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Final Report PD-AAT-941

IAN-46261

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

Volume III

**Tallows, Oils and Fats 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.

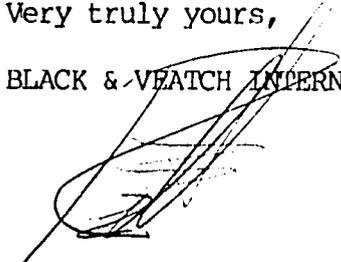
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We appreciate the opportunity of working with the Ministry of Supply and trust that we shall have future opportunities to be of service.

Very truly yours,

BLACK & VEATCH INTERNATIONAL



R. Zitterkopf
Vice President

REZ/ef

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FINAL REPORT

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

VOLUME III

TALLOW, OILS AND FATS FACILITY
PORT OF ALEXANDRIA

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SECTION I

PROJECT SUMMARY

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FINAL REPORT

VOLUME III

TALLOW, OILS AND FATS FACILITY

SECTION I PROJECT SUMMARY

A. INTRODUCTION

This is Volume III 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 II, Quay 81/82 Bagging Facility, Port of Alexandria.

This Volume III covers the development of a Tallow, Oils and Fats Terminal with facilities for offloading from ships in the quay area, temporary storage facilities and bulk loading or drum loading for distribution to customers throughout Egypt.

B. GENERAL DESCRIPTION

The new facility provides for bulk transfer of TOF products from the ship at Quay 87-1/2 through pipelines directly to storage tanks at the terminal. Provision for future unloading of TOF products at or near Quay 87-5 is also included. Oil and tallow pumps are provided in the Operations Building at the terminal for bulk loading at the truck dock, future bulk loading into rail tankcars, or loading into drums.

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C. CAPACITY

Two 10-inch pipelines for vegetable oil and one 10-inch pipeline for inedible tallow are designed to allow unloading of 10,000 MT of oil and 8,000 MT of tallow simultaneously in 24 hours. The total storage capacity is designed for 40,000 MT of oil and 20,000 MT of tallow. Terminal facilities are capable of shipping 1,400 MT of oil and 700 MT of tallow in 8 hours.

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 No. 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 subprojects. The Tallows, Oils and Fats 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:

	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
- Unallocated Contingency	1,144,000	
TOTAL	\$ 42,000,000	L.E. 14,889,000

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2. IMPLEMENTATION LETTERS. 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.

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 were 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)

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The services of these firms was provided under the auspices of the BVI Engineering Services Contract.

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 6 are directly related to the Engineering Services for the TOF Facilities.

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. LETTERS OF COMMITMENT AND LETTERS OF CREDIT.

a. Engineering Services. 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

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
BVI 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 Conveyers	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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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.

b. Construction Services. The Letter of Commitment (No. 263-K-041-24) for Construction Services related to the TOF Facility was issued by USAID on 21 October 1981. The General Construction Contract effective date commenced on the date of latter opening of the U.S. Dollar and Egyptian Pound Letters of Credit. The U.S. Dollar Letter of Credit No. 40770309 in favor of Harbert Howard Companies was issued by Citibank/New York on 7 November 1981 and an Egyptian Pound Letter of Credit was opened by Cairo Bank on 15 November 1981.

5. GENERAL CONSTRUCTION CONTRACT. A general construction contract based on IFB-263-K-041-GC-2 was awarded to Harbert-Howard Companies on 30 April 1981. This Contract award was subject to the approval of the Council of State, Arab Republic of Egypt. This approval was granted on 30 September 1981 subject to comment from the Council of State review. The comments of the Council of State were incorporated into Change Order No. 1. The original value of the Contract was U.S. Dollars \$ 21,871,982 and L.E. 4,984,628.

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

<u>Change Order No.</u>	<u>Description</u>	<u>U.S. \$</u>
1	Technical Services	32,734.60
2	Technical Services	106,802.72
6	Spare Parts	396,658.05
10	Technical Services	13,394.47

E. BENEFITS

The major benefit of the new facility is the physical capacity to handle the increasing volume of imports of tallows, oils and fats and to insure a continuing flow of these essential items to the people of Egypt. Along with this essential benefit, numerous secondary benefits may be expected.

The old facilities are scattered in numerous locations in the Alexandria area and were not originally designed as high volume TOF Facilities. By being designed with high volume unloading lines and large volume storage tanks, the facility permits rapid unloading of bulk carriers and significantly reduces the time ships must remain in port to unload. Larger shipments are possible which permits a reduction in freight charges. The saving on demurrage charges and freight rates will approach USD 2 million per year at current rates and volumes.

In addition to the significant savings in demurrage and freight rates, the new facility should cost less to operate than the old facilities. Estimated savings from this source are in excess of USD 200,000 per year.

Accordingly, the Alexandria facility is designed specifically for TOF with a view to protecting edible oils and fats from contamination and loss, resulting in additional savings and a higher quality product delivered to the Egyptian people. Although no dollar value has been put on this benefit, it will have a substantial impact on the quality of goods received by the Egyptians.

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Furthermore, the project permits a flexibility for purchase of different oils in that two oil pipelines are provided in addition to the tallow line. The former system eliminated the possibility of cost efficiency in buying oils since the system could handle only one type at a time.

From the standpoint of national policy, another benefit occurring from this facility is the additional storage capacity provided. Under the old system, a total of 28,800 metric tons capacity of vegetable oil storage was provided scattered over five different storage areas. This is only an approximate 10 days supply if all facilities were at capacity. The new Alexandria facility incorporated 40,000 metric tons of vegetable oil storage, thus adding a significant strategic reserve. Under the old system, bulk tallow storage was negligible, while the new facility provides 20,000 metric tons capacity. This additional storage capacity for oils and tallows makes scheduling of ship arrivals less critical and provides a cushion in case of an interruption in receipts due to storms, strikes, or international crises.

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SECTION II

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TALLOW, OILS AND FATS FACILITY

SECTION II, PROJECT DESCRIPTION

A. PARTICIPANTS

The following agencies and firms were involved in the implementation of the Alexandria Tallows, Oils and Fats Terminal.

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), M. A. Sinbel Consulting Engineers (MAS), and Muesser, Rutledge, Johnston and De-Simone, Consulting Engineers (MRJD).

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4. CONSTRUCTION. The construction of the TOF Terminal Facility was contracted to Harbert Howard Companies (HHC) of the U.S.A, a joint venture of Harbert International, Inc. and Paul N. Howard Company. Erection of the storage tank was subcontracted by HHC to Port Said Engineering Works of Egypt and electrical construction to Sadelmi of U.S.A.

5. MANUFACTURERS' SERVICES. To assist with the installation, check-out and start-up of major equipment, service engineers of respective manufacturer's were supplied, under the Harbert-Howard Companies Contract, as follows:

Tank erection and quality control	Pittsburg - Des Moines Mf. Co.
Truck Scale	Howe Richardson
Water Treatment System	Betz
Firetube Boiler	Cleaver - Brooks
Watertube Boiler	Cleaver - Brooks
Waste Treatment Plant	Smith & Loveless, Inc.
Emergency generation	Detroit Diesel Allison

B. ENGINEERING SERVICES

The scope of services provided by the Engineer, Black & Veatch International, included the following:

1. GENERAL. The Engineers services included project planning investigations, design recommendations, detailed engineering design, assistance in the procurement of construction services, equipment and materials, supervision of

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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. All 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

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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
 - Railroad access
 - Sanitary system
 - Drainage provisions
 - Utility requirements
 - Traffic plan of all modes of transportation
- Structures
 - Foundations
 - Tanks
 - Unloading equipment
 - Barges and barge dock
 - Piping
- Special Features
 - Instrumentation
 - Fire protection system
 - Indigenous available equipment and materials
 - 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.

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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 and

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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. 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.

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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 section of A.I.D. Handbook 11 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.

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 suffi-

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cient 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:

- 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.

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- 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 construction contractor.

BVI furnished GASC one reproducible set and seven print sets of drawings showing those changes made during the construction program, based on the marked-up prints, drawings and other data furnished by the Contractor to the Engineer including change orders.

6. MECHANICAL TESTING. Before approving the final payment to the construction contractor, BVI:

- Inspected the construction of the facility for compliance with specifications.
- Inspected and tested the mechanical equipment for proper installation and operation.

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- Inspected and tested instruments for proper installation and operation.
- Inspected the electrical systems for proper installation and operation.
- Instructed the construction contractor to correct any deficiencies or mistakes in his construction or installation.

7. OPERATIONAL TESTING. Upon completion of construction and equipment installation/erection, BVI advised and assisted in the start-up and conducting of an overall operational test run of the completed facility.

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. Prior to commissioning, BVI submitted to the GASC an overall recommended spare parts list.

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.

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The Engineer arranged, through the construction constructor, for class room and hands on training to be given to O & M personnel designated and provided by GASC in the effective operation and maintenance of the facilities constructed.

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.

C. CHRONOLOGY OF EVENTS

A chronology of significant dates relating to the Alexandria TOF Terminal 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 submits prequalification and Construction Documents to GASC	3 December	1978
BVI executes Soils Consultancy Sub-contract	1 February	1979
GASC approves prequalification Documents	20 February	1979
Prequal Readvertised	23 August	1979
Final Drawing & IFB Documents submitted to GASC	18 September	1979
Prequal Readviced (2nd rebid)	29 September	1979
GASC approves IFB	10 February	1980
Bids Received from contractors	8 July	1980
Controversy regarding size of tanks	August	1980
Rebid for redesign of tanks	13 February	1981
Rebid Closing Date	9 March	1981

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General Construction Contract awarded to Harbert-Howard Companies	30 April	1981
Council of State approval for General Construction Contract	30 September	1981
Letter of Commitment for Construction Services issued	21 October	1981
General Construction Contract Effective Date	15 November	1981
Training Program for O & M personal begun	15 August	1983
Provisional Acceptance of Facility	30 September	1983
Inauguration of Completed Facility	9 January	1984
Qualified Final Acceptance	1 November	1984
GASC Committee accepts first partial shipment TOF Spare Parts	21 January	1985
GASC Committee accepts second partial shipment TOF Spare Parts	18 May	1985

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SECTION III

TERMINAL FACILITIES

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SECTION III, TERMINAL FACILITIES

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SECTION III, TERMINAL FACILITIES

A. GENERAL

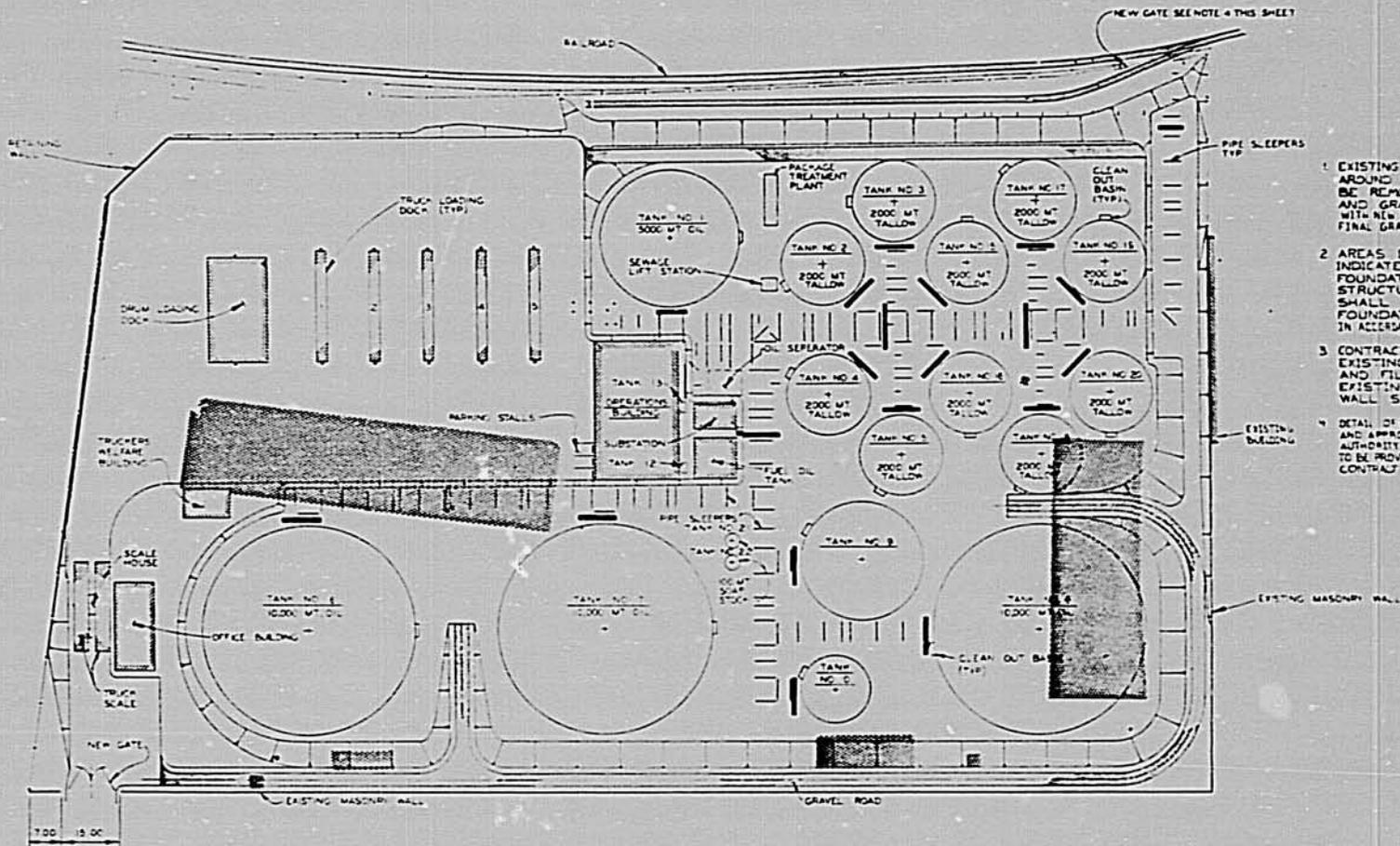
This Section III covers the technical aspects of the TOF Facility.

B. TECHNICAL

The following is a general description of the TOF Facility. This includes the structures, pipelines and miscellaneous equipment. For more details of the structure and pipeline 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 TOF Terminal layout:

Dwg No. 5S-2000	Site Plan
Dwg No. 5M-1001	Mechanical Key Site Plan
Dwg No. 5M-3001	Terminal Piping Plan Sheet 1 of 4
Dwg No. 5M-3002	Terminal Piping Plan Sheet 2 of 4
Dwg No. 5M-3003	Terminal Piping Plan Sheet 3 of 4
Dwg No. 5M-3004	Terminal Piping Plan Sheet 4 of 4



NOTES

1. EXISTING CHAIN LINK FENCE AROUND PLANT SITE SHALL BE REMOVED FOR EXCAVATION AND GRADING AND REPLACED WITH NEW FENCE AFTER COMPLETION OF FINAL GRADING
2. AREAS DESIGNATED THUS [shaded box] INDICATE POSSIBLE BURIED FOUNDATIONS FROM PREVIOUS STRUCTURES. CONTRACTOR SHALL REMOVE ANY SUCH FOUNDATIONS ENCOUNTERED IN ACCORDANCE WITH SPECIFICATIONS
3. CONTRACTOR SHALL REMOVE EXISTING GATES IN MASONRY WALL AND FILL THE GAPS TO MATCH EXISTING WALL. NEW GATE IN WALL SHALL BE ADDED AS SHOWN
4. DETAIL OF RAILROAD GATE SHALL BE CONFIRMED AND APPROVED BY THE EGYPTIAN RAILROAD AUTHORITY. NO OTHER RAILWAY EQUIPMENTS TO BE PROVIDED BY THE CONTRACTOR UNDER THIS CONTRACT

3-DWG-B	ISSUE FOR CONSTRUCTION	DATE	10/1/58
2-243-B	REV AS SHOWN ISSUED W/ADD E	DATE	10/1/58
1-243-B	REV AS SHOWN ISSUED W/ADDENDUM 2	DATE	10/1/58
0-B	ISSUE FOR BIDS	DATE	10/1/58


 DATE 5-11-58



 SCALE: NONE

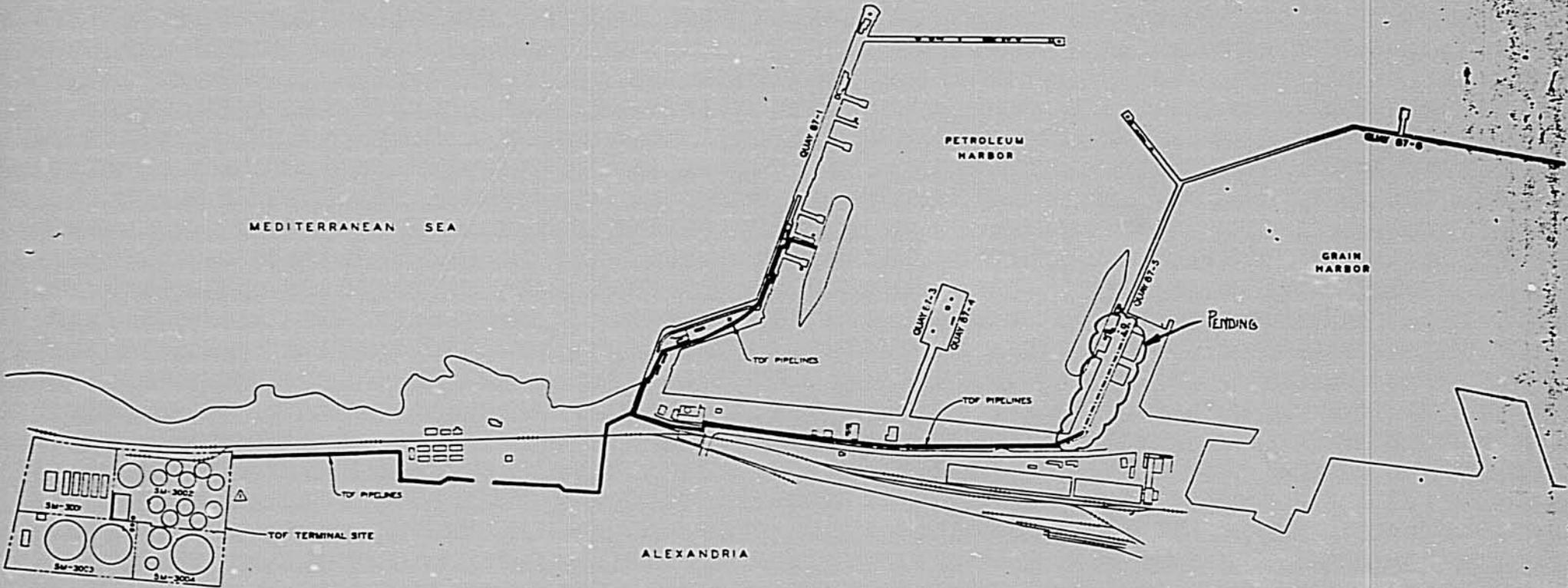

BLACK & VEATCH INTERNATIONAL
 PRINCIPALS

GENERAL AUTHORITY FOR SUPPLY COMMODITIES
 DIRECTOR OF SUPPLY
 ALEXANDRIA
 REPUBLIC OF EGYPT
 PORT TERMINAL

SHEET NO
55-2000
 OF 3
 SITE PLAN

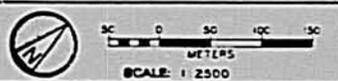
LEGEND

- ABOVE GROUND PIPELINES
- - - UNDER GROUND PIPELINES
- SM-3000 DESIGNATES LIMITS OF AREA COVERED ON DRAWING INDICATED



NO.	DESCRIPTION	DATE	BY	CHKD.
1	ISSUE FOR CONSTRUCTION			
2	ISSUE FOR BIDDING			
3	ISSUE FOR REVIEW			
4	ISSUE FOR RECORD			

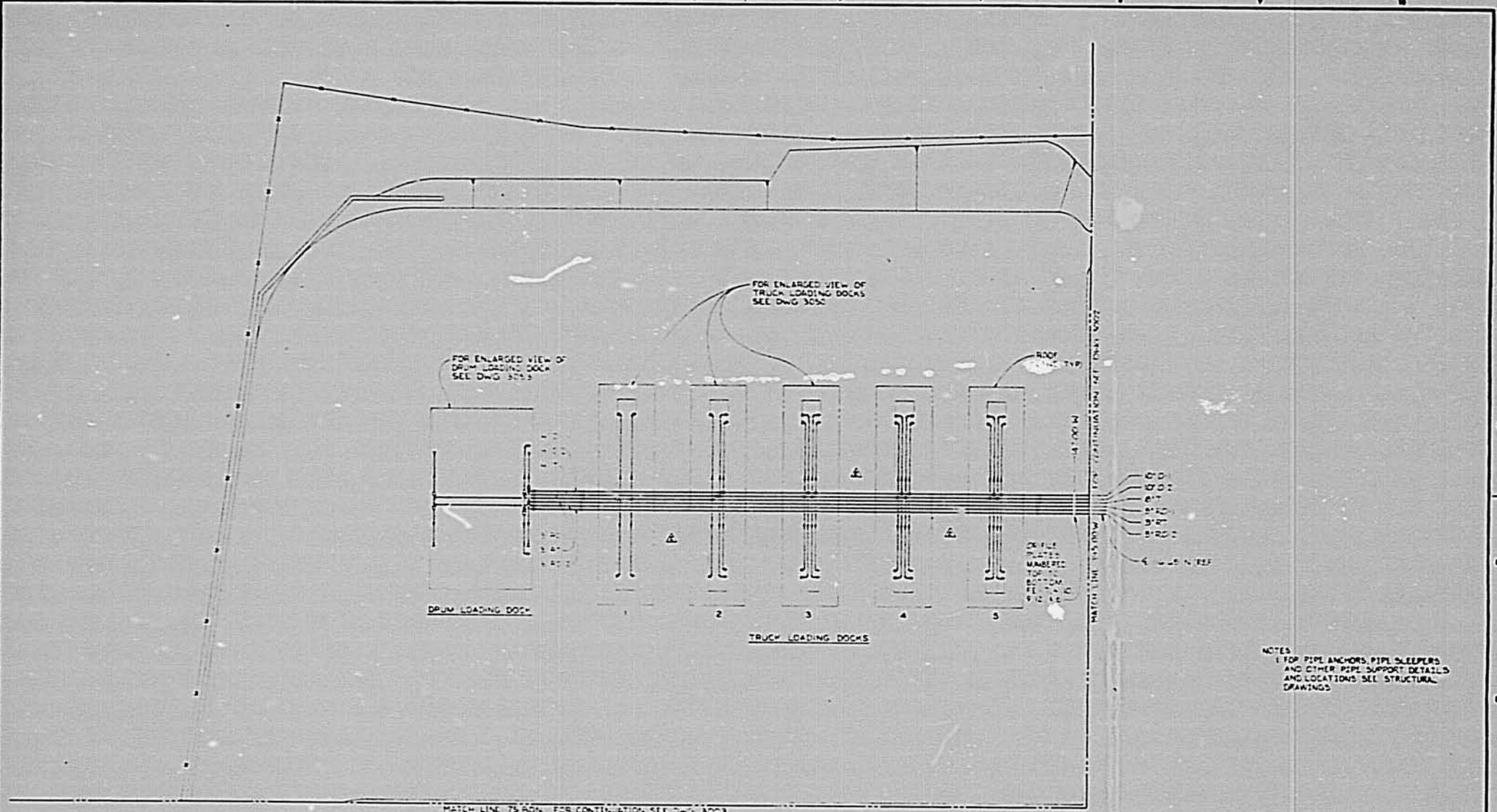

 3-11-80




BLACK & VEATCH INTERNATIONAL
 PROJECT 6112

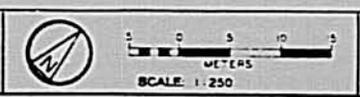
GENERAL AUTHORITY FOR SUPPLY COMMODITIES
 MINISTRY OF SUPPLY
 ALEXANDRIA
 REPUBLIC OF EGYPT
 TOP TERMINAL
 MECHANICAL KEY SITE PLAN

SM-1001 2



2	2	2	2	2	2	2	2	2	2
1	1	1	1	1	1	1	1	1	1
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0

DATE: _____
 DRAWN BY: _____
 CHECKED BY: _____
 APPROVED BY: *Joseph F. Kisch*
 DATE: 11/1/60



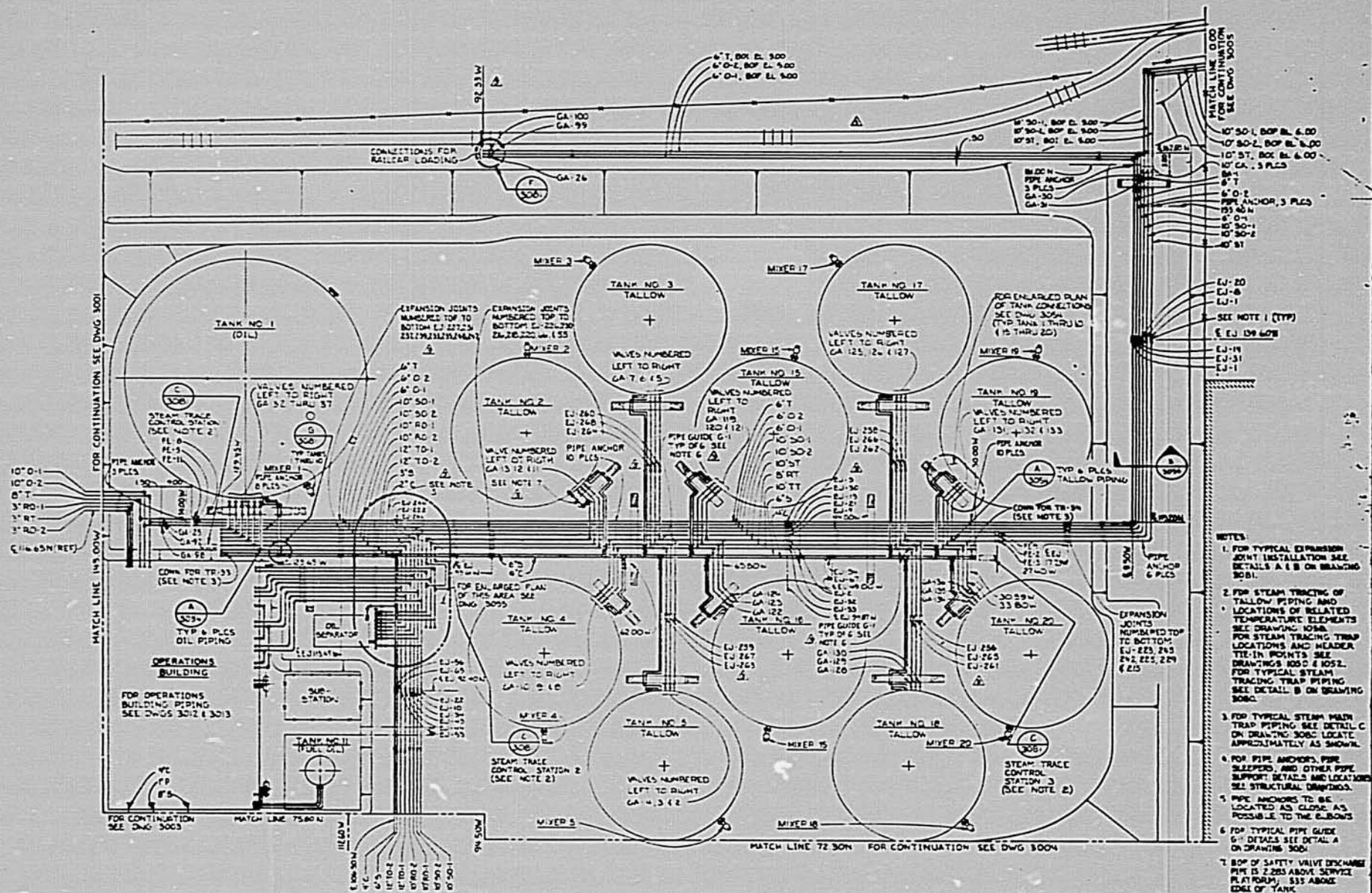
PROJECT 1152
 TERMINAL PIPING PLAN SHT. 1 OF 4

BLACK & VEATCH INTERNATIONAL
 PROJECT 1152

GENERAL AUTHORITY FOR SUPPLY COMMODITIES
 MINISTRY OF SUPPLY
 ALEXANDRIA
 REPUBLIC OF EGYPT
 TOY TERMINAL

SHEET NO. 5M-3001
 OF 2

5



- NOTES
1. FOR TYPICAL EXPANSION JOINT INSTALLATION SEE DETAILS A & B ON DRAWING 3001.
 2. FOR STEAM TRACING OF TALLOW PIPING AND LOCATIONS OF RELATED TEMPERATURE ELEMENTS SEE DRAWING 1036. FOR STEAM TRACING TRAP LOCATIONS AND HEADER TIE-IN POINTS SEE DRAWING 1032 & 1032. FOR TYPICAL STEAM TRACING TRAP PIPING SEE DETAIL B ON DRAWING 3003.
 3. FOR TYPICAL STEAM MAIN TRAP PIPING SEE DETAIL C ON DRAWING 3003. LOCATE APPROXIMATELY AS SHOWN.
 4. FOR PIPE ANCHORS, PIPE SLEEVES, AND OTHER PIPE SUPPORT DETAILS AND LOCATIONS SEE STRUCTURAL DRAWINGS.
 5. PIPE ANCHORS TO BE LOCATED AS CLOSE AS POSSIBLE TO THE ELBOWS.
 6. FOR TYPICAL PIPE GUIDE G-1 DETAILS SEE DETAIL A ON DRAWING 3001.
 7. BOP OF SAFETY VALVE DISCHARGE PIPE IS 2.283 ABOVE SERVICE PLATFORM. SIS ABOVE EDGE OF TANK.

3	RE-EXAMINE JOINTS ELIMINATED	1	1	1
2	ISSUE FOR CONSTRUCTION	1	1	1
1	REVISED AS SHOWN - ISSUED W/ADD'S	1	1	1
0	ISSUE FOR BID	1	1	1
0	ISSUE FOR REVIEW	1	1	1

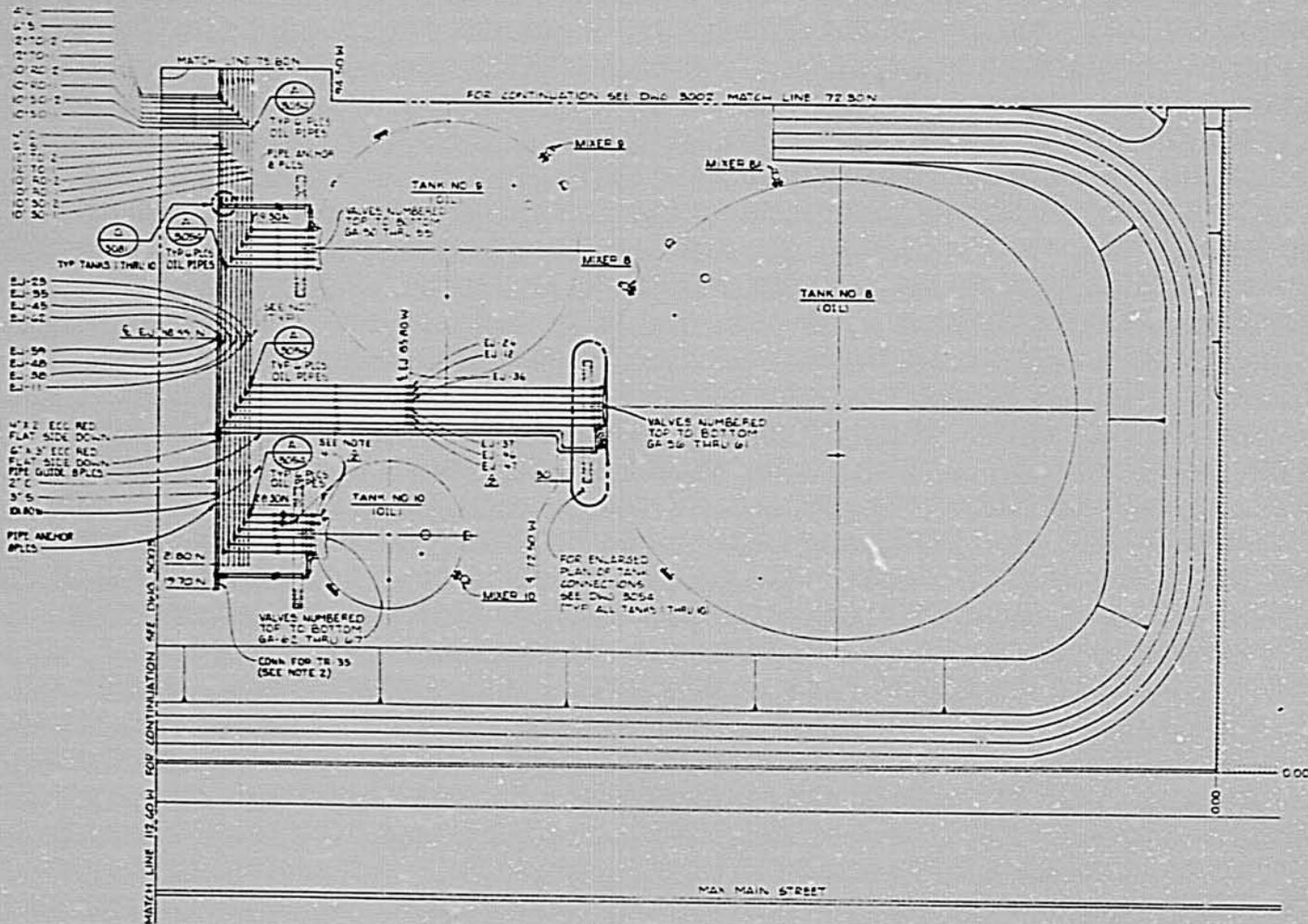
APPROVED FOR CONSTRUCTION
Joseph F. ...
 DATE: 3-11-50



BLACK & VEATCH INTERNATIONAL
 PROJECT 0132

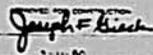
GENERAL AUTHORITY FOR SUPPLY COMMODITIES
 MINISTRY OF SUPPLY
 ALEXANDRIA
 TOT TERMINAL

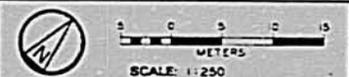
SM-3002
 TERMINAL PIPING PLAN SHEET 2 OF 4



- NOTES
- 1 FOR TYPICAL EXPANSION JOINT INSTALLATION SEE DETAILS A & B ON DRAWING 3001.
 - 2 FOR TYPICAL STEAM MAIN TRAP PIPING SEE DETAIL C ON DRAWING 3000 LOCATE APPROXIMATELY AS SHOWN.
 - 3 FOR PIPE ANCHORS, PIPE SLEEPERS AND OTHER PIPE SUPPORT DETAILS AND LOCATIONS SEE STRUCTURAL DRAWINGS.
 - 4 BOP OF SAFETY VALVE DISCHARGE PIPE IS 2.285 ABOVE SERVICE PLATFORM, 555 ABOVE EDGE OF TANK.

2	10/82	ISSUE FOR REVIEW	BY: J.F.K.
1	10/78	ISSUE FOR CONSTRUCTION	BY: J.F.K.
0	11/80	ISSUE FOR BIDDING	BY: J.F.K.
0	10/79	ISSUE FOR REVIEW	BY: J.F.K.
0	08/78	ISSUE FOR REVIEW	BY: J.F.K.


 3-11-80




BLACK & VEATCH
INTERNATIONAL
 PROJECT 0132

GENERAL AUTHORITY FOR SUPPLY COMMODITIES
 MINISTRY OF SUPPLY
 ALEXANDRIA
 REPUBLIC OF EGYPT
 TOP TERMINAL
 TERMINAL PIPING PLAN - SHEET 4 OF 4

SHEET NO. 2
 5M-3004

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All equipment and materials were supplied and installed by the Construction Contractor. The manufacturers' names, addresses and the equipment name-plate data for the major pieces of equipment are given below.

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 structures include concrete and masonry buildings, steel storage tanks and structural steel loading docks with metal roof decks. The buildings are constructed with reinforced concrete floors, columns, beams and flat roofs with plastered concrete block walls and are identified as Office Building, Trucker's Welfare Building, Operations Building, Substation and Scale House.

a. Buildings The Office Building is located in the southwest corner of the terminal near the main entrance. This is a two-story building with the terminal's mechanical equipment, storage and small work shop area on the ground floor. The first floor contains the control room, laboratory, motor control equipment and offices for the operations and maintenance personnel.

The Substation is a single-story building located just East of the Operations Building and houses the high-voltage switch gear and step down power transformer.

The Scale House, located between the Office and Trucker's Welfare Building, is a small single story building housing the dual truck scales.

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For budgeting reasons, neither furniture, laboratory equipment, maintenance tools, shop equipment nor office equipment were included in the scope of this project.

b. Tanks Steel tanks are provided for the temporary storage of semi-processed vegetable oils, inedible tallow, soap stock and fuel oil supply.

Six (6) tanks having a combined capacity of 40,000 metric tons are reserved for oil storage as follows:

<u>Tank No.</u>	<u>Capacity Each (metric tons)</u>
1	5,000
6, 7, 8	10,000
9	3,750
10	1,250

The total capacity of the ten (10) tallow tanks is 20,000 metric tons as follows:

<u>Tank No.</u>	<u>Capacity Each (metric tons)</u>
2 through 5	
and	2,000
15 through 20	

Each oil and tallow tank has stainless steel steam coils, shell mounted mixers and level gages.

The two (2) soap stock tanks, No. 21 and 22, have a capacity of 100 metric tons of storage each and the fuel oil tank capacity is 98 metric tons.

c. Loading Docks Five (5) docks for bulk loading of tank trucks and one loading dock for filling and loading-out of drums are provided. These are elevated reinforced concrete docks with corrugated roof deck supported by galvanized steel columns and framework.

2. PIPELINES Two, 10-inch diameter steel pipe lines extend from Quay 87-2 to the Operation Building Oil Pumps with connections to each of the oil storage tanks. This includes 4,672 meters of pipeline in the quay area and 2,915 meters within the terminal area and the Operations Building. To complete the piping, another 3,750 meters of 1/2 inch through 8 inch sizes of pipe was installed.

For the tallow to be maintained in a fluid state, the tallow lines were "heat-traced" and insulated. Electrical heat-tracing was installed on the lines from the terminal to the quay and steam heat-tracing was provided for lines in the terminal.

Component

1. Oil unloading line	417 MT/hour
2. Tallow unloading line	334 MT/hour
3. Oil unloading pump, each	415 MT/hour
4. Oil transfer pump	100 MT/hour
5. Tallow loading pump	195 MT/hour
6. Bulk oil loading position, each	62 MT/hour
7. Bulk tallow loading position, each	59 MT/hour

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- 8. Drum oil loading 12.5 MT/hour
- 9. Drum tallow loading 12.5 MT/hour

3. EQUIPMENT. The equipment for the TOF Facility was furnished and installed by the Construction Contractor. The manufacturer's names, addresses and nameplate data for the major equipment are as follows:

a. Watertube Boiler

Manufacturer: Cleaver Brooks, Division of Aqua-Chem., Inc.

Address: Lebanon, Pennsylvania, U.S.A.

Model: D-26

Unit No.: WL-3150

Pressure: 260 P.S.I.

Date of Manufacture: October 1982

Heating Surface:

Boiler: 1120 Square Feet

Waterwall: 241 Square Feet

Burner:

Model No. WT 100-A-7

Serial No. WL-3150

Firing Rate:

Maximum: 18.503

Oil: No. 2

Supply Pressure: 100 P.S.I

Electrical Requirements:

Main Power Supply

Volts: 380

Phase: 3

Hz : 50

Control Power

Volts: 120

Phase: 1

Hz : 50

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b. Firetube Boiler (CB Packaged Boiler)

Manufacturer: Cleaver Brooks, Division of Aqua-Chem., Inc.

Address: Lebanon, Pennsylvania, U.S.A.

Model: CB 100 x - 30

Serial No.: L 71730

Maximum Pressure: 200 P.S.I.

Input: 1,255,000 BTU/Hr.

Oil: 9.0 GPH

Date: 9 August 1982

Electrical Requirements:

 Main Power Supply

 Volts: 380

 Phase: 3

 Hz : 50

 Amp : 4 (Maximum Circuit AMP: 5)

 Circuit Protection: Max. 16 Amp.

 Blower Motor: 1.3 Horsepower

 Control Power

 Volts: 120

 Phase: 1

 Hz : 50

c. Boiler Auxiliary Equipment

1. Deaerator:

Manufacturer: Cleaver Brooks, Division of Aqua-Chem., Inc.

Address: Milwaukee, Wisconsin, U.S.A.

Type: Spraymaster

Model: SM 17

Capacity: 17/250

Serial No.: DS-3523

Date Shipped: October 1982

2. Boiler Feed Pump 1 and 2.

Motors:

Manufacturer: Marathon Electric

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Address: Wausau, Wisconsin 64401 U.S.A.
Model: MJ213 TTDR 7001 EP-R26W
Frame: 213T Des. : B
Type : TDR Phase: 3
Duty : Continuous Code : G
Volt : 190/380 Insulation Class: B
Amp. : 25/12.5 Enclosure: DP
RPM : 2875 Max. Amb. Deg. C: 40

Pumps:

Manufacturer: Gould Pumps, Inc.
Address: Seneca Falls, New York, U.S.A.
Model: 3755
Serial No. (Pump No. 1): 737C 342
Serial No. (Pump No. 2): 737C 654
Capacity: 40 GPM
Head: 195 Feet
PPM: 2900
Size: 1.25 x 1.50 - 8

3. Water Conditioner

Manufacturer: Universal Water Systems, Inc. (UWS)
Address: 1425 Hawthorne Lane, West Chicago, Illinois 60185 U.S.A.
Model: UAS-50-1 TWIN
Serial No.: U-06064-82

d. Oil Pumps 1 and 2

Motors:

Manufacturer: Marathon Electric
Address: Wausau, Wisconsin 64401 U.S.A.
Model: MK 445TFS 7392 AN-W
Serial No. (Pump No. 1): 19-93530-9/7-1
Serial No. (Pump No. 2): 19-03530-9/7-2
Frame: 445 T Des. : B
Type : TFS Phase: 3

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Duty : Continuous (Severe Duty)	Code : G
Volt : 380	Insulation Class: F
Amp. : 210	Enclosure: TEFC
RPM : 1480	Max. Amb. Deg.C.: 50
Hz : 50	Service Factor: 1.15
Size : 150 Horsepower	Nom. Power Factor: 0.86

Pumps

Manufacturer: Allis Chalmers

Address: Cincinnati, Ohio, U.S.A

Model: 150	Type: 9000
Serial No. (Pump No. 1): 821-43008-1-1	Frame: F21-D1
Serial No. (Pump No. 2): 821-43008-1-2	Size : 12 x 8 x 22M
Capacity: 2000 GPM	RPM: 1479
Head: 200 Feet	

Instruction Book: 52 x 10687

e. Oil Pump No. 3

Motor:

Manufacturer: Marathon Electric

Address: Wausau, Wisconsin 64401 U.S.A.

Frame: 286 T	Phase: 3
Duty : Continuous (Severe Duty)	Code : F
Volt : 380	Insulation Class: B
Amp. : 35	Enclosure: TEFC
RPM : 1465	Max. Amb. Deg.C.: 50
Hz : 50	Service Factor: 1.0
Size : 25 Horsepower	

Pumps

Manufacturer: Allis Chalmers

Address: Cincinnati, Ohio, U.S.A

Model: 150	Type : 8000
Serial No. : 821-43008-3-1	Frame: F20-C1
Capacity: 400 GPM	Size : 6 x 4 x 14S

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Frame: 145 HPVZ	Des. : B
Type : TGS	Phase: 3
Duty : Continuous	Code : J
Volt : 380/460	Insulation Class: F
Amp. : 5.6/2.8	Enclosure: EPFC
RPM : 1740	Max. Amb. Deg.C.: 40
Hz : 150	Service Factor: 1.0
	Size : 2 Horsepower

j Oil Separator (Rotary Pump):

Motor:

Manufacturer: O. R. Cote Co.
Address: 556 St. James Ave., Springfield, Massachusetts 01109, U.S.A.

Spec. No.: 36 No. 4- 353

Serial No.: T 647941

Frame: 148 T	Des. : B
Type : TGS	Phase: 3
Duty : Continuous	Code : G
Volt : 220/380	Insulation Class: B
Amp. : 7.8/4.5	Max. Amb. Deg.C.: 40
RPM : 1425	Service Factor: 1.15
Hz : 50	
Size : 3 Horsepower	

Pump:

Manufacturer: Viking Pump - Houdaille

Address: Cedar Falls, Iowa, U.S.A.

Model: K 4124

Serial No.: 170 1382

Gear Reduction Part No. 3-551-001-276

k. Package Treatment Plant, Blower Motors:

Manufacturer: U.S. Electrical Motors, Division of Emerson Electric

Address: Milford, Connecticut, U.S.A.

ID. No. 61-07369-112

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Frame: 182 F	Des. : B
Type : T	Phase: 3
Volt : 380	Code : A
Amp. : 7.8/4.5	Insulation Class: F
RPM : 1440	Max. Amb. Deg.C.: 40
Hz : 50	Service Factor: 1.15

l. Air Compressor:

Manufacturer: Ingersoll-Rand

Model: 429

Serial No.: W11GFVN 180

Type: ESV-1 NI

RPM: 514

Discharge Pressure: 100 PSI

Pressure Tank:

Manufacturer: The Gaskell Co., Inc.

Address: Memphis, Tennessee, U.S.A.

Serial No.: 170-82-1

Nat'l. BD No.: 1113

Max. Allowable Working Press.: 125 PSI at 500 Deg. F.

Capacity: 120

Motor:

Manufacturer: Westinghouse Electric Corp.

Volts: 380

Phase: 3

RPM : 1500

Hz : 50

Size : 50 Horsepower.

Controls:

Manufacturer: Furnas

Pressure Control: BVI. 836 T

Catalog No. 836 T-T254J, Series A

m. Mixer Motors:

Manufacturer: Philadelphia Gear Corp.

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Address: King of Prussia, Pennsylvania, U.S.A.

RPM:

Input : 1500

Output: 232

Ratio : 6.182 to 1

Service Factor: 1.25

Order No.: 836155-1

Type: MSE-11-300

Size : 40 Horsepower

Serial No.: (Tank No. 1) 81 KA 1566

Order No. 836155-2

Type: MSES-08-250

Size: 20 Horsepower

Serial No. (Tank No. 2) 81 GGA 1512

(Tank No. 3) 81 GGA 1521

(Tank No. 4) 81 GGA 1567

(Tank No. 5) 81 GGA 1573

(Tank No. 15) 81 GGA 1569

(Tank No. 16) 81 GGA 1575

(Tank No. 17) 81 GGA 1568

(Tank No. 18) 81 GGA 1574

(Tank No. 19) 81 GGA 1570

Order No. 836155-3

Type: MSE-11-300

Size: 300 Horsepower

Serial No.:(Tank No. 6, Motor 1) 81 CKA 1582

(Tank No. 6, Motor 2) 81 CKA 1583

(Tank No. 7, Motor 1) 81 CKA 1577

(Tank No. 7, Motor 2) 81 CKA 1580

(Tank No. 8, Motor 1) 81 CKA 1579

(Tank No. 8, Motor 2) 81 CKA 1581

(Tank No. 9) 81 CKA 1578

Order No. 836155-4

Type: MSE-08-250



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Size: 15 Horsepower

Serial No.:(Tank No. 10) 81 CGA 1584

n. Motor Control Center, MCC-1, MCC-2, MCC-3, & MCC-4

Manufacturer: General Electric Co.

Address: Bloomington, Illinois, U.S.A.

Model: 8000 Line Control Center

Catalog No.: 478 x 0946 LO 1 (MCC-1)

478 x 0946 LO 2 (MCC-2)

478 x 0946 LO 3 (MCC-3)

478 x 0946 LO 4 (MCC-4)

Diagram No.: 234 B 7262

Amp. (Supply): 1000

Volts: 380

Phase: 3, 4 wire

o. Air Handling Unit (AHU-1):

Manufacturer: Buffalo Forge Co.

Address: Buffalo, New York, U.S.A.

Model: J

Shop Order: 82300870

Size: 95

Type: V

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C. SURPLUS MATERIALS AND EQUIPMENT

Due to unestablished priorities in the quay area, the exact scope of the pipeline to be constructed could not be fixed prior to award of the Construction Contract. Also, some changes in the details were required during construction resulting in a surplus of materials and parts. As the extra quay for unloading TOF products had not been assigned at the completion of the Contract, these surplus materials were turned over to the Employer for future expansion or use in operation or maintenance of the facility.

D. SPARE PARTS

Because of budgeting difficulties during implementation of the project, no funds were provided for the spare parts required for maintenance of the project. However, the Contract required that recommended spare parts lists for all equipment be submitted by the Contractor.

Provision of spare parts was finalized by Change Order No. 6 in the amount of \$ 396,658.05. The first shipment of these spare parts was shipped, cleared through customs and subsequently delivered to the Terminal site in January 1985. The second and concluding shipment arrived in May 1985.

BLACK & VEATCH INTERNATIONAL

FINAL REPORT

VOLUME III

TALLOW, OILS AND FATS FACILITY

PORT OF ALEXANDRIA

SECTION IV

CONSTRUCTION DRAWINGS

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VOLUME III

TALLOW, OILS AND FATS FACILITY

PORT OF ALEXANDRIA

SECTION IV, CONSTRUCTION DRAWINGS

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B. DRAWING LIST	IV - 1

FINAL REPORT

VOLUME III

TALLOW, OILS AND FATS FACILITY

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 TOF 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>
5-A-2001	KEY SITE PLAN
5-S-1001	TRUCKERS WELFARE BUILDING (GROUND FLOOR PLAN)
5-S-1002	TRUCKERS WELFARE BUILDING (ELEVATION & SECTION)
5-S-1003	TRUCKERS WELFARE BUILDING (ELEVATIONS & DETAILS)

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<u>Drawing No.</u>	<u>Drawing Title</u>
5-S-1004	TRUCKERS WELFARE BUILDING (SANITARY & INSTALLATION)
5-S-1005	TRUCKERS WELFARE BUILDING (KITCHENETTE & TOILET LAYOUT)
5-S-1006	TRUCKERS WELFARE BUILDING (WINDOW DETAILS)
5-S-1007	TRUCKERS WELFARE BUILDING (DOOR DETAILS)
5-S-1040	TRUCKERS WELFARE BUILDING FOUNDATION
5-S-1041	TRUCKERS WELFARE BUILDING ROOF
5-S-1101	OPERATIONS BUILDING (GROUND FLOOR PLAN)
5-S-1102	OPERATIONS BUILDING (UPPER FLOOR PLAN)
5-S-1103	OPERATIONS BUILDING (SECTION A-A)
5-S-1104	OPERATIONS BUILDING (ELEVATION) SHEET 1 OF 4
5-S-1105	OPERATIONS BUILDING (ELEVATION) SHEET 2 OF 4
5-S-1106	OPERATIONS BUILDING (ELEVATION) SHEET 3 OF 4
5-S-1107	OPERATIONS BUILDING (ELEVATION) SHEET 4 OF 4
5-S-1108	OPERATIONS BUILDING - DRAIN PIPES
5-S-1109	OPERATIONS BUILDING - DRAINAGE SYSTEM
5-S-1111	OPERATIONS BUILDING - SANITARY
5-S-1112	OPERATIONS BUILDING (DOOR TYPES)
5-S-1113	OPERATIONS BUILDING (WINDOWS TYPES - UPPER FLOOR)
5-S-1114	OPERATIONS BUILDING (WINDOWS TYPES - GROUND FLOOR)
5-S-1115	OPERATION BUILDING (DETAIL)
5-S-1116	OPERATIONS BUILDING (MAIN STAIR SECTION)
5-S-1117	OPERATION BUILDING - FINISH SCHEDULE
5-S-1140	OPERATIONS BUILDING - FOUNDATION PLAN

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<u>Drawing No.</u>	<u>Drawing Title</u>
5-S-1141	OPERATIONS BUILDING - FOOTING SECTIONS
5-S-1142	OPERATIONS BUILDING (GROUND FLOOR & COL. SECTIONS)
5-S-1143	OPERATIONS BUILDING (GROUND FLOOR & COLUMN DETAILS)
5-S-1144	OPERATIONS BUILDING (UPPER FLOOR PLAN)
5-S-1145	OPERATIONS BUILDING (UPPER FLOOR PLAN GIRDER)
5-S-1146	OPERATIONS BUILDING (UPPER FLOOR & ROOF BEAM SECTIONS)
5-S-1147	OPERATIONS BUILDING (UPPER FLOOR PLAN CONCRETE INSERTS)
5-S-1148	OPERATIONS BUILDING (ROOF PLAN)
5-S-1149	OPERATIONS BUILDING - ROOF GIRDER SECTIONS
5-S-1150	OPERATIONS BUILDING - DETAILS OF STAIRS
5-S-1201	OFFICE BUILDING (GROUND FLOOR PLAN)
5-S-1202	OFFICE BUILDING (UPPER FLOOR PLAN)
5-S-1203	OFFICE BUILDING (ELEVATION & SEC.) SHEET 1 OF 3
5-S-1204	OFFICE BUILDING (ELEVATION & SEC.) SHEET 2 OF 3
5-S-1205	OFFICE BUILDING (ELEVATION & SEC.) SHEET 3 OF 3
5-S-1206	OFFICE BUILDING (SANITARY INSTALLATIONS - GROUND FLOOR)
5-S-1207	OFFICE BUILDING (SANITARY INSTALLATION - FIRST FLOOR)
5-S-1208	OFFICE BUILDING (SANITARY INSTALLATION - ROOF PLAN)

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<u>Drawing No.</u>	<u>Drawing Title</u>
5-S-1209	OFFICE BUILDING (DOOR TYPES)
5-S-1210	OFFICE BUILDING (WINDOW TYPES)
5-S-1211	OFFICE BUILDING (MISC. JOINERY DETAILS & TOILET LAYOUTS)
5-S-1212	OFFICE BUILDING (MAIN STAIR SECTION)
5-S-1213	OFFICE BUILDING - FINISHING SCHEDULE
5-S-1240	OFFICE BUILDING FOUNDATION PLAN
5-S-1241	OFFICE BUILDING (FOOTING DETAILS)
5-S-1242	OFFICE BUILDING - COLUMN PLAN & DETAILS
5-S-1243	OFFICE BUILDING (UPPER FLOOR PLAN)
5-S-1244	OFFICE BUILDING - ROOF PLAN
5-S-1245	OFFICE BUILDING (STAIRCASE DETAILS)
5-S-1247	SCALE HOUSE & TYPICAL DOOR AND WINDOW DETAILS
5-S-2000	SITE PLAN
5-S-2003	GRADING PLAN
5-S-2004	FOUNDATION & UTILITY PLAN AREA 1
5-S-2005	FOUNDATION & UTILITY PLAN AREA 2
5-S-2006	FOUNDATION & UTILITY PLAN AREA 3
5-S-2007	FOUNDATION & UTILITY PLAN AREA 4
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SECTION V, OPERATION AND MAINTENANCE MANUAL

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 INSTRUCTIONS

The Engineer, therefore, prepared a three volume Operation and Maintenance Manual, TOF Terminal, Alexandria. Copies of this three volume set 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 storage system
- Loading and transfer
- Equipment cleaning system
- Soap stock recovery system
- Electrical heat tracing system
- Steam distribution system
- Steam generation system
- Boiler feedwater system
- Compressed air system
- Wastewater treatment system
- Fire protection system
- 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 was presented the manufacturers' detailed operation and maintenance instructions for various items of equipment. The manufacturers' operation and maintenance manual for the process related mechanical equipment were included in Volume I of the TOF Terminal Operation and Maintenance Manual along with manual text. Manufacturers' manuals for the TOF Terminal utilities system mechanical equipment were included in Volume 2 of the TOF Terminal manual.

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Manufacturers' operation and maintenance instructions for the electrical system equipment were included in Volume 3 of the TOF Terminal Operation and Maintenance Manual.

Manufacturers' operation and maintenance manuals were included for the following equipment and were bound in the indicated volume of the TOF Terminal Operation and Maintenance Manual:

a. TOF Terminal Operation and Maintenance Manual - Volume 1.

- Process Pumps
- Oil Separator Pump
- Control Valves
- Meters and Gages
- Flow Measuring Devices
- Tank Mixers
- Portable Cleaning Equipment

b. Terminal Operation and Maintenance Manual - Volume 2.

- Truck Scales
- Sump Pumps
- Sewage Lift Station
- Package Treatment Plant
- Air Compressor
- Water Treatment Equipment
- Fuel Handling Equipment
- LP - Gas System Equipment

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- Fire Tube Boiler
- Water Tube Boiler
- Deaerator
- Ventilation System Equipment

c. TOF Terminal Operation and Maintenance Manual - Volume 3.

- Carbon Dioxide Fire Protection System
- Diesel Generator Set
- Secondary Unit Substation
- Heating Cable
- Control Panel
- Motor Control Centers

C. OPERATION AND MAINTENANCE MANUAL TABLE OF CONTENTS

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D. TRAINING PROGRAM

The contract for construction of the TOP Facility provided forty-five (45) days of training for the Employer's operating and maintenance personnel. To provide a guide for the trainees and reference material during operation and maintenance of the facility, the Contractor prepared and distributed a Training Manual. This manual was planned to complement the Operations and Maintenance Manual prepared by Black & Veatch International.

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The program was started on 15 August 1983 when approximately sixty (60) trainees reported for the Terminal Orientation program.

The following is a summary of the training program as conducted by the Contractor.

TRAINING PROGRAM AND DEMONSTRATION RUNSCHEDULE

<u>DATE</u>	<u>DAY</u>	<u>DESCRIPTION</u>
4 Aug.	Thurs.	Preliminary Session; Boiler Water Treatment
6 Aug.	Sat.	Preliminary Session; Boiler Operation
15 Aug.	Mon.	Terminal Orientation; Begin Formal Classroom Work and Demonstration Run
16 Aug.	Tues.	Terminal Orientation
17 Aug.	Wed.	Receiving and Shipping
18 Aug.	Thurs.	Receiving and Shipping
19 Aug.	Fir.	Off
20 Aug.	Sat.	Tank Strapping and Gaging, Product Heating, Water Treating.
21 Aug.	Sun.	Tank Strapping and Gaging, Product Heating, Water Treating.
22 Aug.	Mon.	Guard Force, Emergency Procedures
23 Aug.	Tues.	Electrical Systems and Instrumentation
24 Aug.	Wed.	Tank and Pipeline Cleaning and Maintenance
25 Aug.	Thurs.	Waste Water Treating
26 Aug.	Fri.	Off
27 Aug.	Sat.	Building / Grounds / Equipment Maintenance
28 Aug.	Sun	Maintenance Schedules / Recap / End of Classroom Work.
29 Aug.	Mon.	Pipeline / Tank Identification and Labeling
30 Aug.	Tues.	Pipeline / Tank Identification and Labeling
31 Aug.	Wed.	Steam Generation System

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<u>DATE</u>	<u>DAY</u>	<u>DESCRIPTION</u>
1 Sept.	Thurs.	To include: Water Treatment Fire Tube Boiler Boiler Room Instrumentation Deareator Water Tube Boiler Air Compressors Steam Tracing, Heating Coils, Temperature Control Valves, etc. Fuel Oil Pump Set Wet Storage of Boiler
2 Sept.	Fri.	Off
3 Sept.	Sat.	Same as 1 Sept.
4 Sept.	Sun	Same as 1 Sept.
5 Sept.	Mon.	Same as 1 Sept.
6 Sept.	Tues.	Valve Operation in Conjunction with Graphic Display Panel
7 Sept.	Wed.	Valve Operation in Conjunction with Graphic Display Panel
8 Sept.	Thurs.	Pump Operation, Simulated Receiving and Shipping
9 Sept.	Fri.	Off
10 Sept.	Sat.	To include: Control Panel Operation Oil & Tallow Pumps
11 Sept.	Sun.	" Engine Driven Pump
12 Sept.	Mon.	" Tank Mixers Truck / Drum Loading
13 Sept.	Tues.	" Valve Lineup
14 Sept.	Wed.	Pump Operation, Simulated Receiving and Shipping
15 Sept.	Thurs.	Oil Separator; Sewage Lift Station; Sewage Treatment
16 Sept.	Fri.	Holiday
17 Sept.	Sat.	"
18 Sept.	Sun.	"
19 Sept.	Mon.	"
20 Sept.	Tues.	"
21 Sept.	Wed.	Additional Training as Requested or Required

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<u>DATE</u>	<u>DAY</u>	<u>DESCRIPTION</u>
22 Sept.	Thurs.	Over-all Plant Operation
23 Sept.	Fri.	Off
24 Sept.	Sat.	Trial Operation by Terminal Personnel
25 Sept.	Sun.	Trial Operation by Terminal Personnel
26 Sept.	Mon.	Trial Operation by Terminal Personnel
27 Sept.	Tues.	Trial Operation by Terminal Personnel
28 Sept.	Wed.	Trial Operation by Terminal Personnel
29 Sept.	Thurs.	Trial Operation by Terminal Personnel, End Demonstration Run
30 Sept.	Fri.	Off
1 Oct.	Sat.	Provisional Acceptance

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SECTION VI, TRANSFER OF FACILITIES

A. GENERAL

During the month of September 1983, construction of the TOF Facility was completed. Final inspection was carried out jointly with representatives of the Employer (GASC), the Contractor (HHC), the Engineer (BVI) and the Alexandria Oil and Soap Company (AOSC) and a list of items requiring repair or correction was prepared.

In September, a decree was signed by the Minister of Supply establishing the Committee responsible for transfer of the TOF Facility from the Contractor to the Employer and from the Employer to the Chairman of the Alexandria Oil and Soap Company who has been nominated to operate the TOF Terminal.

The Committee convened in the Control Room of the TOF Terminal on 30 September 1983. After much discussion and deliberation an agreement on the terms of transfer was reached. A memorandum of the meeting was prepared and signed by each Committee member. The terms of the Provisional Acceptance between the Employer (GASC) and the Contractor (HHC) were also established and the Provisional Acceptance signed.

B. MEMORANDUM OF TRANSFER

The following is a translation of the Memorandum of Transfer which was executed in Arabic.

HANDING OVER REPORT
FOR TOF TERMINAL
EL MAX - ALEXANDRIA
MINUTES OF MINISTRY OF SUPPLY

On Friday 30-9-1983, at 12:00 noon at the TOF Terminal, El Max-Alexandria, a committee was held according to the Ministry Decree No. 418-83 which was issued on 29-9-1983.

The Committee consisted of:

1st GASC:

1. Mr. Mahmoud Taha Wali Chief
2. Dr. Hazem Aly Hekil
3. Dr. Farouk Ismail Ahmed
4. Mr. Mohamed Badawi Abdel Rahman
5. Eng. Mahmoud El Aasar
6. Mr. Fathy Yossif Haron
7. Mr. Hashem Aly Rashowan

2nd Alexandria Oil & Soap Company:

1. Chemical Eng. Mahmoud Hazem Ozman
2. Eng. Abdel Aziz Mohamed Aly
3. Eng. Edward Anis
4. Eng. Mohamed Shehata

3rd Black & Veatch International:

1. Eng. Mohamed Delawar
2. Mr. Alex Douglas
3. Mr. John Dyer

4th Harbert-Howard Companies:

1. Mr. Harry N. Hill
2. Mr. Sam Tomme
3. Mr. Kevin Carroll

5th Assistance form the GASC:

1. Mr. Monir Labib Malati
2. Mr. Mohamed Abdel Fatah Sanouth
3. Mr. Saad Hamed Abou El Makarm

The Committee started the work by discussing the inspection reports and equipment checking reports which had been done by a similar committee consisting of BVI, the Alexandria Oil & Soap Company and Harbert-Howard Companies, the general contractor of the project. These reports were:

1. Oil & Tallow pipelines from the quay to the terminal.
2. The main boiler, auxillary boiler, the water treatment plant and the boiler equipment.
3. Oil & Tallow pipelines inside the terminal.

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4. Tanks Nos. 1, 2, 3, 15, 17, 19, 20, 18, 16, 5, 4, 9, 8, 10, 6, 7, 21 and 22 and the fuel tanks (3 tanks) with all necessary equipment.
5. Electricity distribution net including the sub-station and control panels Nos. 1, 2, 3 and 4 and the auxillary generator, also the heat trace on the lines coming from the quay.
6. The lighting network including the office building, trucker's welfare building, scale pit, operations building, sub-station, drum loading dock, truck loading docks and site lighting.
7. The two scale pits, scale house, and scales.
8. Compressor and air distribution network.
9. Tank cleaning equipment.
10. The office building, truckers welfare building, sub-station, operations building, drum loading dock, truck loading docks, pavement, retaining wall, fence and gravel roads.

The committee had technical remarks mentioned in the inspection reports and equipment checking reports; some of these remarks had been corrected and a mark was written in front of it to approve that it was corrected.

With regard to other remarks, HHC is presently working on the outstanding items. Everything will be completed in the next few days. (Attached herewith are the inspection reports & equipment checking reports).

The committee understood that testing & operating of the terminal has been done by the use of water because the oil & tallow were not available. To run a complete operation, the test will be delayed until the GASC confirms to the committee the date of arrival of the first oil & tallow ships to Alexandria port.

Since the contract between GASC & HHC expires on 30-9-1983; also since HHC completed all the construction and installation work and the terminal is ready for operation, HHC asked the GASC to receive the terminal according to their contract. The GASC agreed to provisional acceptance and in turn gave it to Chemical Engineer Mohamed Hazem who is responsible for supervising, running and operating it.

Furthermore, a provisional acceptance certificate was fixed saying that TOF Terminal El Max-Alexandria has been handed over on 30-9-1983 as provisional acceptance. (Attached herewith the certificate).

It was agreed that HHC will be present at the terminal during the complete operation of the TOF terminal as soon as the ship arrives. They will also be checking the boiler with the complete load for three continuous days.

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In case something fails during the operation or something is wrong with the installation or fabrication or not in accordance with the contract requirements, HHC is responsible for fixing or repairing at once and HHC is responsible for the costs without any neglect of the contract conditions.

The GASC has a performance bond and payment bond each in the value of U.S. Dollars FOURTEEN AND ONE-HALF MILLION. These bonds will not be released until the contractor has performed all his responsibilities in accordance with the contract documents and final acceptance of the terminal. (Attached herewith a copy of performance bond & payment bond).

The provisional acceptance report is finished on this date at 4:00 PM.

/Signed/
General Authority for Supply Commodities
Alexandria Oil & Soap Co.
Harbert Howard Companies
Black & Veatch International

C. PROVISIONAL ACCEPTANCE

The following is a copy of the provisional Acceptance executed in the English language on 30 September 1983.

PROVISIONAL ACCEPTANCE CERTIFICATE

Provisional Acceptance was made as of September 30, 1983 for the TOF Terminal in Alexandria. Full load operation is required for commissioning; all the parties concerned agreed that Harbert Howard Companies will stand by for the running of the facility for sufficient time to verify the continuous operation during which the boiler has to keep running for three (3) successive days. The test will be carried out upon arrival of tallow and oil vessels at the Port of Alexandria.

/Signed/
Representatives of the General Authority for Supply
Commodities
Representatives of the Alexandria Oil & Soap Co.
Representatives from Black & Veatch International
Representatives of Harbert-Howard Companies

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D. INAUGURATION

The inauguration of the TOF Terminal took place on 9 January 1984. Among the attendees were the following:

Dr. Nagi Shatla, Minister of Supply

Governor of Alexandria

Mr. Mahmoud T. Wali, First Undersecretary, GASC

Mr. Michael Stone, Director, USAID

Mr. Joseph Pastic, Project Officer, USAID

Mr. Adel Youssry, Undersecretary, GASC

Dr. Hazem Osman, Chairman, Alexandria Oil & Soap Co.

Mr. Erik Gude, Harbert-Howard Company

Mr. Charles G. Box, BVI

Mr. R. Zitterkopf, BVI

The inauguration ceremony consisted of an unveiling of the inauguration plaque and the cutting of a ribbon placed across the Control Building Entrance. It was followed by a tour of the site and speeches by the Minister of Supply, the USAID Director, and the Governor of Alexandria.

E. FINAL ACCEPTANCE

In accordance with the terms of the Contract for General Construction, the General Construction Contractor guaranteed his work for one year from the date of Provisional Acceptance. Provisional Acceptance took place 30 September 1983 and Final Acceptance was scheduled for 30 September 1984.

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During October 1984, numerous meetings took place concerning final acceptance. These meetings covered final acceptance plus several items considered to require correction. Correction of these items is important. However, in terms of the broad scope of the facility and its successful operation for one year, these items can be regarded as minor.

Minutes of meetings to which the Engineer was invited are included as Exhibits VII-1 through VII-3.

Following is a copy of the Final Acceptance Certificate executed in the English language on 1 November 1984.

Contract No. 263-K-041-GC 2

Final Acceptance Certificate

Final Acceptance was made as of 1st November 1984 and Harbert Howard Companies and his surety are released from all provisions of Performance Bond No. 263-K-041-GC 2 issued by American Home Assurance Co. & Insurance Company of North America on October 9, 1981 and from all provisions of Payment Bond No. 263-K-041-GC 2 issued by American Home Assurance Co. & Insurance Company of North America on October 9, 1981.

The above with due consideration of exceptions listed in the bond dated Nov. one, 1984 submitted to us today Nov. 7, 1984.

/Signed/
General Authority for Supply Commodities

CONFERENCE MEMORANDUM:

Client : General Authority for Supply Commodities BVI P.N.: 8152
Project : Alexandria TOF Facility File : GC-2.7.1
Subject : Final Acceptance, Contract No. 263-K-041-GC-2

Date and Place: Meeting was held on 8 October 1984 at
Ministry of Supply, 99 Kasr El-Aini Street, Cairo

Attending:

Mr. Mahmoud T. Wali - First Undersecretary, Ministry of Supply
Eng. Magdi El-Gawad - Undersecretary, Ministry of Supply
Dr. Hazim Osman - Chairman, Alexandria Oil & Soap Co.
Gordon Burles - Harbert Howard Companies
Kevin Carrol - Harbert Howard Companies
R. Martin - Black & Veatch International
R. Zitterkopf - Black & Veatch International

The meeting was also attended by the First Undersecretary of the Ministry of Industry, the GASC Technical Committee, plus other representatives from the Ministry of Supply.

The purpose of the meeting was to discuss Final Acceptance by the GASC of Tallows, Oils and Fats Terminal in Alexandria.

Mr. Wali chaired the meeting. Mr. Wali summarized the actions to date and the need for final acceptance.

It was agreed that Dr. Hazim would prepare a letter listing all of the items that the AOSC regarded as outstanding.

The next meeting was scheduled for 17 October 1984.

CONFERENCE MEMORANDUM:

Client : General Authority for Supply Commodities
Project : Alexandria TOF Facility
Subject : Final Acceptance, Contract No. 263-K-041-GC-2

BVI P.N.: 8152
File : GC-2.7.1

Date and Place: Meeting was held on 17 October 1984 at
Ministry of Supply, 99 Kasr El-Aini Street, Cairo

Attending:

Mr. Mahmoud T. Wali - First Undersecretary, Ministry of Supply
Eng. Magdi El-Gawad - Undersecretary, Ministry of Supply
Chemist Mohamed Hazem Osman - Alexandria Oil & Soap Company
Dr. Mahmoud Abdel Hakim Refai - GASC Technical Committee (Cairo University)
Eng. Mahmoud Mohammed El-Asar - GASC Technical Committee (Petroleum Sector)
Eng. Ahmed Ahmed El Khashab - GASC Technical Committee (Alexandria Salt & Soda Co.)
Dr. Hazim Hakel - Mataranya University
Mr. Raffat Mohamed Yousef - MOS, Legal Advisor
Mr. Fathi Haroun - Ministry of Supply
Eng. Hassan - GASC
Mme. Shadia - GASC, Accountant
Gordon Burles - Harbert Howard Companies
Kevin Carrol - Harbert Howard Companies
Mike Bowers - Harbert Howard Companies
Mr. Saleh El Mehrezy - Harbert Howard Companies
R. Zitterkopf - Black & Veatch International

The purpose of the meeting was to discuss the items requiring correction before Final Acceptance can be given by the General Authority for Supply Commodities (GASC)

Mr. Wali chaired the meeting. The Ministry of Supply has received a letter from the Alexandria Oil & Soap Company (AOSC) setting forth their opinion of present defects in the facility. These are:

I. General:

1. Control Panel (Meters do not function properly).
2. a) Varec Level Meters in Tank do not work.
b) Heating pipes in Tanks at wrong height (AOSC want 30 cm in lieu of present 1.0 m).
3. There is no storm water drainage at facility.
4. Height of outlets from tanks impractical because all contents of tanks can't be pumped out.

.../...

II. Operational Defects:

1. Automatic relay of standby generator does not function.
2. Vibration of pipes caused cracks in the Operation Building. There are no dampers or shock absorbers built into piping.
3. No manhole to boiler chimney.
4. Internal timer for chemical tanks does not work on automatic.
5. Ceiling of Laboratory allows water leakage. HHC has applied plaster which didn't work. AOSC asks roof tile to be replaced.

III. Others :

1. No spare parts for short term.
2. No hand tools.
3. No catalogs and users manuals especially for pressure valves and for oil pumps.
4. No tools for cleaning boiler tubes.
5. No drawings.
6. No spare parts for long term items.

Spare Parts, Drawings, & Operating Instructions:

BVI pointed out that many of these items could be dispensed with quickly.

1. The Spare Parts have been shipped and should arrive in Alexandria soon.
2. Re Drawings, as the GASC is its client, BVI presents all of its drawings directly to GASC and the GASC then distributes them. However, BVI did directly present two copies of the constructions drawings to AOSC on 10 September 1983 and one copy of the record drawings on 1 September 1984. BVI presented copies of the correspondence and acknowledgment by AOSC.
3. Re Operations manuals, BVI explained that it presents these directly to the GASC. However, in general, two copies of all the Manufacturer's Instruction Books were transmitted directly to the AOSC and AOSC acknowledged receipt on 11 October 1984.

Meter:

The metering device in the plant were discussed. Dr. Hazim stated that he rejected all of the meters in the plant, including those in the control panel as well as the tank level meters. He reported that they were all defective. Eng. Magd proposed that during their coming maintenance program, HHC repair or replace the meters to the full personal satisfaction of Dr. Osman.

.../...

Harbert Howard Companies (HHC) stated that the meters all operated at one time. Any problems now were due to lack of maintenance. HHC reported that they had indeed recalibrated all of the meters in 1983. They were not obligated to recalibrate them again. Even if they were to be recalibrated, HHC would have to first perform 10 months of maintenance on them. Such maintenance should not be a HHC responsibility.

Pipe Hangers:

Dr. Hazim reported that vibration in the system piping was causing cracks in the Control Building walls. He pointed out that there was no provision for shock absorbers in the piping.

HHC pointed out that the excess vibration could best be controlled by proper operations of the facility. At present AOSC personnel are bypassing the control valves on the product piping to the loading dock.

Dr. Hazim pointed out that it should have been completed that there would be poor operations and thus a provision for some type of shock absorber should have been included.

Control Building Roof:

Dr. Hazim pointed out that this roof was leaking. HHC agreed to repair it.

The next meeting was set for 23 October 1984.

CONFERENCE MEMORANDUM:

Client : General Authority for Supply Commodities BVI P.N.: 8152
Project : Alexandria TOF Facility File : GC-2.7.1
Subject : Final Acceptance, Contract No. 263-K-041-GC-2

Date and Place: Meeting was held on 23 October 1984 at
Ministry of Supply, 99 Kasr El-Aini Street, Cairo

Attending:

Mr. Mahmoud T. Wali - First Undersecretary, Ministry of Supply
Eng. Adel El Sharkawy - First Undersecretary, Ministry of Industry
Eng. Magdi El-Gawad - Undersecretary, Ministry of Supply
Dr. Mahmoud Abdel Hakim Refai - GASC Technical Committee (Cairo University)
Eng. Mahmoud Mohammed El-Asar - GASC Technical Committee (Petroleum Sector)
Eng. Ahmed Ahmed El Khashab - GASC Technical Committee (Alexandria Salt & Soda Co.)
Mr. Raffat Mohamed Yousef - MOS, Legal Advisor
Eng. Hassan - GASC
Mme. Shadia - GASC, Accountant
Mr. Ibrahim El Baz - MOS, Accountant
Gordon Burles - Harbert Howard Companies
Kevin Carrol - Harbert Howard Companies
Mr. Saleh El Mehrezy - Harbert Howard Companies
R. Zitterkopf - Black & Veatch International

The purpose of the meeting was to discuss Final Acceptance by the General Authority for Supply Commodities (GASC) of the Tallows, Oils and Fats Terminal in Alexandria. Mr. Wali chaired the meeting.

Pipe Hangers:

It was pointed out that there were cracks in the Control Building. The AOSC were of the opinion that these cracks resulted from vibration on the pipe hangers. They said that there was nothing in the piping system to absorb this vibration. HHC replied that there was no proof that pipe vibration was causing the cracks. Furthermore, this vibration in the pipes was a result of improper operation of the facility and not a result of defective construction. The control valves are bypassed when loading product. HHC suggested that the solution to the problem of vibration was proper operation and not a vibration damping system.

It was suggested that the cracks due to vibration on the pipe hangers was a result of the engineering design. BVI explained that there was no specific details in the specifications or drawings for the pipe hangers as items such as these were left to the Contractor so as to permit more freedom for suppliers. The construction documents specifically provide that the Contractor is to design the pipe hangers.

.../...

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Meters:

As a result of the discussions of the 17 October 1984 meeting, HHC presented a letter Ref. No. HE/84-059 concerning the control panel metering. In this letter, HHC offered to perform "corrective maintenance and recalibration... to ensure that it works within the agreed design parameters." HHC also offered to replace "any of this equipment that proves to have been defective at time of installation." HHC will issue a new performance bond to cover this item at the same time that the committee issues a Final Acceptance Certificate.

Other Issues:

The Committee then summarized that in addition to the meters the remaining issues were 1) the leaking roof in the Control Building, 2) the cracks in the Control Building walls, and 3) the automatic switch on the standby generator. The Committee suggested that they be handled by a similar letter as for the metering. In addition, the gate on the new fence was not completed.

Ceiling:

As the ceiling is leaking HHC agreed to make the necessary repairs. The MOS requested that the waterproofing be replaced rather than patched.

Switch at Standby Generator:

HHC explained that this contact key switch had been made inoperative by poor operation. The unit was manually operated without waiting the time delay for the automatic feature. Thus HHC has bypassed the automatic operation so that the switch will operate.

There are spares for this switch in the spare parts shipment. HHC will reconnect the switch to operate as automatic but will recommend to the AOSC that they keep it manual.

Operations and Maintenance Contract:

MOS suggested that the performance guarantee be increased and extended on the assumption that HHC would perform the O & M Contract.

The MOS will be the party releasing the performance bond; however, any O & M contract will be with the Ministry of Industry.

Performance Bond:

There was much discussion on the total value of the performance bond to be provided for the outstanding items.

Finally HHC and MOS agreed to a value of \$ 1 Million. This bond will be issued by the same bonding company as the original bond.

HHC will provide the new performance bond to guarantee the remedial work for the agreed items. In turn, the MOS will provide final acceptance with the exception of the agreed items.

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BLACK & VEATCH INTERNATIONAL

FINAL REPORT

VOLUME III

TALLOW, OILS AND FATS FACILITY

PORT OF ALEXANDRIA

SECTION VII

FINANCIAL

FINAL REPORT

VOLUME III

TALLOW, OILS AND FATS FACILITY

PORT OF ALEXANDRIA

SECTION VII, FINANCIAL

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B. FINANCIAL EXHIBITS	VII - 1

FINAL REPORT

VOLUME III

TALLOW, OILS AND FATS FACILITY

SECTION VII, FINANCIAL

A. GENERAL

The following USAID Letters of Commitment show the U.S. Dollar expenditures for the TOF Terminal Facility Project:

<u>Letters of Commitment No.</u>	<u>Description</u>
263-K-04101	BVI Engineering Services (includes all five sub-projects)
263-K-04124	Harbert Howard Companies Equipment and Construction

The Truck Weigh Scales for the TOF Facility were purchased under Letter of Commitment No. 263-K-04112.

A summary of the U.S. Dollar Letters of Commitment for Loan 263-K-041, by sub-project is contained in Exhibit 1. 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. Total USAID/Egypt Letters 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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EVI ENGINEERING SERVICES

BUDGET ANALYSIS

U.S. DOLLAR COSTS INCURRED THRU SEPTEMBER 1984

GRAIN/TOF STORAGE FACILITIES

SUMMARY SHEET

ITEM	COSTS TO DATE	CONTRACT BUIGET	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

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

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

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

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

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

BVI ENGINEERING SERVICES

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

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

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	845,655.00	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

BVI 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

BVI 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

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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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EVI 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: 602

OFFICE NAME : INFRASTRUCTURE DEVELOPMENT

PROJECT NO.: 2630037.00

PROJECT TITLE: GRAIN TAL OIL FATS STOR & DIST PROJECT OFFICER: JOSEPH J PASTIC

EARMARK DOC. NUMBER/ COMMITMENT DOCUMENT NO.	EARMARK SERIAL NO.	EARMARK DESCRIPTION COMMITMENT DESCRIPTION	COMMITTED	DISBURSED	UNLIQUIDATED	ACCUAL	PIPELINE
PROJECT ELEMENT NO.	01	PROJECT ELEMENT NAME: 10 PROFESSIONAL SERVICES					
CO-06/17/78-HCC L/COM-263-KC4101	P700015	EVI-ENGINEERING SERVICES-HCC 0170001 EVI-ENG. SVCS. HCC	5,467,787	5,334,036	153,751	35C	153,401
EARMARK DOCUMENT TOTALS > > >			5,467,787	5,334,036	153,751	35C	153,401
ELEMENT TOTALS			5,467,787	5,334,036	153,751	35C	153,401
PROJECT ELEMENT NO.	02	PROJECT ELEMENT NAME: 30 COMMODITIES					
CO-IFB-263-A-301-HCC L/COM-263-KC4120	P700034	ONESCC-ARCH ITEMS FOR QUAY-HCC 0300051 ONESCC-ARCH FOR QUAY	62,294	62,294	0	C	0
EARMARK DOCUMENT TOTALS > > >			62,294	62,294	0	C	0
CO-IFB-263-A-302-HCC L/COM-263-KC4122	P700036	AEG-SUP DEL FORKLIFT TRUCKS 0301029 AEG-FORKLIFT TRUCK	68,478	68,478	0	C	0
EARMARK DOCUMENT TOTALS > > >			68,478	68,478	0	C	0
CO-IFB-263-D-10-HCC L/COM-263-KC4116	P700032	AT-FREIGHT FORWARDING SEP-HCC 0300049 AT-FRT FORWARDING SVC	0	0	0	C	0
EARMARK DOCUMENT TOTALS > > >			0	0	0	C	0
CO-IFB-263-E-302-HCC L/COM-263-KC4116	P700024	MOTOR CONTROL CENTERS-HCC 0300341 AEG-MOTOR CNTRL CENTE	63,362	63,362	0	C	0
EARMARK DOCUMENT TOTALS > > >			63,362	63,362	0	C	0
CO-IFB-263-E-303-HCC L/COM-263-KC4116	P700030	ONESCC-SUP DEL OF CONDUIT-HCC 0580047 ONESCC-CONDUIT	95,325	95,325	0	C	0
EARMARK DOCUMENT TOTALS > > >			95,325	95,325	0	C	0
CO-IFB-263-E-304-HCC		ONESCC-SUP DEL OF CONDUCTORS					

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EXHIBIT 4

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

MACS-PU7C
 OPTION NO.: 0

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

OFFICE CODE: 602
 PROJECT NO.: 2630017.00

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	COMMITTED	DISBURSED	UNLIQUIDATED	ACCURAL	PIPELINE
REQUEST ELEMENT NO. 02	PROJECT ELEMENT NAME:	30 COMMODITIES					
L/COM-263-KC4115	P700029	0530046 UNESCO-CONDUCTORS	129,875	129,875	0	C	0
EARMARK DOCUMENT TOTALS > > >			129,875	129,875	0	C	0
CC-IFB-263-E-305-HCC L/COM-263-KC4119	P700033	0530050 UNESCO-LIGHT FIXTURES-HCC UNESCO-LIGHT FIXTURES	209,142	209,142	0	C	0
EARMARK DOCUMENT TOTALS > > >			209,142	209,142	0	C	0
CC-IFB-263-E-307-HCC L/COM-263-KC4115	P700027	0530044 NWR-SUP DEL EQUIP-HCC NWR-EQUIPMENT	13,583	13,583	0	C	0
EARMARK DOCUMENT TOTALS > > >			13,583	13,583	0	C	0
CC-IFB-263-E-301-HCC L/COM-263-KC4104	P700016	0530035 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
CC-IFB-263-E-306-HCC L/COM-263-KC4105	P700019	0530036 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
CC-IFB-263-GC2-HCC L/COM-263-KC4124	P700036	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
CC-IFB-263-M-202-HCC L/COM-263-KC4123	P700037	0381030 AEG-EQUIP & TECH SVCS-HCC AEG-EGP/TECH SVCS	583,746	523,771	59,975	0	59,975

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EXHIBIT 4

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

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

OPTION NO.: 0

OFFICE CODE: 602
 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 CONTROL NO.	EARMARK DESCRIPTION COMMITMENT DESCRIPTION	COMMITTED	DISBURSED	UNLIQUIDATED	ACCRUAL	PIPELINE
PROJECT ELEMENT NO.	02	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	F700031	AEROGLIDE-BAG CLOSERS & CONVE 0580042 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	F700026	AEG-SUP DEL OF MOTOR TRUCK-HC 0580043 AEG-MOTOR TRUCKS	136,773	136,773	0	C	0
EARMARK DOCUMENT TOTALS > > >			136,773	136,773	0	C	0
CC-IFB-263-M-303-HCC L/COM-263-K04107	F700021	MCC-SUPPLY SPARE PARTS-HCC 0580036 MCC-SPARE PARTS	236,714	236,714	0	C	0
EARMARK DOCUMENT TOTALS > > >			236,714	236,714	0	C	0
CC-IFB-263-M-304-HCC L/COM-263-K04106	F700022	TMP-SUP SUP TECH SVCS-HCC 0780039 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	F700025	AEG-SUP DEL OF BUCKET ELEV-HC 0580042 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	F700026	HE-SUP DEL OF SPOUTING GATES 0580045 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	F700035	ONESCC-SUP DEL VENT EQUIP-HCC 0580052 ONESCC-VENT EQUIP	68,936	68,936	0	C	0

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 OPTION NO.: 0

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

OFFICE CODE: 602 OFFICE NAME : INFRASTRUCTURE DEVELOPMENT
 PROJECT NO.: 2630037.00 PROJECT TITLE: GRAIN TAL OIL FATS STOR & DIST PROJECT OFFICER: JOSEPH J PASTIC

COMMITMENT DOC. NO	EARMARK CONTROL NO.	COMMITMENT DESCRIPTION	COMMITTED	DISBURSED	UNLIQUIDATED	ACCUAL	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-KL4106	F700020	M30-SCREW CONVEYORS-HCC 0330037 M30-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-KL4109	F700023	S30-SUP STRUCTURAL STEEL-HCC 0360040 S30-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-KL-102	F700016	M2-SUP/DEL TAG EQUIP-HCC 0379007 M2STEC-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-KL-103	F700017	M2-SUP EQUIP-HCC 0363102 M2ECCBY SUPP/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 > > >			35,705,605	35,245,651	460,154	220,350	239,804

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FINAL REPORT

VOLUME III

TALLOW, OILS AND FATS FACILITY

PORT OF ALEXANDRIA

SECTION VIII

CONCLUSIONS AND RECOMMENDATIONS

FINAL REPORT

VOLUME III

TALLOWES, OILS AND FATS FACILITY

PORT OF ALEXANDRIA

SECTION VIII, CONCLUSIONS AND RECOMMENDATIONS

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B. RECOMMENDATIONS	VIII - 2

FINAL REPORT

VOLUME III

TALLOW, OILS AND FATS FACILITY

SECTION VIII, CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

The TOF Facility Construction was completed on 29 September 1983 in accordance with the Construction Contract Schedule. Transfer of the TOF Facility to the Operating Company was made on 30 September 1983.

The success of this phase of the project in being completed on schedule and within the budgeted amount can be attributed to the cooperation and concrete efforts of all parties concerned. This includes the responsible persons from the GASC, USAID, HHC, and BVI. The beneficiaries of this cooperative effort are the people and Government of the Arab Republic of Egypt.

Although the construction of the TOF Facility is complete, because of the budgeting limitations at the beginning of the project, there are still some matters that must be given further attention if the success of the project is to be carried into the operation and maintenance of the Terminal. Funds must be provided for the carrying out the additional work as recommended below.

B. RECOMMENDATIONS

Because of a shortage of funds at the beginning of the project and as a result of knowledge obtained during construction and startup of the TOF Facility, the following are recommended to be provided:

1. Operations and maintenance technical assistance.
2. Tools and equipment for a repair and maintenance workshop.
3. Reserve water storage for the boiler supply and firewater system with supply and firewater booster pumps.
4. Terminal inner communications system.
5. Additional warehouse space.
6. Workers shower and locker rooms.
7. Laboratory Equipment.

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FINAL REPORT

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SECTION IX

PHOTOGRAPHS

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SECTION IX, PHOTOGRAPHS

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B. PHOTOGRAPHS	IX - 1

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VOLUME III

TALLOW, OILS AND FATS FACILITY

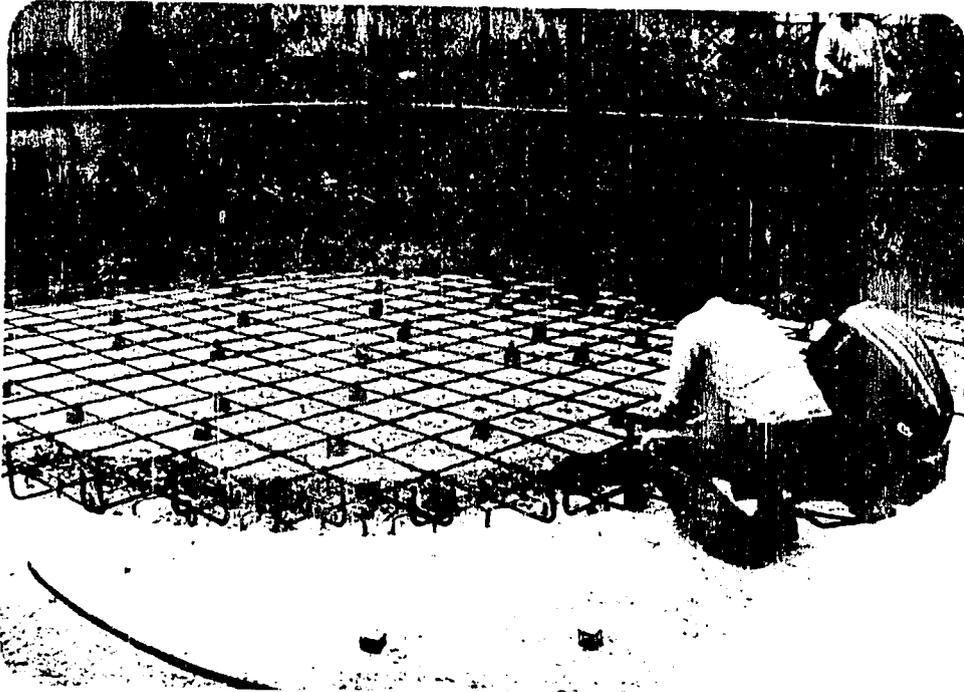
SECTION IX PHOTOGRAPHS

A. GENERAL

This section contains representative photographs of the TOF Terminal during construction as well as after the completion and transfer of the Facility to the Alexandria Oil and Soap Company on 30 September 1983 and at the Inauguration Ceremony on 9 January 1984.

B. PHOTOGRAPHS

TOF CONSTRUCTION PHASE

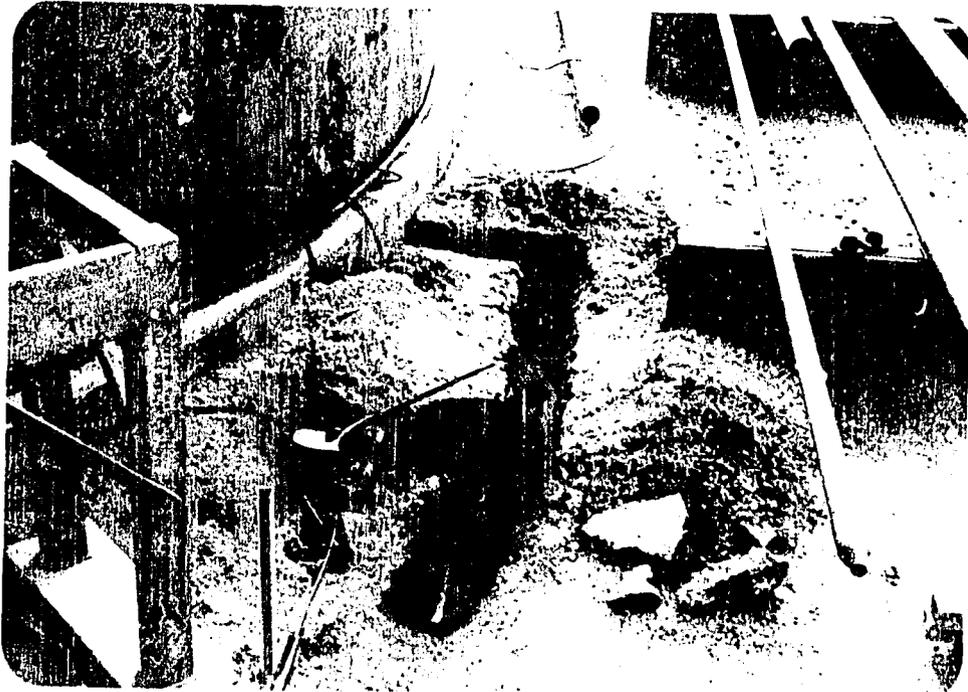


Reinforcing steel shown in place for the TOF Terminal fuel oil storage tank located just east of the Operations Building in Area No. 2 of the Terminal.

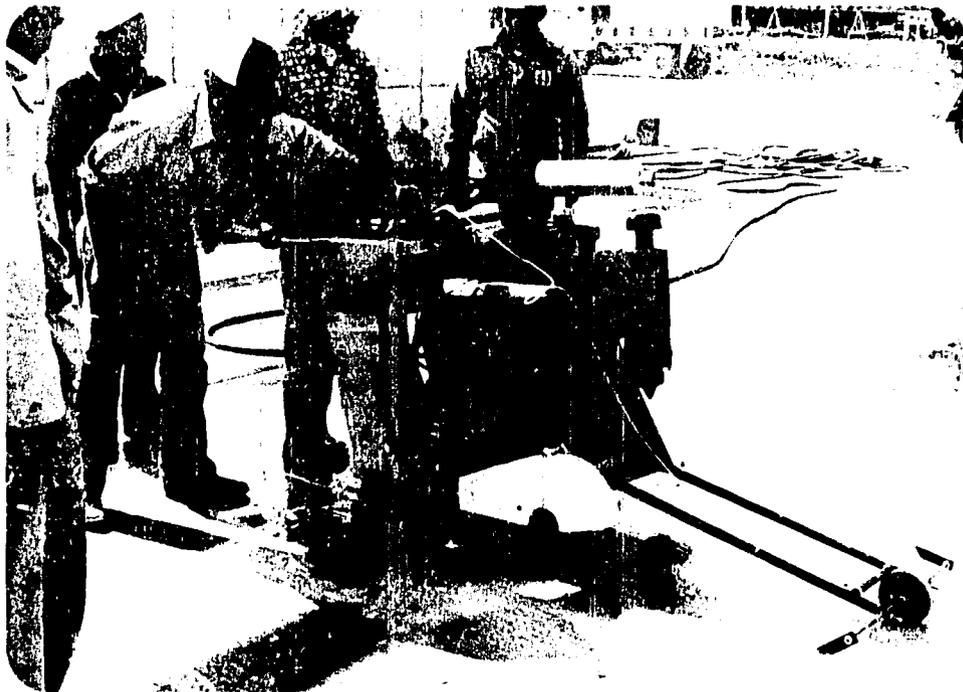


TOF Terminal Facility, photograph taken inside the Operations Building showing the first slab in place.

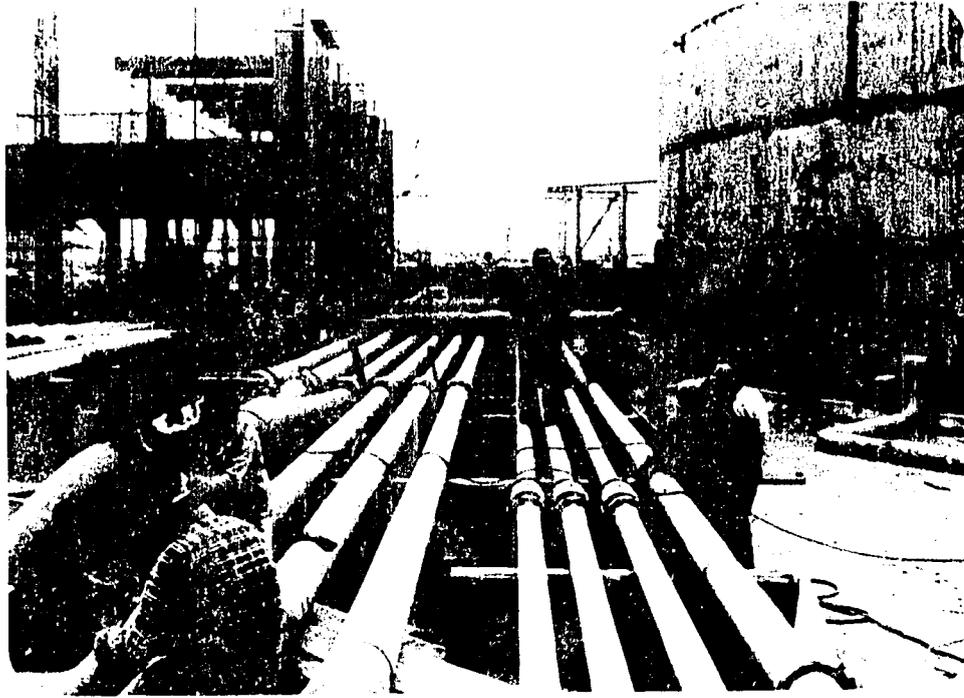
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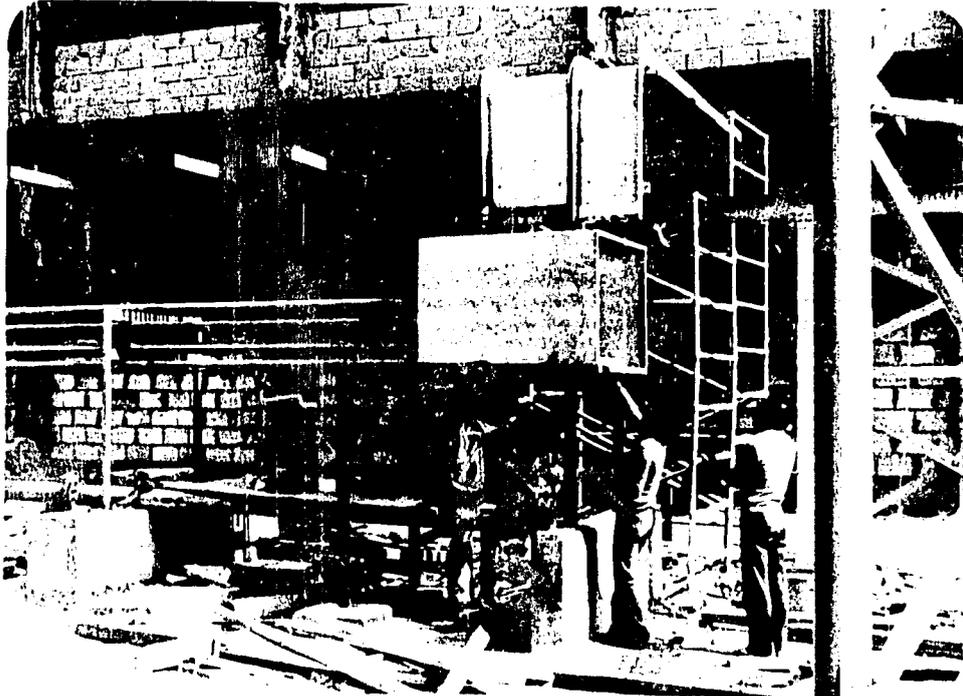
Installation of tank grounding system at TOF.



Sewing control joints in exterior paving.



Work crews installing piping near the Operation Building for the TOF Terminal Facility in Alexandria.



Electrical conduit, junction box connection to electrical cable tray entering Operation Building.

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TOF STARTUP PHASE



TOF operator training class conducted in Arabic
(August 1983)

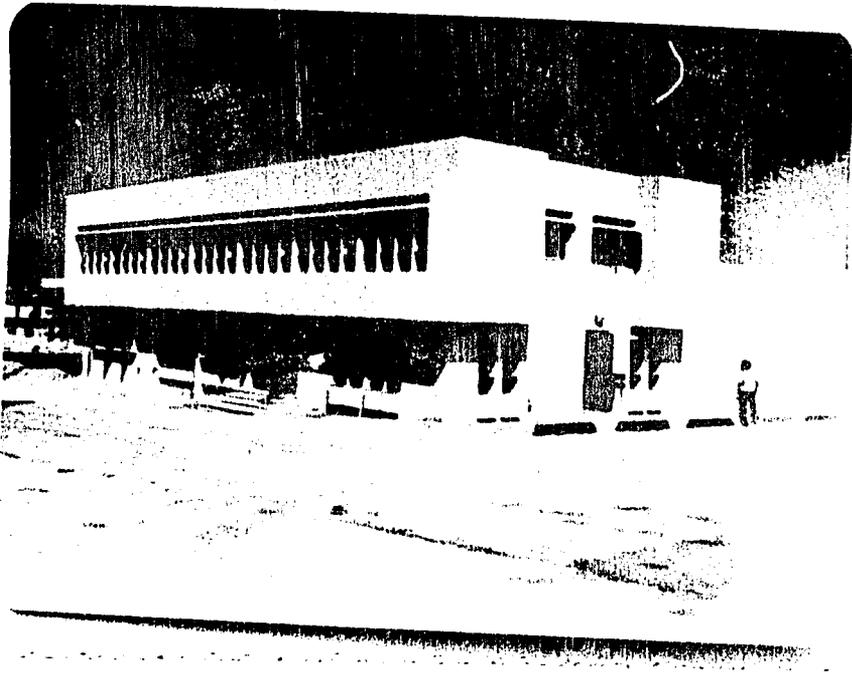


GASC officials conduct inspection of TOF Facility during
startup operations in September 1983. Operation Building
can be seen in background.

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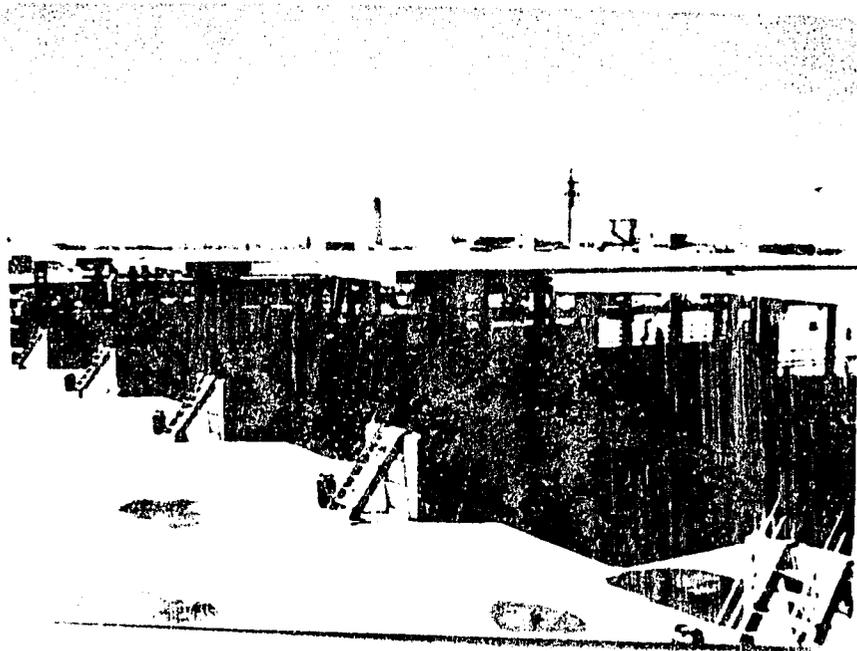
BLACK & VEATCH INTERNATIONAL

COMPLETED TO FACILITY



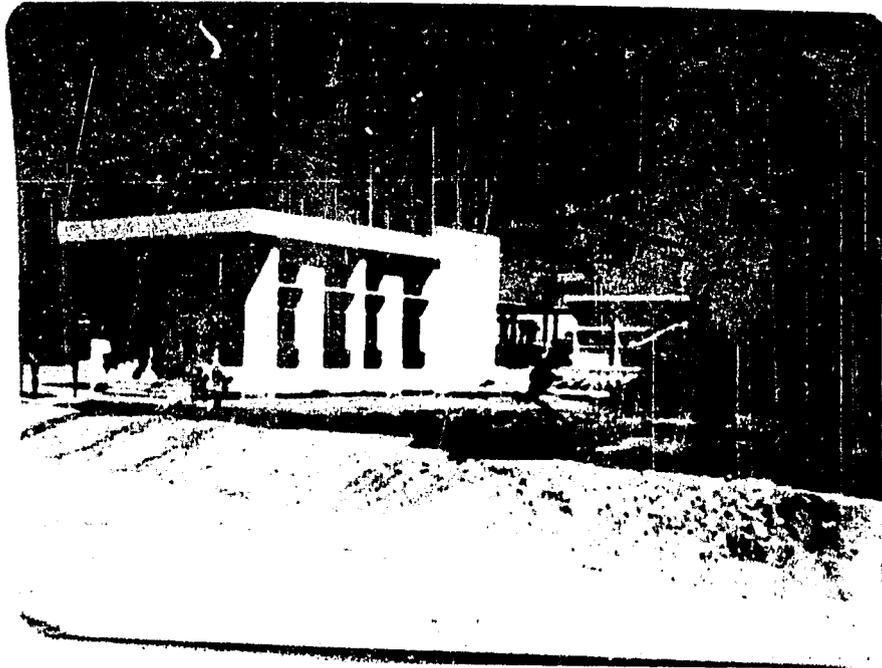
View of IOF Administration Building
from front gate.

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View from Operations Building of completed
truck loading stations.

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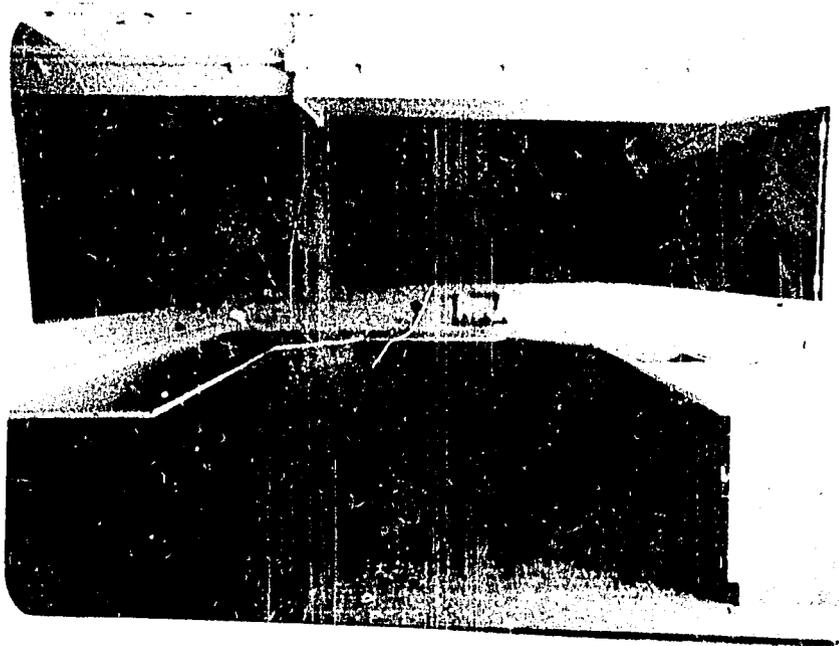


Trucker's Welfare Building.

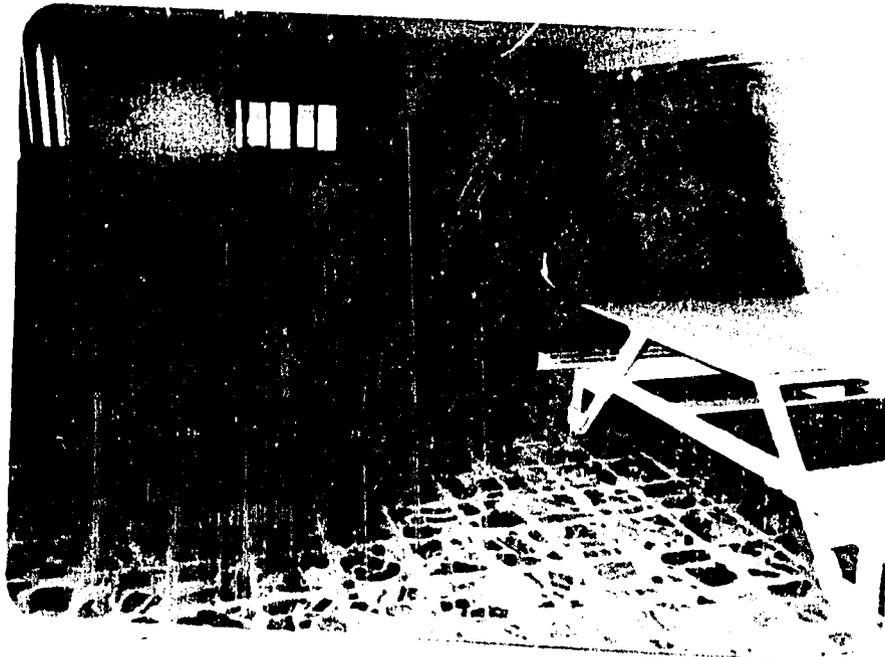
126



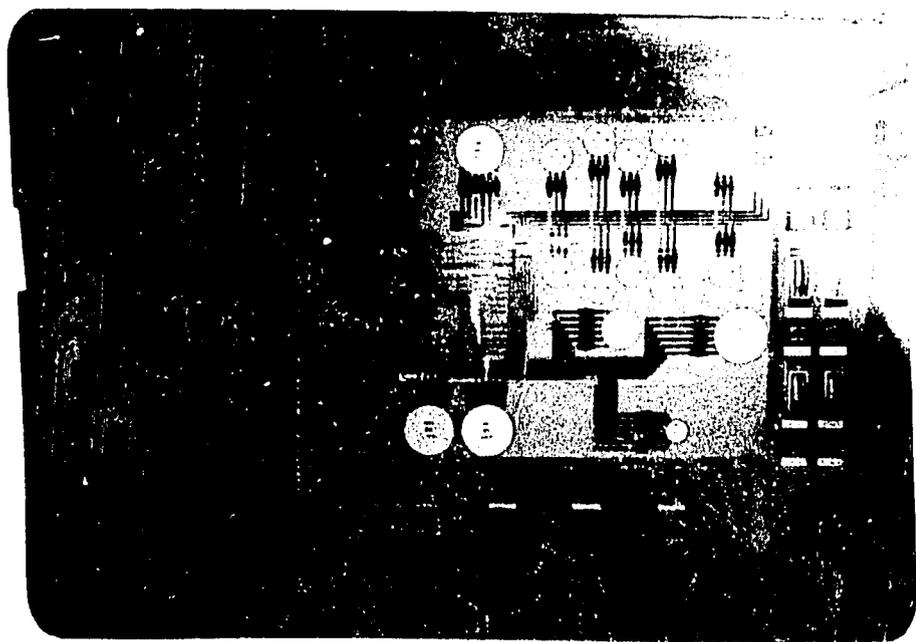
View of piping and electrical conduit
at east side of TOF looking toward
the sea.



Photograph shows the cabinets installed in the laboratory facility as part of the Operations Building.

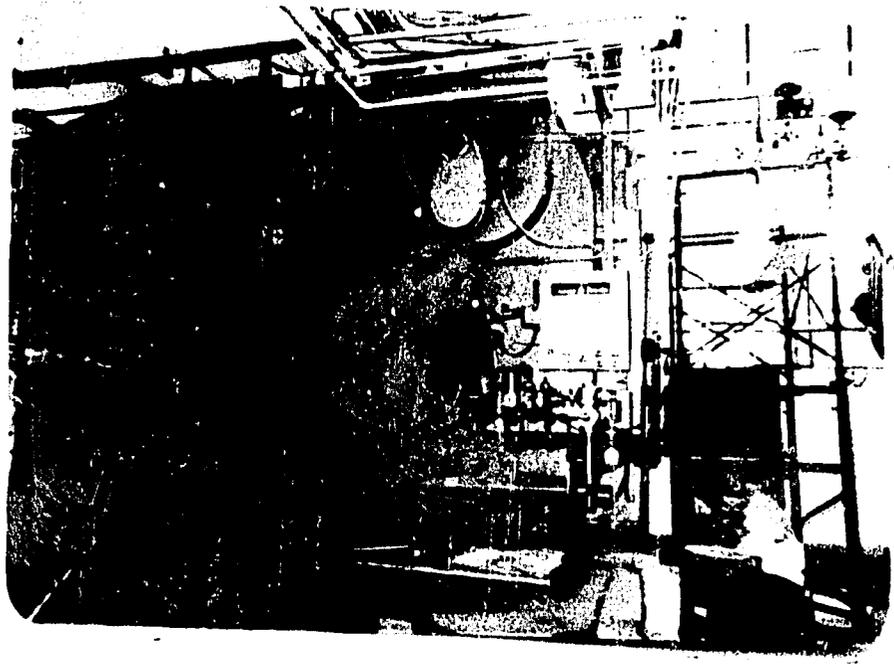


Photograph shows the TOF Terminal Operations Building control room. The finish work for the Operations Building and the motor control center room was completed in order to provide a classroom area for operator training.



Photograph shows the graphics control panel installed in the control room of the TOF Terminal Operations Building.

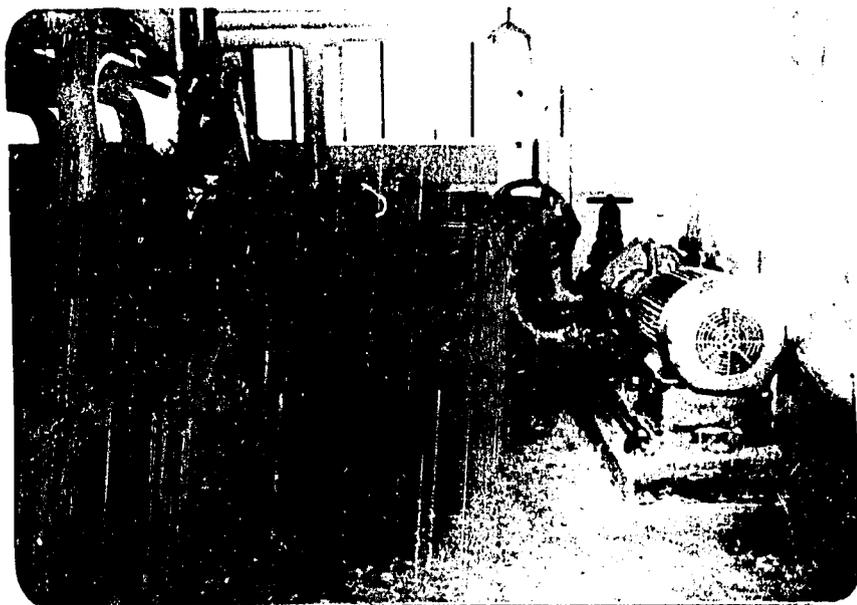
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TOF Terminal Water tube boiler.



Photograph shows the emergency diesel engine generator with the the exhaust duct manifold installed from the generator to the outside of the building. Checkout of the diesel engine was performed between 20th and 26 July, 1983.



TOF Terminal Operations Building showing the status of installation of piping and valves to the various tallow and oil transfer pumps.

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TOF INAUGURATION CEREMONY



Minister of Supply, Director of USAID, Governor of Alexandria and Chairman of AOSC at Reception held during TOF Inauguration Ceremony of 9 January 1984.



Photograph of completed Operations Building.

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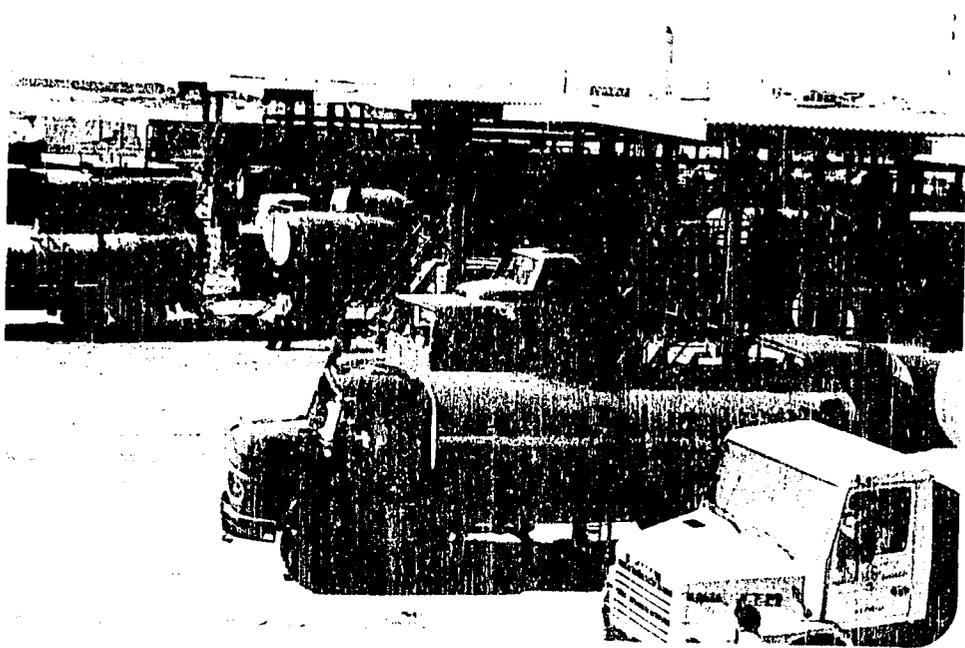


Minister of Supply and USAID Director startup Boiler during tour of TOF Facility.



Egyptian and U.S. of America Dignitaries inspect TOF Facility during 9 January 1984 Inauguration Ceremony.

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Bulk Truck Loadout Station at TOF Facility.



USAID and Egyptian representatives inspect bulk loadout station.

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