

Final Report

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Design and Construction Supervision of Grain and TOF Storage Facilities in Safaga and Alexandria

Volume II

**Quay 81/82 Bagging Facility
Port of Alexandria**

**Prepared for
General Authority for Supply Commodities
Ministry of Supply
Cairo, Arab Republic of Egypt**

Prepared by



8 May 1985

General Authority for Supply Commodities
Ministry of Supply
99, Kasr El-Aini Street
Cairo, Egypt

Attention: Mr. Mahmoud T. Wali
First Undersecretary

Subject: Grain/TOF Terminal Storage Facility
USAID Project 263-K-041
Project Completion Report

Dear Mr. Wali:

Black & Veatch International is pleased to submit this Project Completion Report covering our engineering services with respect to Design and Construction of Grain and TOF Facilities in Safaga and Alexandria. All work required by Black & Veatch International under the Contract Documents has been completed.

This Final Completion Report consists of three separate volumes. Together they cover the five subprojects under USAID Project Loan No. 263-K-041. The three volumes are:

- Volume I - Laboratory Equipment, Portable Bagged Grain Conveyors, and Safaga Silo Complex (Design), Port of Safaga.
- Volume II - Quay 81/82 Bagging Facility, Port of Alexandria.
- Volume III - Tallows, Oils and Fats Facility, Port of Alexandria.

During the execution of our services, we have worked closely with representatives of the Ministry of Supply. We would like to express our sincere thanks for the assistance and cooperation provided to us.

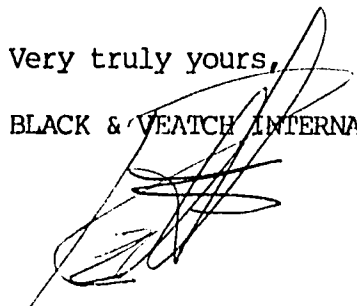
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We appreciate the opportunity of working with the Ministry of Supply and trust that we shall have future opportunities to be of service.

Very truly yours,

BLACK & VEATCH INTERNATIONAL



R. Zitterkopf
Vice President

REZ/ef

FINAL REPORT

DESIGN AND CONSTRUCTION SUPERVISION OF
GRAIN AND TOF STORAGE FACILITIES IN
SAFAGA AND ALEXANDRIA

VOLUME II

QUAY 81/82 BAGGING FACILITY
PORT OF ALEXANDRIA

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FINAL REPORT

VOLUME II

QUAY 81/82 BAGGING FACILITY

PORT OF ALEXANDRIA

SECTION I

PROJECT SUMMARY

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FINAL REPORT

VOLUME II

QUAY 81/82 BAGGING FACILITY

PORT OF ALEXANDRIA

SECTION I, PROJECT SUMMARY

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FINAL REPORT

VOLUME II

QUAY 81/82 BAGGING FACILITY

SECTION I, PROJECT SUMMARY

A. INTRODUCTION

This is Volume II of a three volume Final Report covering the design and construction supervision of Grain and TOF Storage Facilities in Safaga and Alexandria. The other volumes are:

- Volume I, Laboratory Equipment, Portable Bagged Grain Conveyors and Safaga Silo Complex (Design), Port of Safaga.

- Volume III, Tallows, Oils and Fats Facility, Port of Alexandria.

This Volume II covers the development of a Grain Unloading and Bagging Facility with equipment for collecting grain from surge bins adjacent to ships and mechanically conveying it to storage and bagging facilities. Grain is distributed from the facility by means of bags or through bulk trucks.

B. GENERAL DESCRIPTION

Grain unloading and bagging operations have taken place for some time at Quay 81 and 82. Initially, operations consisted of the use of portable pneumatic evacuators to move wheat from the grain ships to portable surge bins located at dockside with the collected grain bagged manually and the bags sewn

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by hand. Bagged grain was then loaded onto waiting trucks or stacked on the ground until trucks became available. Due to the very limited storage capacity of the portable surge bins, ship off-loading could only take place when bagging crews were available.

The Quay 81/82 Grain Bagging Facility modifies these operations by collecting the grain from the portable surge bins and mechanically conveying it to the new storage and bagging facilities located adjacent to Quay 82. The Quay 81/82 facility provides approximately 8,200 MT of storage capacity in bolted steel prefabricated storage and bagging bins. This capacity will allow ship off-loading to take place during periods when bagging crews are not available. Grain is bagged using manually operated gross weight baggers and electrical bag sewing machines at 30 bagging stations. The bagging stations may be fed with grain directly from the quays, or grain can be reclaimed from storage for delivery to the bagging stations to satisfy the bagging capacity during periods of low off-loading rates or while ships are entering or leaving a berth or are being readied. Bagging capacity is such that 10 hours of bagging can match an average of 20 hours of ship off-loading.

C. CAPACITY

The new bagging facility is sized to bag up to 6,000 MT/day of wheat with 10 hours of bagging operation. During those periods when bagging crews or trucks are not available, ship off-loading grain can be stored in the storage facility. Total storage capability available is 8,210 MT in two lines of fifteen (15) bagging stations each.

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Each quay is connected to the main storage facility by a system of drag conveyors to allow either simultaneous or independent unloading of grain into the storage facility. There are three independent lines of distribution conveyors provided to feed the storage bins and the bagging bins. Two lines of distribution conveyors are spouted to one-half of the storage bins and one-half of the bagging bins. The third distribution conveyor is line spouted to feed each of the storage bins.

Each bagging station accommodates two truck positions allowing a maximum of sixty trucks to be stationed at any one time.

D. IMPLEMENTATION

1. LOAN AGREEMENT. The original loan agreement between the Arab Republic of Egypt, Ministry of Supply and Home Trade and the United States Agency for International Development, under Loan 263-K-041, was signed on 28 September 1977. The amount of the Loan was U.S.\$ 42,000,000 and was to cover the foreign currency portion of the implementation cost for five sub-projects. The Quay 81/82 Bagging Facility was one of the sub-projects.

The five sub-projects with the allocation of loan funds as well as the local currency amounts funded for each was as follows:

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	U.S. Dollars (USAID Loan No. 041)	Egyptian Pounds (ARE)
1) Laboratory Equipment	63,000	2,000
2) Portable Bagged Grain Conveyors	572,000	7,000
3) Quay 81/82 Bagging Facility	6,770,000	1,538,000
4) Safaga Silo Complex	24,127,000	10,687,000
5) Tallow, Oils & Fats Facility	9,324,000	2,655,000
- Contingency	1,144,000	
TOTAL	\$ 42,000,000	L.E. 14,889,000

2. IMPLEMENTATION LETTER Procedures for utilizing the proceeds of the loan were outlined in AID Implementation Letter No. 1, dated 20 January 1978. Also, Implementation Letter No. 1 stipulated a terminal date for requesting Letters of Commitment, or amendments thereto, of 30 September 1981 and, for disbursement, 30 June 1982. The terminal and disbursement dates were subsequently extended to 31 March 1985. At the time of this final report, USAID was considering a further extension of the Terminal Disbursement Date to 31 October 1985 to enable payment for some delayed invoices.

3. ENGINEERING SERVICES CONTRACT. The contract for Engineering Services was signed between the General Authority for Supply Commodities (GASC), an agency of the Ministry of Supply of the Government of the Arab Republic of Egypt (A.R.E.), and Black & Veatch International, Consulting Engineers (BVI), a duly recognized U.S. Corporation, on 17 June 1978.

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The original contract amount was \$ 3,771,665.00 (three million seven hundred seventy-one thousand six hundred sixty-five U.S. Dollars) and L.E. 947,085.00 (nine hundred forty-seven thousand eighty-five Egyptian Pounds). This contract was to provide the Engineering Services for all five of the sub-projects.

The following firms are in subcontract association with BVI:

- Arab Consulting Engineers (ACE)
- Technical Industrial Consulting Office (TICO)
- M. A. Sinbel Consulting Engineers (MAS)
- Muesser, Rutledge, Johnson & DeSimone Consulting Engineers (MRJD)

The services of these firms are provided under the auspices of the BVI Engineering Service Contract. Only ACE, TICO and MRJD were involved in the services provided for the Bagging Facility.

The Engineering Service Contract has been amended seven times as follows:

- Amendment 1, dated 17 July 1978
- Amendment 2, dated 1 February 1979
- Amendment 3, dated 8 January 1981
- Amendment 4, dated 7 July 1981
- Amendment 5, dated 6 December 1981
- Amendment 6, dated 10 March 1983
- Amendment 7, dated 10 March 1983

Only Amendments 2, 3, and 5 are directly related to the Engineering Services for the Quay 81/82 Bagging Facility.

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A breakdown of the original U.S. Dollar Engineering Services Contract amount, by sub-project, including Amendments 1 through 6 is located on Table I-1. The Egyptian Pound amounts are detailed in Table I-2. Please note that Amendment No. 1 made no financial commitment to the Engineering Contract. Additionally, Amendment No. 7 has not been listed on these tables as the funds allocated in the Amendment were not for financing under USAID Loan 263-K-041.

4. ENGINEERING LETTERS OF COMMITMENT. A Direct Letter of Commitment for the Engineering Services (No. 263-K-041-01) in favour of BVI was issued by USAID on 11 July 1978. This Letter of Commitment covers the U.S. Dollar contract amount and the expiry date corresponds with the terminal date for disbursements under the USAID Loan. Financial details of expenditures against the Letter of Commitment may be found in the Letter of Commitment report located in Section VII.

4. PROCUREMENT CONTRACTS LETTERS OF COMMITMENT/CREDIT. This section provides a brief description of each contract, Letters of Commitment and Letters of Credit issued under Loan Agreement No. 263-K-041 for the procurement of equipment and materials for the Grain Bagging Facility.

It should be noted that, in order to provide similar equipment for operations and maintenance purposes, procurement contracts for the Grain Bagging Facility sometime included requirements for furnishing like equipment and materials for the Tallows, Oils and Fats Terminal in Alexandria and the Safaga Grain Silos Complex. These equipment and materials were transferred to their respective projects as required. The Financial details of each contract Letter of Commitment is located in Section VII of this report.

TABLE I-1
BVI ENGINEERING SERVICES CONTRACT
U.S. DOLLAR BUDGET

Sub-Project	Original Contract Amount U.S.D.	Amendment No. 1	Amendment No. 2	Amendment No. 3	Amendment No. 4	Amendment No. 5	Amendment No. 6	Total Contract Amount U.S.D.
1) Laboratory Equipment	8,000	-	-	-	-	-	-	8,000
2) Portable Bagged Grain Conveyors	19,000	-	-	-	-	-	-	19,000
3) Quay 81/82 Bagging	791,200	-	29,985	163,581	-	199,292	-	1,184,054
4) Safaga Grain Silos	2,166,014	-	58,980	-	863,427	-	-	3,088,421
5) Tallows Oils & Fats	787,451	-	28,240	123,143	-	-	249,474	1,188,308
TOTALS	\$3,771,665	-	117,205	286,724	863,427	199,292	249,474	\$5,487,787

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TABLE I-2
EVI ENGINEERING SERVICES CONTRACT
EGYPTIAN POUND BUDGET

Sub-Project	Original Contract Amount L.E.	Amendment No. 1	Amendment No. 2	Amendment No. 3	Amendment No. 4	Amendment No. 5	Amendment No. 6	Total Contract Amount L.E.
1) Laboratory Equipment	400	-	-	-	-	-	-	400
2) Portable Bagged Grain Conveyors	450	-	-	-	-	-	-	450
3) Quay 81/82 Bagging	106,710	-	14,755	74,817	-	54,600	-	250,882
4) Safaga Grain Silos	613,475	-	33,510	-	-	-	-	646,985
5) Tallows Oils & Fats	226,050	-	12,410	102	-	-	52,433	290,995
TOTALS	L.E.947,085	-	60,675	74,919	-	54,600	52,433	L.E.1,189,712

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a. Prefabricated Grain Storage and Bagging Bins (IFB No. 263-K-041-M204). The work performed under this contract consisted of providing all labor, material, equipment and supervision to design and fabricate twenty (20) bolted steel grain storage bins, each to contain 340 metric tons of wheat or corn, and thirty (30) bolted steel grain bagging bins each to contain 47 metric tons of wheat or corn at Quay 81/82 in Alexandria, A.R.E. In addition, twenty (20) bolted steel grain bagging bins each to contain 47 metric tons of wheat or corn were provided for the Safaga Grain Silos Complex at Safaga, A.R.E. All bagging bins included a bagging platform, reclaim hopper and supporting steel structure.

The contract was awarded to Peabody Tectank, Inc. on 13 June 1979. The total contract amount, including estimates for Technical Services and direct costs for supervision, was \$ 2,000,557. Purchase Change Order Number 1, however, issued on 20 June 1980 decreased this contract by an amount of \$ 15,969 to a revised total amount of \$ 1,984,588.

USAID Letter of Commitment No. 263-K-04103 for the contract was issued on 13 July 1979, and Citibank/New York Letter of Credit No. 40770059 was opened on 27 August 1979.

b. Interrupter Switchgear for Quay 81/82 (IFB No. 263-K-041-E301). The work consisted of providing one indoor metal-enclosed interrupter switchgear, in accordance with detailed specifications and drawings. The total contract amount, including spare parts, was \$ 42,554.

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The contract was awarded to American Export Group on 9 September 1979. USAID Letter of Commitment No. 263-K-04104 for this contract was issued on 8 November 1979, and Citibank/New York Letter of Credit No. 40770113 was opened on 27 December 1979.

c. Secondary Unit Substations for Quay 81/82 (IFB No. 263-K-041-E306). The work consisted of providing three (3) indoor secondary unit substations for the Quay 81/82 Bagging Facility, all in accordance with the specifications and drawings prepared by the Engineer.

The contract was awarded to General Electric Company 9 September 1979. The total U.S. Dollar contract amount, including spare parts, was \$ 151,802.

Procurement Change Orders Number 1 and 2 were jointly approved by USAID on 29 November 1982. The change orders provide for technical services by the manufacturer's representative in the amount of USD 20,000.00.

USAID Letter of Commitment No. 263-K-04105 for this contract was issued on 9 November 1979, and Citibank/New York Letter of Credit No. 40770114 was opened on 27 December 1979.

d. Screw Conveyors for Quay 81/82 (IFB No. 263-K-041-M306). The work performed under this contract consisted of furnishing, designing and supplying a screw conveyor system of the supplier's standard product line with proven performance, and in accordance with the Engineers specifications.

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The contract was awarded to Newell Machinery Company on 18 December 1979. The total contract amount was \$ 90,225. A procurement Change Order in the amount of \$ 11,494.33, covering spare parts for the screw conveyors, was executed by GASC on 26 April 1981 and approved by USAID on 11 May 1981.

USAID Letter of Commitment No. 263-K-04106 for this contract was issued on 25 January 1980, and Citibank/New York Letter of Credit No. 40770133 was opened on 25 February 1980.

e. Portable Bulk Grain Conveyors for Quay 81/82 (IFB No. 263-K-041-M303). The work to be performed under this contract consisted of furnishing, designing and supplying a portable belt conveyor system of the supplier's standard product line with proven performance, and in accordance with the Engineer's specifications. The total contract amount, including spare parts, was \$ 238,300.64.

The contract was awarded to Midwest Conveyor Company on 22 October 1979. USAID Letter of Commitment No. 263-K-04107 for this contract was issued on 25 January 1980, and Citibank/New York Letter No. 40770134 of Credit was opened on 25 February 1980.

f. Drag Conveyors for Quay 81/82 (IFB No. 263-K-041-M304). The work to be performed under this contract consisted of furnishing, designing and supplying a complete drag conveyor system of the suppliers standard product line with proven performance, and in accordance with the Engineer's specifications. The total contract amount, including spare parts, technical services and direct costs for supervision, was \$ 1,657,666.

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The contract was awarded to Tramco Metal Products on 9 September 1979. USAID Letter of Commitment No. 263-K-04108 for this contract was issued on 29 January 1980, and Citibank/New York Letter of Credit No. 40770135 was opened on 25 February 1980.

g. Structural Steel & Miscellaneous Metals for Quay 81/82 (IFB No. 263-K-041-S301). The work performed under this contract consisted of providing all labor, material, equipment and supervision to design and fabricate all structural and miscellaneous metals as indicated on the drawings and specifications by the Engineer. Estimated quantities were as follows:

Structural Steel	- 470 MT
Miscellaneous Steel	- 40 MT
Grating	- 1800 sq. meters
Stair Treads	- 750 each
Handrailing	- 1600

The structural steel and miscellaneous metals furnished under this contract included the following:

Structural Steel	Anchor Bolts
Miscellaneous Shapes & Plates	Guardrails
Grating	Bumper Posts
Stair Treads	Expansion Anchor
Handrailing	

The contract was awarded to Bell Steel Company on 18 December 1979. The original contract was issued for an amount of \$ 1,295,000. However, Purchase Change Order No. 1, executed on 3 March 1980, and Purchase Change Order No. 2,

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executed on 2 July 1980, increased the contract by \$ 58,950 and \$ 16,700 respectively. The total revised contract amount as a result of these change orders was \$ 1,370.650.

USAID Letter of Commitment No. 263-K-04109 for this contract was issued on 29 January 1980, and Citibank/New York Letter of Credit No. 40770136 was opened on 25 February 1980.

h. Motor Control Centers for Quay 81/82 (IFB No. 263-K-041-E302). The work performed under this contract consisted of providing all labor, material, equipment and supervision to design and fabricate eleven (11) Motor Control Centers for use at the Quay 81/82 Bagging Facility in Alexandria, A.R.E. Control Centers 1 through 7 are in the grain storage area, units 81-1 and 81-2 at Quay 81 and units 82-1 and 82-2 at Quay 82. The original contract amount including spare parts was \$ 70,997.20.

The contract was awarded to American Export Group 25 October 1979. Purchase Change Order No. 1 executed on 7 July 1980, however, reduced the contract by \$ 10,464 to a revised total amount of \$ 60,534.20.

Procurement Change Orders No. 2 in the amount of \$ 2,628.00, covering the purchase of Electrician's Tools, was executed by the supplier and GASC on May 30, 1981.

USAID Letter of Commitment No. 263-K-04110 for this contract was issued on 7 February 1980, and Citibank/New York Letter of Credit No. 40770137 was opened on 25 February 1980.

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i. Bucket Elevators for Quay 81/82 (IFB No. 263-K-041-M304). The work addressed under this contract consisted of providing all labor, material, equipment and supervision to design and fabricate two (2) constant speed, centrifugal discharge bucket grain elevators with a belt speed not to exceed 750 feet per minute, each to convey 200 metric tons per hour of whole grains at Quay 81/82 Bagging Facility in Alexandria, A.R.E.

The contract was awarded to American Export Group on 25 October 1979. The total contract amount, including estimates for technical services and supervision, was \$ 86,946.

The USAID Letter of Commitment No. 263-K-041111 for this contract was issued on 8 February 1980, and Citibank/New York Letter of Credit No. 40770138 was opened on 25 February 1980.

j. Motor Truck & Railroad Track Scales (IFB No. 263-K-041-M205). The work consisted of providing five (5) motor truck scales each with a gross capacity of 60 metric tons and 70 to 75 feet (21.34 m to 22.86 m) long by 10 feet (3.05 m) wide and one (1) combination railroad track/motor truck scale with a gross capacity of 200 metric tons and a rail length of 70 feet (21.34 m) long by 10 feet (3.05 m) wide. The original contract specified four motor truck scales, however, the quantity was increased to five by way of Purchase Change Order No. 1, executed on 3 March 1980. Distribution of the scales to the project sites is as follows:

Safaga - one truck scale and one railroad/truck combination scale

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Quay 81/82 - two truck scales
TOF - two truck scales

The total revised contract amount for all scales, including spare parts, technical services and direct costs for supervision, was \$ 180,904.

The contract was awarded to American Export Group on 7 November 1979. USAID Letter of Commitment No. 263-K-04112 for this contract was issued on 8 February 1980, and Citibank/New York Letter of Credit No. 40770139 was opened on 25 February 1980.

k. Panelboards for Quay 81/82 (IFB No. 263-K-041-E307). The work performed under this contract consisted of furnishing eleven (11) lighting and appliance panelboards for use at Quay 81/82 in Alexandria, A.R.E. The Contract was awarded to New World Research Corporation on 22 April 1980. The total contract amount was \$ 11,611.

Purchase Change Order No. 1, in the amount of \$ 2,943.00, covering the addition of 19 Bindicators for portable surge bins, was approved by USAID on 18 December 1981.

The USAID Letter of Commitment No. 263-K-04113 for this contract was issued on 29 May 1980, and Citibank/New York Letter of Credit No. 40770170 was opened on 25 June 1980.

l. Spouting Gates and Valves for Quay 81/82 (IFB No. 263-K-041-M307). This contract was awarded to Hough Brothers, Inc. on 4 May 1980. The work

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performed under this contract consisted of furnishing, designing and supplying spouting gates and valves for the industrial application of conveying whole grains, as detailed in the Engineer's specifications. The total contract award amount, including spare parts, was \$ 163.481.

USAID Letter of Commitment No. 263-K-04114 for this contract was issued on 30 May 1980, and Citibank/New York Letter of Credit No. 40770171 was opened on 25 June 1980.

m. Conductors for Quay 81/82 (IFB No. 263-K-041-E304). This contract was awarded to ONESCO, Inc. on 6 May 1980. The work performed under this contract consisted of furnishing all conductors, conductor accessories, ground rods and ground clamp for use at Quay 81/82 Bagging Facility in Alexandria, A.R.E. The quantities of material to be provided were detailed in the Engineer's specifications and documents. The total contract award amount was \$ 137,289.61.

USAID Letter of Commitment No. 263-K-04115 for this contract was issued on 2 June 1980, and Citibank/New York Letter of Credit No. 40770172 was opened on 25 June 1980.

n. Conduit for Quay 81/82 (IFB No. 263-K-041-E303). This contract was awarded to ONESCO, Inc. on 7 May 1980. The work to be provided under this contract consisted of furnishing all raceway and associated items of material for use at the Quay 81/82 Bagging Facility in Alexandria, A.R.E. The quantities of material to be provided were detailed in the Engineer's specific-

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ations and documents. The total contract amount was \$ 96,235.28.

Purchase Change Order No. 1, in the amount of \$ 1,615.00, covering the additional Unistruct Clamps, was approved by USAID on 26 October 1981.

The USAID Letter of Commitment for this contract was issued on 2 June 1980, and the Letter of Credit was opened on 25 June 1980.

o. Bag Closers and Bagging Conveyors (IFB No. 263-K-041-M203). The original IFB specified fifty (50) bagging units and seventeen (17) spare sewing heads; 30 each for Quay 81/82 and 20 each for Safaga. However, the contract was executed for only the Quay 81/82 portion of the equipment, as approval of the Safaga procurements had not been finalized.

The contract was awarded to Aeroglide Corporation on 3 April 1980. The total U.S. Dollar amount of the contract for 30 units with 10 spare sewing heads, plus technical services and costs for direct supervision, was \$ 226,460.73, with an Egyptian Pound component of L.E. 1,050.

Purchase Change Order No. 1, in the amount of \$ 3,384.40, covering the purchase of additional 600 volt portable power cords for the Bag Closers and Bagging Conveyors, was approved on 6 December 1980.

Purchase Change Order No. 2, in the amount of \$ 169,800.00, covering the additional Bag Closers Units for Safaga, was approved by USAID on 9 December 1981.

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Purchase Change Order No. 3, in the amount of \$ 17,068.99, covering the Bag Closers and Conveyors Spare Parts for the Quay 81/82 project was approved by USAID in July 1981.

On 1 April 1982, the USAID Letter of Commitment was amended by \$ 4,800 to cover the cost of an additional trip to Egypt by the Technical Service Representative.

USAID Letter of Commitment No. 263-K-04117 for this contract was issued on 12 June 1980, and Citibank/New York Letter of Credit No. 40770175 was opened on 1 July 1980.

p. U.S. Freight Forwarding Services for Alexandria and Safaga (IFB No. 263-K-041-D10). This contract was awarded to Alltransport, Inc. on 12 May 1980. The work to be provided under this contract consisted of furnishing all labor, material and services required for forwarding shipments of material and equipment requested by the Engineer, and in strict accordance with the terms and conditions outlined in the Specifications. The Forwarder was required to render to the Employer a complete and efficient Foreign Freight Forwarding Service in accordance with established and accepted customs, practices and procedures. The estimated U.S. Dollar contract amount for these services was \$ 966,654.

USAID Letter of Commitment No. 263-K-04118 for this contract was issued on 12 June 1980.

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A letter of Credit was not issued to the Contractor, however, as the contracting approach for freight forwarding services for the Alexandria and Safaga projects was subsequently revised. The Performance Bond was returned to the Contractor and the Contract was cancelled. The funds in the Letter of Commitment were subsequently deobligated.

q. Lighting Fixtures and Supplies for Quay 81/82 (IFB No. 263-K-041-E305). This contract was awarded to ONESCO, Inc. on 13 May 1980. The work performed under this contract consisted of furnishing all lighting fixtures, lamps, starters, ballasts, switches, receptacles, device plates, pushbutton stations, supports and miscellaneous items of material for use at Quay 81/82 Bagging Facility in Alexandria, A.R.E. The quantities of material to be provided were detailed in the Engineer's specifications. The total contract amount was \$ 219,615.32.

Purchase Change Order No. 1 in the amount of \$ 8,217.74, covering the purchase of additional cord receptacles, was approved by USAID on 19 March 1981.

USAID Letter of Commitment to 263-K-04119 for this contract was issued on 17 July 1980, and Citibank/New York Letter of Credit No. 40770187 was opened on 28 July 1980.

r. Miscellaneous Architectural Items for Quay 81/82 (IFB No. 263-K-041-E301). This contract was awarded to ONESCO, Inc. on 5 July 1980. The work performed under this contract consisted of furnishing miscellaneous archi-

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tectural materials, as detailed in the Engineer's specifications. The total contract amount was \$ 65,691.68.

USAID Letter of Commitment No. 263-K-04120 for this contract was issued on 18 July 1980, and Citibank/New York Letter of Credit No. 40770186 was opened on 28 July 1980.

s. Ventilation Equipment for Quay 81/82 (IFB No. 263-K-041-M301). A contract was awarded to ONESCO, Inc. on 16 July 1980. The work performed under this contract consisted of furnishing standard manufacturers equipment and components required for the ventilation system of an electrical building, as detailed in the Engineer's Specifications. The ventilation system consisted of three (3) roof mounted air handling units, ductworks, supply registers and other specified items. The total contract amount for the ventilation system, including spare parts, was \$ 70,746.

Purchase Change Order No. 1 in the amount of \$ 2,000.00 credit for deletion of ductwork, was approved by USAID on 21 October 1981.

USAID Letter of Commitment No. 263-K-04121 for this contract was issued on 12 August 1980, and Citibank/New York Letter of Credit No. 40770207 was opened on 28 August 1980.

t. Forklift Trucks for Quay 81/82 and Safaga (IFB No. 263-K-041-M302). A contract was awarded on 7 December 1980. The contract consisted of furnishing four (4) forklift trucks in accordance with the specifications and docu-

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ments. The total contract award amount was \$ 68,310.00. Distribution of the forklift trucks was as follows:

Quay 81/82 - 2 trucks

Safaga Silos - 2 trucks

USAID Letter of Commitment No. 263-K-04122 for this contract was issued on 26 January 1981, and Citibank/New York Letter of Credit No. 40770272 was opened on 19 March 1981.

6. GENERAL CONSTRUCTION CONTRACT AND LETTER OF CREDIT. A contract was awarded to the Arab Contractors (Osman Ahmed Osman & Company) for IFB-263-K-041-GC-1 on 23 December 1979. Work performed under the specifications included all site work and the complete construction of a bulk receiving, storage and bagging facility in Alexandria, A.R.E.

The work under this contract included furnishing the specified materials and equipment, providing all supervision, labor, tools and transportation needed to perform the specified construction, and providing engineering data, instruction manuals, accessories, and field services as stipulated in accordance with the specifications, drawings and other contract documents.

The work performed included the following:

Installation of all concrete foundations and paving.

Construction of a scale house and pits.

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- Erection of all structural steel and prefabricated metal grain bins.
- Installation of all mechanical equipment and instrumentation.
- Installation of all electrical equipment.
- Testing and start up of the entire facility.

Banque Du Caire Letter of Credit No. 61049-19 was opened in favor of the Arab Contractors on 12 January 1980, in the amount of L.E. 3,007,050.

The value of the Contract was subsequently amended, by the following Change Orders:

Number	Identification	Value L.E.
1.	Admixtures	732.00
2.	Soil Borings	271.30
3.	Retaining Wall Deduct	(4,418.55)
4.	Rubbish Removal	20,864.96
5.	Reinforcing Steel Deduct	(27,436.40)
6.	Paving Deduct	(200,926.68)
7.	Bagging & Storage Bin Roof	5,937.50
8.	Conveyor Openings at 0 & 180	540.00
9.	Structural Steel Repairs	26,425.00
10.	Metal Conduit Pull Boxes	1,982.00
11.	Volumetric Feeder Extension	2,070.00
12.	Truck Loading Platform	6,420.00

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Number	Identification	Value L.E.
13.	Cable Tray	180.00
14.	Relocate Switchgear	1,300.00
15.	Scale House Modification	1,383.28
16.	Miscellaneous Architectural	6,783.31
17.	Wash Water Line	180.00
18.	Ventillation Equipment	2,000.00
19.	Spouting Modifications	2,140.00
20.	Sand Blast Surge Bins	14,575.00
21.	Anchor Bolt Deduct	(4,030.00)
23.	Extra Painting	5,000.00
24.	Gate Modification	3,572.66
25.	Man Door Relocation	112.00
26.	Electrical Building Extension	4,700.00
27.	Rail Bumper Demolishing	720.00
28.	Underground Pull Boxes	4,750.00
29.	Installation of 4-6" Conduits	3,748.00

TOTAL Decrease for Change Orders 1 thru 29	L.E. (120,424.642)
Original Contract Value	L.E. <u>3,007,050.000</u>
Revised Contract Value	L.E. 2,886,625.358

E. BENEFITS

Operation of the Quay 81/82 Grain Bagging Facility of Alexandria benefits the people and government of the Arab Republic of Egypt by improving the distribution of grain through the Port of Alexandria while, at the same time, reducing the delivered cost.

Readily quantifiable economic and financial benefits which will result from operation of the Quay 81/82 Bagging Facility include reduced demurrage costs, reduced grain losses and longer bag life. Each of these benefits is addressed below. Benefits from improved efficiency in truck handling are difficult to calculate but are also expected to have a favorable impact upon the financial benefits of the project. Other unquantifiable benefits (socio-economic impact of the program, reduced port congestion, etc.) likewise have favorable financial benefits.

1. REDUCED DEMURRAGE. The Port of Alexandria is presently subjected to more ship traffic than it can effectively accommodate. When bulk grain ships arrive at the port, inefficient offloading practices result in long dockside times and high demurrage charges for ship delays. Freight rates for ships bound for the Port of Alexandria include demurrage charges which may be conservatively estimated at U.S.\$ 5,000 per day of ship offloading time. The overall average rate of offloading by previous means was 1,000 MT/day or 50 percent of the average covering rate of 10 evacuators. The installed system depends on the same evacuators. However, the installed system permits two-shift operation of ship offloading. Therefore, the overall average offloading rate of the installed system is $10 \text{ evacuators} \times 20 \text{ MT/hour} \times 20 \text{ hours} \times 50\% =$

2,000 MT/day. Based on this 100 percent increase in offloading rate, savings on demurrage cost can be calculated approximately \$ 5,000 per day.

2. REDUCED GRAIN LOSSES. It is estimated that a minimum reduction of 1 percent of total throughput in grain losses will result from better grain handling with the operation of the Quay 81/82 Bagging Facility. This loss reduction is due to mechanical rather than manual filling and handling of bags. The associated benefits from this reduced grain loss were calculated as about one percent of the annual throughput which results in an annual savings of about \$ 825,000 per year.

3. BAG SAVINGS. The previous bagged grain handling operations at Port of Alexandria include several movements of bags by stevedoring hooks. Each time a bag is hooked it is torn, thereby limiting bag life to three uses. With the inception of the new Quay 81/82 facility, use of these hooks is minimized and it is estimated that bag life increases from three to four uses. Associated benefits amount to about \$ 300,000 per year.

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VOLUME II

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PORT OF ALEXANDRIA

SECTION II

PROJECT DESCRIPTION

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SECTION II, PROJECT DESCRIPTION

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SECTION II, PROJECT DESCRIPTION

A. PARTICIPANTS

The following agencies and firms were involved in the implementation of the Quay 81/82 Grain Bagging Facility at the Port of Alexandria.

1. SPONSORING AGENCY. This project was carried out under the sponsorship of the Ministry of Supply and Home Trade, Arab Republic of Egypt (A.R.E.). Implementation and administration of the project was performed by the General Authority for Supply Commodities (GASC).

2. FUNDING AGENCY. U.S. Dollar funds for the project were provided through Loan No. 263-K 041 from the United States Agency for Development (USAID). Egyptian Pounds funds were provided by the Government of the Arab Republic of Egypt.

3. ENGINEER. The engineering design and construction supervision services were performed by Black & Veatch International (BVI), Consulting Engineers, Kansas City, Missouri, U.S.A. with the assistance of Arab Consulting Engineers (ACE), Technical Industrial Consulting Office (TICO), and Muesser, Rutledge, Johnston and Desimone, Consulting Engineers (MRJD).

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4. PROCUREMENT. Equipment and materials for the Quay 81/82 Bagging Facility were furnished under separate procurement contracts with the following firms:

<u>IFB Number</u>	<u>IFB Title</u>	<u>Successful Tenderer</u>
IFB-263-K-041-M203	Bagging Conveyors and Sewing Machines	Aeroglide Corporation
IFB-263-K-041-M204	Prefabricated Grain Storage and Bagging Bins	Peobody Tectank, Inc.
IFB-263-K-041-M305	Truck and Railroad Track Scales	American Export Group, Inc.
IFB-263-K-041-M302	Forklift Trucks	American Export Group, Inc.
IFB-263-K-041-M303	Portable Bulk Grain Conveyors	Midwest Conveyor Company Inc.
IFB-263-K-041-M304	Drag Conveyors	Tranco Metal Products, Inc.
IFB-263-K-041-M305	Bucket Elevators	American Export Group, Inc.
IFB-263-K-041-M306	Screw Conveyors	Newell Machinery Company
IFB-263-K-041-M307	Spouting, Gates and Valves	Hough Brothers, Inc.
IFB-263-K-041-M310	Ventilation Equipment	ONESCO, Inc.
IFB-263-K-041-E301	Interrupter Switchgear	American Export Group, Inc.
IFB-263-K-041-E302	Motor Control Centers	American Export Group, Inc.
IFB-263-K-041-E303	Conduit	ONESCO, Inc.
IFB-263-K-041-E304	Conductors	ONESCO, Inc.
IFB-263-K-041-E305	Lighting Fixtures and Supplies	ONESCO, Inc.
IFB-263-K-041-E306	Secondary Unit Substations	General Electric Company
IFB-263-K-041-E307	Distribution Panels	New World Research Corp.

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<u>IFB Number</u>	<u>IFB Title</u>	<u>Successful Tenderer</u>
IFB-263-K-041-S301	Structural Steel and Miscellaneous Metals	Bell Steel Company
IFB-263-K-041-A301	Miscellaneous Architectural Items	ONESCO, Inc.

5. CONSTRUCTION. The general construction of the Quay 81/82 Bagging Facility was contracted to the Arab Contractors, Osman Ahmed Osman & Co., 34 Adly Street, Cairo, Arab Republic of Egypt.

6. MANUFACTURERS' SERVICES. To assist with the installation, check-out and start-up of major equipment, service engineers of respective manufacturers' were supplied as follows:

<u>Equipment Contract No.</u>	<u>Description</u>	<u>Supplier</u>
263-K-041-M204	Grain Storage and Bagging Bins	Peabody Tectank, Inc.
263-K-041-M304	Drag Conveyors	Trameco Metal Products, Inc.
263-K-041-M305	Bucket Elevators	American Export Group
263-K-041-M205	Truck & Railroad Track Scales	American Export Group
263-K-041-M203	Bag Closers and Bagging Bins	Aeroglide Corporation
263-K-041-E306	Secondary unit Substation	General Electric Company

B. ENGINEERING SERVICES

The scope of services provided by the Engineer, Black & Veatch International, included the following with respect to a temporary Grain Receiving and Bagging Facility at Quays 81/82 in Alexandria.

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1. GENERAL. The Engineer's services included project planning, investigations, design recommendations, detailed engineering design, assistance in the procurement of construction services, equipment and materials, supervision of construction and equipment installation, training of O & M personnel, start-up and operational test running of completed facilities and, at the specific request of the GASC, inspection and/or advisory services during the guarantee period of the construction contract. The Engineer performed the following functions:

- BVI prepared preliminary and final project design, construction and equipment cost estimates, and implementation recommendations for approval by GASC. The designs, specifications or other documents prepared by the Engineer were suitable for competitive bidding or for direct negotiations with prequalified General Construction Contractors.
- BVI planned, scheduled and provided technical services for the overall engineering, procurement, construction, initial operation and performance test program of the project.
- Acting as consultant to the GASC, BVI coordinated all activities under its supervision to assure the project was implemented within the established cost estimate, plans and schedules.
- BVI maintained effective continuous liaison with GASC and provided such reports, consultation, advice and assistance required for the effective management and the efficient progress of the project.

2. PRELIMINARY ENGINEERING AND DESIGN. Following appropriate site and subsurface investigations and consultation with GASC, BVI prepared and submitted a Preliminary Project Design, cost estimates and Implementation Study to GASC for approval to proceed with the project, with information copies to USAID/Cairo.

The Preliminary Project Design and Implementation Study established a plan which allowed the earliest practicable start of final engineering design/equipment procurement/construction/installation on an uninterrupted basis.

The preliminary study provided specific and detailed consideration to each of the basic and supporting facilities required for full operation and maintenance of the facility and its equipment.

BVI recommended capacities, operating characteristics and principal features required for a coordinated operating facility. In like manner, planning criteria and standards for general site preparation, site development, earthwork and grading, structural excavation, foundations, drainage, site access and utility requirements were given specific consideration in scheduling.

The study presented a comprehensive plan and schedule for the accomplishment of design and procurement, cited in detail the design criteria the Engineer intended to use for each of the various categories of work, and listed the standards (i.e., codes, testing standards, standard specifications, etc.) which it considered applicable to the work. It included the following items:

a. Project Description. The parameters of location, site improvement, structures and special features were addressed.

- Location
 - Site topography and surface features
 - Plant siting and layout
- Site Improvement
 - Access roads
 - Security fencing
 - Drainage provisions
 - Utility requirements
 - Traffic plan
- Structures
 - Foundations
 - Ship unloading equipment
 - Conveyors and elevators
 - Silos
 - Bagging assemblies
- Special Features
 - Instrumentation
 - Fire protection system
 - Indigenous available equipment and materials
 - Dust control system
 - Miscellaneous equipment

b. Scheduling. The study was accompanied by a preliminary project schedule and a preliminary CPM (Critical Path Method) analysis. The schedule and CPM analysis reflected the Engineer's planning and design, engineering, procurement, construction and erection to the point of testing the complex. It predicted an optimal sequence of actions to result in an orderly and un-interrupted progress of work.

Special note was taken of planning and scheduling by Egyptian agencies responsible for provision of other support facilities and utilities.

The study was supplemented from time to time as required by the submission of preliminary engineering layouts and diagrams. Such submissions were for the purpose of assuring GASC concurrence with proposed design features prior to the expenditures of time and effort on detailed engineering which may not have met with GASC approval.

c. Preliminary Cost Estimates. The study was accompanied by a preliminary cost estimate showing U.S. Dollar and/or local currency costs for all required equipment, materials and construction/erection services. The estimate took into consideration the availability and suitability of locally manufactured equipment and materials.

3. FINAL ENGINEERING AND DESIGN. Upon approval of the Preliminary Project Design and Implementation Study by the GASC and receipt of Notice to Proceed, the Engineer initiated the final engineering and design phase of this Contract, made the engineering investigations and calculations needed to produce the designs, detailed drawings, specifications and final cost estimates required for construction and/or installation and erection of all equipment and structures required for the project.

BVI was responsible for the procurement of the soils investigations required to provide a basis for final design. The Engineer prepared an invitation for proposal for soils consultation, drilling and testing services

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and solicited offers from a minimum of three prequalified firms or associations. The firm of Mueser, Rutledge, Johnston & DeSimone (MRJD) was selected to perform the soils consulting services on the basis of competence, experience and ability to perform the services. Amendment No. 2 to the Engineer's Agreement provided funds for the Soils Consultancy Subcontract.

The Engineer prepared the detailed site, site development, grading, layout, architectural, structural, mechanical, electrical and instrument drawings, and detailed specifications required for the construction, erection and installation of the complete project. BVI prepared final cost estimates showing U.S. Dollar and/or local currency costs for all required equipment, materials and construction/erection services.

BVI prepared detailed specifications covering the equipment and materials required for the completion of the work. Specifications for the equipment of off-shore procurement by GASC were prepared for incorporation into bid invitations and in a form to provide a sound basis for competitive bidding by qualified manufacturers and suppliers. Specifications for equipment and materials to be procured by the local construction contractor were incorporated into the general construction bidding documents.

The specifications included applicable requirements for performance, reliability, erection supervision, guarantees and/or warranties, and spare parts provisions. Procurement documents for major equipment required the supplier to provide detailed shop and erection drawings for the Engineer's review and approval to ensure conformance with specifications and to provide information for related construction, installation and/or erection.

Engineering design followed accepted U.S. standards, codes, criteria and practice. In addition, preparation of drawings and contract documents took into consideration local contracting procedures in Egypt. The Engineer maintained liason with the GASC when formulating the documents to ensure that they met the needs of the GASC.

4. PROCUREMENT OF EQUIPMENT AND MATERIALS AND CONSTRUCTION SERVICES. BVI prepared complete Invitation for Bids (IFB) documents applicable to all construction services, including the procurement of equipment and materials, and assisted in the evaluation of the bids received. The procurement of such construction services were in accordance with appropriate sections of A.I.D. Handbook 11 or in accordance with pertinent ARE procedures, whichever was applicable.

a. Procurement IFB's. Each procurement, to the extent applicable, included the following:

- Complete specifications, drawings and other data, as applicable.
- Provision for concurrent spare parts, special tools, operating and repair manuals, laboratory instruments and equipment, etc.
- Commercial contract terms and conditions including, when appropriate, requirements for guarantees, warranties, performance bonds and default procedures, and special USAID provisions.
- Provisions for supervision of installation and operator training, if appropriate.

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- A synopsis of the IFB for advertising purposes and a cost estimate for the equipment and materials included in the IFB. Upon receipt of GASC approval of the IFB, BVI issued invitations to bidders and issued such IFB amendments and clarifications where necessary.

Upon receipt of the bids, BVI performed the following:

- Made technical and commercial analysis and evaluations of all bids to insure their responsiveness, compliance with all terms and specifications, and reasonableness of price.
- Submitted bid tabulations, analysis and evaluations, together with recommendations for award of contracts, to GASC and USAID/Cairo for their distribution.
- Upon receiving written notice from GASC that award has been approved, prepared appropriate Notice of Award and requisite letters to unsuccessful bidders for issuance by GASC. Assisted GASC in all matters pertaining to procurement contract preparation, execution and administration as requested.
- Assisted and advised GASC in making shipping arrangements, securing proper insurance coverage, export and import documentation. Certified invoices for progress payments, as necessary, and performed all other administrative work necessary to effect timely supply of equipment and materials in accordance with project completion requirements.

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- Reviewed all detailed shop or layout drawings submitted by the suppliers for conformance to design concepts and specifications.
- Ensured, to the best of its ability, the timely manufacture, inspection, testing, and delivery of the equipment as necessary to assure compliance with the construction schedule.
- Supervised and/or reviewed necessary factory inspections and tests as required to assure compliance with the applicable specifications.
- Advised and assisted GASC in securing all contractual guarantees and warranties and monitored vendor's performance under contracts.
- Advised and assisted the GASC to establish and implement proper procedures for documenting and controlling the receipt, storage and issuance of all equipment and materials procured.

b. Procurement of Construction Services. The Engineer prepared Invitation for Bids (IFB) documents applicable to all construction services and assisted in the evaluation of the bids received. The procurement of such construction services was in accordance with appropriate sections of USAID Handbook 11, Country Contracting, or in accordance with pertinent ARE procedures, whichever was applicable.

BVI planned and scheduled a complete construction program for project in conformance with the approved Project Design and Implementation Study.

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BVI submitted copies of complete final design, engineering drawings, specifications, draft construction IFB and a proposed construction contract to GASC for approval with copies to USAID/Cairo for information and concurrence.

After GASC approval, BVI prepared for publication a construction contract synopsis and a contractor prequalification questionnaire, reviewed questionnaire responses and participated in evaluation of such responses, and assisted GASC to prepare a prequalified bidder list.

BVI assisted GASC to issue an IFB to all firms on the approved prequalified bidders list, and received and tabulated all bids.

BVI analyzed and evaluated all bids to assure their responsiveness and compliance with the IFB. The Engineer ascertained whether the proposed successful bidder had the technical capability in all required areas and sufficient equipment and financial reserves to successfully complete the project within the proposed construction schedule. BVI submitted bid tabulations, analysis and evaluation, together with a recommendation for contract award to GASC with concurrent copies to USAID/Cairo.

BVI assisted GASC in matters pertaining to negotiation, execution and administration of the construction contract, and prepared the Notice of Award and requisite letters to the unsuccessful bidders for issuance by GASC.

5. CONSTRUCTION SUPERVISION AND INSPECTION. BVI provided resident construction engineers and supporting staff as required to:

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- Act as the GASC representative and provide engineering supervision and detailed inspection of performance of construction activities to ensure, to the best of its ability, quality-controlled continuous efficient progress of all work.
- Interpret drawings and specifications and consult with GASC, the construction contractor and subcontractors to ensure compliance with the documents so as to ensure timely progress of the construction program.
- Review all detailed construction, shop and erection drawings submitted by the construction contractor for compliance with design concept and construction specifications.
- Provide engineering supervision and inspection of all field construction work, field surveys, test and laboratory services.
- Prepare or review and approve, as necessary, any field design changes.
- Advise and assist GASC to establish and implement proper procedures for documenting and controlling the receipt, storage and issuance of all equipment and materials to be furnished by GASC to the construction contractor.
- Monitor and determine actual construction progress and certify the validity of progress payment invoices submitted to GASC by the construction contractor.

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At the satisfactory conclusion of the overall operational test and the correction of all deficiencies noted in the final inspection, the Engineer certified acceptability and recommended release of appropriate final payments by GASC.

8. SPARE PARTS LEVELS AND INVENTORY. In the procurement contracts, BVI provided for the supply of recommended spare parts.

9. TRAINING OF OPERATIONS AND MAINTENANCE PERSONNEL. As part of the overall scope of services, the Engineer, to the maximum extent practicable, provided on-the-job training during project construction and particularly during the final inspection, mechanical and overall operation testing to O & M personnel designated and provided by GASC.

BVI also arranged a training manual including organization, staffing and operating procedures for the personnel who will operate and maintain the installation. As a part of this effort, appropriate operating/repair/maintenance manuals were obtained and/or developed and turned over to the GASC staff.

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C. CHRONOLOGY OF EVENTS

A chronology of significant dates relating to the Alexandria Quay 81/82 Bagging Facility is as follows:

BVI and GASC execute engineering services agreement	17 June	1978
Direct Letter of Commitment for engineering services issued	11 July	1978
GASC approves Preliminary Design Report	30 November	1978
BVI executes soils consultancy sub-contract	1 February	1979
BVI submits detailed design	27 February	1979
Draft General Construction Contract Documents (GC-1) IFB submitted to GASC	15 April	1979
GASC approves draft of GC-1 IFB	5 May	1979
GC-1 tender closing date	30 July	1979
GASC approves GC-1 Contract award	23 September	1979
GC-1 Contract signed with Arab Contractors	23 Decemeber	1979
Egyptian Pound Letter of Credit issued to Arab Contractors	12 January	1980
Construction of Storage Bins and Quay 82 Unloading Facility Completed	December	1981
First unloading operation of Quay 82 from Grain Ship	21 January	1982
General Company of Silos accepts Quay 82 Portion of Facility	17 March	1983
Operational Test of Quay 81 Portion of Facility	14 May	1983
Final Acceptance of completed Quay 81/82 Facility	15 May	1983

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PORT OF ALEXANDRIA

SECTION III

GRAIN BAGGING FACILITIES

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SECTION III, GRAIN BAGGING FACILITIES

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QUAY 81/82 BAGGING FACILITY

SECTION III, GRAIN BAGGING FACILITIES

A. GENERAL

This section III covers the technical aspects of the Grain Bagging Facility.

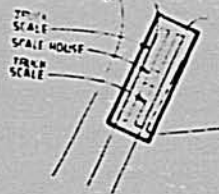
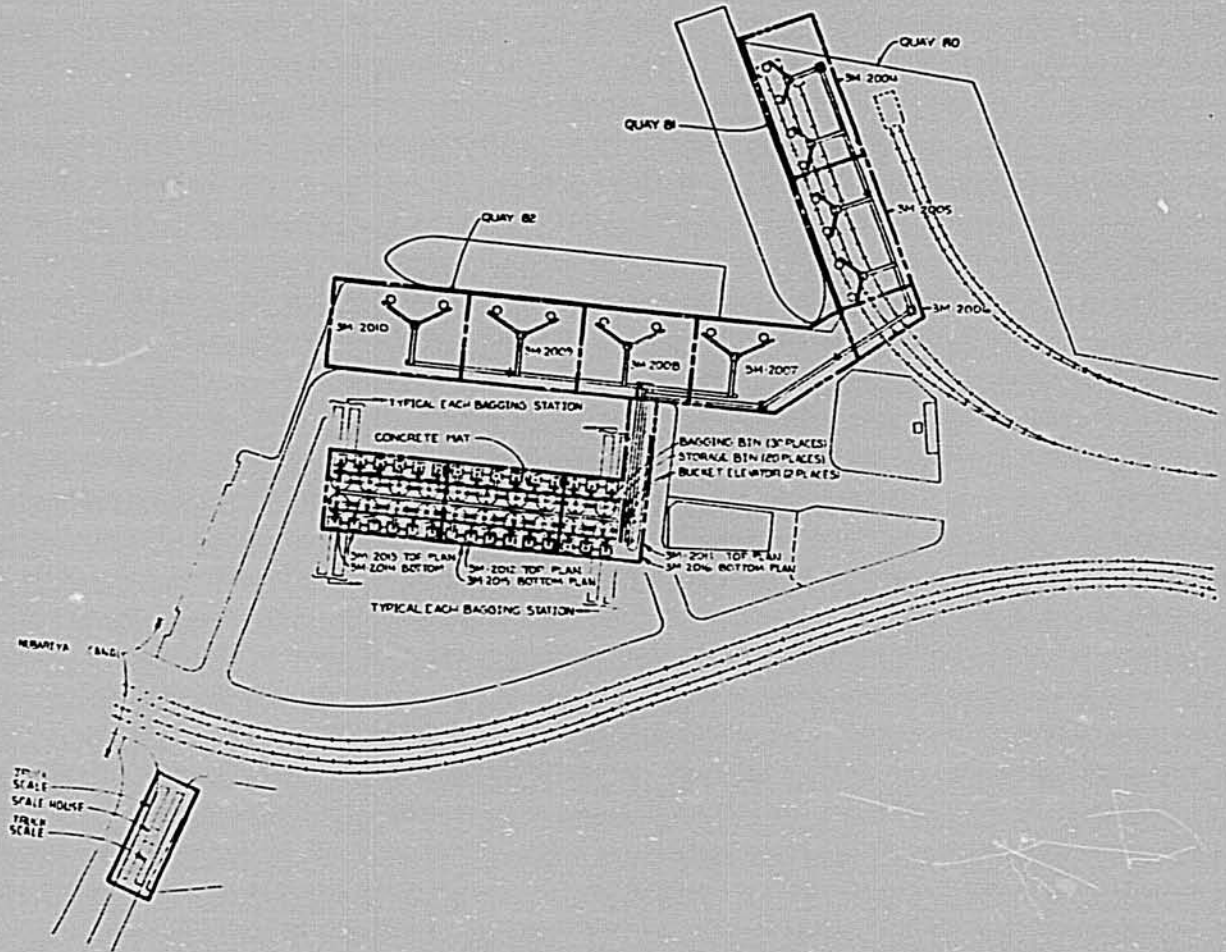
B. TECHNICAL DESCRIPTION

The following is a general description of the Grain Bagging Facility. This includes the storage and bagging bins, conveyors and miscellaneous equipment. For more details of the storage and bagging bins, and conveyor arrangement and construction details, see the record construction drawings submitted separately. A list of the record drawings is included in Section IV.

Copies of the following construction drawings are included herein for reference to the Bagging Facility layout and flow of grain:

Dwg No. 3M-2001	Key Plan
Dwg No. 3M-2002	Mechanical Equipment Plan
Dwg No. 3M-1001	Mechanical Flowsheet, Ship Unloading and Grain Transfer
Dwg No. 3M-1002	Mechanical Flowsheet, Grain Handling
Dwg No. 3M-1003	Mechanical Flowsheet, Grain Handling

INNER HARBOR
ALEXANDRIA



0-517-79	ISSUE FOR RFD	DATE	BY
P-22374	ISSUE FOR REVIEW	DATE	BY

Thomas & Spink
5-16-79



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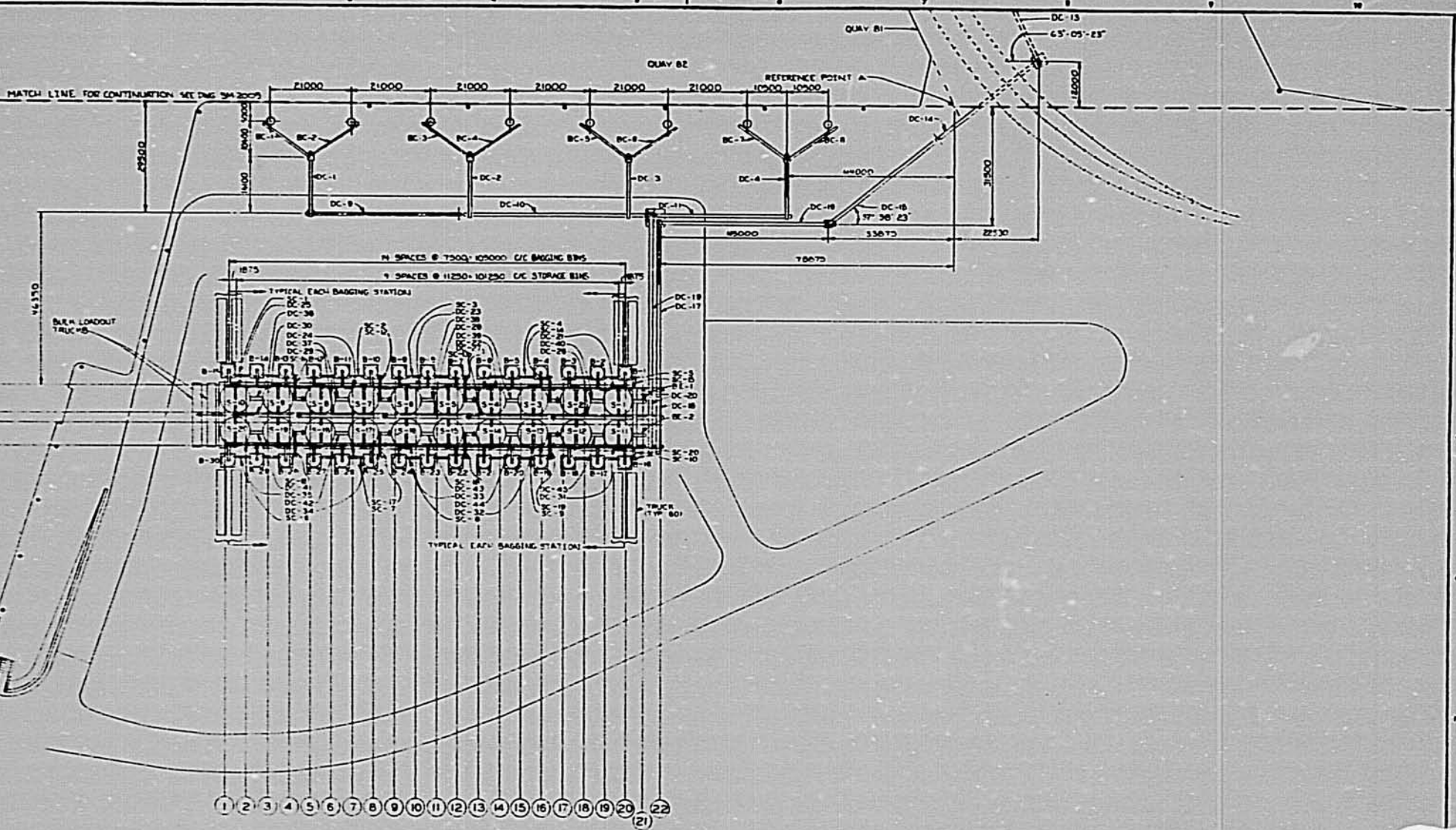
BLACK & VEATCH INTERNATIONAL
PROJECT 0152

GENERAL AUTHORITY FOR SUPPLY COMMODITIES
MINISTRY OF SUPPLY
ARAB REPUBLIC OF EGYPT
ALEXANDRIA
QUAY B1/B2

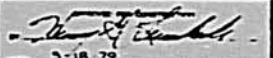
3M-2001
3M-2001

51

1



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23	ISSUE FOR REVIEW	MD	ML
22	ISSUED WITH I.F.B. 263 N.O.M. P.1004	MD	ML
21	ISSUED WITH I.F.B. 263 N.O.M. P.1004	MD	ML

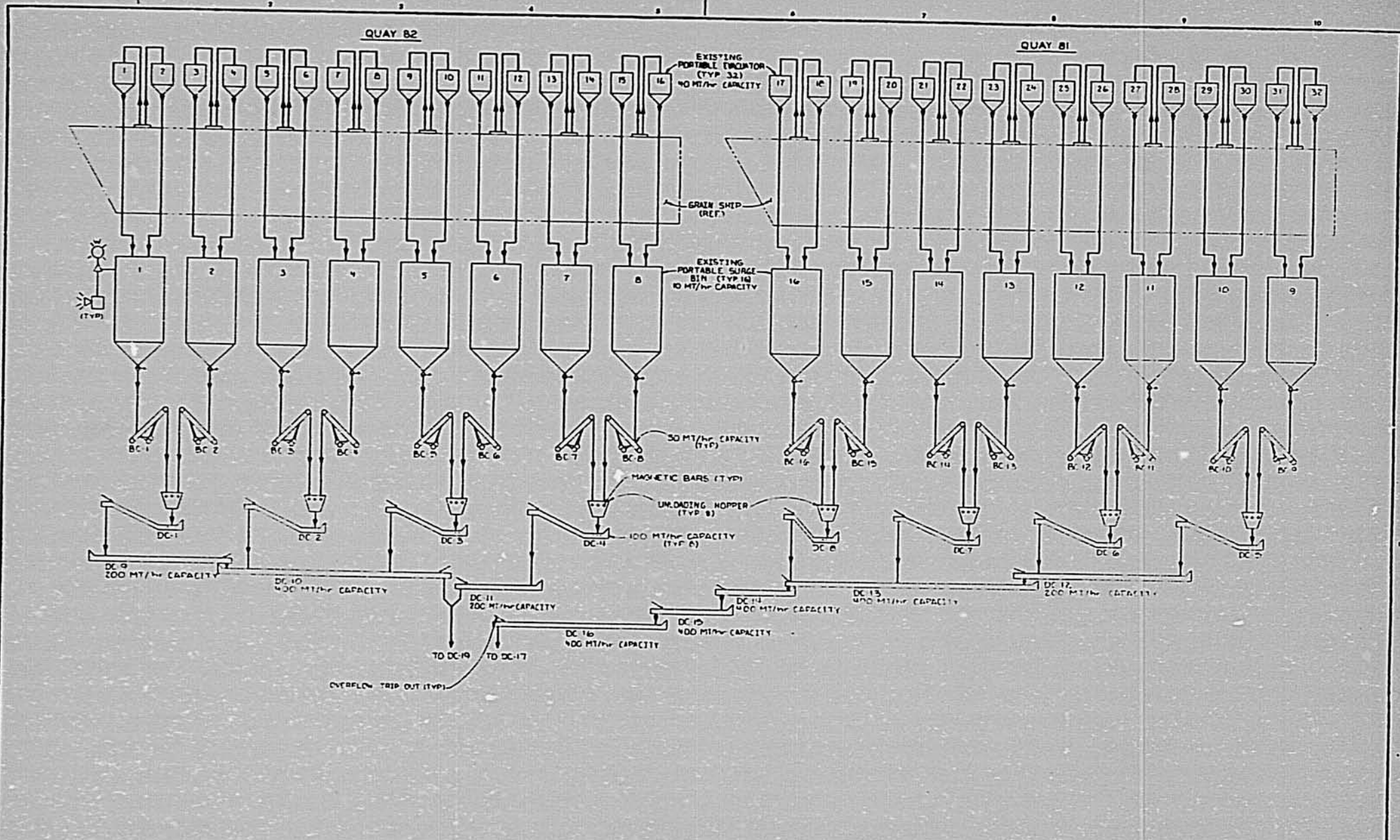

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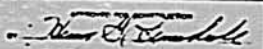
GENERAL AUTHORITY FOR SUPPLY COMMODITIES
 MINISTRY OF SUPPLY
 ARAB REPUBLIC OF EGYPT
 ALEXANDRIA QUAY # 82
 MECHANICAL EQUIPMENT PLAN

SHEET NO. 3M-2002
 OF 2

NS



2	1-18-79	ISSUED WITH ADDENDUM #2	23	
3	01-27-79	ISSUE FOR BID	53	RLM
4	02-23-79	ISSUE FOR REVIEW		
5	03-17-79	REVISED BY: R. PHILLIPS/CHRYSLER/STANLEY	65	
6	04-04-79			

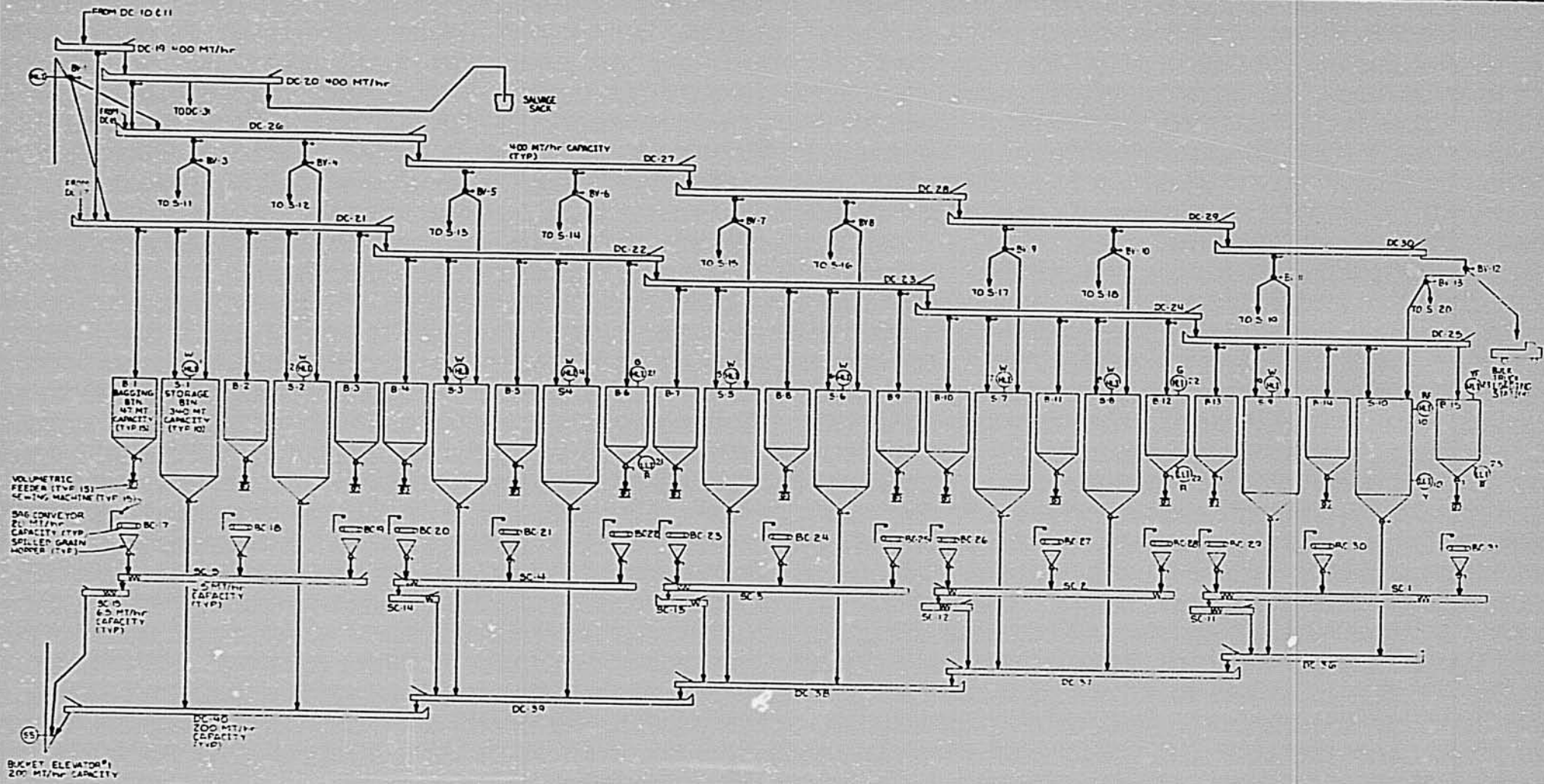

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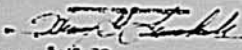


GENERAL AUTHORITY FOR SUPPLY COMMODITIES
 MINISTRY OF SUPPLY
 ARAB REPUBLIC OF EGYPT
 ALEXANDRIA
 MECHANICAL FLOWSHEET QUAY 82/81
 SHIP UNLOADING AND GRAIN TRANSFER

SHEET NO. 2
 3M-1001



2	10/79	ISSUED WITH ADDENDUM #2	KP		
0	11/79	ISSUED FOR BID	DS		
P	12/79	ISSUE FOR REVIEW	SP		
11	1/80	ISSUE WITH PRELIMINARY DESIGN PROVISIONS			


 5-18-79

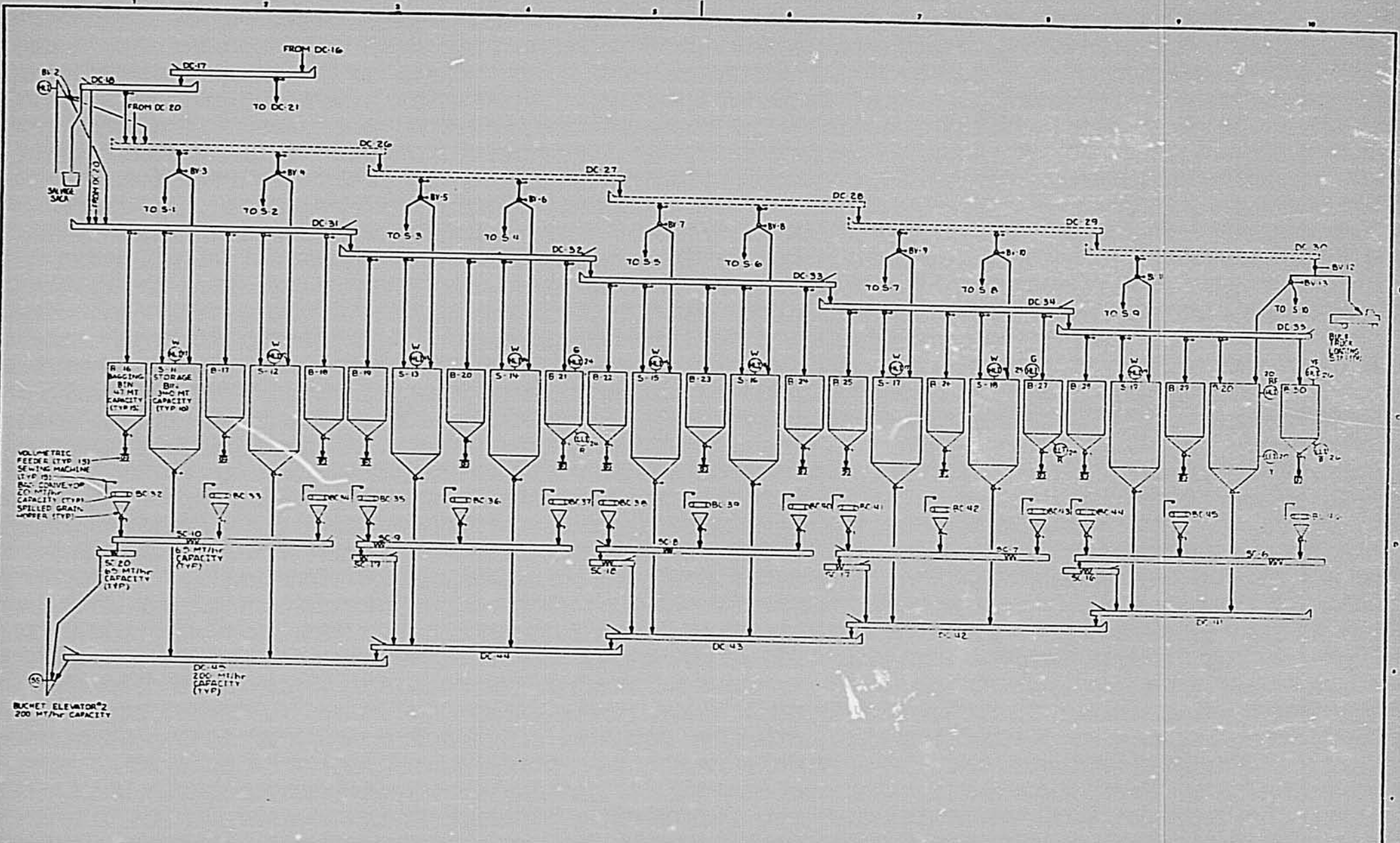


SCALE: NONE



GENERAL AUTHORITY FOR SUPPLY COMMODITIES
 MINISTRY OF SUPPLY
 ALEXANDRIA
 MECHANICAL FLOW SHEET
 QUAY #1/2
 GRAIN HANDLING

3M-1002
 1/2



2	5-18-79	ISSUED WITH ADDENDUM #2	EP		
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F		SCALE FOR REVIEW			
B		ISSUED WITH PRELIMINARY DESIGN DRAWINGS			

[Signature]
 5-18-79



SCALE: NONE



GENERAL AUTHORITY FOR SUPPLY COMMODITIES
 MINISTRY OF SUPPLY
 ALEXANDRIA
 MECHANICAL FLOWSHEET
 QUAY B/82
 GRAIN HANDLING

3M-1003
 2

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All equipment was supplied through separate procurement contacts. The equipment was subsequently installed and the civil works constructed by the Construction Contractor. Information on the major pieces of equipment are given later in this section. For dimensional data and other details, please refer to the Operation and Maintenance Manual.

Information on operation and maintenance of the respective items of equipment is provided in the Manufacturer's Instruction Books bound in Black & Veatch International Operations and Maintenance Manual submitted separately.

1. STRUCTURES. The facilities consist of a system of elevated belt conveyors from Quay 81/82 to storage bins and bagging stations.

There is an Electrical Equipment Building which receives the primary electrical power from two underground utility feeders. From the switchgear in the Electrical Equipment Building power is distributed to three secondary unit substations. One substation is located in the Electrical Equipment Building while the other two are located on Quay 81 and Quay 82 respectively in their own electrical buildings.

There are few ancillary facilities as the design criteria specified that the facility would depend on the adjacent and existing Alexandria Silo Complex for support facilities. However, the Quay 81/82 Facility does include a new truck scale.

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2. CAPACITY. The following is a list of capacities for various equipment used in the new bagging facility:

Portable Pneumatic Evacuators	40 MT/hr, each of 32
Portable Surge Bins	10 MT/hr, each of 16
Portable Belt Conveyors	50 MT/hr, each of 16
Drag Conveyors	100 MT/hr, each of 8
Drag Conveyors	200 MT/hr, each of 3
Drag Conveyors	400 MT/hr, each of 5
Main Drag Conveyors	400 MT/hr, each of 2
Distribution Drag Conveyors	400 MT/hr, each of 17
Bagging Stations	20 MT/hr, each of 30
Reclaim Drag Conveyors	200 MT/hr, each of 10
Reclaim Screw Conveyors	6.5 MT/hr, each of 20
Bucket Elevators	200 MT/hr, each of 2
Storage Bins	340 MT, each of 20
Bagging Bins	47 MT/hr, each of 30
Bag Filling Feeders	47 MT/hr, each of 30
Truck Weighing Scales	60 MT, each of 2

C. EQUIPMENT AND MATERIALS PROCURED

The equipment and materials for the Grain Bagging Facility was furnished under separate procurement contracts. This included all mechanical and electrical equipment as well as structural steel and metal products. The General Construction Contractor provided only construction material such as concrete and asphaltic pavement.

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The following items describe in general terms the scope of equipment and materials procured under the separate procurement contracts.

1. BAGGING CONVEYORS AND SEWING MACHINES (IFB-263-K-041-M203). This IFB provided the bagging equipment to be installed at the bagging stations. Major items of equipment in this IFB consisted of:

- 30 Mechanical Baggers
- 30 Transition Spouts
- 30 Bagging Conveyors
- 30 Sewing Pedestals
- 60 Sewing Machines
- 30 Bagging Conveyor Foot Switches
- 30 Sets of Bolts and Gaskets

There was no manufacturer's representative service included.

2. PREFABRICATED GRAIN STORAGE AND BAGGING BINS (IFB-K-041-M204). This IFB provided all of the storage bins and bagging stations. Major items of equipment in this IFB consisted of:

a. Grain Storage Bins. Twenty 26 feet (7.92 m) diameter by 48 feet (14.63 m) high prefabricated bolted steel grain storage bins with nominal 35° cone bottoms were procured. The bin is supported by a high continuous metal skirt which is an integral part of the bin.

b. Bagging Bins. Thirty 12 feet (3.65 m) diameter by 24 feet (7.3 m) high prefabricated bolted steel grain storage (bagging) bins with 45° cone bottoms were provided. The bin is supported by either a continuous metal skirt

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or a series of legs set around the tank perimeter which in either case would be an integral part of the tank.

c. Structural Steel. Thirty sets of bagging station structural steel , including bolts, grating, handrails, and grain recovery cone bottom were provided.

d. Manufacturer's Representative. One manufacturer's representative was assigned to the project site throughout the period of bin and bagging station erection.

3. TRUCK AND RAILROAD TRACK SCALES (IFB-263-K-041-M205). This IFB provided two motor truck scales. Major components of the IFB were:

2 sets scale levers.

2 scale deck frames including prefabricated reinforcing steel.

Twenty days of manufacturer's representative time provided for instruction at the beginning of installation of this equipment and eight additional provided during the Contractor's calibration of this equipment.

4. PORTABLE BULK GRAIN CONVEYORS (IFB-263-K-041-M303). This IFB provided sixteen portable bulk grain conveyors of which eight were approximately 48 feet (14.63 m) long and eight were approximately 30 feet (9.14 m) long.

No manufacturer's representative service was provided under this IFB.

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5. DRAG CONVEYORS (IFB-263-K-041-M304). This IFB provided all of the drag conveyors. Major items of equipment in this IFB consisted of:

- Eight inclined bulk flow conveyors with supporting steel (DC-1 through DC-8).
- Eight hoppers.
- Two inclined drag conveyors (DC-17 and DC-19).
- Thirty-five horizontal drag conveyors (DC-9 through DC-16, DC18, and DC-20 through DC-45).

Twenty days of manufacturer's representative service was provided at the start of installation and ten days of such service during start-up of he installed equipment.

6. BUCKET ELEVATORS (IFB-263-K-041-M305). This IFB provided two bucket elevators. Ten days of manufacturer's representative service was provided during erection.

7. SCREW CONVEYORS (IFB-263-K-041-M306). This IFB provided the screw conveyors. No manufacturer's representative services were included in this IFB. Major items of equipment in this IFB consisted of twenty "U"-Trough screw conveyors, with bolted covers, supports, spouts and drives.

8. SPOUTING, GATES, AND VALVES (IFB-263-K-041-M307). This IFB provided the bucket valves. It also provided the miscellaneous gates and spouting not provided by the Bins and Bagging Stations IFB or any of the several Conveyor IFBs.

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- Thirty-two portable dry chemical fire extinguisher of a twenty pound size.
- Two wheel mounted dry chemical fire extinguishers.

9. VENTILATION EQUIPMENT (IFB-263-K-041-M310). This IFB provided the ventilation equipment to be installed on the roofs of the electrical buildings. No manufacturer's representative services were included in this IFB. Major items of equipment in this IFB were:

- Two each 10,000 cfm air handling units (only one to be installed).
- Three each 3,300 cfm air handling units (only two to be installed).
- Miscellaneous Ductwork.
- Miscellaneous Registers.

10. INTERRUPTER SWITCHGEAR (IFB-263-K-041-E301). This IFB provided the metal-clad 10.5 kV interrupter switchgear installed in the Electrical Equipment Building. The switchgear included seven in-line cubicles. No manufacturer's representative services were provided under this IFB.

11. MOTOR CONTROL CENTERS (IFB-263-K-041-E302). This IFB provided the motor control centers to be installed in the Silo Area Equipment Building, and the Electrical Equipment Buildings 81 and 82. Major items of equipment in this IFB included eleven motor control centers.

No manufacturer's representative services were provided in this IFB.

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12. CONDUIT (IFB-263-K-041-E303); CONDUCTORS (IFB-263-K-041-E304); LIGHTING FIXTURES AND SUPPLIES (IFB-263-K-041-E305). These three IFBs provided lighting fixtures, electric conduit, conductors and hardware needed for installation of the plants electrical and control circuit.

13. SECONDARY UNIT SUBSTATIONS (IFB-263-K-041-E306). This IFB provided the secondary unit substations installed in the Silo Area Electrical Equipment Building, the Electrical Equipment Buildings 81 and 82. Major items of equipment in this IFB included:

- Secondary Unit Substation 1
- Secondary Unit Substation 2
- Secondary Unit Substation 3

No manufacturer's representative services were provided in this IFB.

14. PANELBOARDS (IFB-263-K-041-E307). This IFB provided the lighting and appliance panelboards installed in the Scale House, Storage Bin Area and Electrical Equipment Buildings 81 and 82. Major items of equipment in this IFB included:

- Three NEMA 1 panels.
- Eight NEMA 9 panels.

No manufacturer's representative services were provided in this IFB.

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15. STRUCTURAL STEEL AND MISCELLANEOUS METALS (IFB-263-K-041-S301). This IFB provided the structural steel, grating, plate and handrails as well as the finish paint for the complete facility.

16. MISCELLANEOUS ARCHITECTURAL ITEMS (IFB-263-K-041-A301). This IFB provided the miscellaneous items such as concrete additives, small quantities of roofing materials, and numerous other small items.

17. CONDUCTORS (IFB-263-K-041-E304). This IFB provided all conductors, conductor accessories, ground rods and ground clamps for use in the facility.

18. LIGHTING FIXTURES AND SUPPLIES (IFB-263-K-041-E305). This IFB provided all lighting fixtures, lamps, starters, ballasts, switches, receptacles, device plates, pushbutton stations, supports and miscellaneous other small items.

D. DETAILED EQUIPMENT LIST

The equipment for the Grain Bagging Facility was obtained under the procurement contracts provided above. Following is a detailed comprehensive listing of the equipment:

<u>Name of Equipment</u>	<u>Capacity</u>
Portable Pneumatic Evacuators	
1 to 16 - Quay 82	40 MT/hr
Portable Pneumatic Evacuators	
17 to 16 - Quay 81	40 MT/hr

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<u>Name of Equipment</u>	<u>Capacity</u>
Portable Pneumatic Surge Bins	
1 to 8 - Quay 82	10 MT/hr
Portable Surge Bins	
9 to 16 - Quay 81	10 MT/hr
Portable Belt Conveyors	
BC-1 to BC-8 - Quay 82	50 MT/hr
Portable Belt Conveyors	
BC-9 to BC-16 - Quay 81	50 MT/hr
Drag Conveyors DC-1 to 4 - Quay 82	100 MT/hr
Drag Conveyors DC-5 to 8 - Quay 81	100 MT/hr
Drag Conveyor DC-9 - Quay 82	200 MT/hr
Drag Conveyor DC-10 - Quay 82	400 MT/hr
Drag Conveyor DC-11 - Quay 82	200 MT/hr
Drag Conveyor DC-12 - Quay 81	200 MT/hr
Drag Conveyor DC-13 - Quay 81	400 MT/hr
Drag Conveyor DC-14 - Quay 81	400 MT/hr
Drag Conveyor DC-15 - Quay 81	400 MT/hr
Drag Conveyor DC-16 - Quay 81	400 MT/hr
Drag Conveyor DC-17	400 MT/hr
Drag Conveyor DC-18 - Storage	400 MT/hr
Drag Conveyor DC-19	400 MT/hr
Drag Conveyor DC-20 - Storage	400 MT/hr
Drag Conveyor DC-21 - Storage	400 MT/hr
Drag Conveyor DC-22 - Storage	400 MT/hr
Drag Conveyor DC-23 - Storage	400 MT/hr
Drag Conveyor DC-24 - Storage	400 MT/hr
Drag Conveyor DC-25 - Storage	400 MT/hr
Drag Conveyor DC-26 - Storage	400 MT/hr
Drag Conveyor DC-27 - Storage	400 MT/hr
Drag Conveyor DC-28 - Storage	400 MT/hr
Drag Conveyor DC-29 - Storage	400 MT/hr
Drag Conveyor DC-30 - Storage	400 MT/hr
Drag Conveyor DC-31 - Storage	400 MT/hr

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<u>Name of Equipment</u>	<u>Capacity</u>
Drag Conveyor DC-32 - Storage	400 MT/hr
Drag Conveyor DC-33 - Storage	400 MT/hr
Drag Conveyor DC-34 - Storage	400 MT/hr
Drag Conveyor DC-35 - Storage	400 MT/hr
Storage Bins S-1 to S-20 - Storage	320 MT
Bagging Bins B-1 to B-30 - Storage	47 MT
Volumetric Feeders 1-30 - Storage	24 MT/hr
Spilled Grain Hoppers 1-30- Storage	-
Bagging Conveyors 1-30 - Storage	20 Mt/hr
Sewing Machines 1-30 - Storage	-
Spilled Grain Recovery Screw Conveyor SC-1 to SC-20	6.5 MT/hr
Bucket Elevator No. 1 - Storage	200 MT/hr
Bucket Elevator No. 2 - Storage	200 MT/hr
Bucket Valves 1, 2	-
Bucket Valves 3 through 12	-
10.5 kV Metal-Clad Switchgear	105 kV, 1200 Amp
SUS-1	380V, 4000A
SUS-2	380V, 1600A
SUS-3	380V, 1600A
MCC-1	380V, 600A
MCC-2	380V, 600A
MCC-3	380V, 600A
MCC-4	380V, 600A
MCC-5	380V, 600A
MCC-6	380V, 600A
MCC-7	380V, 600A
MCC-81-1	380V, 600A
MCC-81-2	380V, 600A
MCC-82-1	380V, 600A
MCC-82-2	380V, 600A

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SECTION IV, CONSTRUCTION DRAWINGS.

A. GENERAL

The engineering services required detailed site, site development, grading, layout, architectural, structural, mechanical, electrical and instrument drawings to be used for the construction, erection, and installation of the facility

The design drawings prepared for the Bagging Facility have been revised to include the modifications and changes made during the project construction using information supplied by the construction contractor. One reproducible set and seven print sets of these record drawings have been submitted separately to the General Authority for Supply Commodities.

B. DRAWING LIST

Following is the list of the record drawings:

<u>Drawing No.</u>	<u>Drawing Title</u>
3A-1001	RESTRICTIONS ON CONTRACTOR'S WORK AREA
3M-1000	ABBREVIATIONS AND LEGEND
3M-1001	MECHANICAL FLOWSHEET SHIP UNLOADING AND GRAIN TRANSFER
3M-1002	MECHANICAL FLOWSHEET GRAIN HANDLING
3M-1003	MECHANICAL FLOWSHEET; GRAIN HANDLING
3M-2001	KEY PLAN

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<u>Drawing No.</u>	<u>Drawing Title</u>
3M-2002	MECHANICAL EQUIPMENT PLAN
3M-2003	MECHANICAL EQUIPMENT PLAN
3M-2004	SURGE BINS 9-12; BELT CONVEYORS 9-12; DRAG CONVEYORS 5, 6 AND 12
3M-2005	SURGE BINS 13-16; BELT CONVEYORS 13-16; DRAG CONVEYORS 7, 8 AND 12 AND 13
3M-2006	DRAG CONVEYORS 13 AND 14
3M-2007	SURGE BINS 7 AND 8; BELT CONVEYORS 7 AND 8; DRAG CONVEYORS 4, 11, 14, 15 AND 16
3M-2008	SURGE BINS 5 AND 6; BELT CONVEYORS 5 AND 6; DRAG CONVEYORS 10, 11, 16, 17 AND 19
3M-2009	SURGE BINS 3 AND 4; BELT CONVEYORS 3 AND 4; DRAG CONVEYORS 9 AND 10
3M-2010	SURGE BINS 1 AND 2; BELT CONVEYORS 1 AND 2; DRAG CONVEYORS 1 AND 9
3M-2011	TOP PLAN: STORAGE BINS 1, 2, 11 AND 12; BAGGING BINS 1-3, 16-18; DRAG CONVEYORS 17-22; 26, 27, 31 AND 32
3M-2012	TOP PLAN: STORAGE BINS 3-6, 13-16; BAGGING BINS 4-9, 19-24; DRAG CONVEYORS 21-24; 26-29, 31-34
3M-2013	TOP PLAN: STORAGE BINS 7-10, 17-10; BAGGING BINS 10-15, 25-30; DRAG CONVEYORS 23-25; 28-30, 33-35
3M-2014	BOTTOM PLAN: STORAGE BINS 7-10, 17-10; BAGGING BINS 10-15, 25-30; DRAG CONVEYORS 36, 37, 41 AND 42; SCREW CONVEYORS 1, 2, 6, 7, 11, 12, 16 AND 17
3M-2015	BOTTOM PLAN: STORAGE BINS 3-6, 13-16; BAGGING BINS 4-9, 19-24; DRAG CONVEYORS 37-40, 42-45; SCREW CONVEYORS 3, 4, 8, 9, 13, 14, 18 AND 19
3M-2016	BOTTOM PLAN: STORAGE BINS 1, 2, 11 AND 12; BAG- GING BINS 1-3, 16-18; DRAG CONVEYORS 39, 40, 44 AND 45; SCREW CONVEYORS 5, 10, 15, AND 20
3M-2050	SURGE BINS 9-12; BELT CONVEYORS 9-12; DRAG CON- VEYORS 5, 6 AND 12

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<u>Drawing No.</u>	<u>Drawing Title</u>
3M-2051	SURGE BINS 13-16; BELT CONVEYORS 13-16; DRAG CONVEYORS 7, 8, 12 AND 13
3M-2052	DRAG CONVEYORS 13, 14, 15 AND 16
3M-2053	SURGE BINS 7 AND 8; BELT CONVEYORS 7 AND 8; DRAG CONVEYORS 4, 11, 15 AND 16
3M-2054	SURGE BINS 5 AND 6; BELT CONVEYORS 5 AND 6; DRAG CONVEYORS 3, 10, 11, 16, 17 AND 19
3M-2055	SURGE BINS 3 AND 4; BELT CONVEYORS 3 AND 4; DRAG CONVEYORS 2, 9, AND 10
3M-2056	SURGE BINS 1 AND 2; BELT CONVEYORS 1 AND 2; DRAG CONVEYORS 1, AND 9
3M-2057	TRANSVERSE SECTION
3M-2058	TRANSVERSE SECTION
3M-2059	TRANSVERSE SECTION
3M-2060	SECTION 1 QUAY 81
3M-2061	SECTION 1 QUAY 82
3M-2062	STORAGE BINS 11 AND 12; BAGGING BINS 16-18; BUCKET ELEVATOR 2; DRAG CONVEYORS 18, 20, 31, 32, 44 AND 45; SCREW CONVEYORS 10 AND 20
3M-2063	STORAGE BINS 13-16; BAGGING BINS 19-24; DRAG CONVEYORS 31-34, 42-45; SCREW CONVEYORS 8, 9, 18 AND 19
3M-2064	STORAGE BINS 17-20; BAGGING BINS 25-30; DRAG CONVEYORS 33-35, 41-43; SCREW CONVEYORS 6, 7, 16 AND 17
3M-2065	STORAGE BINS 11 AND 12; BUCKET ELEVATOR 2; DRAG CONVEYORS 18, 19, 20, 26, 27, 44 AND 45
3M-2066	STORAGE BINS 13-16; DRAG CONVEYORS 26, 29, 42-45
3M-2067	STORAGE BINS 17-20; DRAG CONVEYORS 33-35, 41-43
3M-2068	SECTIONS
3M-2069	TYPICAL BAGGING STATIONS & BAG LOADING PALN & SECTIONS

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3M-2070	NOT USED
3M-2071	NOT USED
3M-2072	NOT USED
3M-2073	NOT USED
3M-2074	NOT USED
3M-2075	NOT USED
3M-2076	DRAG CONVEYOR SPECIFICATIONS
3M-2077	DRAG CONVEYOR SPECIFICATIONS
3M-2078	BUCKET VALVE DETAILS
3M-2079	BUCKET VALVE SECTIONS AND DETAILS
3M-2080	SPOUTING DETAILS
3M-2081	MODIFICATION DETAILS OF EXISTING PORTABLE SURGE BINS
3M-2082	SECTIONS AND DETAILS
3M-2083	SECTIONS AND DETAILS
3M-2084	GRAIN SPOUT TAB SHEET
3M-2085	NOT USED
3M-6001	ELECTRICAL EQUIPMENT BUILDING TOWER NUMBERS 6 & 13 AREA 1 & 3
3S-1001	SCALE HOUSE & TYPICAL DOOR & WINDOW DETAILS
3S-1002	ELECTRICAL EQUIPMENT BUILDINGS TOWER NOS. 6 & 13
3S-1003	ELECTRICAL EQUIPMENT BUILDING - AREA 3
3S-1004	ELECTRICAL EQUIPMENT BUILDING ELEVATIONS & DETAILS
3S-2000	NOT USED
3S-2001	NOT USED
3S-2002	NOT USED

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<u>Drawing No.</u>	<u>Drawing Title</u>
3S-2003	NOT USED
3S-2004	NOT USED
3S-2005	NOT USED
3S-2006	NOT USED
3S-2007	DEMOLITION PLAN
3S-2008	CIVIL KEY PLAN
3S-2009	SITE PLAN - AREA A1
3S-2010	SITE PLAN - AREA A2 & A3
3S-2011	PAVEMENT PLAN
3S-2012	SITE SECTION & DETAILS - SHEET 1 OF 2
3S-2013	SITE SECTION & DETAILS - SHEET 2 OF 2
3S-2014	SITE PROFILES
3S-2015	EXCAVATION FOR STORAGE & BAGGING FOUNDATION - AREA A2
3S-3001	STRUCTURAL CONCRETE KEY PLAN
3S-3002	FOUNDATION PLAN - AREA B1
3S-3003	FOUNDATION PLAN - AREA B2
3S-3004	FOUNDATION PLAN - AREA B3
3S-3005	FOUNDATION PLAN - AREA B4
3S-3006	FOUNDATION DETAILS - AREA B1 & B2 - DRAG CONVEYOR 1-B
3S-3007	FOUNDATION DETAILS - AREA B1 & B2 - BENTS AND TOWER SHEET 1
3S-3008	FOUNDATION DETAILS - AREA B1 & B2 - BENTS AND TOWER SHEET 2
3S-3009	NOT USED
3S-3010	FOUNDATION DETAILS - AREA B3 & B4 - STORAGE BINS

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3S-3011	FOUNDATION DETAILS - AREA B3 & B4 - STORAGE STATION
3S-3012	NOT USED
3S-3013	NOT USED
3S-3014	FOUNDATION DETAILS - AREA B5 SCALE PIT SHEET 1
3S-3015	FOUNDATION DETAILS - AREA B5 SCALE PIT SHEET 2
2S-4000	STORAGE BIN
2S-4001	BAGGING STATION
2S-4002	BAGGING STATION - SECTIONS AND DETAILS - SHEET NO. 1
2S-4003	BAGGING STATION - SECTIONS AND DETAILS - SHEET NO. 2
3S-4000	NOT USED
3S-4001	NOT USED
3S-4002	NOT USED
3S-4003	NOT USED
3S-4004	NOT USED
3S-4005	NOT USED
3S-4006	STRUCTURAL STEEL SUPPORT-DRAG CONVEYOR 1-8 AREA 1
3S-4007	NOT USED
3S-4008	STRUCTURAL STEEL-KEY PLAN
3S-4009	STRUCTURAL FRAMING PLAN AREA 1
3S-4010	STRUCTURAL STEEL PLAN & ELEVATION AREA 2
3S-4011	STRUCTURAL STEEL FRAMING PLANS AREA 3 @ EL. 18700, 14770, 10830 & 6900
3S-4012	STRUCTURAL STEEL FRAMING PLANS AREA 3, 4 & 5 @ EL. 7600, 14050

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<u>Drawing No.</u>	<u>Drawing Title</u>
3S-4013	STRUCTURAL STEEL FRAMING PLANS AREA 3 @ EL. 20500
3S-4014	STRUCTURAL STEEL FRAMING PLANS AREA 4 @ EL. 20500
3S-4015	STRUCTURAL STEEL FRAMING PLANS AREA 5 @ EL. 20500
3S-4016	NOT USED
3S-4017	STRUCTURAL STEEL BRIDGES - AREA 1; BRIDGES NOS. 1-6, 10, 11, 14-17
3S-4018	STRUCTURAL STEEL BRIDGES - AREA 1; BRIDGES NOS. 7, 8, 9, 12
3S-4019	STRUCTURAL STEEL BRIDGES - AREA 1; BRIDGES NOS. 13, 18
3S-4020	STRUCTURAL STEEL TOWERS - AREA 1; TOWER NO. 6
3S-4021	STRUCTURAL STEEL TOWERS - AREA 1; TOWER NO. 13
3S-4022	STRUCTURAL STEEL TOWERS - AREA 1; NOS. 1, 9, 19
3S-4023	STRUCTURAL STEEL BENTS - AREAL BENTS NOS. 2-5, 7, 8, 10-12, 14-18
3S-4024	STRUCTURAL STEEL BRIDGE DETAILS - AREA 1 - SHEET 1
3S-4025	STRUCTURAL STEEL BRIDGE DETAILS - AREA 1 - SHEET 2
3S-4026	STRUCTURAL STEEL BRIDGE DETAILS - AREA 1 - SHEET 3
3S-4027	STRUCTURAL STEEL TOWER DETAILS - AREA 1
3S-4028	STRUCTURAL STEEL BRIDGE DETAILS - AREA 2
3S-4029	NOT USED
3S-4030	STRUCTURAL STEEL ELEVATIONS & DETAILS - AREA 3
3S-4031	STRUCTURAL STEEL ELEVATIONS & DETAILS - AREA 3, 4, & 5
3S-4032	STRUCTURAL STEEL DETAILS - AREA 3, 4, & 5 SHEET 1
3S-4033	STRUCTURAL STEEL DETAILS - AREA 3, 4, & 5 SHEET 2
3S-4034	TRUCK LOADING PLATFORM AT BAGGING STATION - AREAS 3, 4, & 5

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3S-4036	MONORAIL FRAMING PLAN & DETAILS - AREAS 3, 4, & 5
3E-1611	MOTOR CONTROL CENTER SCHEDULES STORAGE BIN AREA
3E-1612	MOTOR CONTROL CENTER SCHEDULES QUAY 81 AND 82 AREAS
3E-1613	POWER PANELBOARD SCHEDULES
3E-1614	POWER PANELBOARD SCHEDULES
3E-1615	POWER PANELBOARD SCHEDULES
3E-1616	TRANSFORMER & LIGHTING FIXTURE SCHEDULE
3E-2000	SCHEMATIC AND WIRING DIAGRAM LEGEND
3E-2001	SCHEMATIC AND WIRING DIAGRAM
3E-2002	SCHEMATIC AND WIRING DIAGRAM
3E-2003	SCHEMATIC AND WIRING DIAGRAM
3E-2004	SCHEMATIC AND WIRING DIAGRAM
3E-2005	SCHEMATIC AND WIRING DIAGRAM
3E-2006	SCHEMATIC AND WIRING DIAGRAM
3E-2007	SCHEMATIC AND WIRING DIAGRAM
3E-2008	SCHEMATIC AND WIRING DIAGRAM
3E-2009	SCHEMATIC AND WIRING DIAGRAM
3E-2010	SCHEMATIC AND WIRING DIAGRAM
3E-2011	SCHEMATIC AND WIRING DIAGRAM
3E-2012	SCHEMATIC AND WIRING DIAGRAM
3E-2013	SCHEMATIC AND WIRING DIAGRAM
3E-2014	SCHEMATIC AND WIRING DIAGRAM
3E-2015	SCHEMATIC AND WIRING DIAGRAM
3E-2016	SCHEMATIC AND WIRING DIAGRAM

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<u>Drawing No.</u>	<u>Drawing Title</u>
3E-2017	SCHEMATIC AND WIRING DIAGRAM
3E-2018	SCHEMATIC AND WIRING DIAGRAM
3E-2019	SCHEMATIC AND WIRING DIAGRAM
3E-2020	SCHEMATIC AND WIRING DIAGRAM
3E-2021	SCHEMATIC AND WIRING DIAGRAM
3E-2022	SCHEMATIC AND WIRING DIAGRAM
3E-2023	SCHEMATIC AND WIRING DIAGRAM
3E-2024	SCHEMATIC AND WIRING DIAGRAM
3E-2025	SCHEMATIC AND WIRING DIAGRAM
3E-2026	SCHEMATIC AND WIRING DIAGRAM
3E-2027	SCHEMATIC AND WIRING DIAGRAM
3E-2028	SCHEMATIC AND WIRING DIAGRAM
3E-2029	SCHEMATIC AND WIRING DIAGRAM
3E-2030	SCHEMATIC AND WIRING DIAGRAM
3E-2031	SCHEMATIC AND WIRING DIAGRAM
3E-2032	SCHEMATIC AND WIRING DIAGRAM
3E-2033	SCHEMATIC AND WIRING DIAGRAM

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SECTION V, OPERATION AND MAINTENANCE MANUAL
AND TRAINING PROGRAM

A. GENERAL

As part of the engineering services, information and instructions on the operation, repair and maintenance of the facility were developed by the Engineer or obtained from the equipment manufacturers.

B. OPERATION AND MAINTENANCE MANUAL

The Engineer prepared an Operation and Maintenance Manual, Quay 81/82 Grain Bagging Facility. Copies of this manual were submitted separately. Major items included in the manual were as follows:

1. DESCRIPTION. The Operation and Maintenance Manual provided a description of the facility and a listing of capacities of various equipment.

2. ORGANIZATION AND STAFFING. It presented an organizational structure for operating and managing the facility, a proposed staffing schedule and a listing of duties and responsibilities for all positions.

3. OPERATING INSTRUCTIONS. Both general and detailed instructions for the operation of the facility were given. Precise instructions were detailed for each of the following subsystems.

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- Receiving and distribution system
- Bagging equipment
- Equipment cleaning system
- Spilled grain recovery system
- Stored grain recovery system
- Bagged grain loading
- Steam generation system
- Bulk loadout
- Truck weighing scales

4. MAINTENANCE. A total maintenance program was recommended. Suggestions were specifically presented for all major items of equipment.

5. SAFETY. Safety considerations were discussed and rules for implementations in operating and in maintaining the facility were given.

6. EQUIPMENT. In this section of the Operation and Maintenance Manual were presented the manufacturers' detailed operation and maintenance instructions for the following items of equipment:

- Metal Clad Switchgear (IFB-263-K-041-E301)
- Secondary Unit Substation (IFB-263-K-041-E306)
- Motor Control Centers (IFB-263-K-041-E302)
- Alarm Control Centers (IFB-263-K-041-E307)
- Bagging Equipment (IFB-263-K-041-E203)
- Bins and Bagging Stations (IFB-263-K-041-E204)

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- Truck Scales (IFB-263-K-041-E205)
- Forklift Trucks (IFB-263-K-041-E302)
- Portable Bulk Grain Conveyors (IFB-263-K-041-E303)
- Drag Conveyors (IFB-263-K-041-E304)
- Bucket Elevators (IFB-263-K-041-E305)
- Screw Conveyors (IFB-263-K-041-E306)
- Ventilation Equipment (IFB-263-K-041-E310)

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Following is a listing of the Table of Contents from the Operation and Maintenance Manual.

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D. TRAINING

During the construction and commissioning of the facility, BVI personnel provided "hands on" training to the Egyptian personnel present at the site. The Egyptian personnel selected for representation at the site were designated by the Government of Egypt.

BVI further arranged through the procurement contracts for each supplier, where applicable, to provide training to O & M personnel designated and provided by GASC.

After commissioning of the Grain Bagging Facility, BVI personnel remained in Alexandria at the adjacent construction site of the TOF and facility through October 1983. BVI personnel made routine periodic visits to the Grain Bagging Facility and were at all times available for advice and consultation.

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SECTION VI

TRANSFER OF FACILITIES

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SECTION VI, TRANSFER OF FACILITIES

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SECTION VI, TRANSFER OF FACILITIES

A. GENERAL

Construction of the storage silos and Quay 82 unloading facilities was completed in December, 1981. During the period 21 January 1982 through 24 January 1982 an operational test (unloading of wheat from ship to storage and bulk trucks) was conducted under Black & Veatch International supervision.

The General Company of Silos (GCS) conducted subsequent unsupervised unloading operations during a training phase and assumed regular operation on 21 May 1982.

Construction of Quay 81 facilities continued during 1982. The GCS accepted the storage silos and Quay 82 facilities on 17 March 1983.

On 15 May 1983 an operational test of the Quay facilities was conducted unloading corn from ship to storage. At the completion of this test, GCS accepted the complete facility.

B. MEMORANDUMS OF TRANSFER

The Quay 82 portion of the Facility was first operated during January 1982. Numerous meetings regarding the transfer of the Facilities to the GCS occurred throughout 1982 and the first half of 1983. Final acceptance of the

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Quay 82 Facility occurred on 17 March 1983 and for Quay 81 and 82 combined Facilities on 15 May 1983. Final acceptance of the Facilities included signed inventory sheets for all equipment contracts and spare parts supplied under the individual procurement IFB's for this report.

1. ACCEPTANCE OF QUAY 82 FACILITY. The following is a translation of the Memorandum of Transfer which was executed in Arabic on 17 March 1983.

"The Committee reassembled on Thursday 17 March 1983, at 10:00 a.m. at the GASC/Alexandria office, in the presence of all parties whose members were listed in the Meeting of 16 March 1983. The Meeting this date is for the official turning over of the Quay 81/82 Bagging Facility to the GCS. They (GCS) have been operating this facility since April 1982. The turning over on this date is to establish the fact that the GCS has received the facility since April 1982 and to assure that they (GCS) are still operating the facility, to date.

The Committee reviewed the eighteen (18) points observed by the GCS, and which are listed in the Meeting Minutes of 17 June 1982, and which are in the scope of responsibility of ARABCON and the consultant BVI. The result of the review is as follows:

- 1) Observations that were ARABCON's responsibility, were fulfilled.
- 2) Of the other points, three observations, that were BVI's responsibility, expressed in Item 10, 11 and 18 (of the 17 June 1982 Meeting):
 - a) Item 10:

Concerns sewing machines No. 15 and 16. BVI representatives promised to hand, the GCS, and looper and looper holders for these two machines, in a week's time.
 - b) Item 11:

Concerns a missing motor of the screw conveyors. BVI representatives promised to hand this to GCS in a week's time.
 - c) Item 18:

Concerns the shortage in plugs. The GCS and BVI are to prepare a list of the missing/short items, according to which, BVI will try to obtain them, in a week's time.

Concerning what was mentioned in the Meeting Minutes of 18 June 1982 about the restrictions laid by the GCS, this is being done by co-ordination, betweek the GASC and GCS.

The GCS representatives stated that they have observed, in the previous period, that the bucket elevators 1 and 2, do give their designed capacity, which is 200 MT/hr., but only for a limited period of time, which does not exceed 30 minutes. And that it is impossible to maintain the continuity of the designed capacity. This is attributed to non capability of the electrical motors, as they are below the required capacity. The elevators could be operated under the present circumstances, provided that the capacity would not exceed 185 MT/hr.

The BVI representatives commented on this by mentioning the fact that; previously, the GCS and BVI representatives have conducted a test under full-load, for the elevators. The result of the test has proved that the elevators had the capacity of elevating 204 MT/hr. This result was maintained, throughout, and the motors proved to be adequate and maintained continuity. The two parties (GCS and BVI) agreed on accepting the results of the operational test, and which maintained the designed capacity.

The GCS requested that the following remarks be considered:

- 1) Make a net to keep threads and yarn. The GCS said that they will do that on their own, and the account of GASC.
- 2) Make a design to modify the bagging units, so as to prevent grain from falling on the ground. This will be done by the GCS, on the account of GASC.
- 3) Make covers for the drag conveyors hoppers. This will be done by the GCS, on the account of GASC. The GCS mentioned that this was to prevent rain water from accumulating in the chains of DC-1 thru DC-8.
- 4) Make permanent maintenance arrangements for the motors of the conveying system. This will be done by the GCS, on the account of GASC.
- 5) The GCS expressed the necessity of providing the facility with an internal communication system. This system is for controlling operation. This should be provided by GASC.
- 6) Feeding the cross-tie cable with electricity.
- 7) To postpone the taking over, of the scale until it is certified and approved by the Standard Weights and Measures Authority, so that they (GCS) would be assured of its validity.

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- 8) For protection of the facility:
 - a) A fence shall be constructed by the GCS, on the account of GASC.
 - b) A fire fighting system that complies with the laws of the Civil Defence and the Fire Department at the Port. This will be done by the GCS, on the account of GASC.
- 9) A revision would be made on the flash lights that the GCS has received, and a request to have a complete set would be made.
- 10) The necessity of finding out a way to avoid the dust resulting during operation.

On finishing the discussion with all the concerned parties, the Committee sees that the third Item of the Decree No. 78 for the year 1983, issued by his Excellency, the Minister of Supply and Internal Trade, be fulfilled. The GCS hereby acknowledges its taking over of the first portion of the facility (Quay 81) to operate it. The Committee recorded the following facts:

First:

Operational testing of the facility was started in the month of January 1982.

Second:

The GCS has actually started operating the facility on 21 May 1982.

A joint Meeting between the GCS, BVI and ARABCON shall be conducted to hand over the offices and furniture at the project site, to the GCS. This is according to the Contract.

The GCS has received five (5) copies of the Operation and Maintenance Manual.

The Meeting was adjourned."

2. FINAL ACCEPTANCE OF QUAY 81/82 FACILITY. Operational testing of the Quay 81 portion of the Facility occurred on 14 May 1983. This test was considered the final test of the completed Facility. The following is a translation of the Memorandum of Transfer which was executed in Arabic and represents Final Acceptance of all equipment, spare parts and construction services provided under this sub-project.

"THE GENERAL AUTHORITY FOR SUPPLY COMMODITIES
PROJECT DEPARTMENT

MINUTES OF MEETING HELD TO TAKE OVER THE SECOND PORTION OF THE
QUAY 81/82 PROJECT (QUAY 81)

On Saturday 14 May 1983, at 9:00 a.m., the Committee, which was formed by the Ministerial Decree No. 78 for the year 1983, issued on February 19, 1983, by his Excellency the Minister of Supply and Internal Trade, has assembled. Members of the Subject Committee are as follows:

THE GENERAL AUTHORITY FOR SUPPLY COMMODITIES (GASC)

- 1) Mr. Mounir Malaty
- 2) Dr. Hamza A. Hamza
- 3) Mr. Hashem Aly Rashwan
- 4) Mr. Saad Abu El Makarem
- 5) Mr. M. Abdel Fattah Safouh
- 6) Mr. Saad Khalaf

THE GENERAL COMPANY OF SILOS (GCS)

- 1) Eng. Magdy Abdel Koudous
- 2) Eng. Adel Fahmy Fahim
- 3) Eng. Mohamed Atteya
- 4) Eng. Farid M. Zamzam
- 5) Eng. Mahmoud Ez El Arab

THE ARAB CONTRACTORS (ARABCON)

- 1) Eng. Farouk Abdel Halim
- 2) Eng. Sami Abdel Motagaly

BLACK & VEATCH INTERNATIONAL (EVI)

- 1) Mr. Alex Douglas
- 2) Mr. Robert Colbert
- 3) Eng. Mohamed Delawar
- 4) Eng. Mostafa Ramadan

On the morning of the above-mentioned date, the Committee started, in the presence of all the members listed. The Meeting began by reviewing the operational trial of the equipment on Quay 81. To avoid the waste of time, the Committee moved to the Project Site, at the Port, where there was a corn ship berthed alongside Quay 81, and which was being offloaded manually by the GCS.

At the site, the BVI representatives, together with representatives from ARABCON, checked and operated the electrical transformers, as they have not been operated for a long time. The electrical equipment have been successfully operated, also a check was made on the Motor Control Centers, to make sure they were in their desired condition.

The Committee has then taken up the subject of the necessary preparations for the operational tests. Evacuators that would be used, should be adequate. Also, the procedure of the test was discussed to insure the adequacy of the equipment in operating the project.

The GCS asked that the test be postponed to the next morning (Sunday 15 May 1983), so that they (GCS) would be able to take care of the various arrangements to be made to carry out the test. As preparations would take a long time, and that it might be fully dark by the time they finish.

The GCS has asked that the following items be fulfilled:

- 1) Providing the facility with an internal communication system, as the vastness of the site (horizontally and vertically) on the Quay 81/82 makes it difficult to communicate.
- 2) The necessity of energizing the secondary feeding cable by the EEA.
- 3) The necessity of checking and adjusting the 2 spare breakers in Quay 82 Substation.
- 4) The 3 lightning arrestors in Quay 81 Transformer are not connected due to the inability of their checked by EEA nor tested.
- 5) The GCS informed the Committee that the scales were calibrated and stamped by the Standard Weights and Measures Authority, Cairo. And that the scales are now operating. By this statement the GCS has taken over (received) the scales from ARABCON.

The Meeting was adjourned and signed at 18:00 hours.

THE GENERAL AUTHORITY FOR SUPPLY COMMODITIES
PROJECT DEPARTMENT

On Sunday 15 May 1983, the Committee reassembled, with all the members mentioned in the minutes of Meeting held on May 14, 1983 present. The operational tests started at 9:00 a.m., after completing

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the necessary arrangements and overcoming all difficulties to start the tests. The actual testing started at 3:00 p.m. and was over at 5:00 p.m.

The Quay 81 equipment was tested by using the corn ship "Fontien", which was berthed alongside the quay, and was being offloaded manually by the GCS. Thus, the equipment on Quay 81 has proved to be adequate, in the presence of all concerned and present parties.

Based on this test, the facility was taken over by the GASC from ARABCON, which in turn, and instantly handed the facility over to the GCS, according to the Ministerial Decree No. 78 for the year 1983. The GCS is now fully responsible of the facility and its operation. It is to be known that the operational tests started at 9:00 a.m. and were over at 5:00 p.m.

The Meeting was adjourned and signed at 6:00 p.m."

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SECTION VII

FINANCIAL

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SECTION VII, FINANCIAL

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SECTION VII, FINANCIAL

A. GENERAL

Exhibit No. 1 provides a breakdown of the U.S. Dollar portion of the Letters of Commitment for the Quay 81/82 Bagging Facility Project.

As reported in Section I.D.6, the General Construction Contract for the Quay 81/82 Bagging Facility was financed by the Egyptian Government in local currency. The final contract value, less change orders, was L.E. 2,886,625.358.

A breakdown of the U.S. Dollar Engineering Services Letter of Commitment is contained in Exhibit 2. The Egyptian Pound component of Engineering Services is contained in Exhibit 3. The USAID/Egypt Letter of Commitment Report as of 3 April 1985 for Loan 263-K-041 is contained in Exhibit 4.

B. FINANCIAL EXHIBITS.

GRAIN/TOF STORAGE FACILITIES

USAID LOAN 263-K-041

DISTRIBUTION OF PROJECT LOAN FUNDS

L/Comm No. 263-K-041	Description	Breakdown by Sub-Project					TOTAL U.S. Dollars
		Laboratory Equipment	Portable Conveyors	Quay 81/82	TOF	Safaga Silos	
01	BVI Engineering Services	7,954	12,929	1,155,707	1,177,902	2,979,544 153,751*	5,487,787
02	Neotec Lab Equipment	33,463 3,785*					37,248
21	Portable Conveyors		523,771 59,975*				583,746
24	HHC General Const. Contract				22,264,068 225,370*		22,489,438
03	Bagging Bins			1,490,854 400*		499,051	1,990,305
12	Truck/Rail Weigh Scales			39,234	32,480	67,059	138,773
17	Bag Closers & Bagging Conveyors			281,577		170,400	451,977
22	Fork Lift Trucks			34,239		34,239	68,478
04, 05, 06, 07, 08, 09, 10, 11, 13, 14, 15, 16, 19, 20 & 21	All other Equip L/Comms for Quay 81/82			4,441,180 16,873*			4,458,053
TOTALS		45,202	596,675	7,460,064	23,699,820	3,904,044	35,705,805

*Unliquidated (not yet expended) funds contained in USAID/Cairo Letter of Commitment report as of 3 April 1985. Please refer to Exhibit 4.

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BVI ENGINEERING SERVICES
BUDGET ANALYSIS
U.S. DOLLAR COSTS INCURRED THRU SEPTEMBER 1984
GRAIN/TOF STORAGE FACILITIES
SUMMARY SHEET

ITEM	COSTS TO DATE	CONTRACT BUDGET	PERCENTAGE USED
1. Overseas Salaries at U.S. Base Pay	497,488.56	516,182.00	96.4
2. Overseas Differential	99,497.71	108,611.00	91.6
3. Overhead - Overseas Field Staff	499,370.83	518,914.00	96.2
4. Home Office Salaries	1,427,970.02	1,439,790.00	99.2
5. Monthly Salary Adjustment			
6. Overhead - Home Office	1,426,971.91	1,446,738.00	98.6
7. Fixed Fee	718,730.97	718,731.00	100.0
8. Subcontract Costs	135,129.71	135,642.00	99.6
9. Consultant Costs	2,808.94	2,679.00	104.0
10. Travel Per Diem			
a) International Travel	153,425.42	117,200.00	130.9
b) International Per Diem	7,371.00	11,040.00	66.8
c) Domestic Travel	4,405.35	12,400.00	35.5
d) Domestic Per Diem	2,192.07	10,100.00	21.7
11. Transportation Personal Baggage	6,380.23	11,040.00	57.8
12. Transportation Household Effects	76,142.46	92,000.00	82.8
13. Transportation Equipment	16,429.25	88,500.00	18.6
14. Equipment	24,854.74	72,700.00	34.2
Equipment - Project		5,000.00	
15. Other Direct Costs			
a) Out of Pocket Expenses	58,281.86	51,679.00	112.8
b) Miscellaneous	146,088.00	105,441.00	138.5
16. Field Staff Allowances	30,883.75	23,400.00	131.9
TOTAL	5,334,422.78	5,487,787.00	97.2

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BVI ENGINEERING SERVICES
BUDGET ANALYSIS
U.S. DOLLAR COSTS INCURRED THRU SEPTEMBER 1984
GRAIN/TOF STORAGE FACILITIES
LAB EQUIPMENT

ITEM	COSTS TO DATE	CONTRACT BUDGET	PERCENTAGE USED
1. Overseas Salaries at U.S. Base Pay	375.68	525.00	71.6
2. Overseas Differential	75.13	105.00	71.6
3. Overhead - Overseas Field Staff	381.61	529.00	72.1
4. Home Office Salaries	2,157.78	2,850.00	75.7
5. Monthly Salary Adjustment			
6. Overhead - Home Office	2,178.82	2,871.00	75.9
7. Fixed Fee	1,062.00	1,062.00	100.0
8. Subcontract Costs			
9. Consultant Costs			
10. Travel Per Diem			
a) International Travel			
b) International Per Diem			
c) Domestic Travel			
d) Domestic Per Diem			
11. Transportation Personal Baggage			
12. Transportation Household Effects			
13. Transportation Equipment			
14. Equipment			
Equipment - Project			
15. Other Direct Costs			
a) Out of Pocket Expenses	169.60	30.00	565.3
b) Miscellaneous	1,553.75	28.00	5,549.1
16. Field Staff Allowances			
TOTAL	7,954.37	8,000.00	99.4

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BVI ENGINEERING SERVICES

BUDGET ANALYSIS

U.S. DOLLAR COSTS INCURRED THRU SEPTEMBER 1984

GRAIN/TOF STORAGE FACILITIES

PORTABLE CONVEYORS

ITEM	COSTS TO DATE	CONTRACT BUDGET	PERCENTAGE USED
1. Overseas Salaries at U.S. Base Pay	767.30	1,050.00	73.1
2. Overseas Differential	153.46	210.00	73.1
3. Overhead - Overseas Field Staff	779.85	1,058.00	73.7
4. Home Office Salaries	3,337.97	6,600.00	50.6
5. Monthly Salary Adjustment			
6. Overhead - Home Office	3,258.31	6,648.00	49.0
7. Fixed Fee	2,550.00	2,550.00	100.0
8. Subcontract Costs			
9. Consultant Costs			
10. Travel Per Diem			
a) International Travel		400.00	
b) International Per Diem		200.00	
c) Domestic Travel			
d) Domestic Per Diem			
11. Transportation Personal Baggage			
12. Transportation Household Effects			
13. Transportation Equipment			
14. Equipment			
Equipment - Project			
15. Other Direct Costs			
a) Out of Pocket Expenses	1,095.52	189.00	579.6
b) Miscellaneous	986.75	95.00	1,038.7
16. Field Staff Allowances			
TOTAL	12,929.16	19,000.00	68.1

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BUDGET ANALYSIS

U.S. DOLLAR COSTS INCURRED THRU SEPTEMBER 1984

GRAIN/TOF STORAGE FACILITIES

QUAY 81/82

ITEM	COSTS TO DATE	CONTRACT BUDGET	PERCENTAGE USED
1. Overseas Salaries at U.S. Base Pay	161,010.80	162,217.00	99.3
2. Overseas Differential	32,202.17	32,443.00	99.3
3. Overhead - Overseas Field Staff	162,380.60	162,627.00	99.8
4. Home Office Salaries	246,570.60	250,885.00	98.3
5. Monthly Salary Adjustment			
6. Overhead - Home Office	251,006.59	252,512.00	99.4
7. Fixed Fee	156,412.00	156,412.00	100.0
8. Subcontract Costs	34,555.00	41,922.00	82.4
9. Consultant Costs			
10. Travel Per Diem			
a) International Travel	28,675.30	19,500.00	147.1
b) International Per Diem	1,660.00	1,820.00	91.2
c) Domestic Travel	548.36	1,400.00	39.2
d) Domestic Per Diem	70.00	700.00	10.0
11. Transportation Personal Baggage	2,248.70	4,440.00	50.7
12. Transportation Household Effects	30,439.44	46,000.00	66.2
13. Transportation Equipment	1,965.17	5,500.00	35.7
14. Equipment	10,960.47	11,500.00	95.3
Equipment - Project		5,000.00	
15. Other Direct Costs			
a) Out of Pocket Expenses	14,877.13	5,500.00	270.5
b) Miscellaneous	11,275.26	15,880.00	71.0
16. Field Staff Allowances	8,850.00	7,800.00	113.5
TOTAL	1,155,707.02	1,184,058.00	97.6

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BVI ENGINEERING SERVICES

BUDGET ANALYSIS

U.S. DOLLAR COSTS INCURRED THRU SEPTEMBER 1984

GRAIN/TOF STORAGE FACILITIES

SAFAGA SILO

ITEM	COSTS TO DATE	CONTRACT BUDGET	PERCENTAGE USED
1. Overseas Salaries at U.S. Base Pay	221,976.21	233,540.00	95.1
2. Overseas Differential	44,395.24	52,083.00	85.2
3. Overhead - Overseas Field Staff	222,612.87	235,210.00	94.6
4. Home Office Salaries	853,572.96	856,290.00	99.7
5. Monthly Salary Adjustment			
6. Overhead - Home Office	845,655.90	860,049.00	98.3
7. Fixed Fee	416,650.00	416,650.00	100.0
8. Subcontract Costs	65,835.31	58,980.00	111.6
9. Consultant Costs	2,808.94	2,679.00	104.9
10. Travel Per Diem			
a) International Travel	86,863.07	66,200.00	104.9
b) International Per Diem	4,547.50	6,280.00	72.4
c) Domestic Travel	2,096.01	9,200.00	22.8
d) Domestic Per Diem	821.50	8,200.00	10.0
11. Transportation Personal Baggage	2,782.15	4,000.00	69.6
12. Transportation Household Effects	30,272.15	30,000.00	100.9
13. Transportation Equipment	13,742.83	78,000.00	17.0
14. Equipment	11,978.87	61,200.00	19.6
Equipment - Project			
15. Other Direct Costs			
a) Out of Pocket Expenses	24,370.70	30,860.00	78.6
b) Miscellaneous	106,914.01	66,000.00	161.9
16. Field Staff Allowances	22,033.75	13,000.00	169.5
TOTAL	2,979,929.97	3,088,421.00	96.5

General Authority for Supply Commodities
Ministry of Supply
Arab Republic of Egypt

EVI ENGINEERING SERVICES

BUDGET ANALYSIS

U.S. DOLLAR COSTS INCURRED THRU SEPTEMBER 1984

GRAIN/TOF STORAGE FACILITIES

TOF FACILITY

ITEM	COSTS TO DATE	CONTRACT BUDGET	PERCENTAGE USED
1. Overseas Salaries at U.S. Base Pay	113,358.57	118,850.00	95.4
2. Overseas Differential	22,671.71	23,770.00	95.4
3. Overhead - Overseas Field Staff	113,216.47	119,490.00	94.7
4. Home Office Salaries	322,330.71	323,165.00	99.7
5. Monthly Salary Adjustment			
6. Overhead - Home Office	324,872.29	324,658.00	100.1
7. Fixed Fee	142,056.97	142,057.00	100.0
8. Subcontract Costs	34,739.40	34,740.00	100.0
9. Consultant Costs			
10. Travel Per Diem			
a) International Travel	37,887.05	31,500.00	120.3
b) International Per Diem	1,163.50	2,940.00	39.6
c) Domestic Travel	1,760.98	1,400.00	125.8
d) Domestic Per Diem	1,300.57	1,000.00	130.0
11. Transportation Personal Baggage	1,349.38	2,600.00	51.9
12. Transportation Household Effects	15,430.87	16,000.00	96.4
13. Transportation Equipment	721.25	5,000.00	14.4
14. Equipment	1,915.40		
Equipment - Project			
15. Other Direct Costs			
a) Out of Pocket Expenses	17,768.91	15,100.00	117.7
b) Miscellaneous	25,358.23	23,438.00	108.2
16. Field Staff Allowances		2,600.00	
TOTAL	1,177,902.26	1,188,308.00	99.1

General Authority for Supply Commodities
Ministry of Supply
Arab Republic of Egypt

BVI ENGINEERING SERVICES

BUDGET ANALYSIS

EGYPTIAN POUND COSTS INCURRED THRU OCTOBER 1983

GRAIN/TOF STORAGE FACILITIES

SUMMARY SHEET

ITEM	COSTS TO DATE	CONTRACT BUDGET	PERCENTAGE USED
1. Subcontract Costs			
Arab Consulting Engineers	348,169.668	381,205.000	91.3
Tech. Indust. Consultant Office	228,598.013	228,730.000	100.4
M. A. Sinbel	97,363.721	97,120.000	100.2
Mueser, Rut., Johnston & DeSimone	60,379.010	60,584.000	99.6
2. Consulting Costs			
3. Travel & Per Diem			
a) Local Travel	12,530.555	2,040.000	614.2
b) Per Diem Personnel	48,413.950	41,145.000	117.7
4. Transportation Household Effects	3,086.850	12,000.000	25.7
5. Transportation Equipment	170.000	11,800.000	1.4
6. Equipment	37,043.428	51,670.000	71.7
7. Other Direct Costs			
a) Out of Pocket Expenses	109,600.417	60,460.000	181.3
b) Miscellaneous	109,254.380	77,145.000	141.6
8. Field Staff Allowances	137,900.699	165,813.000	83.2
TOTAL	1,192,510.691	1,189,712.000	100.2

General Authority for Supply Commodities
Ministry of Supply
Arab Republic of Egypt

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EVI ENGINEERING SERVICES
BUDGET ANALYSIS
EGYPTIAN POUND COSTS INCURRED THRU OCTOBER 1983
GRAIN/TOF STORAGE FACILITIES
LAB EQUIPMENT

ITEM	COSTS TO DATE	CONTRACT BUDGET	PERCENTAGE USED
1. Subcontract Costs			
Arab Consulting Engineers Tech. Indust. Consultant Office M. A. Sinbel Mueser, Rut., Johnston & DeSimone			
2. Consulting Costs			
3. Travel & Per Diem			
a) Local Travel			
b) Per Diem Personnel			
4. Transportation Household Effects			
5. Transportation Equipment			
6. Equipment			
7. Other Direct Costs			
a) Out of Pocket Expenses	50.000	50.000	100.0
b) Miscellaneous			
8. Field Staff Allowances	350.000	350.000	100.0
TOTAL	400.000	400.000	100.0

General Authority for Supply Commodities
Ministry of Supply
Arab Republic of Egypt

BVI ENGINEERING SERVICES
BUDGET ANALYSIS
EGYPTIAN POUND COSTS INCURRED THRU OCTOBER 1983
GRAIN/TOF STORAGE FACILITIES
PORTABLE CONVEYORS

ITEM	COSTS TO DATE	CONTRACT BUDGET	PERCENTAGE USED
1. Subcontract Costs			
Arab Consulting Engineers			
Tech. Indust. Consultant Office			
M. A. Sinbel			
Mueser, Rut., Johnston & DeSimone			
2. Consulting Costs			
3. Travel & Per Diem			
a) Local Travel			
b) Per Diem Personnel			
4. Transportation Household Effects			
5. Transportation Equipment			
6. Equipment			
7. Other Direct Costs			
a) Out of Pocket Expenses	100.000	100.000	100.0
b) Miscellaneous			
8. Field Staff Allowances	350.000	350.000	100.0
TOTAL	450.000	450.000	100.0

General Authority for Supply Commodities
Ministry of Supply
Arab Republic of Egypt

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BVI ENGINEERING SERVICES

BUDGET ANALYSIS

EGYPTIAN POUND COSTS INCURRED THRU OCTOBER 1983

GRAIN/TOF STORAGE FACILITIES

QUAY 81/82

ITEM	COSTS TO DATE	CONTRACT BUDGET	PERCENTAGE USED
1. Subcontract Costs			
Arab Consulting Engineers Tech. Indust. Consultant Office M. A. Sinbel	129,915.664	129,935.000	99.9
Mueser, Rut., Johnston & DeSimone	13,227.000	14,562.000	90.8
2. Consulting Costs			
3. Travel & Per Diem			
a) Local Travel	2,051.040	240.000	854.6
b) Per Diem Personnel	10,081.029	3,000.000	336.0
4. Transportation Household Effects	245.155	6,000.000	4.1
5. Transportation Equipment	154.000	1,000.000	15.4
6. Equipment	11,583.320	18,710.000	61.9
7. Other Direct Costs			
a) Out of Pocket Expenses	22,819.028	12,310.000	185.4
b) Miscellaneous	21,971.184	22,375.000	98.2
8. Field Staff Allowances	35,659.680	42,750.000	83.4
TOTAL	247,707.100	250,882.000	98.7

General Authority for Supply Commodities
Ministry of Supply
Arab Republic of Egypt

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BVI ENGINEERING SERVICES
BUDGET ANALYSIS
EGYPTIAN POUND COSTS INCURRED THRU OCTOBER 1983
GRAIN/TOF STORAGE FACILITIES
SAFAGA SILO

ITEM	COSTS TO DATE	CONTRACT BUDGET	PERCENTAGE USED
1. Subcontract Costs			
Arab Consulting Engineers Tech. Indust. Consultant Office M. A. Sinbel	348,169.668	381,205.000	91.3
Mueser, Rut., Johnston & DeSimone	345,593.910	33,510.000	103.2
2. Consulting Costs			
3. Travel & Per Diem			
a) Local Travel	8,970.890	1,500.000	598.1
b) Per Diem Personnel	27,544.085	23,700.000	116.2
4. Transportation Household Effects	2,841.695	4,000.000	71.0
5. Transportation Equipment	11.000	10,000.000	1.1
6. Equipment	12,924.178	32,960.000	39.2
7. Other Direct Costs			
a) Out of Pocket Expenses	64,716.071	30,160.000	214.6
b) Miscellaneous	71,700.596	42,070.000	170.4
8. Field Staff Allowances	75,663.319	87,880.000	86.1
TOTAL	647,135.412	646,985.000	100.0

General Authority for Supply Commodities
Ministry of Supply
Arab Republic of Egypt

BVI ENGINEERING SERVICES
BUDGET ANALYSIS
EGYPTIAN POUND COSTS INCURRED THRU OCTOBER 1983
GRAIN/TOF STORAGE FACILITIES
TOF FACILITY

ITEM	COSTS TO DATE	CONTRACT BUDGET	PERCENTAGE USED
1. Subcontract Costs			
Arab Consulting Engineers			
Tech. Indust. Consultant Office	98,682.349	98,795.000	99.9
M. A. Sinbel	97,363.721	97,120.000	100.2
Mueser, Rut., Johnston & DeSimone	12,558.100	12,512.000	100.4
2. Consulting Costs			
3. Travel & Per Diem			
a) Local Travel	1,508.625	300.000	502.9
b) Per Diem Personnel	10,788.836	14,445.000	74.7
4. Transportation Household Effects		2,000.000	
5. Transportation Equipment	5.000	800.000	0.6
6. Equipment	12,535.930		
7. Other Direct Costs			
a) Out of Pocket Expenses	21,915.318	14,840.000	147.7
b) Miscellaneous	15,582.600	12,700.000	122.7
8. Field Staff Allowances	24,943.700	34,483.000	72.3
TOTAL	295,884.179	290,995.000	101.7

General Authority for Supply Commodities
Ministry of Supply
Arab Republic of Egypt

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BVI ENGINEERING SERVICES
BUDGET ANALYSIS
EGYPTIAN POUND COSTS INCURRED THRU OCTOBER 1983
GRAIN/TOF STORAGE FACILITIES
BREAKDOWN OF OTHER DIRECT COSTS

ITEM	COSTS TO DATE	CONTRACT BUDGET	PERCENTAGE USED
A. <u>Out of Pocket Expenses</u>			
Cables & Telex	22,205.357	6,300.000	352.5
Telephone	2,915.591	2,280.000	127.9
Postage	97.500	1,960.000	5.0
Vehicle Operation	84,476.469	45,920.000	183.9
Newspaper Advertising	-	4,000.000	-
TOTAL	109,694.917	60,460.000	181.4
B. <u>Miscellaneous</u>			
Office Supplies	18,903.530	8,280.000	228.3
Print Reports & Cont. Documents	5,498.740	1,600.000	343.7
Reproduction Allowance	13,722.135	5,525.000	248.4
Print Drawings	2,968.130	2,450.000	121.2
Freight on Cont. Documents	1.000	900.000	0.1
Office Rent	42,000.000	33,000.000	126.1
Utilities	1,842.580	2,640.000	69.8
Banking Charges	23.000	5,600.000	0.4
Insurance & Clearance	19,200.570	11,700.000	164.1
Vehicle Licensing	2,123.765	5,150.000	41.2
Others	2,970.930	-	-
TOTAL	109,254.380	77,145.000	141.6

General Authority for Supply Commodities
Ministry of Supply
Arab Republic of Egypt

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USAID / ARAE REPUBLIC OF EGYPT
COMPREHENSIVE PIPELINE - COMMITMENT DETAIL
AS OF 03/31/85

EXHIBIT 4

DATE : 04/03/85
REPORT PAGE NO.: 96
MISSION PAGE NO.: 96

OPTION NO.: 0

OFFICE CODE: 002
PROJECT NO.: 2630037.00

OFFICE NAME : INFRASTRUCTURE DEVELOPMENT
PROJECT TITLE: GRAIN TAL OIL FATS STOR & DIST

PROJECT OFFICER: JOSEPH J PASTIC

EARMARK DOC. NUMBER/ COMMITMENT DOC. NO.	EARMARK SERIAL NO.	EARMARK DESCRIPTION	COMMITTED	DISBURSED	UNLIQUIDATED	ACCUAL	PIPELINE
PROJECT ELEMENT NO. 01 PROJECT ELEMENT NAME: 10 PROFESSIONAL SERVICES							
CO-06/17/76-HCC L/COM-263-KC4101	P700015	BVI-ENGINEERING SERVICES-HCC 0170001 BVI-ENG. SVCS. HCC	5,407,787	5,334,036	153,751	350	153,401
EARMARK DOCUMENT TOTALS > > >			5,407,787	5,334,036	153,751	350	153,401
ELEMENT TOTALS			5,407,787	5,334,036	153,751	350	153,401
PROJECT ELEMENT NO. 02 PROJECT ELEMENT NAME: 30 COMMODITIES							
CO-IFB-263-A-301-HCC L/COM-263-KC4120	P700034	ONESCO-ARCH ITEMS FOR QUAY-HC 0520051 ONESCO-ARCH FOR QUAY	62,294	62,294	0	0	0
EARMARK DOCUMENT TOTALS > > >			62,294	62,294	0	0	0
CO-IFB-263-A-302-HCC L/COM-263-KC4122	P700036	AEG-SUP DEL FORKLIFT TRUCKS 0521029 AEG-FORKLIFT TRUCK	68,478	68,478	0	0	0
EARMARK DOCUMENT TOTALS > > >			68,478	68,478	0	0	0
CO-IFB-263-D-10-HCC L/COM-263-KC4116	P700032	AT-FREIGHT FORWARDING SER-HCC 0520049 AT-FRT FORWARDING SVC	0	0	0	0	0
EARMARK DOCUMENT TOTALS > > >			0	0	0	0	0
CO-IFB-263-E-302-HCC L/COM-263-KC4116	P700024	MOTOR CONTROL CENTERS-HCC 0520041 AEG-MOTOR CNTRL CENTE	63,362	63,362	0	0	0
EARMARK DOCUMENT TOTALS > > >			63,362	63,362	0	0	0
CO-IFB-263-E-303-HCC L/COM-263-KC4116	P700030	ONESCO-SUP DEL OF CONDUIT-HCC 0520047 ONESCO-CONDUIT	95,325	95,325	0	0	0
EARMARK DOCUMENT TOTALS > > >			95,325	95,325	0	0	0
CO-IFB-263-E-304-HCC		ONESCO-SUP DEL OF CONDUCTORS					

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USAID / ARAB REPUBLIC OF EGYPT
 COMPREHENSIVE PIPELINE - COMMITMENT DETAIL
 AS OF 03/31/85

EXHIBIT 4

DATE : 04/03/85
 REPORT PAGE NO.: 97
 MISSION PAGE NO.: 97

OPTION NO.: 0

OFFICE CODE: 002
 PROJECT NO.: 263007.00

OFFICE NAME : INFRASTRUCTURE DEVELOPMENT
 PROJECT TITLE: GRAIN TAL OIL FATS STOR & DIST PROJECT OFFICER: JOSEPH J PASTIC

EARMARK DOC. NUMBER/ COMMITMENT ELEMENT	EARMARK DESCRIPTION COMMITMENT DESCRIPTION	COMMITTED	DISBURSED	UNLIQUIDATED	ACCRUAL	PIPELINE
PROJECT ELEMENT NO. 04	PROJECT ELEMENT NAME: 30 COMMODITIES					
L/COM-263-KC4115	F700029 0580046 UNESCO-CONDUCTORS	129,875	129,875	0	C	0
EARMARK DOCUMENT TOTALS > > >		129,875	129,875	0	C	0
CO-IFB-263-E-305-HCC L/COM-263-KC4119	F700035 0580050 UNESCO-LIGHT FIXTURES-HCC UNESCO-LIGHT FIXTURES	209,142	209,142	0	C	0
EARMARK DOCUMENT TOTALS > > >		209,142	209,142	0	C	0
CO-IFB-263-E-307-HCC L/COM-263-KC4115	F700027 0580044 HAR-SUP DEL EQUIP-HCC HAR-EQUIPMENT	13,583	13,583	0	C	0
EARMARK DOCUMENT TOTALS > > >		13,583	13,583	0	C	0
CO-IFB-263-E-301-HCC L/COM-263-KC4104	F700016 0580035 AEG-SUP/DEL EQUIP-HCC AEG-SUP/EQUIP	42,843	42,843	0	C	0
EARMARK DOCUMENT TOTALS > > >		42,843	42,843	0	C	0
CO-IFB-263-E-306-HCC L/COM-263-KC4105	F700019 0580036 GEC-SUP/DEL EQUIP-HCC GEC-SUP/EQUIPMENT	155,078	138,205	16,873	C	16,873
EARMARK DOCUMENT TOTALS > > >		155,078	138,205	16,873	C	16,873
CO-IFB-263-GC2-HCC L/COM-263-KC4124	F700038 0482015 HHC-EQUIP & CONST. TOP FAC HHC-EG & CONSTR TOP	22,489,438	22,264,068	225,370	220,000	5,370
EARMARK DOCUMENT TOTALS > > >		22,489,438	22,264,068	225,370	220,000	5,370
CO-IFB-263-M-202-HCC L/COM-263-KC4123	F700037 0351030 AEG-EQUIP & TECH SVCS-HCC AEG-EGP/TECH SVCS	583,746	523,771	59,975	0	59,975

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USAID / ARAB REPUBLIC OF EGYPT
 COMPREHENSIVE PIPELINE - COMMITMENT DETAIL
 AS OF 03/31/85

EXHIBIT 4

DATE : 04/03/85
 REPORT PAGE NO.: 98
 MISSION PAGE NO.: 98

OPTION NO.: 0

OFFICE CODE: 502
 PROJECT NO.: 2630037.00

OFFICE NAME : INFRASTRUCTURE DEVELOPMENT
 PROJECT TITLE: GRAIN TAL OIL FATS STOR & DIST PROJECT OFFICER: JOSEPH J PASTIC

EARMARK DOC. NUMBER/ COMMITMENT_ELEMENT_NO	EARMARK CONTROL NO.	EARMARK DESCRIPTION COMMITMENT_DESCRIPTION	COMMITTED	DISBURSED	UNLIQUIDATED	ACCBUAL	PIPELINE
PROJECT_ELEMENT_NO	32	PROJECT_ELEMENT_NAME: 30 COMMODITIES					
EARMARK DOCUMENT TOTALS > > >			583,746	523,771	59,975	C	59,975
CC-IFB-263-M-203-HCC L/COM-263-K04117	F7JJC31	AEROGLIDE-BAG CLOSERS & CONVE 0560043 AEROGLIDE-BAG CLS/CNV	451,977	451,977	0	C	0
EARMARK DOCUMENT TOTALS > > >			451,977	451,977	0	C	0
CC-IFB-263-M-205-HCC L/COM-263-K04112	F7JJC26	AEG-SUP DEL CF MOTOR TRUCK-HC 0560043 AEG-MOTOR TRUCKS	138,773	138,773	0	C	0
EARMARK DOCUMENT TOTALS > > >			138,773	138,773	0	C	0
CC-IFB-263-M-303-HCC L/COM-263-K04107	F7JJC21	MCC-SUPPLY SPARE PARTS-HCC 0560036 MCC-SPARE PARTS	238,714	238,714	0	C	0
EARMARK DOCUMENT TOTALS > > >			238,714	238,714	0	C	0
CC-IFB-263-M-304-HCC L/COM-263-K04106	F7JJC22	TMP-SUP DEL TECH SER-HCC 0750039 TMP SUP/TECH SVCS	1,658,498	1,658,498	0	C	0
EARMARK DOCUMENT TOTALS > > >			1,658,498	1,658,498	0	C	0
CC-IFB-263-M-305-HCC L/COM-263-K04111	F7JJC25	AEG-SUP DEL CF BUCKET ELEV-HC 0560042 AEG-BUCKET ELEVTR	81,719	81,719	0	C	0
EARMARK DOCUMENT TOTALS > > >			81,719	81,719	0	C	0
CC-IFB-263-M-307-HCC L/COM-263-K04114	F7JJC26	HE-SUP DEL OF SPOUTING GATES 0560045 HE-SPOUTING GATES	163,805	163,805	0	C	0
EARMARK DOCUMENT TOTALS > > >			163,805	163,805	0	C	0
CC-IFB-263-M-310-HCC L/COM-263-K04121	F7JJC35	ONESCC-SUP DEL VENT EQUIP-HCC 0560052 ONESCC-VENT EQUIP	68,936	68,936	0	C	0

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USAID / ARAB REPUBLIC OF EGYPT
COMPREHENSIVE PIPELINE - COMMITMENT DETAIL
AS OF 03/31/85

EXHIBIT 4

DATE : 04/03/85

REPORT PAGE NO.: 99

MISSION PAGE NO.: 99

OPTION NO.: 0

OFFICE CODE: 002
PROJECT NO.: 2630027.00

OFFICE NAME : INFRASTRUCTURE DEVELOPMENT
PROJECT TITLE: GRAIN TAL OIL FATS STOR & DIST PROJECT OFFICER: JOSEPH J PASTIC

EARMARK DOC. NUMBER/ COMMITMENT DOC. NO	EARMARK CONTROL NO.	EARMARK DESCRIPTION COMMITMENT DESCRIPTION	COMMITTED	DISBURSED	UNLIQUIDATED	ACCRUAL	PIPELINE
PROJECT ELEMENT NO. 02		PROJECT ELEMENT NAME: 30 COMMODITIES					
EARMARK DOCUMENT TOTALS > > >			68,936	68,936	0	C	0
CO-IFB-263-M306-HCC L/COM-263-K04100	P700020	MPC-SCREW CONVEYORS-HCC 0530037 MPC-SCREW CONVEYORS	102,065	102,065	0	C	0
EARMARK DOCUMENT TOTALS > > >			102,065	102,065	0	C	0
CO-IFB-263-S-301-HCC L/COM-263-K04109	P700023	BSC-SLP STRUCTURAL STEEL-HCC 0530040 BSC-STRUCTURAL STEEL	1,372,794	1,372,794	0	C	0
EARMARK DOCUMENT TOTALS > > >			1,372,794	1,372,794	0	C	0
CO-IFB-M201-HCC L/COM-263-K04102	P700015	NI-SUP/DEL TRG EQUIP-HCC 0579007 NEOTEC-SUP/EQUIP	37,248	33,463	3,785	C	3,785
EARMARK DOCUMENT TOTALS > > >			37,248	33,463	3,785	C	3,785
CO-IFB-M204-HCC L/COM-263-K04103	P700017	PTI-SLP EQUIP-HCC 0530102 P-AECBY SLP/EQUIP	1,990,305	1,989,905	400	C	400
EARMARK DOCUMENT TOTALS > > >			1,990,305	1,989,905	400	C	400
ELEMENT TOTALS			30,218,018	29,911,615	306,403	220,000	86,403
PROJECT TOTALS > > >			35,705,805	35,245,651	460,154	220,350	239,804

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BLACK & VEATCH INTERNATIONAL

FINAL REPORT

VOLUME II

QUAY 81/82 BAGGING FACILITY

PORT OF ALEXANDRIA

SECTION VIII

CONCLUSIONS AND RECOMMENDATIONS

FINAL REPORT

VOLUME II

QUAY 81/82 BAGGING FACILITY

PORT OF ALEXANDRIA

SECTION VIII, CONCLUSIONS AND RECOMMENDATIONS

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B. RECOMMENDATIONS	VIII - 3

FINAL REPORT

VOLUME II

QUAY 81/82 BAGGING FACILITY

SECTION VIII, CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

The completed Quay 81/82 Bagging Facility Project successfully met the engineering design criteria and project parameters as established by the USAID Loan Agreement with the Egyptian Government. It should be noted, however, that implementation of the project was hampered by the extended amount of time required for equipment procurement and construction of the Facility by the General Construction Contractor.

1. PROCUREMENT PROCESS. The BVI engineering contract for the Quay 81/82 project stipulated that the equipment for the Facility would be purchased through preparation of IFB packages which would be issued to U.S.A. suppliers. Contracts would then be executed between the supplier and GASC for supply and shipment. Upon receipt of the equipment in Egypt, the GASC turned the equipment over to the local Egyptian General Construction Contractor for installation/erection at the project site.

The aforementioned contracting approach is an acceptable practice in the United States, but proved cumbersome under this host country contract in Egypt. The preparation and approval of each equipment procurement package required multiple decisions and/or actions by each participant in the project; e.g. the GASC, BVI, USAID, the Bank and the Supplier.

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Table VIII-1 provides a list of twenty-five major steps required to process a procurement IFB from the time it is prepared by the Engineer until opening of a U.S. Dollar Letter of Credit by the Bank. BVI estimated that an average of 365 days was required to accomplish the twenty-five actions detailed in Table VIII-1. This 365 days is based on the following assumptions. If any of the following are inserted, the processing time is extended.

- a) GASC, USAID, Citibank or Supplier had no comments regarding the documents and that they remained unchanged from the original submittal.
- b) The General Company of Silos (operating company of completed facility) was not asked to review documents.
- c) No deadlines were exceeded.
- d) The GASC chose not to negotiate with the successful bidder.
- e) The bidders were responsive and no rebids were required.

It is noted that eighteen separate Procurement Contracts were required for the Quay 81/82 Bagging Facility. Thus, the procurement process was compounded even further by the multiple number of bid packages.

2. CONSTRUCTION SCHEDULE. BVI originally estimated that the construction of the facility could be accomplished in approximately eight months. However, the actual time stipulated in the General Construction Contract with Arab Contractor was 330 days or approximate eleven months.

TABLE VIII - 1

QUAY 81/82 BAGGING FACILITY

PROCUREMENT PROCESS PER GUIDELINES

1. Prepare IFB by Engineer in U.S.
2. Forward IFB to BVI/Cario engineering office.
3. Engineer transmits IFB to the GASC.
4. GASC reviews and transmits to USAID.
5. AID transmits IFB to AID Washington after approval.
6. AID Washington sends advertisement to Commerce Business Daily.
7. Commerce Business Daily publishes.
8. Vendors request copies of IFB from Engineer.
9. Engineer send IFB documents to vendor.
10. Vendor sends tender to Engineer.
11. Engineer evaluates tender and forwards documents to Egypt with recommendation for Contract award.
12. Engineer in Egypt transmits bid to GASC and AID.
13. GASC reviews, selects and request AID approval.
14. AID sends approval to the GASC and forwards contract to the GASC.
15. GASC transmits signed contract to the Engineer.
16. The Engineer forwards signed contract to the U.S. for preparation of conformed contract documents.
17. The Engineer forwards signed copies of the contract to the vendor and USAID Washington.
18. GASC requests USAID to issue Letter of Commitment.
19. USAID Egypt requests USAID Washington to issue Letter of Commitment.

TABLE VIII - 1

QUAY 81/82 BAGGING FACILITY

PROCUREMENT PROCESS PER GUIDELINES

20. USAID Washington issues Letter of Commitment.
21. USAID Washington advises USAID Egypt that Letter of Commitment issued.
22. USAID advises GASC that Letter of Commitment has been issued.
23. GASC requests Citibank/Cairo to open Letter of Credit in accordance with USAID Letter of Commitment and conditions.
24. Citibank/Cairo requests Citibank/New York to open Letter of Credit to equipment supplier.
25. Bank issues Letter of Credit to Supplier.

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The contract effective date for the Quay 81/82 Bagging Facility was 12 January 1980 but the Quay 82 portion of the Facility was not accepted by the GASC until 17 March 1983 and the Quay 81 portion until 15 May 1983. This excessive length of time was attributable to the Contractors inability to properly schedule the work and to maintain control over assignments of labor and construction equipment to the project. The Contractor's lack of adequate project management definitely had an adverse affect on the timely completion of the Facility.

B. RECOMMENDATIONS.

From experience gained by BVI on the Quay 81/82 Bagging Facility Project, it was recommended that the contracting approach for the TOF and Safaga project be changed to a "whole-of-the-works" type contract. This approach would give a single contractor prime responsibility for procurement of the project equipment and materials and construction of a completed Facility.

BLACK & VEATCH INTERNATIONAL

FINAL REPORT

VOLUME II

QUAY 81/82 BAGGING FACILITY

PORT OF ALEXANDRIA

SECTION IX

PHOTOGRAPHS

BLACK & VEATCH INTERNATIONAL

FINAL REPORT

VOLUME II

QUAY 81/82 BAGGING FACILITY

PORT OF ALEXANDRIA

SECTION IX, PHOTOGRAPHS

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FINAL REPORT

VOLUME II

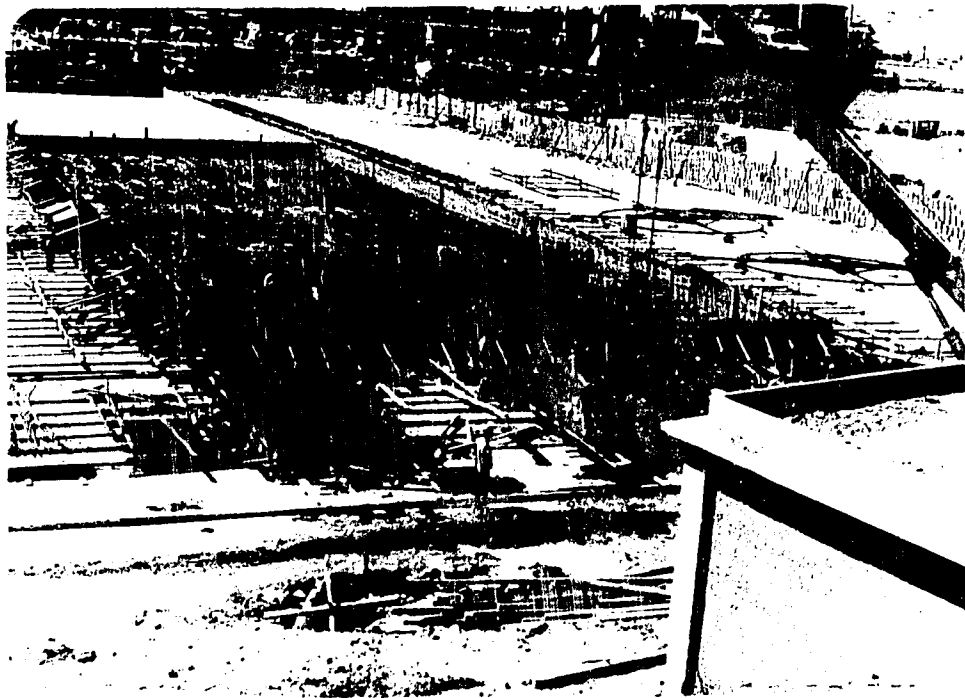
QUAY 81/82 BAGGING FACILITY

SECTION IX, PHOTOGRAPHS

A. GENERAL

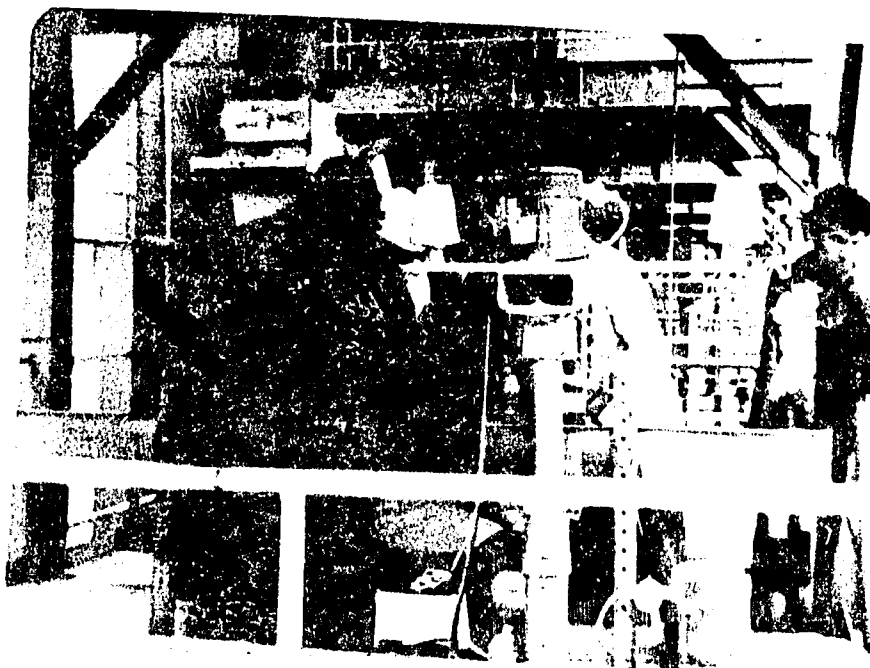
This section contains representative photographs of the Quay 81/82 Bagging Facility during construction as well as after the completion and transfer of the Facility to the General Company of Silos on 15 May 1983.

B. PHOTOGRAPHS

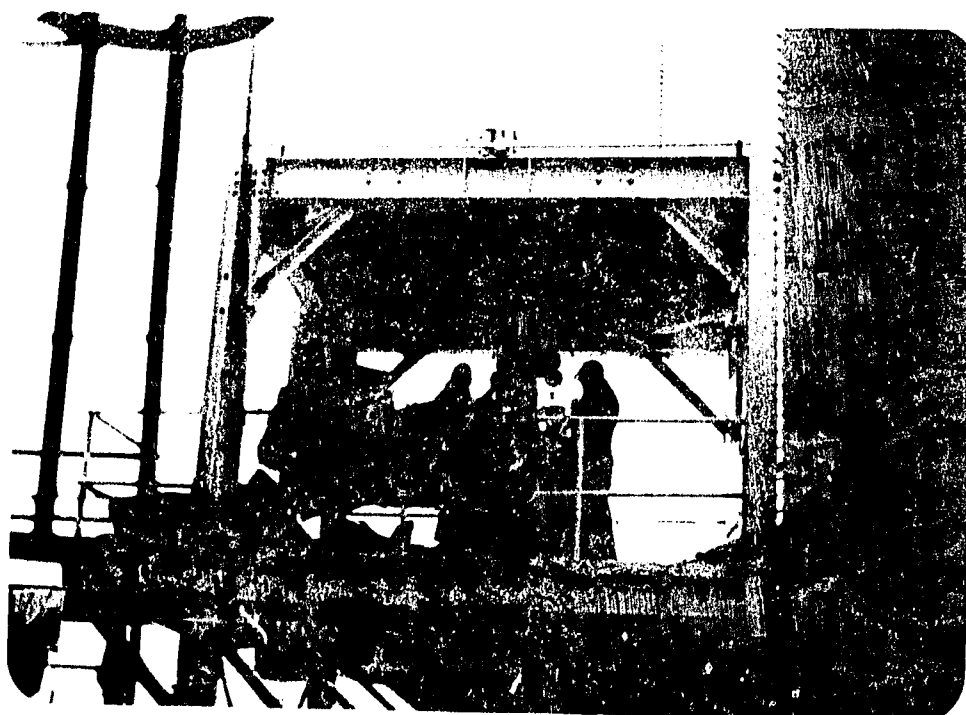


Work on Quay 81/82 Facility was initiated in 1980. Photograph shows Main Mat at Quay 82.

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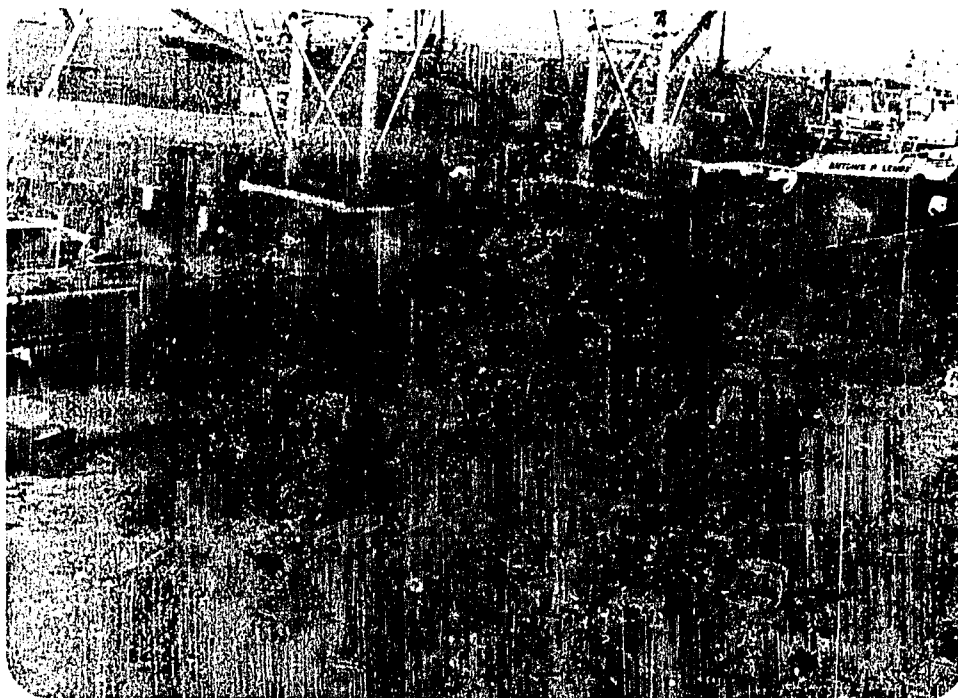


Egyptian Operators adjusting Bag Sewing Machine
at Quay 82.



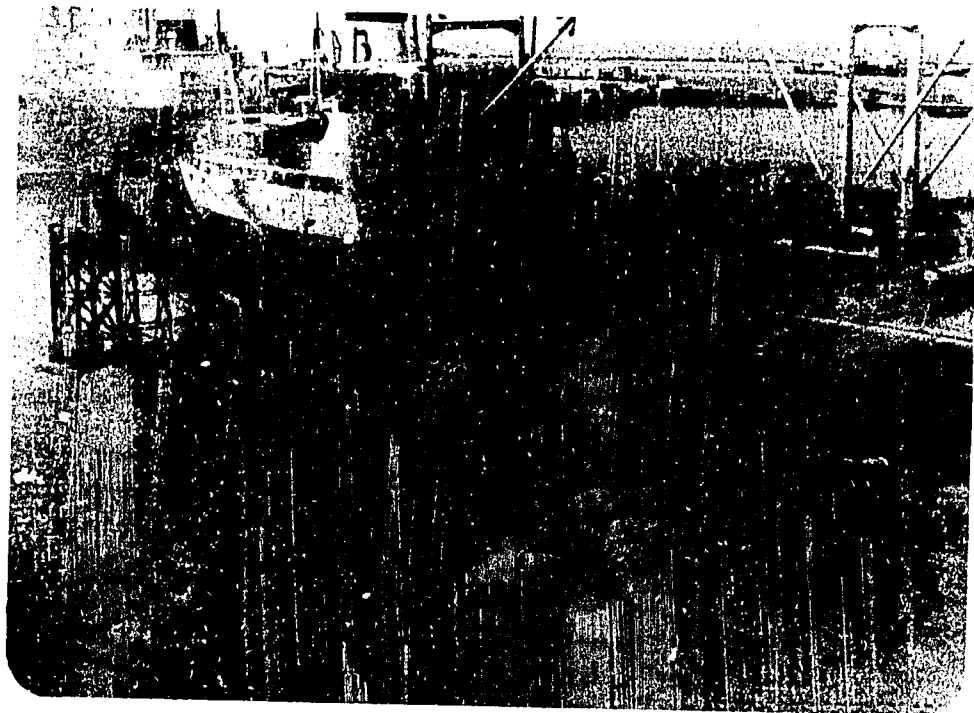
Photograph of Grain Bagging Station and Sewing Machine.

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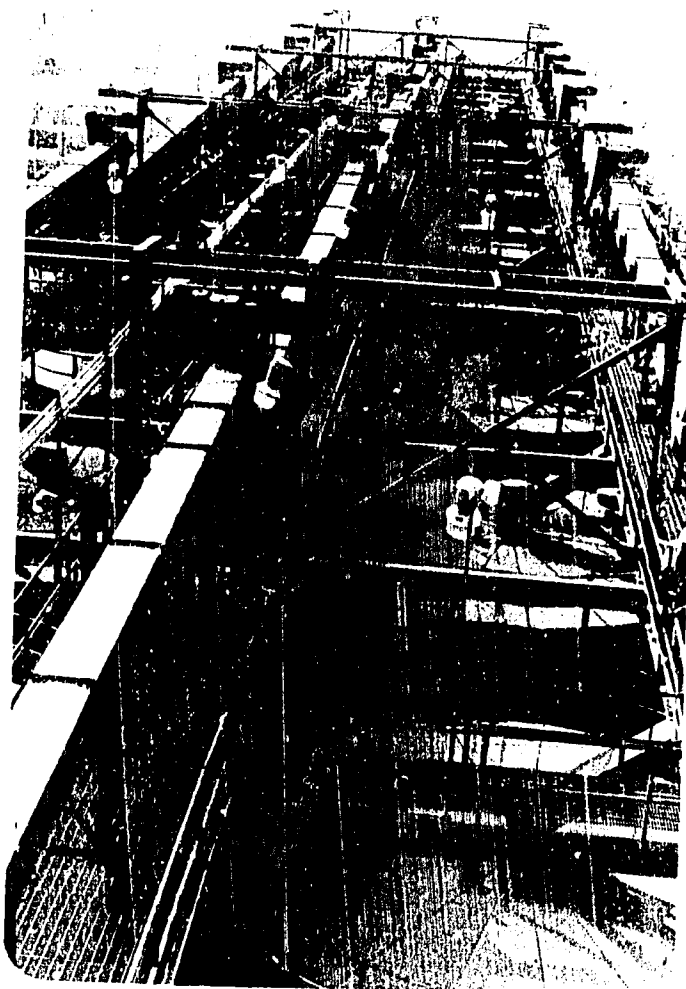


Quay 81/82 Bagging Facility conveyor system along Quay 82 offloading grain from a ship. The new Quay 82 conveyor system is capable of offloading 400 metric tons of grain per hour.

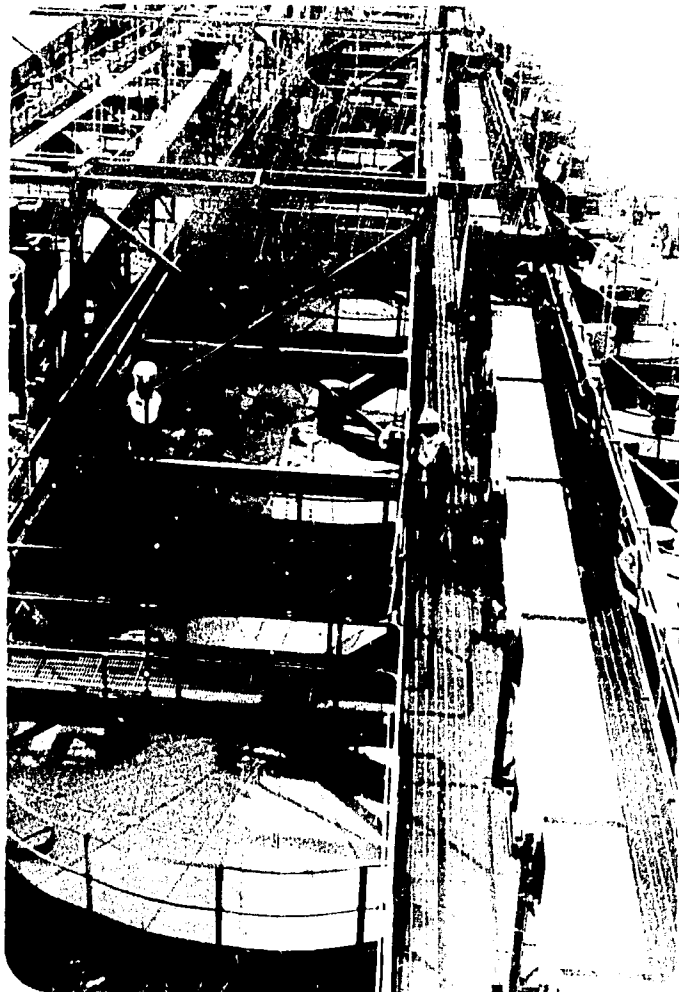
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Quay 82 Drag Conveyor train showing inclined drag conveyors DC-1 and DC-2 and the main drag conveyor leading from the quay. A ship currently being off-loaded can be seen in the background.



Photograph taken from the bucket elevator platform looking West showing the distribution conveyor systems.



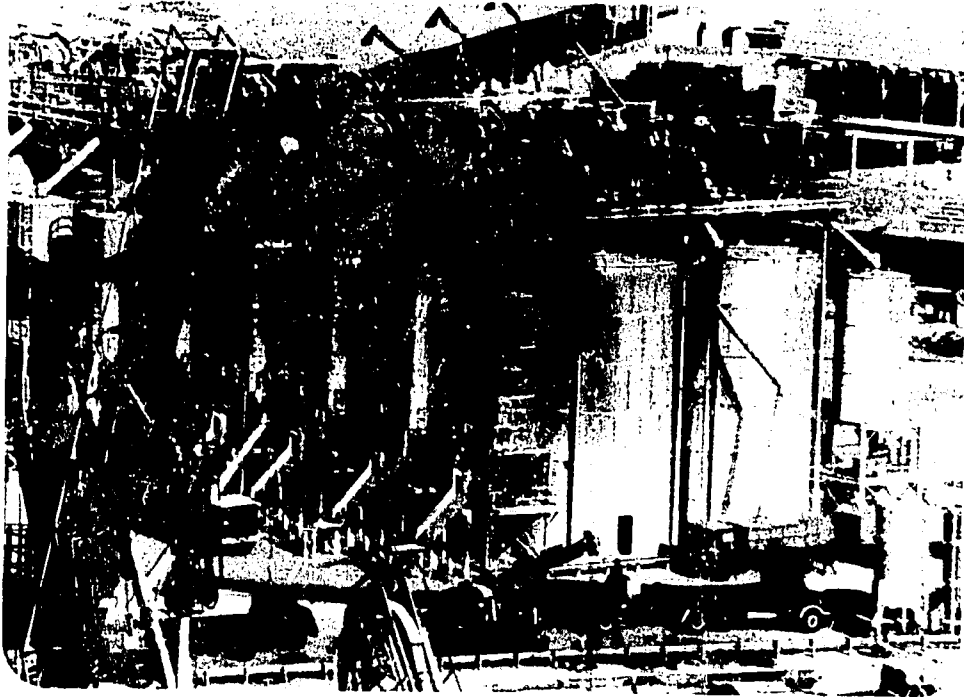
Photograph showing the North half of the Quay 81/82 Bagging Facility taken from the bucket elevator platform.



Photograph taken during the early evening hours showing the Quay 81/82 Bagging Facility.



Quay 81/82 Facility, photograph shows the bulk loadout spout located on the western end of the facility in full operation.



The Quay 81/82 Facility in Operation.



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