-of-plant activities (missions, programmes, visits)	600	600
x	Total of our own trainees. Coverage: about 11%.	4000	4000
8	Training services for others (educational and production centres).	1200	1200
x	Total of the training capacity- (includes management)	5200	5200

(C) Staff: 104 full-timers + 105 part-timers.

(D) Training Centres:

Spinning, weaving (cotton, wool and blends), ready-made garments, mechanics and electricity, management training, adult education and literacy, industrial safety and civil defense.

All our centres are equipped with the necessary machinery, pilots and audio-visual aids.

We are planning to modernise these centres by introducing new methods and aids (closed circuit T.V., visual cassettes, etc.)

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PRODUCTION/OUTLET - FLOW CHART 1975

TONS (EXCLUDING LINEN AND JUTE)

1974/75 SEASON COTTON CROP 1974/75 (SEASON)	TOTAL 448.213 (65.022 TO STOCK)					
	EXTRA LONG		LONG		MEDIUM	
	193.865 (819 TO STOCK)		166.059 (10.708 TO STOCK)		178.289 (153.495 TO STOCK)	
	DOMESTIC	EXPORT	DOMESTIC	EXPORT	DOMESTIC	EXPORT
41.570	61.476	73.362	81.989	101.489	23.305	
	59.1 %		49.4 %		13.1 %	

1975 CALENDAR YEAR RAW MATERIALS	COTTON 218 213			RAYON	SYNTHETIC		
	EXTRA LONG	LONG	WASTE		DOM.	DOM.	IMP.
41.570	73.362	103.432	1.800	480	5,000	6.452	

Waste Factor ±16%

YARNS	COTTON SYSTEM 185.992			FILAMENT			10.672 WOOLLEN WORSTED	
	IMP.	DOMESTIC	EXPORT	RAYON	SYNTH.	DOMESTIC	EXPORT	
		140.488	45.504	6.340	DOM 550 IMP 150	9.372	1.300	

Waste Factor ±5%

COTTON WOOL EST 1.550

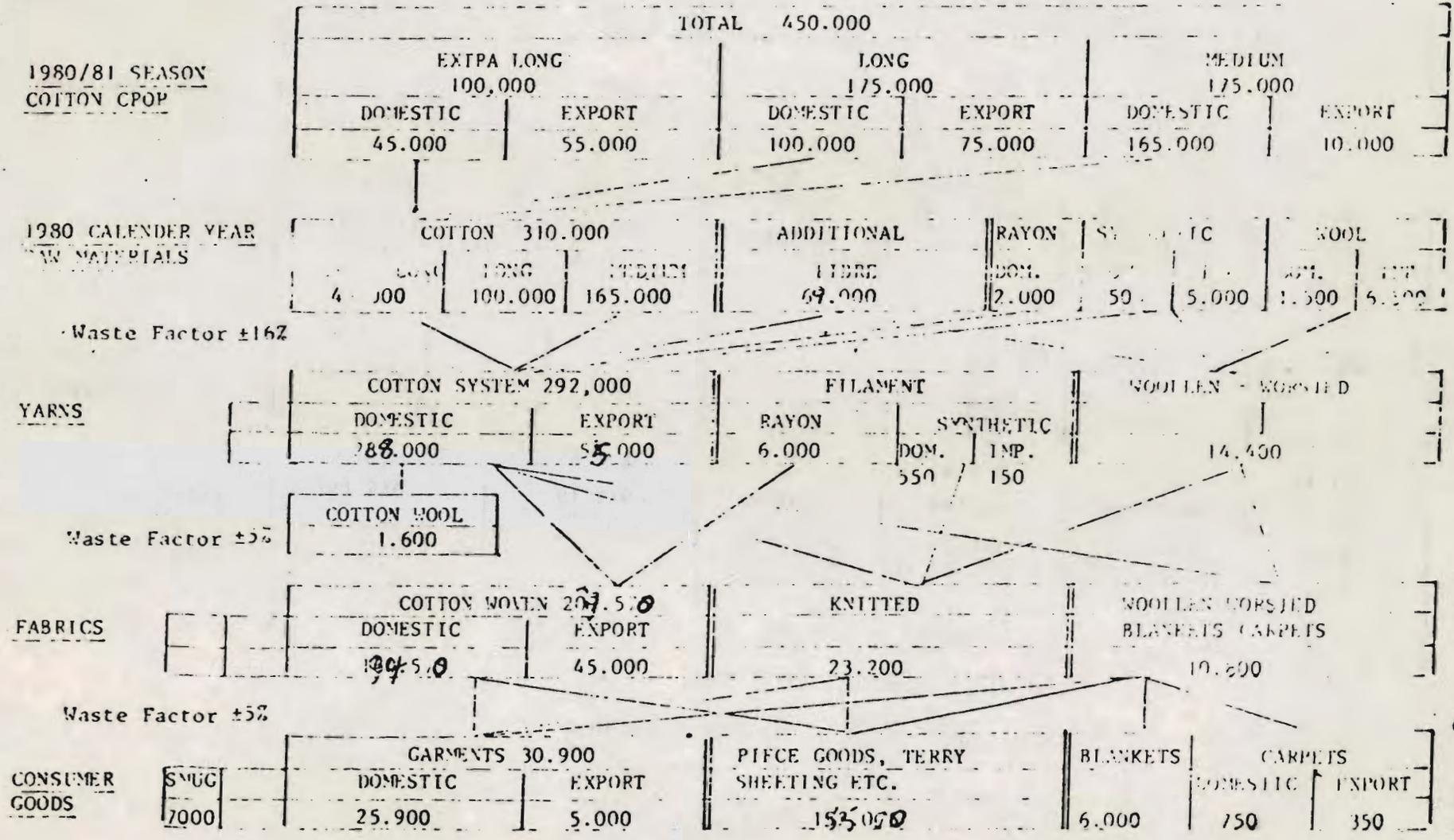
FABRICS	WOVEN COTTON TYPE 126.309			KNITTING		WOOLLEN-WORSTED BLANKETS - CARPETS	
	SMUG	IMP.	DOMESTIC	EXPORT			
	400	1,250	106.133	19.342	13.254	8.670	

Waste Factor ±5%

CONSUMER GOODS	GARMENTS			PIECE GOODS, SHEETING, TERRY AND COTTON CARPETS		BLANKETS	WOOL CARPETS	
	SMUG	IMP.	DOMESTIC	EXP.			DOM.	IMP.
	8400	13	16.040	3.450	188.701	5.230	840	370

PRODUCTION/OUTLET - FLOW CHART 1980

TONS (EXCLUDING LINEN AND JUTE)



PRODUCTION/OUTLET FLOW CHART 1985

TONS (EXCLUDING LINEN AND JUTE)

1985 '86 SEASON
COTTON CROP

TOTAL 450.000					
EXTRA LONG 100.000		LONG 175.000		MEDIUM 175.000	
DOMESTIC	EXPORT	DOMESTIC	EXPORT	DOMESTIC	EXPORT
45.000	55.000	100.000	75.000	165.000	10.000

UNDER YEAR

COTTON 310.000			ADDITIONAL FIBRES	RAYON	SYNTHETIC		WOOL	
EXTRA LONG	LONG	MEDIUM		DOM.	DOM.	IMP.	DOM.	IMP.
45.000	100.000	165.000	147.000	2.000	500	5.000	1.500	8.500

Waste Factor ±16%

YARNS

COTTON SYSTEM SPUN 348.800		FILAMENT		WOOLLEN-WORSTED	
DOMESTIC	EXPORT	RAYON	SYNTHETIC		
348.500	40.000	6.000	700	17.600	

COTTON WOOL

1.600

Waste Factor ±5%

FABRICS

COTTON TYPE WOVEN 284.000		KNITTED		WOOLLEN-WORSTED	
DOMESTIC	EXPORT			BLANKETS	CARPETS
252.000	55.000	30.400		12.700	

Waste Factor ±5%

CONSUMER
GOODS

SMUG	GARMENTS 59.200		PIECE GOODS, TERRY SHEETS		BLANKETS	WOOL CARPETS	
5000	DOMESTIC	EXPORT	ETC.			DOMESTIC	EXPORT
	49.200	10.000	220.124		7.000	800	400

ANNEX L
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RECOMMENDED TECHNICAL ASSISTANCE PROGRAMS
AND GENERAL OBSERVATIONS

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SECTION I: RECOMMENDED TECHNICAL ASSISTANCE

A. GENERAL BACKGROUND

The proposed technical assistance programs have the following general objectives:

1. To aid in ensuring the proper selection of equipment.
2. To aid in ensuring timely, effective implementation of the rehabilitation and expansion program.
3. To aid in ensuring that the capital investments result in optimum returns.
4. To aid in achieving productivity and quality improvements and cost reductions over and above those attributable to the proposed capital investments.
5. To aid in establishing improved planning and control procedures to ensure continuing results from the rehabilitation and expansion programs.
6. To train personnel in modern techniques of textile management.

While all of the recommended technical assistance programs are deemed to be important to both the assurance of the optimum results of the proposed capital expenditures and to the attainment of additional improvements, one particularly is connected intimately with the proposed investment programs and deserves special mention. This is the apparel technical assistance program.

B. APPAREL TECHNICAL ASSISTANCE

The apparel technical assistance program is described in detail in Section VII of Part Two. Apparel manufacturing is highly labor intensive; where machine productivity depends primarily upon the individual operators. Therefore, the production system, the work-in-process controls, individual workplace design, operator methods, operator and supervisory training and attention to individual motivation and activity level are more critical to overall productivity than equipment. The purchase of new equipment without the proper attention to these other aspects will not result in the desired levels of productivity and quality. For this reason, the apparel technical assistance program has been included as part of the capital investment proposals.



C. SUMMARY OF PROPOSED TECHNICAL ASSISTANCE PROJECTS

Below is a summary of the proposed technical assistance projects, excluding the apparel technical assistance which has been included in the overall apparel investment.

Program	Estimated Cost
Master Development Plan	\$ 70,000
Materials Handling Study	165,000
Equipment Specifications	60,000
Bid Evaluations	120,000
Survey of Cotton Spinning and Weaving	50,000
Waste Control Program in Cotton Spinning	160,000
Production Control Program in Cotton Spinning	120,000
Cost Reduction Program in Cotton Spinning	400,000
Start-up Assistance in New Yarn Mill	160,000
Engineering of Warping and Sizing	60,000
Waste Control Program in Cotton Weaving	200,000
Production Control Program in Cotton Weaving	140,000
Cost Reduction Program in Cotton Weaving	400,000
 Total Estimated Cost	 \$2,105,000

Following is a brief description of the scope of work envisioned in each of the proposed technical assistance programs.

D. MASTER DEVELOPMENT PLAN

The implementation of the proposed rehabilitation and expansion plan must be planned carefully and monitored effectively in order to ensure optimum results. Because of the complexity of the project and the interrelationship among manufacturing units, the sequence and timing of each element of the project bear on the overall results. For example, increased weaving capacity prior to the development of increased yarn supply could result in idle equipment; equipment procurement prior to completion of physical facilities could result in unnecessary capital being tied up; and equipment erection prior to personnel training could result in low equipment productivity.

It is recommended that a master plan be developed, using the Critical Path Method (CPM) and that the plan be monitored frequently, ideally through the use of the Program Evaluation Review Technique (PERT).

The general scope of work envisioned in this program is as follows:

- Development of a thorough understanding of each aspect of the program and the interrelationships of the individual projects.
- Development of a project "network," a graphical representation of the project plan, showing the interrelationships of the various activities.
- In conjunction with Mehalla management, determination of realistic time estimates for each element of the program.
- Review of the "network" for each individual project with the responsible Mehalla manager for that project.
- Obtainment of agreement of the elemental "network" and the overall project "network."
- Development of input requirements, frequencies and responsibilities for project status review and evaluation.
- Development of review and status evaluation procedures, including consideration of the use of Mehalla's computer.
- Training of several Mehalla personnel in the CPM and PERT techniques.
- Training of someone in Mehalla to act as overall project coordinator.
- Periodically monitoring the program and reporting of findings and recommended actions to Mehalla's senior management.

This assistance ideally should be provided by an individual or firm skilled in CPM and PERT techniques and with intimate knowledge of the textile and apparel industries. The assistance will require several months of on-site work at Mehalla at the very beginning of the project, followed by periodic visits to monitor the project throughout the duration of the project implementation.

The estimated cost of this assistance is \$70,000.



E. MATERIALS HANDLING

In Section X, Part Two, a study of the overall materials handling systems has been recommended in order to determine the economic justification for improved materials handling and, if justified, to specify the type of system which should be installed.

Because capital expenditures for improved materials handling should not be made until after a feasibility/conceptual design study has been undertaken, this study should be conducted as soon as possible. Different from the other recommended technical assistance programs, this study must be conducted prior to a final capital investment decision and development of specifications of equipment.

The general scope of work for this assistance is described in Section X, Part Two of this report. The assistance is suggested in three phases as follows:

	Estimated Cost
Analysis and Conceptual Design Phase	\$ 50,000
Detailed Design Phase	40,000
Implementation Phase	75,000
Total Estimated Cost	\$165,000

F. EQUIPMENT SPECIFICATIONS

The development of equipment specifications is among the first steps in implementing the proposed project. The proper development of these specifications is vital to the success of the project. Mehalla management has considerable experience in developing equipment specifications; and, among the Mehalla management, there is a great deal of technical expertise.

However, there are several factors which suggest that assistance in the development of the equipment specifications is desirable:

1. The magnitude of the proposed investment will require not only the development of specifications for each individual major piece of equipment but also an overall review of the specifications, requiring knowledge of cotton, woolen and worsted systems of manufacture.

2. Since the specifications should be developed as soon as possible, outside assistance, unencumbered with daily managerial responsibilities, could serve to expedite the process
3. Since U.S. equipment is involved, it would be highly desirable to have someone intimately familiar with U.S. equipment and U.S. equipment suppliers involved in the development of the specifications.

The general scope of work involved in this assistance is outlined below:

- Development of a thorough understanding of each project.
- Development of a thorough understanding of the end product specifications from each project.
- Development of desired capabilities, capacities, performance characteristics, flexibility and technical criteria for each major item of equipment.
- Preparation of written specifications for submission to potential suppliers.

All of this work should be done in conjunction with Mehalla management, working intimately with each key manager in the development of the specifications.

The estimated cost for this assistance is \$60,000.

G. BID EVALUATIONS

The objective evaluation of the bids and proper selection of equipment are fundamental to the success of the project. As with the development of specifications, outside assistance in the evaluation of bids by persons intimately familiar with the projects involved and with U.S. equipment could aid in ensuring proper selection as well as reducing the time of Mehalla management for this detailed work.

The general scope of work involved in this assistance is as follows:

- Determination of bid evaluation criteria such as cost, guarantees, conformance to specifications, technical assistance, similar equipment in place, etc.
- Determination of value to be assigned to the various criteria.

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- Detailed review of the bids in order to evaluate each according to the evaluation criteria.
- Discussion of bid review analysis with appropriate Mehalla manager.
- Preparation of written report on the evaluation of each major item of equipment.
- Review of final evaluation with senior Mehalla management.
- Determination of supplier or request for additional information or revised bids if required for final determination.

Ideally, this assistance should be provided by the same source which provided assistance in the preparation of equipment specifications.

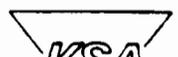
The estimated cost for this assistance is \$120,000.

H. SURVEY OF COTTON SPINNING AND WEAVING

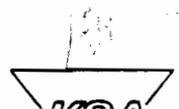
As pointed out in Sections I and II of Part Two of this report, cursory analyses permitted during the course of this study indicated that considerable potential exists for cost reduction in the existing cotton spinning and weaving operations through improved labor productivity, improved machine efficiencies, reduced waste levels and improved production planning and control. These cost reductions could amount to several million dollars annually. Since the existing operations are intimately involved in the proposed project, their efficiency and costs are fundamental to overall project success. In order to identify and quantify the cost reduction potential and develop plans for improvement programs to achieve this potential, a survey of the existing cotton system spinning and weaving operations is recommended.

The general scope of work envisioned for this program is as follows:

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1. Collection of data and information from each cotton system spinning and weaving unit on items such as the following:
 - Product mix.
 - Lot size.
 - Machine speeds.
 - Job assignments.
 - Indirect labor complement.
 - Supervisory complement.
 - Package sizes.
 - Waste levels.
 - Quality levels.
 - Running conditions (stop levels, ends down, etc.).
 - Work-in-process levels.
 - Productivity (machine and labor).
 - Unit balance.
 - Machine downtime
 - Elemental costs (raw materials, labor, overhead).
2. Interviews with manufacturing management.
3. On-the-floor observations and studies of major operations.
4. Development of cost, productivity, waste and quality performance for each unit.
5. Comparison of current performance with achievable performance levels.
6. Development of cost reduction potential in each unit by cost element.
7. Development of a cost reduction program plan detailing the following, by unit:
 - Cost reduction goals.
 - Programs required to effect the improvements.
 - Techniques to be used.
 - Mehalla staff required to implement the programs.
 - Training required to prepare the Mehalla staff.
 - Priorities and sequence of implementation.
 - Estimated calendar time for each program.
 - Outside assistance required.
 - Estimated cost of each program.
 - Estimated cost/benefit relationship from each program.



8. Preparation of a written report covering the findings, conclusions and recommendations.

The resulting report should form the basis for the decision to embark on the improvement programs in the cotton spinning and weaving units described below. The survey would determine the feasibility and economic justification of these programs. While our preliminary analysis indicates that the programs could result in substantial benefits, the proposed survey should be undertaken to verify this and to provide Mehalla management with a study of the economic justification and a plan of implementation.

The survey should be conducted by a firm or persons with in-depth textile experience and skilled in management techniques such as industrial engineering, production planning and control, waste and quality control.

The estimated cost of this study is \$50,000.

I. WASTE CONTROL PROGRAMS

Assuming the economic justification for a program of waste reduction and control in the cotton spinning and weaving units is confirmed by the survey, the following general scope of work is envisioned. The scope of work, of course, would be defined in greater detail in the survey report.

1. Identification of current waste levels by process, type and cause.
2. Development of waste control reports by process, type and supervisory and managerial unit.
3. Development of corrective action to reduce waste created by improper machine settings, poor maintenance, improper handling, and operator created.
4. Conduct of supervisory and management training sessions on effect of waste on cost and profits on theory and practical application of waste control.
5. Establishment of standard levels of waste by process, type and supervisory and managerial unit.
6. Follow-up with managers, supervisors, maintenance personnel and operators to ensure desired performance.

7. Examination of final product specifications and raw material input to determine potential for raw material savings through improved lay-down and blending techniques, blending by micronaire, etc.
8. Development of overall, coordinated waste control reporting system including supervision, unit management, department management and summary and exception reports for top management.
9. Training of several key Mehalla personnel in waste control procedures and in monitoring the program to ensure continuing results.
10. Documentation of all techniques, procedures and controls and conduct of management seminars to ensure understanding and acceptance.

These programs should be conducted by a firm or persons with in-depth textile and waste control experience.

The estimated costs of the technical assistance for these programs are \$160,000 for spinning and \$200,000 for weaving.

J. PRODUCTION CONTROL PROGRAM

Production scheduling and control at Mehalla are extremely complex, particularly in the cotton spinning and weaving area with its six spinning units and 13 weaving sheds. The development of an effective production planning and scheduling system can aid in ensuring no idle equipment time due to unavailability of stock, in reducing work-in-process and capital tied up in inventories, and in improving customer service. From observations made during this study, there were indications that a modern production control system is needed at Mehalla. With the modernization and expansion program, the need for such a system will become more acute.

The general scope of work envisioned for this assistance follows:

1. Review of current production planning, scheduling and control procedures.
2. Collection of information on production levels, product mix, work-in-process levels, raw materials inventories, finished goods inventories, throughput times, etc.

3. Identification of current responsibilities for production planning, scheduling and control and conduct of interviews with key personnel involved.
4. Description of current system, including inputs, outputs, frequencies, reports, controls and responsibilities.
5. Identification and quantification of improvement potential in terms of reduced downtime, reduced work-in-process and improved service.
6. Conceptual design of improved system including general input-output requirements, responsibilities, portions to be computerized, etc.
7. Review of conceptual design with Mehalla management.
8. Detailed design of the improved system, including programming specification.
9. Monitoring of Mehalla's programming staff and program testing.
10. Training of key users of the system.
11. Monitoring to ensure forecast results.

This assistance is estimated to cost \$260,000.

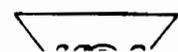
K. COST REDUCTION PROGRAM IN COTTON SPINNING AND WEAVING

Cost reduction programs in the cotton spinning and weaving plants should be considered if the proposed survey of these operations indicates a desirable cost/benefit relationship. We are of the opinion that these programs can easily be justified. The programs would be especially timely in achieving increased labor productivity in order to ensure the ability to staff the expanded operations from the existing work force.

The general scope of work envisioned in the cost reduction programs is as follows:

1. Selection and training of up to 20 capable Mehalla employees in time and motion study, frequency marking techniques, work sampling procedures and basic principles of industrial engineering.

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2. Taking one operation at a time, supervise and direct the engineering team to accomplish the following:
 - Analyze methods and procedures.
 - Improve methods and procedures.
 - Determine proper job loads for direct labor through work measurement.
 - Determine expected machine efficiencies.
 - Determine proper indirect labor complements.
 - Establish standards for machine speeds, package sizes, labor complements, machine efficiencies, productivity levels, and running conditions.
 - Establish control reports for comparing actual performance to standard.
 - Establish procedures for frequency checking running conditions.
3. Train two training coordinators, one for spinning and one for weaving, and 20 to 30 instructors in analytical training methods.
4. Supervise the implementation of analytical training programs for retraining employees in the improved methods.
5. Conduct management seminars on industrial engineering, analytical training and cost reduction.
6. Conduct supervisory development seminars to expose line supervisors to the basics of industrial engineering and analytical training and to develop involvement of the supervisors in the cost reduction programs.
7. Supervise follow-up, control and monitoring programs to ensure achievement of results and continuation of the improved performance.

In addition to the cost reductions which would result from these programs, they would provide the company with a trained group of work study and operator training personnel and industrial engineering and analytical training programs which could be extended into other areas of the company.

These programs would require several calendar years for completion, and the estimated cost is \$400,000 for spinning and \$400,000 for weaving.

L. ENGINEERING OF WARPING AND SIZING

The warping and sizing operations are centralized, and the quality of the sized beams has a significant effect on weaving efficiency. As pointed out in Section II, Part Two, one percent increase in weaving efficiency could result in additional contribution of about \$80,000 per year. Therefore, it is recommended that an engineering program be conducted in this department, concentrating on improving the quality of the sized beams but also including methods improvement and development of standards for equipment productivity and labor.

The estimated cost of this program is \$60,000.

M. START-UP ASSISTANCE IN THE NEW YARN MILL

To ensure an effective start-up of the new yarn plant, a program of technical assistance is recommended. The program should include the following:

1. Development of standards for productivity, machine efficiencies, labor, waste and quality.
2. Development of control and reporting systems for productivity, machine efficiencies, labor, waste and quality.
3. Training of first-line supervision.
4. Implementation of an analytical training program for operating personnel.
5. Development of a schedule for machine erection, machine commissioning, personnel intake and training and production buildup.
6. Overall coordination of plant start-up.

The estimated cost of this assistance is \$160,000.

SECTION II: GENERAL OBSERVATIONS

A. LONG-RANGE PLANNING

1. Introduction

During the course of this study, the desirability of the preparation of a formal long-range plan was noted. In view of the size, product diversity and complexity of the company, coupled with the dynamic nature of world textile markets and textile production and the rapid development and increasing cost of textile technology, the need for a formal long-range plan for Misr Spinning and Weaving Company is particularly acute.

2. Philosophy and Objectives

As the first step in the development of a long-range plan, it is suggested that management develop a clearly stated corporate philosophy. This should state the basic beliefs of management and what the company "stands for." It should place emphasis on those aspects of the company which management wishes to stress, for example, its people, product quality, product development, technological leadership, efficiency, customer service, etc. The philosophy should articulate the underlying mental attitude against which corporate objectives can be developed and within which management actions and activities will be taken.

Following the statement of corporate philosophy, a brief set of overall corporate objectives should be developed. These should include the following:

- Financial objectives.
- Market objectives.
- Growth objectives.

3. Market Plan

The marketing plan should form the basis of the overall long-range plan. This plan should look out into the future in a fairly definitive way for three years and in a general way for at least five years. The market plan should include at least the following:

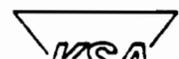
- a. Analysis of domestic market by major product group.
- b. Analysis of export markets by major product group.

- c. Analysis of major competitors domestically and in the export markets.
- d. Analysis of the company's strengths and weaknesses in such areas as product design, product quality, product costs, and customer service.
- e. Determination of percent of sales desired for domestic and export by major product group.
- f. Three-year projection, by year, of sales volume, by major product group, and by country.
- g. A more general projection for at least five years of sales volume by major product group for domestic and export sales.
- h. Identification of areas of weakness and plans for improvement, for example, product development, sales force, product quality, etc.

4. Manufacturing Plan

The manufacturing plan should be developed from the marketing plan. Current manufacturing capabilities and capacities should be compared with the marketing projections. Requirements for additional capabilities or capacities should then be developed. Cost estimates for equipment replacement or additions should be prepared, together with a timetable for developing the required capabilities and capacities to meet the market projections. The manufacturing plan should include items such as the following:

- Projected product capabilities.
- Projected capacities by major product group.
- Projected space and equipment requirements.
- Plans for effecting productivity and quality improvements.
- Projected expenditures for plant and equipment.
- Projected labor requirements.
- Projected manufacturing costs.



5. Personnel and Management

Based upon the manufacturing plan, a management and personnel plan should be developed. This should include an analysis of personnel, supervisory and management requirements, taking into account anticipated turnover and retirements. Key management requirements should be noted and candidates for filling the requirements identified. Plans should then be developed for preparing the candidates to fill the identified positions.

Anticipated reductions in direct and indirect labor through technological improvements and productivity improvement programs should be developed and compared with anticipated requirements in new or expanded production units. Plans should then be developed for transferring and retraining these personnel.

6. Support Functions

To support the market and manufacturing plans, the support functions should develop plans for their areas of responsibility. These should include planning and control systems, quality control, maintenance and engineering, power and water, etc.

7. Financial Plan

Based upon the market, manufacturing, personnel and support function plans, a financial plan should be developed. This plan should include at least the following:

- Investment requirements
- Projected changes in assets and expenditures.
- Cash flow projections.
- Pro forma profit and loss statements.
- Projected balance sheets

8. Long-Range Planning Responsibility

Long-range planning should be the responsibility of the Chairman. It might be desirable to form a Long-Range Planning Committee consisting of the Chairman, Financial Director, Marketing Director and a senior manufacturing manager. This committee should develop a format for the plan elements, establish timetables for completion of each element and review and approve the elements and the final plan. Each year, the plan should be updated.

The first year the plan is developed will be the most difficult. However, in view of the magnitude of the proposed expenditures and the work which has already gone into the analysis and development of these, it is suggested that serious consideration be given to the development of a long-range plan by the end of 1976.

B. ANALYTICAL OPERATOR TRAINING

1. Background

Textile and apparel manufacturers are faced with a severe shortage of skilled workers in most parts of the world. Due to the increased skill requirements in these industries, employee selection, training and retraining procedures demand intensive appraisal by manufacturers. These functions have assumed a new importance; and, in the majority of companies, the need to upgrade them has become critical. The traditional training procedures followed by most manufacturers have been unsystematic, increasingly expensive and generally ineffective.

A basic analytical approach to training has been used successfully in many industries since its development in Great Britain during World War II. Since the early 1960's, analytical training has given the textile and apparel industries a scientific, specialized and systematic approach to the task of training textile and sewing machine operators. As practiced, it combines basic industrial engineering with concentrated training techniques to provide manufacturers with a highly effective means for both training new employees and retraining experienced operators whose performance is lagging or whose job content is substantially changed.

From our observations at the Misr Spinning and Weaving Company, it is our opinion that the application of analytical training to the training of employees in the proposed new manufacturing units and to the retraining of current employees could lead to significant improvements in productivity.

2. Objectives of Analytical Training

The underlying purpose of analytical training is to provide a company with the means to develop and improve human skills and performance rapidly and effectively. Providing good training and retraining for a company's employees is a humane and worthwhile project. To be successful in this development of operator skills, analytical training must be carefully planned, guided and controlled in order to achieve the following specific objectives:

a. *Increased Productivity*

Increased productivity is realized by:

- Training new operators faster.
- Raising the performance of experienced operators by retraining.
- Raising the performance of transferred operators (experienced operators who have been changed to a different job or product).
- Reducing labor turnover or failure rates, particularly among new employees.

b. *Reduced Labor Turnover or Failure Rate*

The turnover rate, or failure rate, in most companies tends to be highest during the learning period. Once a new operator achieves the performance level of the experienced operators, he or she tends to stay with the job except for mainly unavoidable causes and particularly upsetting circumstances.

Analytical training has its main effect on the inexperienced operator turnover, or failure, by helping new operators to gain job satisfaction and high performance earnings in a much shorter time.

Control and reduction of unwanted turnover, or failure, during plant start-up or expansion is also of particular importance, since during expansion it is usually necessary to dip lower into the labor pool for new recruits or transfers; and the lower down the list of qualified prospects a company goes; the greater the need for intensified training.



c. *Improved Quality*

Another aim of analytical training is the improvement of the quality of operators' work by the development of correct job methods and skills. This is true not only with completely unskilled operators but also with experienced operators who may be highly productive but whose quality performance is poor.

In addition to the above, analytical training helps provide:

- Improved recruiting.
- Improved job methods.
- Improved supervision.
- Fixed overhead recovery.
- Increased plant flexibility.

3. Elements of Analytical Training

Much of the success achieved with analytical training can be traced to two key elements:

- Complicated production operations are broken down to their smallest component skills through detailed scientific analysis so that they can be taught effectively through repetitive practice and a "rebuilding" of the components into the complete operation.
- The specialized analytical training technique is applied from an engineering perspective. Training specialists who are also experienced production engineers must design and install analytical programs to fit the particular conditions and requirements of the labor force, the individual plant and the particular product or products to be manufactured.

4. Method of Accomplishing Objectives

Some salient characteristics of the analytical training approach include:

- a. Separate training centers in which trainees and retrainees can concentrate upon learning without the distractions of the production floor. These centers should be located within, or contiguous to, each major production unit.

- b. Analysis of the operation to be trained isolates its various skill elements, which provide the basis for designing a series of training exercises. As the analytical training program develops, a resident training director begins to do this important work on his own, having developed the necessary skills for doing so during the initial start-up phase.
- c. Basic skill exercises are practiced by the operator in short, repetitive exercises but at full production speed. As the trainee reaches a predetermined level of proficiency in each skill, he or she goes on to more difficult exercises. Gradually, skills are combined until the operator is practicing the entire operation.
- d. Stamina buildup is achieved as the trainee progresses from short practice runs to longer and longer cycles, until he or she develops the stamina to perform the operation properly over a full day.
- e. Training instructors work closely with the new operators, as well as with experienced operators undergoing retraining. Under the supervision of the training director, they provide constant instruction and follow-up to ensure that the training will last.
- f. Selection and testing procedures must be modernized to give analytical training programs the best opportunity to succeed. In particular, proper testing of new recruits and retrainees makes it possible to match the abilities of an employee, such as finger dexterity or eye-hand coordination — with the physical requirements of a particular operator.

Obviously, one of the most important phases of the analytical training program begins with the search for and selection of the training director and instructors. The success of the training program depends upon these people since they are the ones who have the day-to-day contact with and responsibility for those being trained.

Their training is equally important and must be under the initial guidance of a graduate engineer specializing in textile/apparel training and with experience in the specific or closely allied product.



5. Results in Plants Using Analytical Training

Typical results achieved in plants using analytical training have been:

Reduction in Training Times	
— Successful Trainees	69%
— Unsuccessful Trainees	59%
Reduction of Unearned Pay (or Losses Sustained Due to Guaranteed Wage)	
— Successful Trainees	67%
— Unsuccessful Trainees	54%
Reduction of Replacement Costs	65%
Productivity Increases Retrainees	32%

An understanding of these numbers can only lead one to the conclusion that other improvements must follow and that everyone involved must benefit. As mentioned earlier, some of the additional improvements take the form of such things as:

- Increased earnings.
- Overhead recovery.
- Reduced turnover.
- Improved quality.
- Increased flexibility.
- Improved morale.
- Improved supervision.

C. INDUSTRIAL ENGINEERING

The industrial engineering function at Mehalla is weak relative to the potential for cost reduction and overall manufacturing improvement. As pointed out several times in this report one of the primary challenges to Mehalla management is to improve labor productivity. Industrial engineering can be the primary function for the development of productivity improvement.

It is recommended that additional emphasis be given to industrial engineering; that an effective industrial engineering staff be developed; that specific programs with quantified goals be planned and that the industrial engineering effort be measured against these goals.

As labor costs increase, the competitiveness of Mehalla may diminish unless considerable effort and attention is devoted to the improvement of productivity.

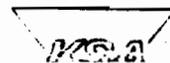
TECHNICAL ASSISTANCE – NEW FACTORY AND REORGANIZATION

We believe the foregoing shows that, while the proposed investment is feasible, an investment in equipment alone would be difficult to justify. The new factory should be set up in the best manner known, and the existing factories should then be reorganized or converted to emulate this model. The basic objective should be a reduction in the total unit labor cost by improving productivity while increasing operator take-home pay and quality of the finished product.

These goals can be achieved, but a good deal of technical assistance will be required before the following changes and improvements are accomplished.

At the heart of the reorganization is a change from the present line system to what is called a mobile bundle unit (MBU). Essentially, a MBU is a production system based on a bundle as the unit of work and operations are divided for maximum efficiency. The job content of each operation is set for this efficiency without regard for the balancing required in a straight line. Work tables are designed for each operation, and specific handling methods are determined. Thus, each operator's earnings are dependent only on her own skill and the effort she puts forth.

Bundle storage is provided for on small (2' x 2') bundle trucks with casters, and these trucks serve as the pickup and disposal rack for each garment. On many front and back pants panels, the trucks are equipped with clamps to further facilitate the handling. Each machine is powered by an individual motor, and each work table is located to permit minimum travel time to get and dispose bundles. The main advantages of this system are:



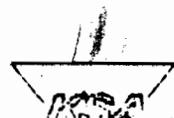
1. The unit production is no longer limited to the slowest operation.
2. The rigidity of the line system is eliminated, making possible maximum utilization of motion economy principles through table designing.
3. Work in process can be accumulated between each operation, permitting greater production flexibility.
4. Each operator can work as rapidly as he is able to without dependence on his co-workers.
5. It is possible to balance part-time jobs by transferring operators during the day.
6. It is possible to counteract the effect of absenteeism and turnover by transferring operators and by overtime to a greater extent than is possible in the straight-line system.
7. It is easier to expand or contract the unit size for changes in demand or in styles.
8. It allows individual incentives which are superior to group incentives.

The main disadvantages are:

1. It requires better supervision — better judgment and application of time.
2. Bundle handling is necessary.
3. It requires more work in process
4. It requires a longer production cycle than a straight-line system.

For those garments planned and now made, we believe the advantages far outweigh the disadvantages.

As the first step in the proposed conversion, an action plan should be developed, probably as a part of a detailed factory planning report. This action plan should be a joint effort between management and the technicians; it should assign responsibilities and priorities; and it should include a timetable for completion of the various steps.



Although by no means complete and not necessarily in order, such a plan might include the following:

1. Develop complete action plan.
2. Start detailed factory planning report:
 - a. New factory —
 - Garment specifications.
 - Machinery specifications.
 - Layout.
 - Cost, volume and efficiency projections.
 - b. Existing factories.
3. Select management and engineers for foreign training and plant visits.
4. Trial patterns and samples.
5. Visit foreign factories and equipment suppliers.
6. Schedule new equipment trials.
7. Correct and finalize patterns; run final sample cuts.
8. Complete equipment trials and evaluation. Specify, order and schedule equipment delivery and setup dates.
9. Complete planning report.
10. Complete layout plans for new and existing factories.
11. Complete building construction.
12. Relocate existing factories.
13. Explanations to employees — short-range actions and long-term plans.
14. Review personnel procedures and finalize changes.

15. Design payroll system; initial training of management and clerks.
16. Select people for initial training.
17. Start supervisory training.
18. Begin training center.
19. X% of equipment and operators in new factory.
20. 100% of equipment and operators.
21. Review and update planning report and action plan for existing factories.
22. Specify, order, etc. equipment for existing factories.
23. New factory to X% efficiency.
24. Start conversion of first existing factory.
25. Etc.

Although the above is important, the greatest value from technical assistance will come during the plant start-up and comprehensive cost reduction and quality improvement program. Some of the major elements of this include:

1. Organize or reorganize the factories into desirable units; consider combining the cutting rooms, parts sections, etc. Prepare layouts of these.
2. Specification of machinery, attachments and storage facilities if not accomplished in the planning report. Follow up on deliveries, setups and carpentry work.
3. Design and have printed bundle production tickets. These should be serially numbered to help prevent cheating and should provide spaces for each operator's clock number or initials to assist in quality control efforts.
4. Complete design or revision of payroll system and train clerks. System to provide:
 - a. Gummed sheets for attendance, production and off-standard times as well as space for production tickets.
 - b. Simple yet effective and timely cost, production, efficiency and operating reports for management's use.



5. Revise materials handling and cutting procedures to support new system and layout.
6. Design improved workplaces to reduce handling times.
7. Introduce selected equipment, attachments and work aids such as thread trimmers and stackers meant to reduce labor content, job complexity and training times. Make certain these provide more consistent quality.
8. Standardize the method of handling at each operation and establish training curves for the jobs.
9. Train operators to use the new equipment, attachments and methods and motivate them to perform well.
10. Implement scientific training program. As discussed elsewhere, this is a formalized training approach designed to effectively fill vacancies, to upgrade capabilities, to retrain existing employees to improve their productivity and quality, and to assure that new operators are properly trained in the shortest possible time. This type training is especially useful on the more difficult jobs having longer learning times, and these should probably be started early in the project.
11. Continuously try to simplify the make of the garment where this can be done without lowering the intrinsic value or appearance of the finished product.
12. Work measurement to develop standards for all operations and to equalize earnings opportunities. Individual incentives should be used throughout the factories, hopefully without a ceiling or maximum. Additionally, the quotas should be established using proper allowances for the job and machine — not just one allowance figure across the board.
13. Rate or quota installation and follow-up to prove the standards for each operation as installed. Of all the elements, this is the most time consuming; it is also the most important and is the key to success.
14. Design and install quality control procedures and train personnel.
15. Select and train utility operators and install utility and transfer incentive plans.

16. Since the operation is currently overstaffed, continuously work toward restructuring the organization to reduce indirect labor.

17. Formal training and development of management, staff engineers and supervision both in the factory and in classroom sessions. This is the second key to success, and topics should cover both the technical and human relations aspects of their jobs. A short list of some of the items that should be covered includes:
 - a. Cost Controls:
 - Payroll procedures.
 - Cost reports.

 - b. Quality Control
 - General considerations.
 - Specific in-plant procedures.
 - Quality specifications.

 - c. Engineering Techniques
 - Capacity studies.
 - Follow-up.
 - Methods improvement.
 - Quotas and piece rates.
 - Slide rule use.
 - Sewing equipment.
 - Incentive plans.

 - d. Production Flow
 - Balancing.
 - Production systems.
 - Work in process.

 - e. Personnel
 - Operator orientation.
 - Operator training.
 - Turnover and absenteeism.
 - Handling grievances.
 - Company policy.
 - Safety.
 - Maintaining morale.
 - Discipline.

18. Manualization of all procedures, operation bulletins, quality specifications, methods, time values and rates, workplace sketches, etc.

With these things in place and operating as they should, we are confident that the garment plant will continue to maintain or improve its vital position in the company.

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APPENDIX 1
SUMMARY OF INVESTMENT PLAN – YARN MILL NO. 7
NEW YARN COUNTS – MEDIUM COUNTS – 54,000 SPINDLES

Item No.	Description	Estimated Costs		
		Foreign Exchange in US \$	Local Currency in US \$	Total US \$
1.	Processing Equipment CIF Value	\$15,137,000		\$15,137,000
2.	Import Duty on 1. (12%)		\$1,816,500	1,816,500
3.	Clearing + Local Transportation + Erection	152,000	152,000	304,000
4.	Auxiliary Equipment + Accessories CIF Value	1,742,000		1,742,000
5.	Import Duty on 4.		209,000	209,000
6.	Clearing + Local Transportation for		9,000	9,000
7.	Spares (5%), Including Duty (12%)	757,000	91,000	848,000
8.	Electrical Substation, CIF + Distribution + Installation + Duty	785,000	200,000	985,000
9.	Airconditioning Equipment, CIF + Installation + Duty	1,850,000	380,000	2,230,000
	Subtotal Equipment Installed	\$20,423,000	\$2,857,500	\$23,280,500
10.	Construction 22,880 Sq. Meters		5,034,000	5,034,000
	Total Investment (Excluding Working Capital)	\$20,423,000	\$7,891,500	\$28,314,500

APPENDIX 2

SUMMARY OF INVESTMENT PLAN – COTTON WEAVING

Item	Description	Estimated Cost in US \$		
		Estimated Foreign Exchange in US \$	Local Currency in US \$	Total in US \$
1.	Processing Equipment and Accessories CIF Value	\$10,446,800		\$10,446,800
2.	Import Duty on 1.(12%)		\$1,254,000	1,254,000
3.	Clearing and Local Transportation and Erection	105,000	123,000	228,000
4.	Auxiliary Equipment and Accessories		Included in Item 1.	
5.	Import Duty on 4.		Included in Item 2.	
6.	Clearing and Local Transportation for 4		Included in Item 3.	
7.	Spares (10%) Including Duty (12%)	1,044,500	125,300	1,169,800
8.	Electrical (Renovation and Connection Only) Estimated		134,000	134,000
9.	Airconditioning (Updating Only) Estimated		50,000	50,000
	Subtotal Equipment Installed	\$11,596,300	\$1,686,300	\$13,282,600
10.	Construction (Updating Only) 10,050 a \$65 Estimated		655,000	655,000
	Total Investment (Excluding Working Capital)	\$11,596,300	\$2,341,300	\$13,937,600

APPENDIX 2A
SUMMARY OF INVESTMENT PLAN – WARPING AND SLASHING

Item	Description	Estimated Cost in US \$		
		Estimated Foreign Exchange in US \$	Local Currency in US \$	Total in US \$
1.	Processing Equipment – CIF Value	\$606,440		\$606,440
2.	Import Duty on 1. (12%)		\$ 72,800	72,800
3.	Clearing and Local Transportation and Erection	20,500	112,000	132,500
4.	Auxiliary Equipment and Accessories		Included in Item 1.	
5.	Import Duty on 4.		Included in Item 2.	
6.	Clearing and Local Transportation for		Included in Item 3.	
7.	Spares (5%) Including Duty (12%)	30,500	3,700	34,200
8.	Electrical (Renovation and Connection Only)		5,000	5,000
9.	Airconditioning		None	
	Subtotal Equipment Installed	\$657,440	\$193,500	\$850,940
10.	Construction (Updating Only) Estimated		12,000	12,000
	Total Investment (Excluding Working Capital)	\$657,440	\$205,500	\$862,940

APPENDIX 3
SUMMARY OF INVESTMENT PLAN
EQUIPMENT REHABILITATION (COTTON MILLS)

Item No.	Description	Estimated Cost		
		Foreign Exchange in US \$	Local Currency in US \$	Total in US \$
1.	Equipment + Accessories CIF Value(1)	1,386,750		1,386,750
2.	Import Duty on 1. (12%)		166,500	166,500
3.	Clearing + Local Transportation + Erection		14,000	14,000
4.	Auxiliary Equipment + Accessories		Not Applicable	
5.	Import Duty on 4.		Not Applicable	
6.	Clearing + Local Transportation for 4.		Not Applicable	
7.	Spares Including Duty		Not Applicable	
8.	Electrical		Not Applicable	
9.	Airconditioning		Not Applicable	
	Subtotal Equipment Installed	1,386,750	180,500	1,567,250
10.	Construction		Not Applicable	
	Total Investment (Excluding Working Capital)	1,386,750	180,500	1,567,250

APPENDIX 4
SUMMARY OF INVESTMENT PLAN
TWISTING AND SEWING YARN MANUFACTURING

Item No.	Description	Estimated Cost		
		Foreign Exchange in US \$	Local Currency in US \$	Total in US \$
1.	Equipment CIF Value	825,000		825,000
2.	Import Duty on 1. (12%)		99,000	99,000
3.	Clearing + Local Transportation + Erection	9,000	9,000	18,000
4.	Auxiliary Equipment + Accessories		Included in 1.	
5.	Import Duty on 4.		Included in 2.	
6.	Clearing + Local Transportation for 4.		Included in 3.	
7.	Spares (5%) Including Duty (12%)	41,250	5,000	46,250
8.	Electrical (Connection Only)		6,000	6,000
9.	Airconditioning		None	
	Subtotal Equipment Installed	875,250	119,000	994,250
10.	Construction		None	
	Total Investment (Excluding Working Capital)	875,250	119,000	994,250

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APPENDIX 5
SUMMARY OF INVESTMENT
COTTON DYEING AND FINISHING

Item No.	Description	Estimated Cost		
		Foreign Exchange in US \$	Local Currency in US \$	Total in US \$
1.	Processing Equipment + Accessories -- CIF Value	8,557,206		8,557,206
2.	Import Duty on 1. (12%)		1,026,865	1,026,865
3.	Clearing + Local Transportation + Erection	85,572	85,572	171,144
4.	Auxiliary Equipment and Accesories		Included in 1.	
5.	Import Duty on 4.		Included in 2.	
6.	Clearing and Local Transportation on 4.		Included in 3.	
7.	Spares (6%) Including Duty (12%)	513,432	61,612	575,044
8.	Electrical (Renovation & Connection) Estimate		171,144	171,144
9.	Airconditioning (Updating Only) Estimate		Not Applicable	
	Subtotal Equipment Installed	9,156,210	1,345,193	10,501,403
10.	Construction (33,100 Sq. Mtrs. Avg \$154/Sq. Mtr.)(1) (6,882 Sq. Mtrs. at \$218/Sq. Mtr.)(2)		5,097,400 1,500,276	5,097,400 1,500,276
	Total Investment (Excluding Working Capital)	9,156,210	7,942,869	17,099,079

- (1) Building to be started early 1978, completed mid 1979.
(2) Building presently under construction

APPENDIX 6
SUMMARY OF INVESTMENT – WOOL MILL – YARN

	Estimated Cost in US \$		
	Foreign Exchange	Local	Total
1. Processing Equipment and Accessories -- CIF Value			
– Raw Wool Scouring	232,950		
– Worsted Spinning	1,597,550		
– Woolen Spinning	4,101,600		
– Bulking, Reeling, Winding	183,800		
Subtotal	6,115,900		
2. Import Duty on 1. (12%)		733,908	
3. Clearing and Local Transportation and Erection	122,320	61,160	
4. Auxiliary Equipment and Accessories		Included in 1.	
5. Import Duty on 4.		Included in 2.	
6. Clearing and Local Transportation on 4.		Included in 3.	
7. Spares (8%) Including Duty	489,272	58,713	
8. Electrical (Renovation and Connection) Estimate		30,580	
9. Airconditioning (Updating Only) Estimate		Not Applicable	
Subtotal Equipment installed	6,727,492	884,361	7,611,853
10. Construction (6,000 Sq. Meters at \$167/m²)		1,002,000	1,002,000
Total Investment (Excluding Working Capital)	6,727,492	1,886,361	8,613,853

(1) 50% of total 12,000 square meters to be built for wool mill to be completed mid-1978.

APPENDIX 7

SUMMARY OF INVESTMENT -- WOOL MILL -- WEAVE AND FINISH

	Estimated Cost in US \$		
	Foreign Exchange	Local	Total
1. Processing Equipment and Accessories -- CIF Value			
-- Weaving and Preparation	2,996,370		
-- Wool Dyeing and Finishing	1,591,510		
-- Inspection and Finishing	215,000		
Subtotal of 1.	4,802,880		
2. Import Duty on 1. (12%)		576,346	
3. Clearing and Local Transportation and Erection	96,056	48,028	
4. Auxiliary Equipment and Accessories	Included in 1.		
5. Import Duty on 4.	Included in 2.		
6. Clearing and Local Transportation on 4.	Included in 3.		
7. Spares (10%) Including Duty (12%)	480,288	57,635	
8. Electrical (Renovation and Connection) Estimate		192,116	
9. Airconditioning (Updating Only) Estimate	Not Applicable		
Subtotal Equipment Installed	5,379,224	874,125	6,253,349
10. Construction (6,000 Sq. Meters at \$167 (1)		1,002,000	1,002,000
Total Investment (Excluding Working Capital)	5,379,224	1,876,125	7,255,349

(1) 50% of total 12,000 square meters to be built for wool mill to be completed mid-1978.

APPENDIX 3
SUMMARY OF INVESTMENT PLAN – APPAREL
NEW APPAREL UNIT PLUS EQUIPMENT REPLACEMENT

Description	Estimated Cost in US\$		Total US\$
	Foreign Exchange in US\$	Local Currency in US\$	
New Sewing Factory Plus Equipment Replacement (CIF Value)			
[S913,750 + S21,500 x 1.10 (Freight)]	\$1,028,775		
[S924,304 + S21,750 x 1.10 (Freight)]	1,040,659		
	\$2,069,434		\$2,069,434
Auxiliary Equipment plus Accessories	405,682		405,682
Spare Parts	192,596		192,596
Erection	18,814		18,814
Technical Assistance	624,000		624,000
Clearing, Local Transport Plus Local Installation	—	\$351,942	351,942
Total	\$3,310,526	\$351,942	\$3,662,468

APPENDIX 9
SUMMARY OF INVESTMENT PLAN – POWER PLANT

Item No.	Description	Est. Cost in US \$		
		Foreign Exchange in US \$	Local Currency in US \$	Total US \$
1.	Equipment CIF Value	10,153,000		10,153,000
2.	Import Duty on 1. (12%)		1,218,500	1,218,500
3.	Clearing + Local Transportation + Erection	102,000	1,950,000(1)	2,052,000
4.	Auxiliary Equipment + Accessories		Included in 1.	
5.	Import Duty on 4.		Included in 2.	
6.	Clearing + Local Transportation for 4.		Included in 3.	
7.	Spares (5%) Including Duty (12%)	508,000	61,000	569,000
8.	Electrical		Included in 3.	
9.	Airconditioning		None	
	Subtotal Equipment Installed	10,763,000	3,229,500	13,992,500
10.	Construction 3,000 Sq. Mtrs at 1,200 (Estimated)		3,600,000	3,600,000
	Total Investment (Excluding Working Capital)	10,763,000	6,829,500	17,592,500

(1) Includes \$500,000 for turbine foundation.

APPENDIX 10

SUMMARY OF INVESTMENT PLAN – FOUNDRY AND SHOPS

Item No.	Description	Est. Cost in US \$		
		Foreign Exchange in US \$	Local Currency in US \$	Total US \$
1.	Equipment + Accessories CIF Value	793,000		793,000
2.	Import Duty on 1. (12%)		96,000	96,000
3.	Clearing + Local Transportation + Erection	45,000	64,000	109,000
4.	Auxiliary Equipment + Accessories		Included in 1.	
5.	Import Duty on 4.		Included in 2.	
6.	Clearing + Local Transportation for 4.		Included in 3.	
7.	Spares (5%) Including Duty (12%)	40,000	4,800	44,800
8.	Electrical (Connection Only)		5,000	5,000
9.	Airconditioning		None	
	Subtotal Equipment Installed	878,000	169,800	1,047,800
10.	Construction		None(1)	
	Total Investment (Excluding Working Capital)	878,000	169,800	1,047,800

(1) Machinery foundations included in item 10

APPENDIX 11
SUMMARY OF INVESTMENT PLAN – MATERIALS HANDLING
MATERIALS HANDLING SYSTEM

Description	Est. Cost in US \$		
	Foreign Exchange in US \$	Local Currency in US \$	Total US \$
Materials Handling System (Includes \$220,000 Spare Parts)	2,420,000		2,420,000
Import Duty		290,400	290,400
Clearing + Local Transportation + Erection	20,000	40,000	60,000
Total Investment	2,440,000	330,400	2,770,400

APPENDIX 12
SUMMARY OF INVESTMENT PLAN – FIRE PROTECTION
NEW FIRE TRUCKS AND FIRE DETECTION EQUIPMENT

	Estimated Cost in US \$		
	Foreign Exchange	Local	Total
Two Fire Trucks Plus Fire Detection Equipment (Including Spare Parts at \$28,000)	344,000	–	344,000
Import Duty	–	44,700	44,700
Total Investment	344,000	44,700	388,700

HISTORICAL PRODUCTION, CONSUMPTION, IMPORTS AND EXPORTS OF TEXTILE FABRICS IN EGYPT ^{1/}
(in million square meters)

Year	----- Production -----			----- Imports -----			Exports Cotton	Public Sector Available for Home Market			Private Sector ^{3/} Knitted & Woven	Grand Total	Population (million)	Apparent Consumption per Capita		
	Cotton	Other	Total	Cotton	Other ^{2/}	Total		Woven	Knitted Cotton	Total				Sq. M.	Kg ^{4/}	
1970	507	34	541	-	6	6	152	355	40	395	32	240	667	33.3	19.9	3.5
1971	524	35	559	-	8	8	169	355	43	398	36	244	676	34.1	20.5	3.6
1972	586	31	617	-	9	9	141	445	40	485	39	250	774	34.8	22.2	3.9
1973	554	27	581	-	12	12	135	429	39	468	45	254	767	35.6	21.5	3.8
1974	504	23	527	5	10	15	97	407	33	440	50	260	755	36.4	20.6	3.7
1975 ^{5/}	547	26	573	55	6	61	123	474	32	506	46	260	817	37.2	21.9	3.9

^{1/} EGOSW and Werner International Management Consultants Interim Report, October 1975

^{2/} Including synthetic fabrics smuggled into the country (estimated)

^{3/} There is some export of clothing but not fabrics from the private sector; actual figures are not available

^{4/} Excluding jute and flax

^{5/} Estimated

EGYPT - TEXTILE PRODUCTION AND CONSUMPTION

RATIONED FABRICS

Article	Specifications				Width cm	Finishing	Average Produc- tion Cost LE/Meter	Ex-Factory Price LE/Meter	Ave. Retail Price LE/Meter	Total Deliveries in Thousand Meters					
	Counts <u>NE</u>		Construction Threads/Inch							1969/70	1970/71	1971/72	1973	1974	1975
	Warp	Weft	Warp	Weft											
Grey Loomstate	14	14	52	38	90	Calendered	0.13	0.11	0.125	18.7	21.5	24.7	33.8	40.0	48.5
Bleached Cloths	14	14	56	38	80	Bleached	0.14	0.11	0.130	29.4	32.7	33.5	40.9	50.0	57.0
Zephyr	20	20	65	54	80	Printed for Men	0.15	0.14	0.155	21.7	13.5	16.7	18.9	25.0	28.5
Foulard	14	14	53	33	70	Dyed	0.12	0.10	0.105	11.3	11.0	9.7	14.4	14.0	14.5
Sheet	14	14	47	30	80	Printed for Ladies	0.15	0.12	0.140	3.3	2.3	3.5	3.5	7.0	8.5
Flannelette Mbrad	20	10	58	46	70	Raised Printed	0.18	0.15	0.165	29.9	38.7	41.4	39.1	-	-
Flannelette Katifa	20	8	56	41	70	Raised Printed	0.19	0.17	0.200	18.1	14.1	16.7	13.6	-	-
Cambric	30	30	64	57	80	Dyed	0.13	0.12	0.130	17.1	10.7	11.1	11.6	15.0	24.5
Poplin 1 x 1	30	30	117	53	90	Dyed	0.20	0.18	0.210	12.6	8.1	7.3	7.9	9.0	10.5
Apron Cloth	14	14	50	41	80	Dyed	0.15	0.14	0.160	1.5	4.6	4.9	4.7	6.0	6.5
Flannelette Misr	16	10	41	38	70	Printed	n.a.	0.14	0.160	-	-	-	-	70.0	78.5
							<u>0.154</u> 1/	<u>0.134</u>	<u>0.153</u>	<u>165.6</u>	<u>157.7</u>	<u>169.9</u>	<u>188.8</u>	<u>236.0</u>	<u>277.0</u>

Source: Market Aspects of the Textile Industry in Egypt, ECOSW, Cairo
1/ Including capital and financial charges

Textile Quota Agreement Between
The Government of Egypt and
The United States of America

American Embassy

Cairo, Egypt

December 30, 1975

Excellency:

I have the honor to refer to the Arrangement Regarding International Trade in Textiles done at Geneva on December 20, 1973, hereinafter referred to as the Arrangement. I also refer to recent discussions between Representatives of our two Governments concerning exports of cotton textiles and textile products from the Arab Republic of Egypt to the United States of America. As a result of these discussions and in conformity with Articles 2, 4 and 6 of the Arrangement, I wish to propose the following agreement relating to trade in cotton textiles and cotton textile products between the Arab Republic of Egypt and the United States of America, to replace and supersede, effective January 1, 1975, the Cotton Textile Agreement of May 10, 1974, as corrected and extended.

His Excellency

Zakaria Tewfik Abdel Fattah,

Minister of Trade,

Cairo.

1. The term of this Agreement shall be from January 1, 1975, through December 31, 1977. During such term, the Government of the Arab Republic of Egypt will limit annual exports of cotton textiles and textile products from the Arab Republic of Egypt to the United States of America to aggregate and specific limits at the levels specified in the following paragraphs.

2. The aggregate limit for cotton textiles and cotton textile products for the three years of the Agreement shall be 222,000,000 square yards equivalent. This three year aggregate limit shall be distributed among the three agreement years as follows:

	Limit Square Yard Equivalent
1st Agreement Year (January 1-December 31, 1975)	45,000,000
2nd Agreement Year (January 1-December 31, 1976)	72,000,000
3rd Agreement Year (January 1- December 31, 1977)	105,000,000

3. Within the applicable aggregate limit, the following specific limits shall apply:

	Limit (Square Yards)		
	1st Agreement Year	2nd Agreement Year	3rd Agreement Year
Categories 9/26	22,000,000	36,000,000	40,000,000
Category 9 (Sub-ceiling)	(19,000,000)	(30,000,000)	(36,000,000)
Category 26 (Sub-ceiling)	(8,000,000)	(12,000,000)	(15,000,000)
Categories 22/23	6,000,000	12,000,000	14,000,000
Categories 15/16	6,000,000	8,000,000	12,000,000

4. (a) In any agreement year, within the aggregate limit, the specific limits for non-apparel categories may be exceeded by 10 percent, and specific limits for apparel categories, if any are established by mutual agreement, may be exceeded by 7 percent.

(b) Shortfalls in categories given specific limits may be used in categories without specific limits in accordance with the provisions of paragraph 5 (hereof).

5. (a) Categories not given specific limits are subject to annual consultation levels and to the applicable aggregate limit.

(b) Giving due consideration to the understandings of our two Governments that there are possibilities to increase exports of cotton textiles from the Arab Republic of Egypt to the United States of America so that the Arab Republic of Egypt may enjoy a greater share of the United States' market, especially in categories other than those listed in paragraph 3 (above), and that the possibilities for increased trade represented by the terms of this Agreement will be enhanced by the continued rendering by both Governments of all appropriate facilities to the business communities of both countries in their efforts to identify and explore these possibilities for such trade, thus contributing to the strengthening of economic ties between our two countries, and the desire of both of our Governments to maintain the highest degree of flexibility so that the textile sector's export plans may develop favorably according to the potential of both markets, some categories (listed in Annex A, hereto) have been assigned, within the annual aggregate levels, consultation levels which may be increased by mutual agreement should the trade develop.

(c) For categories not enumerated in paragraph 3 (above) or in Annex A, hereto, and within the applicable aggregate level the United States of America will not designate an annual level of less than 1,000,000 square yards equivalent for any non-apparel category, or less than 700,000 square yards equivalent for any apparel category.

(d) In the event that the Government of the Arab Republic of Egypt wishes to export to the United States cotton textile products in excess of the consultation level, the Government of the Arab Republic of Egypt shall notify the Government of the United States of America specifying the category (or categories) and quantity it desires to export, and the United States will respond to the Government of the Arab Republic of Egypt within 7 working days from the date of receipt of such request by the United States Department of State at Washington, D.C., through diplomatic channels. If the Government of the United States of America does not provide a response to the Government of the Arab Republic of Egypt within the specified period, such failure to respond shall constitute a favorable response.

(e) The United States of America will not respond unfavorably to a request from the Arab Republic of Egypt to increase exports in a consultation category unless such action is necessary to eliminate real risks of market disruption. In the event of an unfavorable response, the United States of America will provide the Arab Republic of Egypt with a factual statement of market conditions in the United States of America which makes the unfavorable response necessary. The statement

will include data similar to that contemplated in paragraphs 1 and 2 of Annex A of the Arrangement. In such event, the United States of America will be prepared to consult promptly with the Arab Republic of Egypt to determine an appropriate course of action.

6. (a) In any agreement year exports may exceed the aggregate limit and any specific limit by allocation to the limits for that year an unused portion of the limit for the previous agreement year (carry over) or a portion of the applicable limit for the succeeding agreement year (carry forward).

(b) Carry over and carry forward together shall total a maximum of 11 percent, of which carry forward may be no more than 6 percent, and carry over no more than 11 percent. For the first agreement year only, carry over may total no more than 5 percent. The levels of carry over and carry forward shall be calculated on the basis of the limits of the receiving year. Short falls must actually exist in aggregate and specific ceilings (where appropriate) of the past year so as to provide the amount being added to the receiving year. The amount of carry forward must be charged to the levels of the forthcoming agreement year.

(c) The limits referred to in sub para (b) of this paragraph, are without any adjustment under paragraph 4 above.

(d) The total adjustment under this paragraph shall be in addition to the adjustments permitted by paragraph 4 to the limits for any year.

7. The Government of the Arab Republic of Egypt shall use its best efforts to space exports from the Arab Republic of Egypt to the

United States within each category evenly throughout the agreement year, taking into consideration normal seasonal factors.

8. The two Governments recognize that the successful implementation of this agreement depends in large part upon mutual cooperation on statistical questions. The Government of the United States of America shall promptly supply the Government of the Arab Republic of Egypt with data on monthly imports of cotton textiles from the Arab Republic of Egypt. The Government of the Arab Republic of Egypt shall promptly supply the Government of the United States of America with data on monthly exports of cotton textiles to the United States. Each Government agrees to supply promptly any other available relevant statistical data requested by the other Government.

9. In the implementation of this Agreement, the system of categories and the rates of conversion into square yards equivalent listed in the Annex B hereto shall apply. In any situation where the determination of an article to be a cotton textile would be affected by whether the weight or chief value criterion provided for in Article 12 of the Arrangement is used, the chief value criterion used by the Government of the United States of America shall apply.

10. The Government of the United States of America and the Government of the Arab Republic of Egypt agree to consult on any question arising in the implementation of this agreement.

11. Mutually satisfactory administrative arrangements or adjustments may be made to resolve minor problems arising in the implementation of this agreement including differences in points or procedure or operation.

12. If, with regard to the provisions of the Arrangement, the

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Government of the Arab Republic of Egypt considers that as a result of limitations specified in this agreement the Arab Republic of Egypt is being placed in an inequitable position vis-a-vis a third country, the Government of the Arab Republic of Egypt may request consultation with the Government of the United States of America with the view to taking appropriate remedial action such as a reasonable modification of this agreement.

13. During the term of this agreement, the Government of the United States of America will not request restraint on the export of cotton textiles from the Arab Republic of Egypt to the United States under the procedures of Article 3 of the Arrangement. The applicability of the Arrangement to trade in cotton textiles between the Arab Republic of Egypt and the United States shall otherwise be unaffected by this Agreement.

14. In conformity with Article 12, paragraph (3) of the Arrangement, and subject to the establishment of a mutually satisfactory certification system, exports of handloom fabrics of the cottage industry of the Arab Republic of Egypt, or handmade cottage industry products made of such handloom fabrics, or traditional folklore handicraft textile products shall not be subject to the provisions of this Agreement.

15. Either Government may terminate this Agreement effective at the end of an agreement year by written notice to the other Government to be given at least 90 days prior to the end of such agreement year. Either Government may at any time propose revisions in the terms of this agreement.

If this proposal is acceptable to the Government of the Arab Republic of Egypt, this note and your note of confirmation on behalf of the Government of the Arab Republic of Egypt shall constitute an agreement between the Government of the United States of America and the Government of the Arab Republic of Egypt.

Accept, Excellency, the renewed assurances of my highest consideration.

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ANNEX A

(Designated Annual Consultation Levels Pursuant to Paragraph 5(b)
of the Agreement)

<u>Category</u>	<u>Level</u> (Square Yards Equivalent)
1-4	5,000,000
18/19/26 (Print Cloth)	6,000,000
21	3,000,000
27	3,000,000
28	2,500,000
29	2,500,000
31	5,000,000
34	3,000,000
35	3,000,000
36	3,000,000
41/42	2,500,000
45	2,000,000
46	1,500,000
56	2,000,000
58	2,000,000
60	3,000,000

ANNEX B

<u>Category</u>	<u>Description</u>	<u>Unit</u>	<u>Conversion Factor</u>
1	Yarn, carded, singles	Lb.	4.6
2	Yarn, carded, plied	Lb.	4.6
3	Yarn, combed, singles	Lb.	4.6
4	Yarn, combed, plied	Lb.	4.6
5	Gingham, carded	Syd.	1.0
6	Gingham, combed	Syd.	1.0
7	Velveteen	Syd.	1.0
8	Corduroy	Syd.	1.0
9	Sheeting, carded	Syd.	1.0
10	Sheeting, combed	Syd.	1.0
11	Lawn, carded	Syd.	1.0
12	Lawn, combed	Syd.	1.0
13	Voile, carded	Syd.	1.0
14	Voile, combed	Syd.	1.0
15	Poplin and broadcloth, carded	Syd.	1.0
16	Poplin and broadcloth, combed	Syd.	1.0
17	Typewriter ribbon cloth	Syd.	1.0
18	Print cloth, shirting type, 80 x 80 type, carded	Syd.	1.0
19	Print cloth, shirting type, other than 80 x 80 type, carded	Syd.	1.0
20	Shirting, Jacquard or dobby, carded	Syd.	1.0
21	Shirting, Jacquard or dobby, combed	Syd.	1.0
22	Twill and sateen, carded	Syd.	1.0
23	Twill and sateen, combed	Syd.	1.0
24	Woven fabric, n.e.s., yarn dyed, carded	Syd.	1.0

<u>Category</u>	<u>Description</u>	<u>Unit</u>	<u>Conversion Factor</u>
25	Woven fabric, n.c.s., yarn dyed, combed	Syd.	1.0
26	Woven fabric, other, carded	Syd.	1.0
27	Woven fabric, other, combed	Syd.	1.0
28	Pillowcases, not ornamented, carded	No.	1.084
29	Pillowcases, not ornamented, combed	No.	1.084
30	Dish towels	No.	0.348
31	Other towels	No.	0.348
32	Handkerchiefs, whether or not in the piece	Doz.	1.66
33	Table damask and manufactures	Lb.	3.17
34	Sheets, carded	No.	6.2
35	Sheets, combed	No.	6.2
36	Bedspreads and quilts	No.	6.9
37	Braided and woven elastics	Lb.	4.6
38	Fishing nets and fish netting	Lb.	4.6
39	Gloves and mittens	Doz. Prs.	3.527
40	Hose and half hose	Doz. Prs.	4.6
41	T-shirts, ll white, knit, men's and boys'	Doz.	7.234
42	T-shirts, other, knit	Doz.	7.234
43	Shirts, knit, other than T-shirts and sweatshirts	Doz.	7.234
44	Sweaters and cardigans	Doz.	36.8
45	Shirts, dress, not knit, men's and boys'	Doz.	22.186
46	Shirts, sport, not knit, men's and boys'	Doz.	24.457

<u>Category</u>	<u>Description</u>	<u>Unit</u>	<u>Conversion Factor</u>
47	Shirts, work, not knit, men's and boys'	Doz.	22.180
48	Raincoats, 3/4 length or longer, not knit	Doz.	50.0
49	Other coats, not knit	Doz.	32.5
50	Trousers, slacks and shorts (outer), not knit, men's and boys'	Doz.	17.797
51	Trousers, slacks and shorts (outer), not knit, women's, girls' and infants'	Doz.	10.797
52	Blouses, not knit	Doz.	14.53
53	Dresses (including uniform), not knit	Doz.	45.3
54	Playsuits, washsuits, sunsuits, creepers, rompers, etc., not knit, n.e.s.	Doz.	25.0
55	Dressing gowns, including bathrobes, beach robes, housecoats and dusters, not knit	Doz.	51.0
56	Undershirts, knit, men's and boys'	Doz.	9.2
57	Briefs and undershorts, men's and boys'	Doz.	11.25
58	Drawers, shorts, and briefs, knit, n.e.s.	Doz.	5.0
59	All other underwear, not knit	Doz.	16.0
60	Pajamas and other nightwear	Doz.	51.96
61	Brassieres and other body-supporting garments	Doz.	4.75
62	Wearing apparel, knit, n.e.s.	Lb.	4.6
63	Wearing apparel, not knit, n.e.s.	Lb.	4.6
64	All other cotton textiles	Lb.	4.6

MAHALI
Summary Balance Sheets
1971-1975
U.S. \$ (000)

ANNEX Q-1

	1971	1972	1973	1974	1975
<u>ASSETS</u>					
CASH	\$ 10,315	\$ 9,666	\$ 6,925	\$ 14,371	\$ 8,588
RECEIVABLES	42,555	27,517	26,080	27,058	30,965
	52,870	37,183	33,005	41,429	39,553
OTHER CURRENT ASSETS	49,675	57,056	57,891	67,544	77,677
TOTAL CURRENT ASSETS	107,545	94,239	90,896	108,973	117,230
INVESTMENTS	16,774	22,555	23,052	26,612	28,788
PLANT AND EQUIPMENT (NET)	52,605	54,343	55,240	52,936	57,981
TOTAL ASSETS	171,924	171,137	169,188	188,521	203,999
<u>LIABILITIES & EQUITY</u>					
CURRENT LIABILITIES	39,296	30,771	27,394	40,964	50,529
LONG TERM LIABILITIES	5,525	7,156	6,092	8,289	11,256
TOTAL LIABILITIES	44,821	37,927	33,486	49,253	61,785
CAPITAL STOCK	10,256	10,256	10,256	10,256	10,256
APPROPRIATED RETAINED EARNINGS	116,847	122,954	125,446	129,012	131,958
TOTAL EQUITY	127,103	133,212	135,702	139,268	142,214
TOTAL LIABILITIES & EQUITY	\$171,924	\$171,137	\$169,188	\$188,521	\$203,999

MAHALLA
Summary Income Statement
1971-1975
US \$ (000)

ANNEX Q-2

ALES	1971	1972	1973	1974	1975
SALES	\$95,681	\$100,855	\$105,080	\$124,992	\$140,715
OTHER INCOME	9,266	6,672	5,564	5,587	4,859
GROSS INCOME	\$104,947	\$107,527	\$110,644	\$130,579	\$145,574
COST OF GOODS SOLD	83,374	86,746	89,537	91,688	110,731
GROSS PROFIT	21,573	20,781	21,107	38,891	34,842
OPERATING EXPENSES	6,351	7,856	6,305	8,892	9,207
INCOME FROM OPERATIONS	15,222	12,925	12,802	29,999	25,635
NON OPERATING INCOME	575	353	2,446	854	397
NET INCOME BEFORE TAXES AND EXTRAORDINARY ITEMS	15,797	13,278	15,248	30,253	26,032
ADJUSTMENT FOR EXPENSE PROVISIONS	1,646	1,218	1,205	8,443	8,333
INCOME TAXES	1,662	746	1,213	5,708	4,720
OTHER LEGAL REQUIREMENTS	1,028	950	1,307	1,785	1,403
EXTRAORDINARY INCOME	218	505	169	239	269
NET INCOME	11,679	10,869	11,692	15,156	11,722
DIVIDENDS PAYABLE TO EMPLOYEES	977	908	977	1,256	990
DIVIDENDS PAYABLE TO GOVERNMENT	8,789	8,166	8,784	11,315	8,914
BALANCE TO APPROPRIATED RETAINED EARNINGS	\$ 1,913	\$ 1,795	\$ 1,931	\$ 2,585	\$ 2,393

COST OF SALES 1971 - 1975 (IN £E 1,000)

Cost Items	1971		1972		1973		1974		1975		5-Year Total	
	Amount	%	Amount	%								
<i>Production Department Costs</i>												
1. Cotton	13,325	42.7	13,615	39.9	13,406	39.2	13,255	35.6	13,156	32.4	66,757	37.7
2. Wool and Synthetics	2,347	7.5	3,045	8.9	2,822	8.3	3,670	9.9	3,903	9.6	15,787	8.9
3. Chemicals	1,317	4.2	1,451	4.2	1,409	4.1	1,578	4.2	2,424	6.0	8,179	4.6
4. Fuel	72	.2	81	.2	81	.2	95	.2	121	.3	450	.2
5. Spare Parts	1,233	4.0	1,267	3.7	1,346	3.9	1,547	4.2	1,914	4.7	7,307	4.1
6. Packing	337	1.1	564	1.7	492	1.5	486	1.3	772	1.9	2,651	1.5
7. Total Material (1. - 6.)	18,631	58.7	20,023	58.6	19,556	57.2	20,631	55.4	22,290	54.9	101,131	57.0
8. Wages	5,933	19.0	7,024	20.6	7,633	22.4	8,320	22.4	10,178	25.1	39,088	22.1
9. Misc. Services	120	.4	169	.5	154	.5	206	.5	144	.4	793	.4
10. Depreciation - Building	240	.8	240	.7	241	.7	253	.7	257	.6	1,231	.7
11. Depreciation - Equipment	1,214	3.9	1,271	3.7	1,307	3.8	1,365	3.7	1,273	3.1	6,430	3.6
12. Indirect Taxes	1,660	5.3	1,868	5.5	1,782	5.2	2,051	5.5	2,436	6.0	9,797	5.5
13. Subtotal (8. - 12.)	9,167	29.4	10,572	31.0	11,117	32.6	12,195	32.8	14,288	35.2	57,339	32.3
14. Total Production Cost (7. + 13.)	27,798	89.1	30,595	89.6	30,673	89.8	32,826	88.2	36,578	90.1	158,470	89.3
15. Less: Waste Sales	(346)	(1.1)	(472)	(1.4)	(739)	(2.2)	(705)	(1.9)	(819)	(2.0)	(3,081)	(1.7)
16. Less: Service Sales	(61)	(.2)	(83)	(.2)	(83)	(.3)	(51)	(0.1)	(136)	(.3)	(414)	(.2)
17. Net Departmental Costs (14. - 15. - 16.)	27,391	87.8	30,040	88.0	29,851	87.3	32,070	86.2	35,623	87.7	154,975	87.4
<i>Production Service Costs</i>												
18. Chemicals	74	.2	88	.3	103	.3	110	.3	143	.3	518	.3
19. Fuel	857	2.8	924	2.7	961	2.8	965	2.6	1,040	2.6	4,747	2.7
20. Spare Parts	786	2.5	681	2.0	859	2.5	1,195	3.2	1,220	3.0	4,741	2.7
21. Packing	67	.2	37	.1	42	.1	70	.2	82	.2	298	.2
22. Total Material (18. Through 21.)	1,784	5.7	1,730	5.1	1,965	5.7	2,340	6.3	2,485	6.1	10,304	5.9
23. Wages	1,750	5.6	1,982	5.8	2,061	6.0	2,229	6.0	2,667	6.6	10,689	6.0
24. Misc. Services	268	.8	303	.9	263	.8	399	1.1	175	.4	1,408	.8
25. Depreciation - Building	239	.8	247	.7	255	.8	260	.7	265	.7	1,266	.7
26. Depreciation - Equipment	246	.8	240	.7	238	.7	240	.7	239	.6	1,203	.7
27. Depreciation - Transport Equip.	56	.2	125	.4	172	.5	196	.5	192	.5	741	.4
28. Indirect Taxes	67	.2	52	.1	81	.2	90	.2	94	.2	384	.2
29. Subtotal (23. Through 28.)	2,626	8.4	2,949	8.6	3,070	9.0	3,414	9.2	3,632	9.0	15,691	8.8

ANNEX Q-4

PROFIT ANALYSIS BY PRODUCT GROUPS - 1974

(IN £E 1,000)

Item	Total		Cotton Spinning		Cotton Fabrics		Cotton/Wool		Ready-made Garments		Carded Wool Yarn		Worsted Wool Yarn		Wool Fabrics	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
1. Material Used (Incl. Spare Parts & Packing)	20,631	55.4	13,596	67.9	2,336	10.3	532	64.0	185	3.6	495	75.1	3,310	85.2	177	4.1
2. Transfers in Of Processed Material	-	-	-	-	13,133	57.8	-	-	4,092	78.8	-	-	-	-	3,182	74.3
3. Departmental Wages	8,320	22.4	2,797	14.0	3,685	16.2	130	15.6	677	13.0	114	17.3	363	9.4	554	12.9
4. Departmental Services	206	.5	12	-	137	.6	16	1.9	28	.5	1	.2	1	-	11	.3
5. Depreciation and Indirect Taxes	3,669	9.9	2,400	12.0	828	3.6	54	6.5	56	1.1	30	4.5	227	5.8	74	1.7
6. Allocated Production Service Expense	5,132	13.8	1,773	8.8	2,614	11.5	100	12.0	155	3.0	39	5.9	161	4.1	290	6.8
7. Subtotal (1.+2.+3.+4.+5.+6.)	37,958	102.0	20,578	102.7	22,733	100.0	832	100.0	5,193	100.0	679	103.0	4,082	104.5	4,288	100.1
8. Less Sales of Waste and Services	756	2.0	549	2.7	6	-	-	-	-	-	20	3.0	176	4.5	5	.1
9. Total Production Cost (7. - 8.)	37,202	100.0	20,029	100.0	22,727	100.0	832	100.0	5,193	100.0	659	100.0	3,886	100.0	4,283	100.0
10. Transfers to Other Departments	-	-	13,133	65.6	3,121	13.7	41	4.9	-	-	568	86.2	2,573	66.2	971	22.7
11. Inventory Build-up (Decrease)	2,350	6.3	266	1.3	1,087	4.8	88	10.6	69	1.3	3	.5	172	4.4	665	15.5
12. Net Sales	48,749	100.0	12,202	100.0	23,369	100.0	883	100.0	6,590	100.0	106	100.0	1,372	100.0	4,227	100.0
13. Cost of Sales (9.-10.-11.)	34,852	71.5	6,830	54.3	18,519	79.2	703	79.6	5,124	77.7	88	83.0	1,141	83.1	2,647	62.6
14. Gross Margin (12. - 13.)	13,897	28.5	5,572	45.7	4,850	20.8	180	20.4	1,466	22.3	18	17.0	231	16.9	1,580	37.4
15. Marketing Expenses	984	2.0	257	2.1	468	2.0	17	1.9	130	2.0	2	1.8	27	2.0	83	2.0
16. Administrative Expenses	2,823	5.8	707	5.8	1,353	5.8	51	5.8	382	5.8	6	5.8	79	5.8	245	5.8
17. Operating Profit (14.-15.-16.)	10,090	20.7	4,608	37.8	3,029	13.0	112	12.7	954	14.5	10	9.4	125	9.1	1,252	29.6
18. Subsidies	1,269	2.6	847	6.9	422	1.8	-	-	-	-	-	-	-	-	-	-
19. Operating Profit After Subsidies (17.+18.)	11,359	23.3	5,455	44.7	3,451	14.8	112	12.7	954	14.5	10	9.4	125	9.1	1,252	29.6

PROFIT ANALYSIS BY PRODUCT GROUPS – FIRST SIX MONTHS – 1975

(IN £E 1,000)

Item	Total		Cotton Spinning		Cotton Fabrics		Cotton/Wool		Ready-made Garments		Carded Wool Yarn		Worsted Wool Yarn		Wool Fabrics	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
1. Materials Used (Incl. Spare Parts & Packing)	10,734	64.5	6,763	65.1	1,316	10.8	292	65.9	159	5.5	256	73.4	1,825	85.2	123	5.6
2. Transfers In of Processed Material	—	—	—	—	7,099	58.1	—	—	2,239	77.5	—	—	—	—	1,558	71.5
3. Departmental Wages	4,798	24.4	1,305	15.5	2,077	17.0	75	16.9	427	14.7	71	20.3	217	10.1	327	15.0
4. Departmental Services	125	.8	9	.1	81	.7	2	.5	29	1.0	—	—	1	—	3	.1
5. Depreciation and Indirect Taxes	1,007	10.1	1,415	13.6	365	3.2	25	5.6	27	.9	6	1.7	109	5.1	29	1.3
6. Allocated Production Service Expense	2,480	12.6	858	8.3	1,260	10.3	49	11.1	74	2.8	19	5.4	81	3.8	139	6.4
7. Subtotal (1.+2.+3.+4.+5.+6.)	20,134	102.2	10,650	102.6	12,218	100.1	443	100.0	2,955	102.3	352	100.8	2,233	104.2	2,179	100.0
8. Less Sales of Waste and Secondis	481	2.2	265	2.6	6	.1	—	—	57	2.3	3	.8	90	4.2	—	—
9. Total Production Cost (7. – 8.)	19,703	100.0	10,385	100.0	12,212	100.0	443	100.0	2,888	100.0	349	100.0	2,143	100.0	2,179	100.0
10. Transfers to Other Departments	—	—	7,099	58.4	1,866	15.3	18	.4	—	—	302	86.5	1,238	57.8	373	17.1
11. Inventory Build-up (Decrease)	(72)	(.4)	396	3.8	(578)	(4.7)	(15)	(3.4)	18	.6	(9)	(2.6)	153	7.1	(37)	(1.7)
12. Net Sales	26,798	100.0	5,195	100.0	13,525	100.0	578	100.0	4,006	100.0	60	100.0	841	100.0	2,594	100.0
13. Cost of Sales (9.–10.–11.)	19,775	73.8	2,390	55.8	10,924	80.8	440	76.1	2,870	71.7	56	93.3	752	89.4	1,843	71.0
14. Gross Margin (12. – 13.)	7,023	26.2	2,305	44.4	2,601	19.2	138	23.9	1,135	28.3	4	6.7	89	10.6	751	29.0
15. Marketing Expenses	443	1.6	86	1.6	223	1.6	10	1.7	66	1.6	1	1.6	14	1.7	43	1.7
16. Administrative Expenses (1)	1,355	5.1	263	5.1	684	5.1	29	5.1	202	5.1	3	5.1	43	5.1	131	5.1
17. Operating Profit (14. – 15. – 16.)	5,125	19.5	1,956	37.7	1,694	12.5	99	17.1	867	21.6	—	—	32	3.8	577	22.2
18. Subsidies	335	1.2	203	3.9	132	1.0	—	—	—	—	—	—	—	—	—	—
19. Operating Profit After Subsidies (17.+18.)	5,860	20.7	2,159	41.6	1,826	13.5	99	17.1	867	21.6	—	—	32	3.8	577	22.2

1) Administrative expenses used above based on 1/2 of total 1975 administrative expenses.

MEHALLA TEXTILE - LONG TERM DEBT AND INTEREST PAYMENTS

	Required Loans ^{1/}		Principal Repayment Schedule		Loan Balance		Interest Payments ^{3/}		
	Existing	New	Existing	New ^{2/}	Existing	New	Existing	New	Combined
1976	14500		3479		11021		1276	0	1276
1977		23909	4228		6793	23909	891	1195	2086
1978		62163	3787		3006	86072	490	5499	5989
1979		9564	1528		1478	95636	224	9085	9309
1980			487		991	95636	123	9564	9687
1981			487		504	95636	75	9564	9639
1982			439	5930	65	89706	28	9418	9446
1983			65	6537	0	83169	3	8811	8814
1984				7207		75962		8141	8141
1985				7946		68017		7402	7402
1986				8760		59257		6588	6588
1987				9658		49599		5690	5690
1988				10648		38951		4700	4700
1989				11739		27212		3609	3609
1990				12942		14269		2406	2406
1991				14270		0		1078	1078
	14500	95636					3110	92750	95860

^{1/} The existing loan of \$14,500,000 is the balance due on a previous loan. The new loan of \$95,636,000 to be made in connection with this project is assumed to be required as follows: 25% in 1977, 65% in 1978, and 10% in 1979.

^{2/} The new loan of \$95,636,000 is scheduled for repayment on an amortizing basis over a 10-year period starting in 1982. Amounts in this column represent approximate annual repayment amounts on an amortizing basis.

^{3/} Interest is applied at 10% of the average of the previous year's and current year's loan balance.

**ESTIMATED SALES INCREASES UNDER PROJECT
1976 VERSUS 1980 (IN £E)
PRODUCT CATEGORY – COTTON YARN**

Transaction	Estimated Sales Value of 1976 Production (At 1975 Prices)				Projected Sales Value with Project (At 1975 Prices)				Increase (Decrease) in Sales Value	
	Units Sold (Metric Tons)	Price per Unit	Sales Value Total Sales Value in 1,000£E	% of Total	Units Sold (Metric Tons)	Price per Unit	Sales Value Total Sales Value in 1,000£E	% of Total	Amount	%
Export Sales	7,000	1,320	9,240	85.3	12,000	1,320	15,840	94.4	6,600	71.4
Domestic Sales	1,700	940	1,598	14.7	1,000	940	940	5.6	(658)	(41.2)
Total Sales	8,700	1,246	10,838	100.0	13,000	1,291	16,780	100.0	5,942	54.8
Estimated Internal Transfers					26,500					
Total Sales and Transfers	35,200				42,200					

Comments:

- (1) 1976 production units represent present production levels and sales.
- (2) Projected production levels based on revised demand estimates utilizing equipment that was originally to be scrapped (projection of 42,200 tons compares with previous 1980 projection of 38,760 tons of production).

PRODUCT CATEGORY – COTTON FABRICS

Transaction	Estimated Sales Value of 1976 Production (At 1975 Prices)				Projected Sales Value with Project (At 1975 Prices)				Increase (Decrease) in Sales Value	
	Units Sold (1,000 Meters)	Price per Unit	Sales Value Total Sales Value in 1,000 £E	% of Total	Units Sold (1,000 Meters)	Price per Unit	Sales Value Total Sales Value in 1,000 £E	% of Total	Amount	%
Export Sales	45,000	218	9,810	32.4	55,000	248	13,640	36.6	3,830	39.0
Domestic Sales	83,500	245	20,457	67.6	85,800	275	23,595	63.4	3,138	15.3
Total Sales	128,500	236	30,267	100.0	140,800	264	37,235	100.0	6,968	23.0
Estimated Internal Transfers	20,000				22,800					
Total Sales and Transfers	148,500				163,600					

Comments:

- (1) Production quantities used are same as used in original projection.
- (2) Projected price increases on export and local sales represent shift to more costly finishes.

PRODUCT CATEGORY – COTTON/WOOL

Transaction	Estimated Sales Value of 1976 Production (At 1975 Prices)				Projected Sales Value with Project (At 1975 Prices)				Increase (Decrease) in Sales Value	
	Units Sold (Metric Tons)	Price per Unit	Total Sales Value in 1,000 £E	% of Total	Units Sold (Metric Tons)	Price per Unit	Total Sales Value in 1,000 £E	% of Total	Amount	%
Export Sales	650	591	384	38.1	650	591	384	38.1	—	—
Domestic Sales	1,000	680	680	63.9	1,000	680	680	63.9	—	—
Total Sales	1,650	645	1,064	100.0	1,650	645	1,064	100.0	—	—
Estimated Internal Transfers										
Total Sales and Transfers										

Comments: No new equipment proposed for cotton/wool production.

PRODUCT CATEGORY – WOOL AND WORSTED YARNS

Transaction	Estimated Sales Value of 1976 Production (At 1975 Prices)				Projected Sales Value with Project (At 1975 Prices)				Increase (Decrease) in Sales Value	
	Units Sold (Metric Tons)	Price per Unit	Sales Value Total Sales Value in 1,000 ££	% of Total	Units Sold (Metric Tons)	Price per Unit	Sales Value Total Sales Value in 1,000 ££	% of Total	Amount	%
Domestic Sales	540	4,320	2,332	100.0	720	4,320	3,110	100.0	778	33.4
Total Sales	540	4,320	2,332	100.0	720	4,320	3,110	100.0	778	33.4
Estimated Internal Transfers					1,390					
Total Sales and Transfers					1,830					

Comments:

- (1) Internal transfers include blanket yarns of 190 tons in 1976 and 200 tons in 1980.
- (2) Increase in units produced (from 1,880 to 1,930) over original estimate represents current production level.
- (3) Increase in projected units sold (from 2,850 to 2,984) represents greater projected internal use for garment production.

PRODUCT CATEGORY – WOOL AND WORSTED FABRICS

Transaction	Estimated Sales Value of 1976 Production (At 1975 Prices)				Projected Sales Value with Project (At 1975 Prices)				Increase (Decrease) in Sales Value	
	Units Sold (1,000 Meters)	Price per Unit	Sales Value Total Sales Value in 1,000 £E	% of Total	Units Sold (1,000 Meters)	Price per Unit	Sales Value Total Sales Value in 1,000 £E	% of Total	Amount	%
Domestic Sales – Fabric	2,410	1,850	4,458	92.4	2,335	2,220	5,184	88.9	726	16.3
Domestic Sales – Blankets	150	2,436	365	7.6	320	2,436	780	13.1	415	114.0
Total Sales	2,560	1,883	4,823	100.0	2,655	2,246	5,964	100.0	1,141	23.7
Estimated Internal Transfers	760				1,775					
Total Sales and Transfers	3,320				4,430					

Comments:

- (1) Blankets represent 70,000 units at 5.221/unit in 1976 and a projection in 1980 of 150,000 units at 5.221/unit.
- (2) Increase of 20% in projected price per meter of fabrics represents combination of wider goods and more costly goods.

PRODUCT CATEGORY – GARMENTS

Transaction	Estimated Sales Value of 1976 Production (At 1975 Prices)				Projected Sales Value with Project (At 1975 Prices)				Increase (Decrease) in Sales Value	
	Units Sold (1,000 Units)	Price per Unit	Sales Value Total Sales Value in 1,000 £E	% of Total	Units Sold (1,000 Units)	Price per Unit	Sales Value Total Sales Value in 1,000 £E	% of Total	Amount	%
Export Sales	2,283	1,076	2,457	30.0	3,000	1,345	4,035	29.4	1,578	64.2
Domestic Sales	4,239	1,354	5,740	70.0	4,772	2,031	9,692	70.6	3,952	68.9
Total Sales	6,522	1,257	8,197	100.0	7,772	1,766	13,727	100.0	5,530	67.5

Estimated Internal Transfers

Total Sales and Transfers

Comments:

- (1) Estimated 1976 sales of 6,522,000 units represents actual current production levels (this compares with 6,000,000 used in original estimate).
- (2) Projected 1980 sales represent 6,522,000 units plus planned 750,000 new suits plus estimated additional production of 450,000 units as a result of reorganization of present plant. These 450,000 additional units represent 1/2 of indicated additional potential production. The total projected 7,772,000 units compares with original projection of 6,750,000 units.

Mokalla Textile
Projected Profit After Taxes, Interest and Dividend
(U.S. Dollars)

<u>Year</u>	<u>1/ Estimated Sales</u>	<u>2/ Normal Operating Profit</u>	<u>3/ Adjustments</u>	<u>4/ Adjusted Operating Profit</u>	<u>5/ Interest Payments</u>	<u>6/ Other Income</u>	<u>7/ Net Profit Before Tax</u>	<u>8/ Purchase of Gov't. Bonds</u>	<u>9/ Dividends & Taxes</u>	<u>Net Profit</u>
1976	147,484	24,186	790	24,976	1,276	1,200	24,900	747	14,940	9,213
1977	147,484	24,186	(2,815)	21,371	2,066	1,229	20,514	615	12,398	7,591
1978	152,704	25,043	(2,489)	22,554	5,989	1,258	17,823	535	10,674	6,574
1979	173,584	28,468	4,849	33,317	9,309	1,283	25,291	759	15,175	9,357
1980	179,684	32,784	5,049	37,833	9,687	1,312	29,458	884	17,675	10,599
1981	199,684	32,784	5,249	38,033	9,639	1,355	29,749	892	17,849	11,356
1982	199,684	32,784	5,449	38,233	9,446	1,398	30,185	906	18,111	11,596
1983	199,684	32,784	5,649	38,433	8,814	1,442	31,061	932	18,637	11,792
1984	199,684	32,784	5,849	38,633	8,141	1,487	31,979	959	19,197	11,833
1985	199,684	32,784	6,049	38,833	7,462	1,533	32,904	989	19,778	12,197
1986	199,684	32,784	6,249	39,033	6,588	1,580	32,025	1,021	20,415	12,599
1987	199,684	32,784	6,449	39,233	5,690	1,628	35,171	1,055	21,103	13,113
1988	199,684	32,784	6,649	39,433	4,700	1,677	36,410	1,092	21,846	13,572
1989	199,684	32,784	6,849	39,633	3,600	1,727	37,751	1,133	22,651	13,997
1990	199,684	32,784	7,049	39,833	2,406	1,779	39,206	1,176	23,524	14,506
1991	199,684	32,784	7,249	40,033	1,078	1,832	40,787	1,224	24,472	15,091

1/ "Estimated sales" are based on applying 10% of projected increase (of \$52,200,000) in 1978, 50% in 1979, and 100% in 1980.

2/ "Normal operating profit" is the "normal operating profit" of 16.4% (based on 1975 results). This profit is before application of interest, taxes and export subsidies.

3/ "Adjustments" are based on data developed in Annex Q-6. These are applied as follows:

In 1,000 U.S. Dollars

<u>Year</u>	<u>Reduction in Present Depreciation</u>	<u>Depreciation on New Facilities</u>	<u>Personnel Savings</u>	<u>Spare Parts</u>	<u>Total</u>
1976	790	-0-	-0-	-0-	790
1978	1,579	(5,705)	1,226	85	(2,815)
1979	2,372	(11,409)	6,125	423	(2,489)
1980	3,161	(11,409)	12,251	846	4,849

After 1980 adjustment is increased \$200,000 annually to reflect estimated further reductions in depreciation on existing equipment.

- 2/ "Adjusted operating profit" represents expected annual profits before interest, taxes and export subsidies. It is calculated as the "normal profit" plus "adjustments".
- 2/ Interest payments as developed in Annex Q-6.
- 2/ Other income is primarily interest received on mandatory purchases of government bonds.
- 2/ "Net before tax profit" is "adjusted operating profit" plus "other income" less "interest payments".
- 2/ Mandatory purchases of government bonds estimated at about 3% of "net before tax profits".
- 2/ "Dividends and taxes" are income taxes and mandatory profit distribution, estimated as 60% of "net before tax profit".

MEHALLA TEXTILE - NET INCREASE IN OPERATING PROFIT (BEFORE TAXES INTEREST AND EXPORT SUBSIDY)

	% Of Net Sales	1976 Estimate	1980 % Increase	1980 Projection	1980 Increase
Net Sales	100	147484	35.394	199684	52200
Normal Cost of Sales	77	113562	"	153755	40193
Normal Gross Margin	23	33922	"	45929	12007
Selling Expenses	1.7	2508	"	3395	887
Administrative Expense	4.9	7228	"	9787	2559
Normal Operating Profit	16.4	24186	"	32747	8561
Adjustments in Mfg. Cost	.0	0	"	4850 ^{2/}	4850
Estimated Profit ^{1/}	16.4	24186	"	37597	13411

^{1/} Estimated profit is before interest, taxes and export subsidies.
^{2/} See scheduled "Adjustments to Projected 1980 Operating Profit"

MEHALLA TEXTILE
ADJUSTMENTS TO PROJECTED 1980 OPERATING PROFIT (EXPENSES)

000\$)		-1980-		-1980-		Over Normal
<u>Cost Elements</u>	<u>1976</u>	<u>Normal %</u>	<u>Normal</u>	<u>Projected %</u>	<u>Projected</u>	<u>(Increase)</u>
	Estimate	Change	Total Amount	Change	Total Amount	Decrease
Depreciation - Present Facilities ^{1/}	5707	35.394	7727	(20.0)	4566	3161
Depreciation - New Facilities ^{2/}	-0-	-0-	-0-	-0-	11409	(11409)
Total Manufacturing Personnel ^{3/}	34614	35.394	46865	-0-	34614	12251
Spare Parts ^{4/}	3333	35.394	4513	10.0	3666	847
Net Adjustment Applied in "Net Profit" Calculation						<u>4850</u>

^{1/}It is estimated that depreciation on existing equipment will be reduced by about 20% over next five years due to equipment being fully depreciated or replaced.

^{2/}The annual depreciation on new equipment and buildings is calculated in Annex 12 as \$11,409,000.

^{3/}As discussed in text, the basic economic justification evaluation is based on the assumption that no personnel in addition to existing manpower will be added to produce additional volume. The \$34,614,000 represent estimated 1976 labor costs for manufacturing wages including service departments.

^{4/}Spare parts are included with the recommended equipment purchases. For this reason and because newer equipment will require fewer parts replacement, it is estimated that spare parts cost will increase by only about 10% while sales are increasing 35%. The estimated \$3,333,000 represent estimated 1976 costs for spare parts in process departments only (service departments excluded).

Mehalla Textile
Summary of Capital Expenditures
with Contingency and Escalation

(000\$)	<u>Foreign Exchange Portion</u>	<u>Egyptian Pound Portion</u>	<u>Total Project</u>
Yarn Mill No. 7	25,835	9,983	35,818
Twisting & Sewing Yarn	1,107	151	1,258
Update Winding & Combing	832	108	940
Total Yarn (Cotton)	27,774	10,242	38,016
Cotton Weaving	14,669	2,962	17,631
Warping & Slashing	832	260	1,092
Cotton Finishing	11,583	10,048	21,631
Update Looms	922	120	1,042
Total Cotton Fabrics	28,006	13,390	41,396
Wool Yarn Mills	8,511	2,386	10,867
Wool Weave and Finish	6,804	2,373	9,177
Total Wool Mills	15,315	4,759	20,074
New Sewing Factory	1,710	230	1,940
Sewing Equipment	1,689	215	1,904
Technical Assistance	789	-0-	789
Total Garments	4,188	445	4,633
Total Production Areas	75,283	28,836	104,119
Power Plant Equipment	13,615	8,638	22,253
Foundry & Shops	1,111	215	1,326
Materials Handling	3,087	418	3,505
Fire Fighting Equipment	435	57	492
Total Service Equipment	18,248	9,328	27,576
Total Capital Expenditures	93,531	38,164	131,695
Technical Assistance	2,105	-0-	2,105
	95,636	38,164	133,880

Mehalla Textile
Depreciation Schedule for New Facilities
with Contingency and Escalation

(000\$) <u>Area and Facility Type</u>	<u>Basis</u>	<u>Depreciation Rate (Per cent)</u>	<u>Annual Depreciation Expense</u>
Production Equipment:			
Cotton Yarn	31,648	8	2,532
Cotton Fabric	32,205	8	2,576
Wool Mill	17,539	8	1,403
Garments	4,633	5	232
Total Production Equipment	86,025		6,743
Service Equipment:			
Power Plant	17,701	6	1,062
Foundry & Shops	1,325	5	66
Materials Handling	3,505	10	351
Fire Fighting Equipment	492	10	49
Total Service Equipment	23,023		1,528
New Buildings:			
Cotton Yarn	6,368	3	191
Cotton Fabric	9,190	3	2,757
Wool Mill	2,535	3	76
Power Plant	4,554	2.5	114
Total New Buildings	22,647		3,138
Total Project	131,695		11,409

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MEHALLA TEXTILE							
PROJECTED CASH FLOW (000 US Dollars)							
Year	1/ Net After Tax Profit	2/ Annual Depreciation	3/ Available Funds	4/ Capital Purchases	5/ Repayment of Debt	6/ Annual Cash Availability	Cumulative Cash
976	9213	5707	14920	3816	3479	7625	7625
977	7591	5423	13014	11449	4228	(2663)	4962
978	6594	10842	17436	15266	3787	(1617)	3345
979	9357	16260	25617	7633	1528	16456	19801
980	10899	16075	26974	-0-	487	26487	46288
981	11008	15875	26883	-0-	487	26396	72684
982	11168	15675	26843	-0-	6369	20474	93158
983	11492	15475	26967	-0-	6602	20365	113523
984	11833	15275	27108		7207	19901	133424
985	12197	15075	27272		7946	19326	152750
986	12589	14875	27464		8760	18704	171454
987	13013	14675	27688		9658	18030	189484
988	13472	14475	27947		10648	17299	206783
989	13967	14275	28242		11739	16503	223286
990	14506	14075	28581		12942	15639	238925
991	15091	13875	28966		14270	14696	253621

"Net after tax profit" (Annex 8) represents profit after interest payments, other income, income taxes, mandatory distribution of profits, and mandatory purchases of bonds.

Depreciation, as shown in Annex 12, is applied as follows:

	(000 US Dollars)				
	1976	1977	1978	1979	1980
On Current Equipment (\$)	5707	5423	5138	4851	4666
On New Facilities (\$)	-0-	-0-	5704	11409	11409
Total (\$)	5707	5423	10842	16260	16075

In 1981 and after, depreciation is reduced \$200,000 per year to reflect reduction in depreciation on existing equipment.

"Available funds" are funds available to make capital purchases and repay loans. "Available funds" represent the "after tax profit" plus "depreciation."

"Capital purchases" are local expenditures of \$38,164,414 paid in EE, recommended under project. They are applied as 10% in 1976, 30% in 1977, 40% in 1978, 20% in 1979.

✓ "Repayment of debt" is per Annex 6.

✓ "Cash available for other projects" are the funds available after local capital purchases in connection with the project and repayment of debt.

Project Performance Tracking (PPT)

A.I.D. plans to finance with the proceeds of this loan a U.S. consulting firm that will draw up a master plan for equipment and services including five schedules for ordering, delivery, installation and testing. The work of the U.S. consultant will be the basis for establishing a Project Performance Tracking (PPT) system which will be used by Mehalla and A.I.D. to monitor physical and financial progress.