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BANGLADESH AGRICULTURAL DEVELOPMENT CORPORATION



AGENCY FOR INTERNATIONAL DEVELOPMENT

Grant Financed

FERTILIZER DISTRIBUTION IMPROVEMENT - I (388-0024)

ENGINEER CONSULTANT SERVICES FOR CONSTRUCTION
OF BAGGED PRODUCT FERTILIZER WAREHOUSES IN
BANGLADESH-PHASE III

PROGRESS REPORT NO. 20

JULY 1984



AMMANN & WHITNEY
CONSULTING ENGINEERS
NEW YORK

in association with



WORLDWIDE ENGINEERS LTD.
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DHAKA



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AMMANN & WHITNEY
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P. O. BOX 348
DHAKA, BANGLADESH

WAREHOUSES PHASE III

Project Director, BADC
USAID Construction Project
20, Outer Circular Road
Rajarbagh, Dhaka-17

724-4.1.1/2202

09 August 1984

Subject : Monthly Report No.20
- July 1984

Dear Sir,

In compliance with paragraph B.2 of Appendix A, Scope of Work, of Agreement for Engineer Consultant Services - Warehouses Phase III, fifteen (15) copies of subject Monthly Report are submitted to BADC and six copies to USAID.

Very truly yours
AMMANN & WHITNEY



George A. Pecht
Project Manager

Encl: Eleven (11) copies

GAP/neh

cc: Chairman, BADC w/encl. (1)
Member-Director (Irri), BADC w/encl. (1)
Manager (Storage) BADC w/encl. (1)
Chief Engineer (C) BADC w/encl. (1)
Mr. David E. Warner, PO, AID/Dhaka w/encl. (6)
File 724-1.4.2 w/encl.

AMMANN & WHITNEY
Consulting Engineers

FERTILIZER WAREHOUSES - PHASE III

Monthly Progress Report No. 20
Month of July, 1984

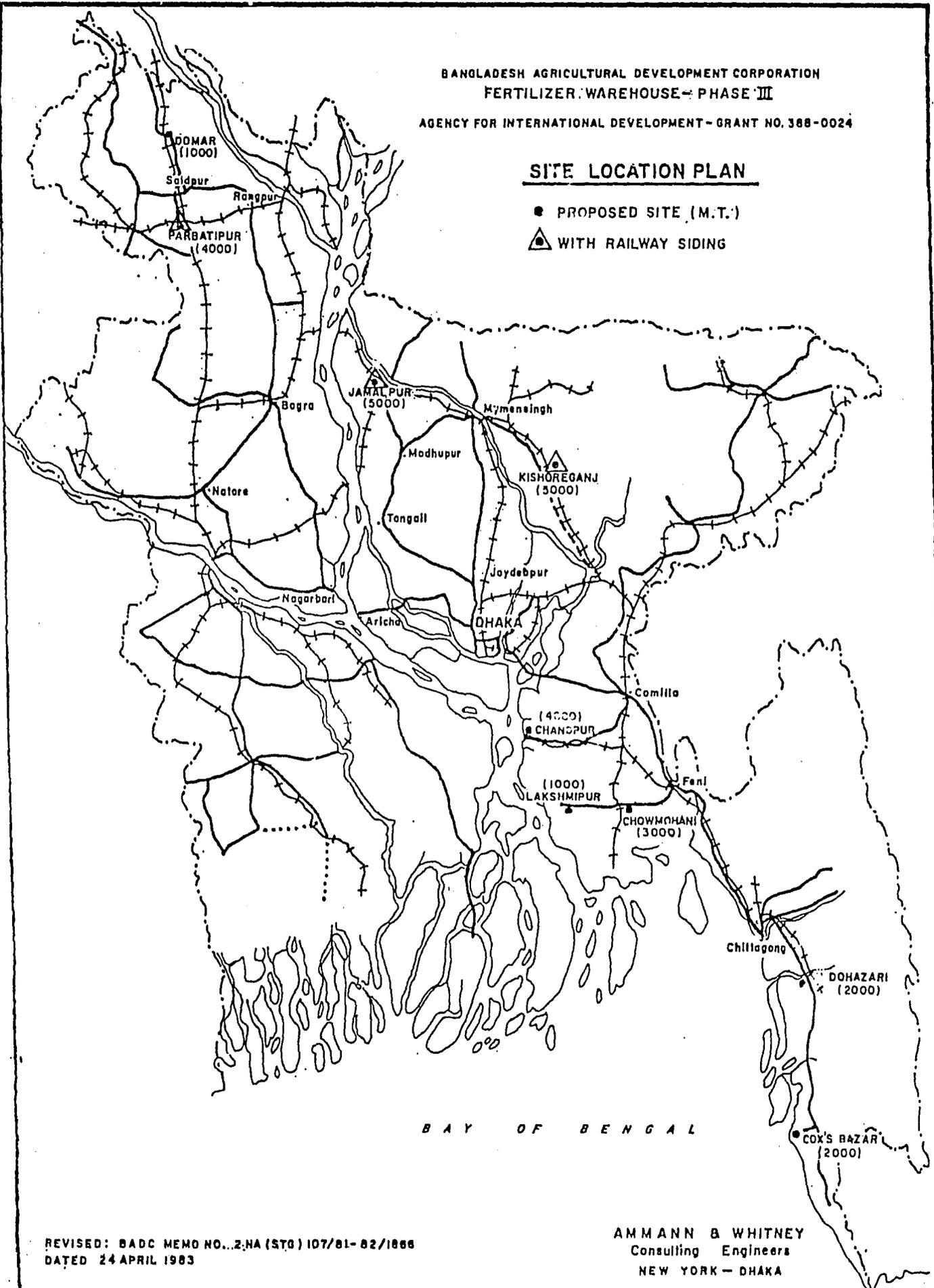
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BANGLADESH AGRICULTURAL DEVELOPMENT CORPORATION
FERTILIZER WAREHOUSE - PHASE III
AGENCY FOR INTERNATIONAL DEVELOPMENT - GRANT NO. 388-0024

SITE LOCATION PLAN

- PROPOSED SITE (M.T.)
- ▲ WITH RAILWAY SIDING



REVISED: BADC MEMO NO. 2/NA (STG) 107/81-82/1866
DATED 24 APRIL 1983

AMMANN & WHITNEY
Consulting Engineers
NEW YORK - DHAKA

PROJECT DESCRIPTION

PROJECT : Construction of Bagged Product Fertilizer Warehouses
in Bangladesh - Phase III

EMPLOYER : Bangladesh Agricultural Development Corporation

FINANCED : United States Agency For International Development
Under Grant
Fertilizer Distribution Improvement-I (388-0024)

ENGINEER : Ammann & Whitney
Consulting Engineers
New York Dhaka

LIST OF SITES AND TONNAGE

<u>NAME OF SITE</u>	<u>TONNAGE</u>	<u>NAME OF DISTRICT</u>	<u>SIZE OF GODOWN</u>
B1 KISHOREGANJ	5000	MYMENSINGH	90'x 300' (27,000 sft)
C3 JAMALPUR	5000 (3500+1500)	JAMALPUR	120'x150'; 90'x90' (26,000 sft)
F1 DOHAZARI	2000	CHITTAGONG	90'x 120' (10,800 sft)
F3 COX'S BAZAR	2000	CHITTAGONG	90'x 120' (10,800 sft)
H2 CHOWMUHANI	3000	NOAKHALI	90'x 180' (16,200 sft)
H3 LAKSHMIPUR	1000	NOAKHALI	60'x 90' (5,400 sft)
I4 CHANDPUR	4000	COMILLA	120'x 180' (21,600 sft)
O5 PARBATIPUR	4000	DINAJPUR	90'x 240' (21,600 sft)
TOTAL	26,000 M.T.		139,500 sft
<u>Contract Terminated</u>			
L4 DOMAR	1000	RANGPUR	60'x 90' (5,400 sft)

I. CONTRACTORS' ACTIVITIES

CONSTRUCTION PHASE

1. Summary of Contractors' Activities

- . Monsoon rains which are reported above normal has caused disruption to the work due to flooding of sites and sources of material. Access to sites due to the rains and flood water has also affected and caused dislocation of the work schedules especially at sites requiring fill materials.
- . Kishoreganj: The Contractor, National Construction & Consult Ltd., did not have a responsible staff member, materials or adequate work force on the site upto 23 July. The Engineer notified the Contractor and BADC that in the opinion of the Engineer, the Contractor has persistently and flagrantly neglected to carry out their obligation under the Contract. The Engineer requested BADC to review and if in agreement make either a demand under Letter of Guarantee for compensation for default or, at the extreme, give notice to the Contractor under Clause 63 of Conditions of Contract.

The Engineer's present estimate for contract completion, based on expected completion of placement of surcharge by 10 August and allowing specified 60 day surcharge period, is June 1985.

- . Jamalpur: The Contractor completed placing of surcharge for the 3500 ton godown on 20.07.84. The estimated date for completion of surcharge for 1500 ton godown is 15.08.84. Allowing specified surcharge period of 80 days, construction of the 3500 ton godown cannot start until November 1984 and on 1500 ton until December 1984. Allowing a minimum of seven months for construction, the estimated completion would be mid-1985.

On 28 July 1984, the Contractor reports that "local miscreants" attacked the contractor's personnel for reason that BADC has not paid the legal demands (compensation). BADC states that the land acquired is khas land and those demanding compensation have no valid documents of ownership.

The Engineer's inquiry indicates that the problem may have stemmed from the Contractor not engaging local (Jamalpur) laborers.

Twentythree of Contractor's and one Engineer's personnel were injured; the Engineer's and Contractor's field office damaged; and, list of items and cash looted (as claimed by Contractor).

- . Dohazari: On 30 July 1984, the Contractor completed placing of surcharge fill in the godown area. A significant settlement of 8 inches has occurred to date. The scheduled period for surcharge loading was estimated at 30 days. The exact period of surcharge loading is dependent on the trend of settlement and the Engineer is continuing monitoring the settlement on an alternate day basis to analyze the trend. Based on estimated surcharge period of 30 days and 15 days removal of surcharge, the godown construction could commence in mid-September. Assuming seven months for construction, the completion date would be about end of April 1985.

Cox's Bazar: The Contractor's Managing Director being hospitalized and now recuperating from an operation, reflected in the decrease in site management and progress of work. The Engineer does not foresee an overrun in contract construction time, as recommended for extension by the Engineer. Personal on-site management by the Managing Director could accelerate the work pace to meet scheduled completion.

The Contractor has not to date submitted an invoice for progress payment. The Engineer questions the Contractor's wisdom which could reflect in a cash flow problem.

Chowmuhani: The main efforts of the Contractor were concentrated on rectification of fill not meeting specification. The Contractor has not completed the "base" fill and consequently has not begun to place the surcharge (12 ft +) fill. It is estimated that the Contractor will not complete the preparatory work including surcharge period prior to mid-October and thus start-up of warehouse construction will not begin until November 1984. The Engineer estimates construction completion by end of June 1985.

Monsoon rain has flooded the area to elevation 94.7. This little over 4 ft. depth of water has a major effect on the progress of work.

Settlement occurring at site varies from 0.21 ft. to 0.33 ft. and as noted above the surcharge is yet to be placed.

Lakshmipur: The performance of the Contractor, Technocon Ltd., is less than satisfactory. Insufficient specified materials, lack of skilled masons and inefficient site management, coupled with lack of planning is major cause for lack of progress. Workmanship has to be monitored very carefully to ensure meeting specified quality of work.

The Engineer rejected and ordered removal of concrete column (one-lift) due to low strength concrete. Masonry wall was also rejected due to poor quality bricks and workmanship.

The Engineer forecasts project completion by February 1985, although with exerted effort the December 31, 1984 contract completion date could be realized.

Chandpur: This site has several issues outstanding which will extend the completion of construction into mid-1985.

1. Pending with BADC is issuance of work order for demolition of existing buildings in area designated for relocation of R2 and R3 ancillary buildings.
2. Receipt from Contractor a quotation for construction of a bridge across the existing canal to provide road access to site.

3. Obtaining USAID's concurrence to BADC's directive for construction of barbed wire fence along property line.
4. Design by Engineer of retaining wall along portion of existing canal to protect area from erosion.
5. BADC to determine location of boundary wall between Monuments #10, #11, #12 and #13, and take action on removal of existing wall in area.

The Contractor was ordered to rectify column footing not conforming to specification.

The Engineer does not apprehend any difficulties for the Contractor to complete the godown structure within the contract period. As noted above, action is required on several issues in order to estimate a firm completion date for all work.

Parbatipur: With the elapsed of 51% of the construction time the Contractor, The Elite Engineers Ltd., has only 21% of the work completed. He is still engaged in placing of surcharge preloading fill with estimated completion by mid-August. With scheduled preloading period of 90 days, the commencing of godown construction would be about December 1984 with estimated completion of construction in July/August 1985.

Coupled with the contractor's lack of initiative, management and planning (the ingredients for successful project), the monsoon rains, strikes by workers, and damage to culverts on access road added to problems resulting in contractor falling behind schedule. The Contractor's absorption of time, materials and money on another project further dilutes his minimal efforts.

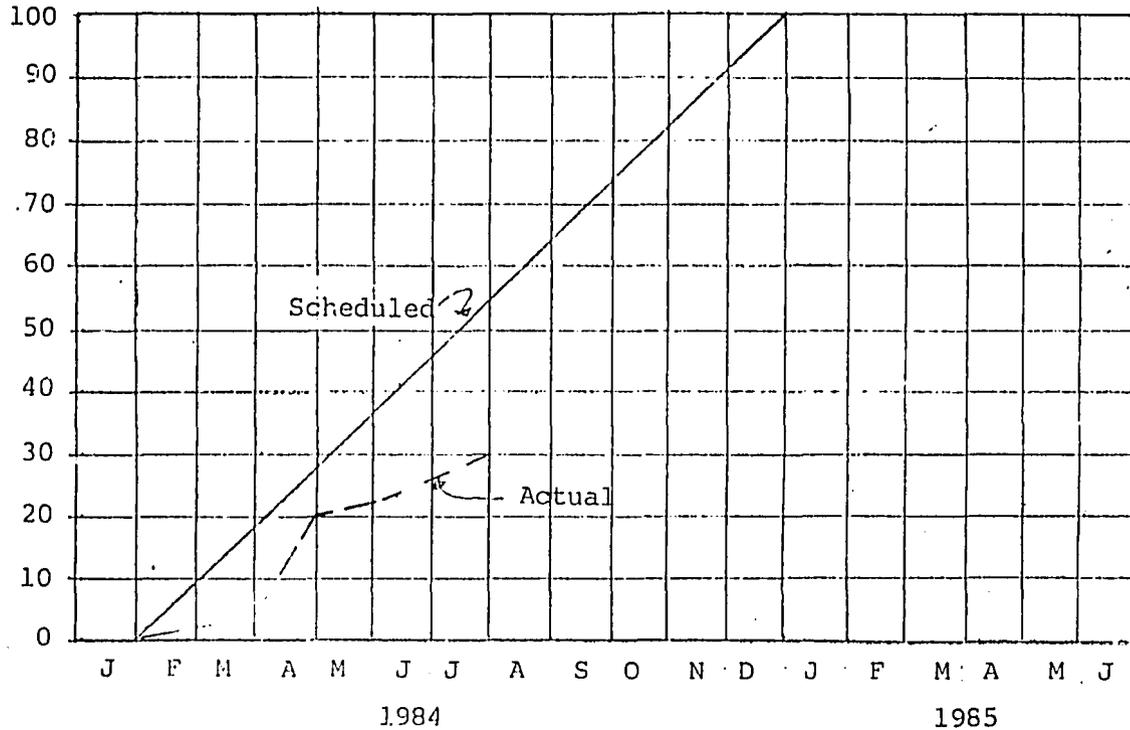
CONSTRUCTION
CONTRACT AND FINANCIAL SUMMARY

Contractor's Activities

<u>Invitation No.</u>	<u>Site</u>	<u>Contractor</u>	<u>Contractor Amount (Tk)</u>	<u>Last Invoice</u>	<u>Accumulated Amount</u>	<u>Accumulated Payments (Tk)</u>
1	B1-Kishoreganj	National Construction & Consult Limited	1,98,40,012.82	B1-1	21,57,900.00	21,57,900.00
2	C3-Jamalpur	Mostafa Brothers (Pvt) Ltd.	1,76,94,451.01	C3-02	40,77,252.23	40,77,252.23
3	F1-Dohazari	Eastern Engineers Consortium Limited	1,55,48,978.95	F1-01	27,15,000.00	27,15,000.00
4	F3-Cox's Bazar	Builders The Best Ltd.	99,64,470.85	-	-	-
5	H2-Chowmuhani	Technocon Limited	1,41,20,342.60	H2-01	48,07,208.16	48,07,208.16
6	H3-Lakshmipur	Technocon Limited	55,91,275.35	H3-02	19,88,767.68	19,88,767.68
7	I4-Chandpur	Fazle Azim Engineers Limited	1,70,67,822.35	I4-02 ^{1/}	22,59,791.12	22,59,791.12
9	O5-Parbatipur	Elite Engineers Limited	1,70,02,196.40	O5-02	27,12,750.00	27,12,750.00
Total			Tk. 11,68,29,550.33		207,18,669.14	207,18,669.14
			(\$ 4,697,609.58)		17.73%	
8	I4-Domar	M.S. Khan & Heirs Ltd.	74,99,255.58		Contract Terminated	

^{1/} Invoice No.I4-02 for Tk.6,26,500 was credited to partial repayment of Mobilization Advance.

CONSTRUCTION PROGRESS - ALL SITES



																		Weighted Percent	Project % Complt.
Kishcreganj	8	18	27	36	45	54	63	72	82	91	100							16.97	4.4
	0	1	20	20	20	26													
Jamalpur	8	18	27	36	45	54	63	72	82	91	100							15.15	3.8
	0	2	18	19	21	25													
Dohazari	8	18	27	36	45	54	63	72	82	91	100							13.31	4.3
	0	1	21	24	32	32													
Cox's Bazar	2	12	22	32	41	51	61	71	80	90	100							8.53	3.1
	0	1	27	37	42	36													
Chowmuhani	2	12	22	32	41	51	61	71	80	90	100							12.09	4.0
	0	1	13	18	33	33													
Lakshmipur	2	12	22	32	41	51	61	71	80	90	100							4.79	1.9
	0	8	30	36	39	39													
Chanpur	2	12	22	32	41	51	61	71	80	90	100							14.61	4.2
	0	1	11	18	26	29													
Parbatipur	2	12	22	32	41	51	61	71	80	90	100							14.55	4.7
	0	1	17	17	31	32													

Total 30.4%
 Last Month 28.7%

CONSTRUCTION PERCENT COMPLETION
(Work Items Only)

Site	- A - SITE DEVELOPMENT	- B - WAREHOUSE	- C - ANCILLARY BUILDINGS	- D - WATER SUPPLY SANITARY	- C - ELECTRICAL	TOTAL
Kishoreganj	56%	0%	2%	5%	0%	20% 3.4%
Jamalpur	47%	0%	10%	4%	0%	16% 2.4%
Dohazari	50%	0%	0%	3%	0%	23% 3.1%
Cox's Bazar	52%	13%	23%	13%	0%	26% 2.2%
Chowmuhani	45%	0%	0%	5%	0%	17% 2.1%
Lakshmipur	30%	18%	65%	5%	3%	24% 1.1%
Chandpur	34%	17%	0%	3%	0%	18% 2.6%
Parbatipur	43%	0%	6%	3%	0%	21% 3.1%

Overall Project Completion (Work Items Only) = 20%

I-1

10

31 July, 1984

INVITATION NO.1 : Bl-KISHOREGANJ

CONTRACTOR : National Construction & Consult Ltd.

Total Contract Price	: Tk. 1,98,40,012.82	Date of Contract	: 16.01.84
Change Order	: Tk.	Site Handed Over	: 29.01.84
Revised Contract Price	: Tk. 1,98,40,012.82	Notice To Proceed	: 02.02.84
Payments To Date	: Tk.	Scheduled Completion	: 31.12.84 (333)
Retention To Date	: Tk.	Elapsed Time	: 181 days 54 %
L/Com. No.	: 388-002403	% Completion	
Date of L/Com.	: 31.01.84	Scheduled Actual	
Issue Date of L/Com.	: 02.02.84	This This	
Amount of L/Com.	: Tk. 1,98,40,012.82 (\$797,885.00)	Period	To Date
L/Com. Amendment No.1	: 13.02.84	9 %	54%
Performance Guarantee	: BCCI LG 84/75	Work	: 2%
	Tk. 19,84,002	Material	: 4%
CAR/PL Insurance	: DAC/CAR/P-09/4/84		
	30.04.84		

1.0 Site Key Personnel

Engineer	: Senior Field Engineer	- A.O. Khan
	Field Engineer	- A.H. Nazrul Islam
	Inspector	- Zulfikar Ali
	Asst. Technician	- Kamrul Hossain
Contractor	: Site Engineer	- Faizur Rahman
	SAE	- Mizanur Rahman
	Foreman	- Abdul Zabba
		Nur Mohammed

2.0 Contractor's ActivitiesThis Period To Date

Activities of the contractor upto 21 July 1984 was negligible and practically nil and there was no contractor's authorised site representative until 21-7-84. There was no labour force at the site. The contractor's authorised representative arrived site from 22-7-84 and since then there are some activities. Contractor placed surcharge fill and collected about 36,000 bricks and started brickwork in R3 building which was non-performed for want of approved bricks.

A. Site Development	7%	56%
A1 Mobilization and Demobilization	-	86%
A2 Preparation of Site	-	99%
A4 Excavation	-	95%
A6 Filling with Imported Material (Select Fill) (Refer to Variation)	-	91%
A10 Boundary Wall - Type A	-	15%
A21 Surcharge For Preloading	57%	91%

C. Ancillary Buildings	0.75%	2.25%
C1 Brick Flat Soling, R3	-	13%
C2 Plain Concrete, R3	-	14%
C3 Brickwork in Foundation, R3	11%	22%
D. Water Supply, Sanitary and Plumbing	-	5%
D7 Inspection Pit	-	20%
D8 Septic Tank	-	30%
D9 Soak Well	-	30%

2.1 Approved Materials On-Site

Portland Cement	- 11.25 ton
Reinforcing Steel, Deformed	- 70 ton
Bricks, 1st Class	- 36,000 nos.
Boulders	- 8,000 cft
Sand, Coarse	- 1,000 cft
Sand, Finr (For Filling)	- 5,000 cft

2.2 Major Equipment On-Site

- 1- Concrete Mixer
- 2- Water Pump

3.0 Problems and Delays

- . Railway land has not been officially handed over to BADC. Require railway estate office to demarcate railway right-of-way in the field and have the Engineer's surveyors confirm location.
- . Abandoned railway siding track to be removed by BR.

4.0 Action Required

- | | | |
|------------|---|---|
| BADC | : | <ul style="list-style-type: none"> . Finalize location of right-of-way with BR (/1610, 15.04) . Follow-up with BR for removal of abandoned railroad ties and track. . Approve insurance policy (/1752, 12.05) . Obtain incoming power line . Action on claim for time extension (/1840, 21.05) |
| Contractor | : | <ul style="list-style-type: none"> . Improve site management . Update construction schedule . Complete Engineer's Field Office punch list items . Comply with insurance warranty concerning fire fighting |

5.0 Claims

Contractor submitted seven claims for various alleged difficulties. The Engineer has requested the Contractor to furnish particulars to substantiate two of his claims (Nos. 3 and 7), and has made his decision on the remaining five.

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6.0 Work Scheduled Next Month

Contractor has failed to maintain schedule of work submitted. The Engineer has requested contractor to submit revised schedule in critical path form.

- Place surcharge preload remaining area
- Fill around ancillary building area
- Brickwork for boundary wall
- R3 brickwork up to lintel level

7.0 Shop Drawings

<u>Drawing No.</u>	<u>Date</u>	<u>Title</u>	<u>Action</u>
KS-	20.04	Bar Schedule EFO	B
KR1/01	27.04	Rebar Detail Footing, Column, Lintel & Sunshade	A
KR/02-1	03.06	Reinforcement of Staircase R1, R2 & R3	B
KR/02-2	04.06	Bar Bending for R1, R2 & R3	B
KR-03	03.05	Septic Tank, Soak Well, Inspection Pit Detail	A
KR3-04	02.05	Reinforcement for lintel, sunshade R3	B
KR1-05-1	03.06	Reinf. of Floor & Roof Slab & Detail of Beam	B
KR1-05-2	03.06	-do-	B
KR2-06 R1	02.06	Reinf. Plan of lintel, sunshade & Ftng. R2	A
KR2-08-1	04.06	Reinf. Plan of Floor & Roof Slab & Beam Details	A
KR2-08-2 R1	04.06	-do-	A
KR3-09-1 R1	07.06	-do-	A
KR3-09-2 R1	07.06	-do-	A
KR-10 R1	02.07	Reinforcement Details of Tally Office and Public Toilet	B
KR-11	26.05	Reinf. Details of Chimney R1, R2 & R3	B
KR-12	30.05	Reinforcement Details of Guard House	B
KR-13	27.05	Reinforcement Details of Pump House	A
KR-1-15	10.06	Electrical Fittings Layout Plan Circuit Diagram & Details R1	C
KR2-14	21.05	Electrical Fittings Plan, Circuit Diagram & Details R2	C
KR3-16	07.06	-do- R3	C
KG/02	08.07	Formwork Details for Footing, Grade Beam, Column & Canopy	H
KG-01-1	15.07	Reinf. Details of Columns & Footings	B
KG-01-2	15.07	-do-	B

8.0 Financial

<u>Invoice No.</u>	<u>Item</u>	<u>Amount Invoice</u>	<u>Payment</u>	<u>USAID Voucher No.</u>
NCC-01/84	Material Prepayment	Tk.21,57,900.00	Tk.21,57,900.00	1451

9.0 General

- . Work on ancillary building and boundary wall suffered for lack of specified bricks and skilled masons.
- . Work suffering due to lack of site management. A new site representative available from 22-7-84.
- . Settlement as of 30.07 varies between 0.14 to 0.24.

Note: The Contractor has not submitted, as of date of this report, the required Monthly Progress Report nor Construction photographs.

10. Variation (Overruns and Underruns)

7- Exploratory excavation (holes) Clause 18 of Conditions	Tk. 3,460.00
Estimated Total Contract Price	Tk. 1,98,40,012.82
A3 Excavation To Waste	30,112.76
A5b Filling with Imported Material (Select)	3,62,292.70
- Exploratory Excavation	3,460.00
Revised Estimated Contract Price	Tk. 2,02,35,878.28

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CONSOLIDATED MATERIALS TESTING REPORT

Project: Fertilizer Warehouses Phase III

For the month July 1984

Site : Kishoreganj

Material/Test	Spec. No.	No. of Tests	No. App- roved	No. Dis- Approved	Remarks/Requirement
A. Select Fill	2E.01-a	1	-	1	Requires F.M. greater than 1.5 and less than 5% passing sieve No.200
B. Surcharge material Silty sand mixed with clay.		10	-	-	
C. Mortar Sand	4A.03	2	1	1	
D. Bricks: Frogmark: GIB	4A.02	5	5	0	Requires sorting at site
MSE		4	3	1	
A. Khalek		10	5	5	
E. Laboratory compaction test: Select Fill	2E.02	1	-	-	To determine maximum dry density
F. Field Density Tests: Surcharge materials	2Z.02	10	-	-	Av. surcharge wet density:- 109.3 pcf.

15

C. Ancillary Buildings	2%	10%
R1: No work to date		
R2:		
C1 Brick Flat Soling	-	40%
C2 Plain Concrete including concrete floor slab	-	39%
C3 Brickworkin foundation	-	100%
C4 Dampproof Course	-	100%
C5 Brickwork above P.L.	16%	35%
R3:		
C1		43%
C2		46%
C3		100%
C4		100%
C5	19%	37%
D. Water Supply, Sanitary		4%
D6 R.C.C. Sewer Pipe	7%	16%
D8 Septic Tank, Type B	33%	33%
D9 Soak Well.	16%	16%

2.1 Approved Materials On-Site

Portland Cement	-	3 T
Reinforcing Steel, Deformed	-	60 T
Bricks, 1st Class	-	338,000 Nos.
Boulders	-	3400 cft
Sand, Coarse	-	18,500 cft
Sand, Fine (For Filling)	-	30,000 cft

2.2 Major Equipment On-Site

- 2- Water Pump (1-electrical; 1-diesel)
- 1- Concrete Mixer
- 1- Vibrator

3.0 Problems and Delays

- . Railway land not officially handed over to BADC
- . Local people attacked contractors labours on 28 July 1984 in the plea of non-payment of land compensation and in the pretext of not hiring local labours by the Contractor and injured contractor's and Engineer's personnel. Work remain suspended for 4 days.

4.0 Action Required

- | | | |
|------------|---|---|
| BADC | : | <ul style="list-style-type: none"> . Process obtaining incoming power line. . Resolve issue relating to handing over newly purchased land on north-west. . Approve insurance policy . Action on claim for time extension C3-1 . Take over land from BR for railway siding. |
| Contractor | : | <ul style="list-style-type: none"> . Submit required monthly progress report. . Take positive action to expedite the work . Submit construction photographs . Update construction schedule . Comply with insurance warranty concerning fire fighting. |

5.0 Claims

. Claim for time extension MBL/FWH-AID/84/405, 15.04.84

6.0 Work Scheduled Next Month

Contractor has failed to maintain work schedule submitted. Revised schedule not realistic.

Refer to attached contractor's schedule of events for July.

7.0 Shop Drawings

<u>Drawing No.</u>	<u>Date</u>	<u>Title</u>	<u>Action</u>
401/84	11.04	Bar Schedule for EFO	B
JR1/01	29.04	Rebar Details Footing, Column, Lintel, Sunshade R1	A
JR/02-1R1	03.06	Reinf. Stairs R1, R2, R3	B
JR/02-2	04.06	Reinf. Stairs R1, R2, R3	B
JR-03	02.05	Septic Tank, Soak Well, Inspection Pit Detail	A
JR3-04 R1	31.05	Reinforcement for lintel sunshade R3	B
JR1-05-1R1	03.06	Reinf. Floor and Roof Slab and Detail of Beam R1	A
JR1-05-2 R1	03.06	-do-	A
JR2-06	08.05	Reinf. Plan of lintel, sunshade and footing R2	B
JR-07	11.05	Plumbing & Sanitary Detail EFO	C
JR2-08-1	04.06	Reinf. Plan of Floor & Roof Slab & Beam Details R2	A
JR2-08-2 R1	04.06	-do-	A
JR3-09-1 R1	07.06	-do- R3	A
JR3-09-2 R1	07.06	-do-	A
JR-10	27.06	Reinforcement Details of Tally Office & Public Toilet	B
JR-11	26.05	Reinf. Details of Chimney Bldgs R1, R2, R3	B
JR-12	30.05	Reinforcement Details of Guard House	B
JR-13	28.05	Reinforcement Details of Pump House	A
JR2-14	05.06	Electrical fittings layout plan R2	B
JR3-16	07.06	-do- R3	C
JG-01	11.06	Reinforcement details of Columns & Footings	B
JR1-15	10.06	Electrical fittings Layout Plan R1	B

JR1/17	20.06	Plumbing & Sanitary Detail and False Slab R1	B
JG/02	22.06	Formwork Details for Footing Grade Beam, Column & Canopy	H
JG/03	23.06	Reinf. Details of columns & Footings	B

8.0 Financial

<u>Invoice</u>	<u>I t e m</u>	<u>Amount Invoice (Tk)</u>	<u>Payment (Tk)</u>	<u>USAID Vou.No.</u>
-	Mobilization Ad- vance	8,84,720.00	8,84,720.00	1059
C3-01	Material Prepay- ment	13,27,696.00	13,27,696.00	1226
C3-02	Progress Payment	18,64,836.23	18,64,836.23	1607
		<u>Tk. 40,77,252.23</u>		

9.0 General

- One full day and 4 hours of rain this month.
- The Contractor will have slightly less than 3.5 months (extended period) after the surcharge period to complete the warehouses. The Engineer estimates 8 months required.
- The Site Engineer is preparing a list of items damaged by the attack of the outsiders.

10.0 Variation (Overrun or Underrun)

A10 Boundary Wall - Type A

Original Quantity	rft	2,100	Tk. 300.00/rft
Estimated Quantity	rft	1,722	
Amount Variation	rft	(- 378)	
Percent Variation		(- 18%)	
Estimated Cost Decrease		(-Tk. 1,13,400)	

CONSOLIDATED MATERIALS TESTING REPORT

Project: Fertilizer Warehouses Phase III

For the month July 1984

Site : Jamalpur

Material/Test	Spec. No.	No. of Tests	No. App- roved	No. Dis- App _r oved	Remarks/Requirement
A. Select Fill	2E.01-a				
B. Concrete Sand	3A.02- b.1	1	1	0	
C. Mortar Sand	4A.03	6	3	3	
D. Concrete Coarse Aggregate	3A.02- b.2	3	1	2	
E. Surcharge Field Wet density	2Z.02	7	-	-	Av. wet density 112.2 pcf.

No. of test at
3 days 7 days 28 days

F. Concrete:					
Compressive Strength Test	3A.03 3A.05	1	4	3	

Average 28 day Strength of Concrete:

Boundary wall foundation(East side) - 3985 PSI (Average of 3 cylinders)

INVITATION NO.3 : F1-DOHAZARI

CONTRACTOR : The Eastern Engineers Consortium Ltd.

Total Contract Price	: Tk. 1,55,48,978.95	Date of Contract	: 16.01.84												
Change Orders	: Tk.	Site Handed Over	: 26.01.84												
Revised Contract Price	: Tk. 1,55,48,978.95	Notice To Proceed	: 02.02.84												
Payments To Date	: Tk. 27,15,000.00	Scheduled Completion	: 31.12.84 (33)												
Retention To Date	: Tk. Nil	Elapsed Time	: 181 days 54 %												
L/Com. No.	: 388-002405	<u>% Completion</u>													
Date of L/Com.	: 31.01.84	<table border="0" style="width: 100%;"> <tr> <td colspan="2" style="text-align: center;"><u>Scheduled</u></td> <td colspan="2" style="text-align: center;"><u>Actual</u></td> </tr> <tr> <td style="text-align: center;">This</td> <td style="text-align: center;">To Date</td> <td style="text-align: center;">This</td> <td style="text-align: center;">To Date</td> </tr> <tr> <td style="text-align: center;"><u>Period</u></td> <td style="text-align: center;"><u> </u></td> <td style="text-align: center;"><u>Period</u></td> <td style="text-align: center;"><u> </u></td> </tr> </table>		<u>Scheduled</u>		<u>Actual</u>		This	To Date	This	To Date	<u>Period</u>	<u> </u>	<u>Period</u>	<u> </u>
<u>Scheduled</u>		<u>Actual</u>													
This	To Date	This	To Date												
<u>Period</u>	<u> </u>	<u>Period</u>	<u> </u>												
Issue Date of L/Com.	: 02.02.84	9 %	54 %												
Amount of L/Com.	: Tk. 1,55,48,978.95 (\$625,317.00)	Work	: 4 %												
L/Com. Amendment No.1	: 13.02.84	Material	: (-)4 %												
Performance Guarantee	: Agrani 001/84 Tk.15,54,900		32 %												
Insurance	: DAC/CAR/COV-43/4/84		9 %												

1.0 Key Site Personnel

<p>Engineer</p> <p>Contractor</p>	<p>: Project Engineer</p> <p>: Project Engineer</p>	<p>- Y.O. Kim</p> <p>- Shahid Uddin Ahmed</p> <p>- Meer Khurshid Ali</p> <p>- Amirul Islam</p> <p>- Khondakar Anwar Hossain</p> <p>- Afzal Hossain Khan</p> <p>- Abdul Jalil</p> <p>- Motahar Hossain</p> <p>- Hossainuddin Ahmed</p> <p>- Rezaul Karim Salim</p>
	<p>Field Engineer</p> <p>Technician</p> <p>Inspector</p> <p>Site Manager</p> <p>Site Supervisor</p> <p>Site Supervisor</p> <p>Site Supervisor</p> <p>Asst. Technician</p>	

2.0 Contractor's Activities

	<u>This Period</u>	<u>To Date</u>
--	--------------------	----------------

The main event was the completion of the surcharge at the end of the month. It was delayed by bad weather, at least 1 week lost due to continuous rain. Allowing 30 days for preloading and 15 days for surcharge removal the start of the godown construction could be expected around September 15. The Engineer's Field Office building was completed and work on the boundary wall continued. The Contractor started placing select fill in R1 and R2 building areas.

A. Site Development (Adjusted % due to variations)	15%	50%
A1 Mobilization & Demobilization	9%	84%
<p>Completed: Engineer's Field Office, temporary access road, electrical & water, labor shed, labor toilet, cement storage, contractor's temporary office. Mobilization of equipment</p>		
A2 Preparation of Site	-	95%
A4 Excavation (60,890 cft)	-	76%
<p>. Topsoil excavation completed except river access.</p>		
A6 Filling with Imported Materials (Select Fill)	-	58%

A10 Boundary Wall, Type A	16%	46%
A21 Surcharge For Preloading	50%	100%
D. Water Supply, Sanitary and Plumbing	-	3%
D8 Septic Tank	-	1
D9 Soak Well	-	1

2.1 Approved Materials On-Site

Portland Cement	- 120 bags
Reinforcing Steel, Deformed	- 60 ton
Bricks, 1st Class	- 2,35,000 nos.
Boulders	- 2,200 cft
Sand, Coarse	- 800 cft
Sand, Fine (For Filling)	- 25,000 cft

2.2 Major Equipment On-Site

- 1 - Bulldozer (not operable)
- 2 - Pumps
- 1 - Concrete Mixer (7.5 cft)

3.0 Problems and Delays

. One week was lost due to rain.

4.0 Actions Required

- | | |
|------------|--|
| BADC | : . Take action to obtain incoming power line.
. Take action on Amendment No.F1-1, Contract Time Extension.
. Take action on approval of insurance policy. |
| Contractor | : . Submit time vs. completion curve with break-up calculations.
. Submit working (shop) drawings.
. Comply with insurance warranty concerning fire fighting.
. Update construction schedule in CPM form. |

5.0 Claims

. Time extension due to late receipt of Notice To Proceed and land problems.

6.0 Work Scheduled Next Month

The Contractor's performance is not in accordance with his schedule and he is directed to submit revised construction schedule in critical path method form for site development, each ancillary building and warehouse.

1. Select fill of the Ancillary Building area
2. Boundary Wall - remaining portion
3. Preparation of form and re-bar for footing, column and grade beam of warehouse.

7.0 Shop Drawings

<u>Drawing No.</u>	<u>Date</u>	<u>Title</u>	<u>Action</u>
002	30.04.84	Construction Schedule	A
004	18.04.84	EFO Bar Schedule	A
DR3-01	23.05.84	Reinf. for Lintel, Sunshade R3	B
DR-02	22.05.84	Septic Tank, Soak Well, Inspection Pit Details	A
DR1-03	23.05.84	Rebar Detail Ftgs., Col., Lintel, Sunshade R1	B
DR-04-1	12.06.84	Reinf. Details Staircase R1, R2 & R3	B
DR-04-02	12.06.84	Bar Bending Schedule R1, R2 & R3	B
DR1-05-1	22.06.84	Reinf. Floor & Roof Slab & Detail of Beam R1	B
DR1-05-2	22.06.84	-do-	B
EEC/A/005	30.04.84	Sequence of Embankment Construction	A
DR2-06	10.06.84	Reinf. Details Lintel, Sunshade, Ftgs, Cols., R2	A
DR2-08-1	14.06.84	Reinf. Plan Floor & Roof Slab & Beam Details R2	A
DR-08-2	14.06.84	-do-	A
DR3-09-1	17.06.84	Reinf. Plan Floor & Roof Slab & Beam Details R3	A
DR3-09-2	17.06.84	Reinf. Schedule Floor & Roof Slab & Beam Details R3	A
DR-10	28.06.84	Reinf. Details of Tally Office & Public Toilet	B
DR-11	06.07.84	Reinf. Details of Chimney Bldg. R1, R2 & R3	B
DR-12	30.06.84	Reinf. Details of Guard House	C
DR-13	07.07.84	Reinf. Details of Pump House	B
DR-14	22.05.84	Electrical Fittings Layout R2	C
DR1-15	11.06.84	Electrical Fittings Layout R1	C
DR3-16	07.06.84	Electrical Fittings Layout R3	B
DG/02	26.06.84	Formwork Details for Footing Grade Beam, Column & Canopy	H

8.0 Financial

<u>Invoice No.</u>	<u>Item</u>	<u>Amount Invoice</u>	<u>Payment</u>	<u>USAID Voucher No.</u>
F1-01	Material Prepayment	Tk.27,15,000	Tk.27,15,000	1281

9.0 General

- . During the month 7 days were lost due to rain. The main activity and critical path item of surcharge preloading was 100% completed (Elev.43.60) this month. On basis of test results of density of surcharge material (98 pcf) the surcharge fill height was increased from 9.5 ft to 12.12 fr. (Elev.43.60) to obtain specified loading of 125 pcf.
- . The total settlement for the godown area were at 30.7.84:
 - 0.67' at the center
 - 0.41'-0.49' at the corners

9.0 General - cont'd

- . Engineer prepared punch list of outstanding items to be completed/repaired/rectified on Engineer's Field Office for Contractor's compliance.
- . On 23 July, the Sub-Divisional Manager (BADC) Patya along with Surveyor of Chandansish Upozilla Revenue Office pegged the 0.28 acre of land for access to River (ADC (Rev) Ctg Memo 2678, 21.07.84). One objection was raised to the marking by a Kamaluddin Ali who was informed to contact Upozilla Revenue Office.

10. Variation (Overruns and Underruns)

Estimated Total Contract Price		Tk. 1,55,48,978.95
A3 Excavation To Waste		(- 1,06,874.50)
A4 Excavation		(- 89,830.87)
A6 Filling with Imported Material (Select)		(- 10,86,002.50)
Revised Total Contract Price		Tk. 1,42,66,271.08
A21 Surcharge For Preloading		
Original Quantity	7,48,165 cft	
Estimated Quantity	7,01,195 cft	
Amount Variation	46,970 cft	
Percent Variation	6.3%	
Cost Decrease		(- 2,86,517.00)
Revised Total Contract Price		Tk. 1,39,79,754.08

CONSOLIDATED MATERIALS TESTING REPORT

Project: Fertilizer Warehouses Phase III

For the month July 1984

Site : Dohazari

Material/Test	Spec. No.	No. of Tests	No. Approved	No. Dis-Approved	Remarks/Requirement
A. Select Fill	2E.01-a	10	10	0	Requires F.M. greater than 1.5 and less than 5% passing sieve
B. Concrete Sand	3A.02-b.1				
C. Mortar Sand	4A.03	1	1	0	
D. Concrete Coarse Aggregate	3A.02-b.2	1	1	0	
E. Field Density Tests: Select Fill	2E.01	26	22	4	90% & 95% MDD
F. Surcharge Field Wet density	2Z.02	6	-	-	Av. unit weight of 98 pcf used.

	Spec. No.	No. of test at			
		3 days	7 days	14 days	28 days
G. Concrete:					
Compressive	3A.03	-	2	2	8
Strength Test	3A.05				

Average 28 day Strength of Concrete:

Engineer's Field Office Floor Slab - 3332 PSI (Av. Of 5 cylinders).

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INVITATION NO.3 SITE: DOHAZARI-F1 CONTRACTOR: THE EASTERN ENGINEERS
CONSORTIUM LTD.

I. GENERAL STATEMENT OF PROGRESS:

Engineer's field office: This office is now complete except some cleaning works. Two air coolers have been brought to the site for field office within two or three days, we will be able to open this office for official use.

Boundary Wall. North, West and South side Boundary wall brick work is complete upto required height. 200'-0" copping casting and angle fixing has been done. Form work of copping is in progress.

Select Fills: Upto this date 3,40,000 cft (approx.) of select fills have been compacted. At present select fill is being done in the R-1 and R-2 building area by hand compaction.

Pre-loading surcharge: On the last 30th July, 1984 pre-loading surcharge was complete.

II. FINANCIAL: Amount Invoice to date
Payments to Date

II. MANPOWER:

1. Engineer	1 No.	8	8. Carpenter	6 NOSs	9 hours
2. Manager	1 No.	9 hours	9. Mason	6 Nos.	work.
3. Supervisor	3 Nos.	work	10. Mason helper	6 Nos.	'
4. Lab. technician	1 No.	'	11. Bar-binder	5 Nos.	
5. Storeman	1 No.	'	12. Security guard	4 Nos.	'
6. Mechanic	1 No.	'	13. Painter	4 N. s.	
7. Electrician	2 Nos.	'	14. Daily labour	1812 N _o s.	'

IV. EQUIPMENT:

1. Bull-dozer (out of order)	1 No.	5. Concrete Mixture machine	1 No.
2. Water pump	2 Nos.	6. Sand cone apparatus	One set
3. Survey Instrument		7. Slump cone apparatus	One set
4. Cylinder mold	5 N _o s.	8. Balance	I(one)

V. MATERIALS: SELECT FILLS | CONCRETE | CEMENT | BRICKS | BOULDER | RE-BAR

	SELECT FILLS	CONCRETE	CEMENT	BRICKS	BOULDER	RE-BAR
Opening stock at site	2,23,562 cft	555 cft	5	197000	636	60
Procured during this month	71483 cft	179 cft	190	88000	1847	-
Used during month	186502 cft	130 cft	80	8550	283	-
Closing stock at site	108,542	604	115	276500	2200	60

VI. THIS PERIOD PROGRESS: Our scheduled progress was 68.19% but actually 20.48% have been done (considering only work) and 31.25% (considering work done and materials on site).

VII. BOTTLENECKS AND DELAYS: Out of 31 days of this month full 7 days were rainy days. Moreover, almost every day it was raining slightly now and then which also hampered the normal flow of the work. So, our scheduled programme could not be followed properly due to rainy weather during the month and which caused ultimate delay.

VIII. CLAIMS FILED: Nil

IX. NEXT MONTH SCHEDULED PROGRAMES:

1. East side boundary wall and copping with angle and bar-bed wire fixing of the North, West and South side boundary wall = Estimated time = 31 days = 1.8.84 to 31.8.84.
2. Select fills in the R-1 and R-2 building area = Estimated time = 31 days = 1.8.84 to 31.8.84.
3. Preparation of form Re-bar of column, footing and grade beam of warehouse and Ancillary building.

X. PROGRESS CHART: Attached

XI. PHOTOGRAPHS: Attached

date : 1st August, 1984

Submitted by KH.ANWAR HOSSAIN
Title: Project Engr.
E.E.C. Ltd.
Dohazari site.

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PROJECT COMPLETION CALCULATION

CONTRACTOR: THE EASTERN ENGINEERS CONSORTIUM LTD.

INVITATION NO. 3

SITE LOCATION: DOHAZARI-F1

MONTH ENDING: 31ST JULY, 1984.

SCHEDULE: A-SITE DEVELOPMENT

ITEM NO. (1)	BID ITEM DESCRIPTION (2)	WEIGHTED PERCENT (3)	PERCENT COMPLETE (4)	TO DATE COMPLETION (5)
A1	Mobilization and Demobilization.	4.70%	75%	3.525%
A2	Preparation of site	0.074%	100%	0.074%
A4	Excavation	1.61%	21.08%	0.34%
A6	Filling with imported materials. b. select fills	58.03%	43.65%	25.33%
A10	Boundary wall	5.74%	40%	2.296%
A21	Surcharge for Pre-loading	9.69%	100%	9.69%

OVERALL UPTO DATE TOTAL PERCENTAGE OF WORK COMPLETED:

$$= \frac{41.255\% \times 77,17,667.40}{1,55,48,978.95} \times 100$$

$$= \frac{0.41255 \times 7717667.40}{1,55,48,978.95} \times 100 = 20.48\%$$

MATERIALS ON SITE

1. Select fills sand	1,08,542 cft	@ Tk.4.00/cft	Tk.434168.00
2. Concrete Sand	800 cft	@ Tk.6.00/cft	Tk.4800.00
3. Cement	6. M.T.	@ Tk.2000/M.T.	Tk.12000.00
4. Bricks	2,90,000 Nos.	@ Tk.900/1000 Nos.	Tk.261,000.00
5. Boulder	2200 cft	@ Tk.15/cft	Tk.33,000.00
6. Re-bar	60 Ton	@ Tk.15,550/MT	Tk.930,000.00
			<u>Tk.16,74,968.00</u>

$$\therefore \% \text{ of Progress based on stock pile materials} = \frac{16,74,968}{1,55,48,978.95} \times 100$$

$$= 10.77\%$$

Total % of progress = 31.25% (considering work done + materials at site)

SCHEDULE OF EVENTS
FOR AUGUST 1984

PROJECT: 0716-FSCF

LOCATION: DCHAZARI-F1

WORK ITEM: SITE DEVELOPMENT

EVENT	DESCRIPTION OF WORKS	TIME ESTIMATE	PLANNED		ACTUAL		REMARKS
			START	FINISH	START	FINISH	
1.	East side boundary wall construction complete and copping with angle and barbed wire fixing of the remaining boundary wall (North, West and South side).	31 days	1.8.84	31.8.84			
2.	Filling with imported materials (select fill) in the Ancillary Building area (R-1, R2) upto EL=29.50.	31 days	1.8.84	31.8.84			
3.	Preparation of Form-Rebar for footing, column and grade beam of warehouse and ancillary building (R1 & R2).	31 days	1.8.84	31.8.84			

Submitted by: The Eastern Engineers Consortium Ltd.

31 July 1984

INVITATION NO.4 : F3-COX'S BAZAR

CONTRACTOR : Builders The Best Ltd.

Total Contract Price : Tk. 99,64,470.85

Change Orders : Tk.

Revised Contract Price : Tk. 99,64,470.85

Payments To Date : Tk.

Retention To Date : Tk.

L/Com. No. : 388-002406

Date of L/Com. : 31.01.84

Issue Date of L/Com. : 23.02.84

Amount of L/Com. : Tk. 99,64,470.85
(\$400,731.00)Performance Guarantee : Indosuez PB/TK/009
Tk.10,00,000

Insurance : DAC/CAR/P-13/5/84

Date of Contract : 12.01.84

Site Handed Over : 26.01.84

Notice To Proceed : 23.02.84

Scheduled Completion: 31.12.84(312)

Elapsed Time: 160 days 51.3%% Completion

<u>Scheduled</u>		<u>Actual</u>	
<u>This Period</u>	<u>To Date</u>	<u>This Period</u>	<u>To Date</u>
10 %	51 %	(-6 %)	36 %
Work	:	5%	26%
Materials	:	(-11%)	10%

1.0 Key Site Personnel

Engineer	: Project Engineer	- Y.O. Kim
	Field Engineer	- M.M. Matiur Rahman
	Inspector	- Md. Serajul Islam Khan
	Technician	- A. Rashid
Contractor	: Site Engineer	- Zahidul Islam
	Field Engineer	- Abdul Baki Miah

2.0 Contractor's ActivitiesThis period To date

The contractor worked mainly on the Warehouse and Ancillary building. The godown exterior column were cast to elevation + 6 ft. The reinforced masonry wall was completed to the plinth level. The ground floors of R1 and R2 were cast. At the R3 building the brickwork upto the ground floor slab was completed. The brickwork for the public toilet and the guard house was done upto roof level.

A. Site Development	4%	52%
A1 Mobilization and Demobilization	2%	95%
A2 Preparation of Site	-	95%
A4 Excavation	-	92%
A6 Filling with Imported Materials (Select Fill)	-	70%

	<u>This Period</u>	<u>To Date</u>
A10 Boundary Wall	5%	87%
A15 Guard House	15%	30%
A16 Public Toilet	10%	25%
B. Warehouse	1%	13%
B2 R.C. Footing, Footing Tie Beam and Grade Beam	-	67%
B3 R.C. Column	18%	18%
B7 Reinforced Masonry Wall	6%	6%
B11 Reinforcing Steel	2%	20%
C. Ancillary Buildings (R1,R2 and R3)	6%	23%
C1 Brick Flat Soling	-	43%
C2 Plain Concrete incl	-	45%
C3 Brickwork in Foundation	-	94%
C4 Damp Proof Course	-	95%
C5 Brickwork above P.L.	9%	40%
C6 Reinforced Concrete	12%	23%
C9 Reinforcing Steel	10%	20%
D. Water Supply, Sanitary and Plumbing	1%	13%
D7 Inspection pits (3 completed)	-	15%
D8 Septic Tank 1 Type A	-	100%
1 Type B	-	50%
D9 Soak Well (3)	10%	85%

2.1 Approved Materials On-Site

Portland Cement	-	15 bags
Reinforcing Steel, Deformed	-	50 tons
Bricks, 1st Class	-	50,000 Nos.
Boulders	-	3,000 cft.
Sand Coarse	-	500 cft.
Sand, Fine (For Filling)	-	20,000 cft.
Stone Chips	-	
Lime	-	10 ton

2.2 Equipment On-Site

- 1- Concrete Mixer (8 cft)
- 1- Vibrator
- 1- Water Pump (1 HP)
- 1- Compactor (Tamper) Not operable

3.0 Problems and Delays

- Late submittal of shop drawings
- Delay in work due to rain.

4.0 Actions Required

- BADC :
- Negotiate land for access to river.
 - Resolve thoroughfare problem.
 - Obtain incoming power line. (1511, 29.03)
 - Action on Amendment F3-1, Contract Time Extension (1841, 21.05)
 - Approval of insurance policy (1889, 27.05)
- Contractor :
- Submit shop drawings 15 days in advance of scheduled construction.
 - Submit construction photographs and monthly report
 - Update construction schedule
 - Comply with insurance warranty concerning fire fighting
 - Submit concrete mix design.

5.0 Claims

- Claim for time extension.

6.0 Work Scheduled Next Month

The contractor has failed to maintain the work schedule submitted by him and the Engineer is unable to determine the contractor's schedule for next month until a revised schedule is submitted as per clause 1, of conditions and request of the Engineer.

7.0 Shop Drawings

<u>Drawing No.</u>	<u>Date</u>	<u>Title</u>	<u>Action</u>
4/84	25.03	Construction schedule Site Development	H
5/84	25.03	Warehouse	H
6/84	25.03	Ancillary Building	H
11/84	05.04	Engineer's field Office (Roof Truss & Slab)	B
12/84 R2	15.04	Details of Wooden Door, Steel Windows grill & Wooden Floor Door Frame Joint, Post and Beam Joint	B
13/84 R1	26.04	Rebar Schedule of Col. C1, C2A, C2B, CA and Door Column	B

7.0 Shop Drawings - Cont'd

<u>Drawing No.</u>	<u>Date</u>	<u>Title</u>	<u>Action</u>
15/84 R1	26.04.84	Concrete Formwork Grade Beams, Columns Canopy Beam & Canopy	H
15/84	08.05	Rebar Schedule of Grade Beam	A
17/84 R1	16.05	Canopy Beam & Loading Platform	B
18.84	27.05	Rebar Schedule Lintel & Sunshade R3	A
21/84(1)	19.05	Rebar Schedule of Stair, Stair-Sunshade, Louver and Stair Slab R2 & R3	B
21/84(2)	19.05	-do-	B
22/84	22.05	Rebar Schedule Lintel and Sunshade R1	B
24/84	26.05	Rebar Schedule of Lintel, & Sunshade & Column R2	B
25/84(1)	29.05	Electrical R1	B
25/84(2)	29.05	-do-	B
26/84	30.05	Electrical R2	B
27/84	31.05	Electrical R3	B
28/84	31.05	Electrical Godown	B
29/84	06.06	Rebar Schedule Toilet False Slab R1,R2 & R3	A
30/84	08.06	Rebar Schedule Stair, Sunshade, Louver & Stair Slab R1	B
31/84	07.08	Rebar Schedule of Godown Side Wall	B
33/84(1)	17.06	Rebar Schedule of Floor & Roof Slab R1	B
33/84(2)	17.06	-do-	B
34/84	05.07	Sanitary and Plumbing Details of Ancillary Building R1,R2 & R3	C
Cox's-35	10.07	Reinforcement Details of Public Toilet	B
Cox's-36	12.07	Septic Tank, Soak well, Inspection pit Details	B

32

7.0 Shop Drawings - Cont'd

<u>Drawing No.</u>	<u>Date</u>	<u>Title</u>	<u>Action</u>
Cox's-37	12.07	Reinforcement Detail of Pump House	B
Cox's-38	17.07	Reinforcement Detail of Guard House	B
39/84(1)	23.07	Rebar Schedule of Floor Slab R3	B
39/84(2)	23.07	-do-	B
Cox's-40-1	27.07	Reinforcement Detail of Floor & Roof Slab	B
Cox's-40-2	27.07	-do-	

8.0 Financial

No invoices submitted.

9.0 General

- The work was delayed because of rainy weather. 9 work days were lost due to rain.
- The Contractor has not submitted a Monthly Progress Report for May, June and July and as construction photographs for July.
- The Engineer has not been informed of reason for Contractor procrastinating in submitting an invoice for progress payments.
- Obtaining access to river may be difficult due to squatters on khas land,
- The Engineer is reviewing site drainage in light of the experience in this monsoon season.

10.0 Variation(Overrun and Underrun)

Estimated total contract price	Tk. 99,64,470.85
A4 Excavation	12,016.20
A6 Imported Select Fill	2,76,396.12
Revised Estimated Total Contract Price	Tk. 1,02,52,883.17

CONSOLIDATED MATERIALS TESTING REPORT

Project: Fertilizer Warehouses Phase III

For the month July 1984

Site : Cox's Bazar

Material/Test	Spec. No.	No. of Tests	No. Approved	No. Dis-Approved	Remarks/Requirement
A. Select Fill	2E.01-a	4	4	0	Requires F.M. greater than 1.5 and less than 5% passing sieve No. 200
B. Concrete Sand	3A.02-b.1	1	1	0	3 parts Sylhet sand blended with 1 part local sand
C. Mortar Sand	4A.03	2	2	0	2 parts of Sylhet sand blended with 1 part local sand
D. Concrete Coarse Aggregate	3A.02-b.2	3	2	1	
E. Pea Gravel	4A.05	2	1	1	
F. Field Density Tests: Select Fill	2E.01	11	5	6	95% MDD

No. of test at
3 days 7 days 28 days

G. Concrete: Compressive Strength Test	3A.03 3A.05	10	14		
--	----------------	----	----	--	--

Average 28 day Strength of Concrete:

Godown Grade Beam (North side) - 3527 PSI (Av. of 5 cylinders)
 " " " (South side) - 3533 PSI (Av. of 4 cylinders)
 " " " (East side) - 3537 PSI (Av. of 2 cylinders)
 G.F. Staircase R1 Building - 3725 PSI (Av. of 3 cylinders)

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INVITATION NO.5 : H2-CHOWMUHANI

CONTRACTOR : Technocon Limited																							
Total Contract Price	: Tk.1,41,20,342.60	Date of Contract	: 12.01.84																				
Change Orders	: Tk.	Site Handed Over	: 31.01.84																				
Revised Contract Price	: Tk.1,41,20,342.60	Notice To Proceed	: 23.02.84																				
Payments To Date	: Tk.48,07,208.16	Scheduled Completion:	31.12.84(312)																				
Retention To Date	: Tk. -	Elapsed Time:	160 days 51%																				
L/Com. No.	: 388-002407	* Completion																					
Date of L/Com.	: 31.01.84	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Scheduled</th> <th colspan="2">Actual</th> </tr> <tr> <th>This Period</th> <th>To Date</th> <th>This Period</th> <th>To Date</th> </tr> </thead> <tbody> <tr> <td>10%</td> <td>51%</td> <td>%</td> <td>33%</td> </tr> <tr> <td></td> <td>Work</td> <td>:</td> <td>- 17%</td> </tr> <tr> <td></td> <td>Material:</td> <td>-</td> <td>16%</td> </tr> </tbody> </table>		Scheduled		Actual		This Period	To Date	This Period	To Date	10%	51%	%	33%		Work	:	- 17%		Material:	-	16%
Scheduled		Actual																					
This Period	To Date	This Period	To Date																				
10%	51%	%	33%																				
	Work	:	- 17%																				
	Material:	-	16%																				
Issue Date of L/Com.	: 23.02.84																						
Amount of L/Com.	: Tk.1,41,20,342.60 (\$567,863.00)																						
Performance Guarantee	: Indosuez PB/TK/006 Tk.14,12,035																						
Insurance	: DAC/CAR/P-07/84																						

1.0 Key Site Personnel

Engineer	: Project Engineer	- Y.O. Kim
	Senior Field Engineer	- M.J. Alam
	Inspector	- A.C. Banik
	Asstt. Technician	- K.L. Nath
Contractor	: Project Engineer	- L.A. Sikdar (Dhaka)
	Site Engineer	- Sk. Rezaul Hoque
	Asstt. Site Engineer	- Md. Jahangir Alam
	Site Manager	- Abul Kashem

2.0 Contractor's Activities

Unfortunately the contractor's main activity was reworking the compacted fill adding coarse sand to bring the fill upto specification. His work was hampered by bad weather. Some new sand was brought in. Little actual work was accomplished.

	<u>This Period</u>	<u>To Date</u>
A. Site Development	2%	45%
A1 Mobilization and Demobilization	3%	72%
. Engineer's Field Office: Testing of water supply and sanitary system pending.	2%	92%
A2 Preparation of Site		100%
A4 Excavation (Refer to 10. Variation)	-	100%
A56 Filling with on site material	3%	3%
A66 Filling with imported material	1%	100%
A10 Boundary Wall	3%	53%
A16 Public Toilet	20%	70%
A21 Surcharge for Preloading	0%	0%
A23 48 inch R.C. Pipe Culvert . 6-8 ft. lengths on site.	0%	0%

	<u>This Period</u>	<u>To Date</u>
D. Water Supply, Sanitary and Plumbing	-	5%
D7 Inspection Pit	-	7%
D8 Septic Tank	25%	50%
D9 Soak Well	-	25%

2.1 Approved Material On-Site

Portland Cement	- 5 bags
Reinforcing Steel, Deformed	- 110.62 M.T.
Bricks, 1st Class	- 80,000 Nos. (to be sorted)
Boulders	- 14,000 cft.
Sand, Coarse	- 7,000 cft.
Sand, Fine (For Filling)	- 80,000 cft. (to be blended)

2.2 Major Equipment On-Site

1 - R.T. Roller (10 Ton)
2 - Concrete Mixers
1 - Vibrator
2 - Water Pumps

3.0 Problems and Delays

- . "Sweet" water not available at site. Contractor required to sink deep tubewell.
- . The Engineer submitted to the contractor a punch list of items to be completed/rectified in EFO.
- . Contractor has inadequate space to blend material and truck loads of fill material dumping all over fill area causing problems.
- . Blending of select fill is slowing down program of filling.

4.0 Actions Required

- | | |
|------------|--|
| BADC | : . Approval of insurance policy (1601, 12.04)
. Claim for Time Extension (1834, 20.05)
. Obtain incoming power line (1358, 14.03) |
| Contractor | : . Lease land for temporary facilities and for stockpiling of select fill and other materials.
. Complete installation of RCC pipe culvert
. Install deep tubewell for sweet water.
. Arrange pressure testing of water supply and sanitary plumbing system.
. Procure good quality sand for fill or blend sand in inadequate quality and fill & surcharge godown area.
. Complete EFO as per punch list.
. Develop passage for truck to Ancillary Building of the time of surcharge. |

5.0 Claims

Time extension due to late issuance of Notice to Proceed.

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6.0 Work Scheduled Next Month

Finish select fill to the required height and surcharge site.
Connect items on punch list for EFO.
Continue with boundary wall.

7.0 Shop Drawings

<u>Drwg.No.</u>	<u>Date</u>	<u>Title</u>	<u>Action</u>
CH-012A	08.04	Bar Schedule for Engineer's Field Office	H
CH-013A	17.04	Bar Schedule of Column & Footing	B
CH-014	18.03	Bar Schedule of Grade Beam, Tie Beam, Canopy Beam, Canopy Slab of Warehouse	C
CH-015	18.03	Bar Schedule for Beam of Godown	B
CH-016R	21.05	Formwork of Public Toilet and Guard House	B
CH-017	25.03	Schedule of Bar Warehouse Roof Slab, Bottom Vent, Top Vent	C
CH-018A	21.05	Schedule of Bars of Guard House & Public Toilet	A
CH-019A	22.04	Bar Schedule of Pump House	A
CH-020	23.04	Bar Schedule for Septic Tank, Inspection Pit & Soak well	C
CH-021	03.05	Reinforced Masonry Wall	C
CH-022	03.05	Reinforcement Footing, Columns, Lintel, Stair way and Porch Ground Floor R1	C
CH-023R1	09.05	Sanitary, water Supply and Electrical EFO	B
CH-024	27.05	Footing, Lintel, etc. R2	C
CH-025	27.05	Beam, Floor, Slab, etc. R1	C
CH-026	30.05	Formwork Canopy Beam & Slab	B
CH-027	30.05	Floor, Roof, Stair Slab R2	C
CH-028	30.05	Lintel, Stairing, Beam R3	C
CH-029-1	28.07	Floor, Roof, & Stair Slab R3	A
CH-029-2	28.02	-do-	
CH-030	04.06	Plumbing & Electrical Public Toilet	A
CH-032	13.06	Plumbing & Electrical R2	C
CH-033	16.06	Reinforcement, Lintel, Sun-shade, Footing R2	A

<u>Drwg.No.</u>	<u>Date</u>	<u>Title</u>	<u>Action</u>
CH-034-1	18.06	Staircase Reinforcement R1,R2 and R3	B
CH-034-2	18.06	-do-	B
CH-035	24.06	Reinforcement Footing, Column, Lintel, Sunshade R1	A
CH-036	20.06	-do- R3	A
009R	06.06	Warehouse Bar Chart	Under Review
010R	06.06	Ancillary Building Bar Chart	Under Review
011R	09.06	Site Development Bar Chart	Under Review

8.0 Financial

<u>Invoice</u>	<u>I t e m</u>	<u>Amount Invoice (Tk)</u>	<u>Payment (Tk)</u>	<u>USAID Voucher No.</u>
H2-01	Progress Payment	48,07,208.61	48,07,208.61	1572

9.0 General

- . Total 63 hours of rain between 26.6 to 25.7 which effected work schedule.
- . Water level upto El. 94.70

10.0 Variation (Overruns or Underruns)

Estimated Total Contract Price	Tk. 1,41,20,342.60
A4 Excavation	21,431.70
Revised Estimated Total Contract Price	Tk. 1,41,41,774.30

CONSOLIDATED MATERIALS TESTING REPORT

Project: Fertilizer Warehouses Phase III

For the month July 1984

Site : Chowmuhani

Material/Test	Spec. No.	No. of Tests	No. App- roved	No. Dis- Approved	Remarks/Requirement
A. Select Fill	2E.01-a	128	86	42	
B. Concrete Sand	3A.02- b.1	1	1	0	
C. Concrete Coarse Aggregate	3A.02- b.2	1	1	0	
D. Bricks: Frogmark: PSH BRS	4A.02	5 5	0 4	5 1	
E. Field Density Tests: Select Fill	2E.01	29	20	9	90% & 95% MDD
E. Laboratory Compaction Test, Select Fill	2E.02				

No. of test at
3 days 7 days 28 days

F. Concrete: Compressive Strength Test	3A.03 3A.05	2	9		
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Average 28 day Strength of Concrete:

Foundation of P. Toilet - 5223 PSI (Av. of 3 cylinders)

E.F.O. Floor - 5093 PSI (Av. of 3 cylinders)

7/20

WAREHOUSE PHASE-III
CONTRACTOR'S MONTHLY REPORT

July '84
MONTH COVERED

INVITATION NO ✓ 5
6

SITE ✓ H2 CHOWMUHANI
H3 LAKSHMIPUR

CONTRACTOR:
TECHNOCON LTD.

I. GENERAL STATEMENT OF PROGRESS

Progress this month: 2.13%. Total overall progress
21.184%. Break down A (Total overall) - 54.04%.
D (Overall) - 5.27%. 48,07,208.16

II. FINANCIAL: Amount Invoice To Date Tk. ~~48,18,908.11~~
Payments To Date Tk.

III. MANPOWER RETURNS

Skilled 154 nos. semi skilled 120 nos
unskilled/General labourers 1404 nos.
office staff: Sr. Site Engr. - 1, Asslt. site Engr. - 1
mixture machine operator - 1, RT Driver - 1 Night guard - 2

IV. EQUIPMENT REPORTS

RT Drt Roller - , Mixture machine - 2 nos
vibrator. 2 nos. , water pump. 3 nos

V. MATERIALS:

Name	Unit	Opening Stock at Site	Procured During the month	Used During the month	Closing Stock at Site
Select Sand	cft	120000	78700	85000	113700
Bricks	nos.	177500	50	500	177000
cement	Bag	35	55	85	5
syphet sand	cft	2000	6000	6000	2000
Boulder	cft	17562	200	50	17612
Rebar	Tons	110.39	0	0	110.39

VI. PROGRESS THIS PERIOD: Scheduled vs. Actual performed.

75% Boundary wall completed. 115% of select sand filling completed. 80% work at Public toilet completed

VII. BOTTLENECKS AND DELAYS: Reasons, Action Required and Action Taken.

ⓐ Heavy rain and flood delays in overall program (15 days rains)

VIII. CLAIMS FILED

IX. NEXT MONTH SCHEDULED PROGRAM

Follow monthly schedule which has been submitted.

X. PROGRESS CHART

XI. PHOTOGRAPHS

DATE: 11/8/84

SUBMITTED BY [Signature]
TITLE: SFF/TL

INVITATION NO.6 : H3-LAKSHMIPUR

CONTRACTOR : Technocon Limited

Total Contract Price : Tk.55,91,275.35

Change Orders : Tk. 5,000.00

Revised Contract Price : Tk.55,96,275.35

Payments To Date : Tk.19,88,767.68

Retention To Date : Tk. 1,13,343.07

L/Com. No. : 388-C02408

Date of L/Com. : 31.01.84

Issue Date of L/Com. : 23.02.84

Amount of L/Com. : Tk.55,91,275.35
(\$224,858.00)

Performance Guarantee : Indosuez PB/TK/007

Tk. 5,59,130

Insurance : DAC/CAR/P-06/4/84

Date of Contract : 12.01.84

Site Handed Over : 31.01.84

Notice To Proceed : 23.02.84

Scheduled Completion:31.12.84(312)

Elapsed Time: 160 days 51 %

% Completion

Scheduled		Actual	
This Period	To Date	This Period	To Date
10%	51%	0%	39%
	Work	1%	24%
	Material	(-)1%	15%

1.0 Key Site Personnel

Engineer	: Project Engineer	- Y.O. Kim
	Field Engineer	- M. Hassan
	Inspector	- Mozaharul Islam
	Technician	- S. Khan
Contractor	: Project Engineer	- Liakat Ali Sikder
	Asst. Site Engineer	- S. Hossain
	Site Manager	- Abul Kashem
	Foreman	- M.M. Hossain

2.0 Contractor's ActivitiesThis Period To Date

The contractor cast some warehouse columns and worked on the Ancillary Building.

A. Site Development	-	30%
A1 Mobilization and Demobilization	1%	73%
A2 Preparation of Site	13%	86%
A3 Excavation of waste	36%	36%
A4 Excavation	2%	36%
A6 Filling with Imported Material, Select Fill	4%	16%
A10 Boundary Wall	-	62%
A15 Guard House	5%	40%
A16 Public Toilet	5%	90%
B. Warehouse	-	18%
B2 RCC in Footing and Grade Beam	-	78%
B3 R.C. Column	6%	30%
B11 Reinforcing Steel	-	26%

C. Ancillary Building (Adjusted percentage)	9%	65%
C4 Damp Proof Course	-	100%
C5 Brickwork above Plinth Level	2%	98%
C6 Reinforced Concrete	12%	90%
C9 Reinforcing Steel	10%	83%
C14 Cement Plaster	58%	78%
C15 Cement Plaster	52%	68%
C17 Neat Cement Finishing	2%	2%
C23 Removal Lime Terracing	-	100%
D. Water Supply, Sanitary and Plumbing	2%	5%
D8 Septic Tank, Type B	-	100%
D9 Soak Well	-	30%
D10 W.C. Pan Install	50%	50%
D17 Install H.C.I. Pipe (4" dia)	25%	25%
D19 Install G.I. Water supply Pipe	12%	12%
E. Electrical	2%	3%
E1 Pipe work	1%	10%
E2 Cable work	90%	90%
E6 Switch board	50%	50%

2.1 Approved Materials On-Site

Portland Cement	- 35 bags
Reinforcing Steel, Deformed	- 39 MT
Bricks, 1st Class	- 20,000 (To be sorted)
Boulders	- 13,200 cft
Sand, Coarse	- 4,200 cft
Sand, Fine (For Filling)	- 10,000 cft
Wood	- 120 cft

2.2 Major Equipment On-Site

- 1- Concrete Mixer
- 3- Vibrators (one out of order)
- 1- Water Pump (out of order from 28.05)
- 1- Pick-up Truck
- 1- Truck

3.0 Problems and Delays

Nil

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4.0 Action Required

BADC : . Approve insurance policy (/1603, 12.04)
: . Action on claim for time extension (/1835, 21.05)

Contractor : . Install deep tubewell

5.0 Claims

Time extension.

6.0 Work Scheduled Next Month

The Contractor is progressively falling behind his '07.06.84 (Drq.No.06R and 08R) construction schedule. There is a chronic shortage of specified materials and this coupled with minimal site planning and ineffective site management is major cause for slow progress. The workmanship must be monitored very carefully since the laborers/mistries engaged have marginal ability.

The Engineer forecasts, based on present effort of contractor, completion of construction by February 1985. With the slightest effort, completion by December 1984 could be realized.

Refer to Contractor's Schedule of Events for next month's work schedule.

7.0 Shop Drawings

Refer to previous Progress Report for list of approved (A or B) shop drawings.

<u>Drawing No.</u>	<u>Date</u>	<u>Title</u>	<u>Action</u>
M25 R1	04.06	Bar Schedule Reinforced Masonry Wall, Loading Platform, etc.	C
EW-27 R2	14.07	Electrical (Warehouse)	A
H3-28	15.07	Reinf. Masonry Wall	B

8.0 Financial

<u>Invoice No.</u>	<u>Item</u>	<u>Amount Invoice(Tk)</u>	<u>Payment</u>	<u>USAID Voucher No.</u>
H3-01	Material Prepayment	12,72,681.70	12,72,681.70	1248
H3-02	Progress to 16.06	7,16,085.93	7,16,085.93	1597

9.0 General

The Contractor is approximately 40 days behind his revised schedule. With exerted effort, improved site management, skilled workers, and required specified materials he could maintain his schedule.

10.0 Variation

Change Orders

H3-01	31.05	Provide Kitchen Chimney Complete	Tk. 5,000.00
H3-02	12.06	Construct Type B Boundary Wall	Pending BADC's approval.

CONSOLIDATED MATERIALS TESTING REPORT

Project: Fertilizer Warehouses Phase III

For the month July 1984

Site : Lakshmipur

Material/Test	Spec. No.	No. of Tests	No. App- roved	No. Dis- Approved	Remarks/Requirement
A. Select Fill	2E.01-a	11	4	7	Requires F.M. greater than 1.5 and less than 5% passing sieve No. 200
B. Fea Gravel	4A.05	4	0	4	
<u>No. of test at</u> <u>3 days 7 days 28 days</u>					
C. Concrete:					
Compressive	3A.03				
Strength Test	3A.05	6	15		

Average 28 day Strength of Concrete:

Godown grade beam - 3591 PSI (Av. of 3 cylinders)
C2, C1, to B1 to A1

Darwan's Quarter Roof Slab - 3170 PSI (Av. of 3 cylinders)

Godown Column C4 - 2889 PSI (Av. of 3 cylinders)

Guard house Foundation - 3498 PSI (Av. of 3 Cylinders)

Godown Column C1, B1, B4 - 4049 PSI (Av. of 3 cylinders)

A4

8

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PROJECT : FERTILIZER WARE HOUSES PHASE - III
 LOCATION: ~~BE-EXTENSION~~/H3-LAKSHMIPUR
 WORK ITEM:

SCHEDULE OF EVENTS

TECHNOCON LTD
 Dhaka.
 Period from .1.8.84.....to..31.8.84....

EVENT	DESCRIPTION OF WORK	TIME ESTIMATE	SCHEDULED		ACTUAL		REMARKS
			START	FINISH	START	FINISH	
<u>Site Development</u>							
1)	Preparation of site	45 days	16.6.84	10.7.84			- To be continued
2)	Filling compaction of Select fill in go-down area	125 "	1.4.84	18.8.84	1.4.84		- To be continued
3)	Boundary Wall Type-A	140 "	1.4.84	21.9.84	1.4.84		- To be continued
4)	Guard House	50 "	10.6.84	30.7.84	10.6.84		- To be continued
5)	Public Toilet	120 "	25.3.84	24.7.84	25.3.84		- Nearby Completed
<u>Ware House</u>							
1)	Prepare form, Rebar for Footing, Grade Beam, Column Girder, Beam spandrel, slab etc.	160 "	3.3.84	18.8.84	3.3.84		- To be continued
2)	Brick-work upto 6'-0" height	40 "	15.6.84	25.7.84	3.8.84		- To be continued
3)	Column upto 2/3 Ht. canopy beam slab (1st half)	29 "	29.7.84	28.8.84			- May start in last week
	Bottom vent	23 "	26.6.84	19.7.84			- May start in last week
<u>Ancillary Building</u>							
1)	Cement Plastering	30 "	20.7.84	19.8.84	16.6.84		- To be continued
2)	Lime terracing	20 "	27.7.84	16.8.84			- May start on 12.8.84
3)	Patent stone flooring	20 "	27.7.84	16.8.84	8.8.84		- Tentative start
4)	Preparation of doors & window grills	40 "	7.7.84	17.8.84	7.7.84		- To be continued
5)	Install sanitary water supply piping system	120 "	31.3.84	11.7.84	22.6.84		- To be continued
6)	Install electrical pipe & fixtures	120 "	31.3.84	11.7.84	22.6.84		- To be continued

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WAREHOUSE PHASE-III
CONTRACTOR'S MONTHLY REPORT

July/84
MONTH COVERED

INVITATION NO. ~~5~~
6

SITE: H2-GHOSHMANI
H3 LAKSHMIPUR

CONTRACTOR:
TECHNOCON LTD.

I. GENERAL STATEMENT OF PROGRESS

Progress This Month = 2.31% Total Overall
Progress = 31.33%

II. FINANCIAL: Amount Invoice To Date Tk.
Payments To Date Tk.

III. MANPOWER RETURNS
Skilled 4160 Pms.
Unskilled 2856 Pms.

IV. EQUIPMENT REPORTS
① Mixture Machine - 1 no
② Vibrator - 2 nos
③ Truck - 1 no
④ Pick-up - 1 no

V. MATERIALS:

Name	Unit	Opening Stock at Site	Procured During the month	Used During the month	Closing Stock at Site
① m.s. Rod	m.T.	39 m.T.	--	0.50	38.50
② Concrete Sand	cft	4500	--	100	4400
③ Cement	bags	159	--	124	35
④ Select fill	cft	10,000	2000	3500	8500
⑤ Boulders	cft	13500	--	500	13000
⑥ Bricks	nos	20,000	20,000	2500	37500

VI. PROGRESS THIS PERIOD: Scheduled vs. Actual performed.

Anc. Bldg. Brickwork complete. Part Rouse roof casted.
90% of Public Toilet complete

VII. BOTTLENECKS AND DELAYS: Reasons, Action Required and Action Taken.

① Rains delayed normal progress.

VIII. CLAIMS FILED

IX. NEXT MONTH SCHEDULED PROGRAM

(As per attached schedule)

X. PROGRESS CHART (attached)

XI. PHOTOGRAPHS (attached)

DATE: _____

SUBMITTED BY

TITLE: _____

[Signature]
07/8/84

01

B. Warehouse		
B2 RCC Footing	5%	17%
B3 RC Columns	17%	17%
B7 Reinforced brick wall	9%	9%
B11 Reinforcing Steel	9%	27%
C. Ancillary	0%	0%
Work held in abeyance. Refer to Problems and Delays		
D. Water Supply, Sanitary and Plumbing	0%	3%
D8 Septic Tank	0%	24%
D9 Soak Well	0%	25%

2.1 Approved Material On-Site

Portland Cement	- 85 MT
Reinforcing Steel, Deformed	- 87 MT
Bricks, 1st Class	- 110,000 nos.
Boulders	- 5,500 cft.
Sand, Coarse	- 28,000 cft
Sand, Fine (For Filling)	- 7,000 cft

2.2 Major Equipment On-Site

- 2- Rammer (One out-of-order since 27.7)
- 2- Concrete Mixer
- 3- Vibrator
- 2- Water Pump
- 1- Welder
- 1- Drill Machine

3.0 Problems and Delays

- . Work on ancillary buildings R2 and R3 held in abeyance pending removal of existing structures by others.

4.0 Action Required

- | | | |
|------------|---|---|
| BADC | : | <ul style="list-style-type: none"> . Approve insurance policy . Approve design of bridge providing access to site . Action to remove shops at Sen Gupta Road. |
| Contractor | : | <ul style="list-style-type: none"> . Submit monthly progress report . Update construction schedule . Submit working (shop) Drawings . Submit construction photographs . Action on providing incoming power line . Start work on R1 building . Complete the capping and barbed wire of the boundary wall . Fill in R2 and R3 foundations |



5.0 Claims

Contract time extension (FAEL-ADC/AW/84/2388, 23.04.84)

6.0 Work Scheduled Next Month

The Contractor has not submitted a Progress Report for July and thus his program for August is not available. His generalized schedule is attached to this report.

7.0 Shop Drawings

Refer to previous Progress Report for list of approved (A or B) shop drawings.

<u>Drawing No.</u>	<u>Date</u>	<u>Title</u>	<u>Action</u>
01 R1	28.03	Work Schedule Site Development	H
02 R2	28.03	Retaining Wall	H
03 R1	28.03	Pipe Culvert	H
04 R1	28.03	Warehouse	H
05 R1	28.03	Ancillary Bldgs	H

8.0 Financial

<u>Invoice No.</u>	<u>Item</u>	<u>Amount Invoice (Tk)</u>	<u>Payment</u>	<u>USAID Voucher No.</u>
-	Mobilization Advance	8,53,391.12	8,53,391.12	0997
I4-01	Material Prepayment	14,06,400.00	14,06,400.00	1249
I4-02	Material Prepayment	6,26,500.00	(-6,26,500.00)	<u>1/</u> 1753

1/ Amount recovered against Mobilization Advance. Interest, to be determined by USAID, payable by Contractor on outstanding advance and delayed repayment.

9.0 General

- . Monsoon rains and high water level has effected the progress of work.
- . Delay in issuing of Work Order by BADC in removal of existing buildings will effect construction completion.
- . Pending with BADC is approval of design of bridge across existing canal.
- . Concurrence required from USAID on construction of barbed wire fence along property line.
- . Design of retaining wall along existing canal (extra work) requires Engineer's action.

10.0 Variations (Overruns and Underruns)

Estimated Total Contract Price	Tk. 1,70,67,822.35
Change Order I4-01	11,440.00
Change Order I4-02	71,597.30
A4 Excavation -Overrun	10,650.00
A5 Filling with On-Site Material - Overrun	6,106.00

Revised Estimated Total Contract Price Tk. 1,71,67,615.65

Additional Change Orders/Variation under review:

- . Construct bridge across canal
- . Purchase 48" R.C. culvert pipe
- . Construct barbed wire fence
- . Repair/rebuild existing boundary wall at canal
- . Construct retaining wall at canal
- . Construct lean concrete foundation for R2 and R3 buildings.

CONSOLIDATED MATERIALS TESTING REPORT

Project: Fertilizer Warehouses Phase III

For the month July 1984

Site : Chandpur

Material/Test	Spec. No.	No. of Tests	No. Approved	No. Dis-Approved	Remarks/Requirement
A. Select Fill	2E.01-a	5	2	3	Requires F.M. greater than 1.5 and less than 5% passing sieve No.200
B. Concrete Sand	3A.02-b.1	1	1	0	80% Sylhet Sand blended with 20% local sand
C. Mortar Sand	4A.03	2	1	1	60% Sylhet sand blended with 40% local sand
D. Concrete Coarse Aggregate	3A.02-b.2	3	1	2	
E. Bricks: Frogmark: CBM	4A.02	20	18	2	Requires sorting at site
F. Field Density Tests: Select Fill	2E.01	65	47	17	95% MDD
			<u>No. of test at</u> <u>7 days 28 days</u>		
G. Concrete: Compressive Strength Test	3A.03 3A.05	12	32		Min. required strength is 3000 PSI at 28 days
H. 2" Mortar cube (Cement Test)	3A.02	3	-		Min. 2800 PSI at 7 days
I. 2" Mortar cube	4A.03	-	3		Min. 1800 PSI at 28 days

Average 28 day strength of concrete:

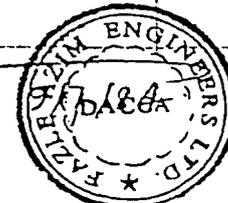
- E.F.O. Floor Slab - 3348 PSI (Av. of 3 cylinders)
- Godown Footings, D7, -2581 PSI (Av. of 2 cylinder)
- " " E4,E5 - 3242 PSI (Av. of 3 cylinders)
- " " E6,B7,C7 - 3751 PSI (Av. of 2 cylinders)
- Godown door column - 4279 PSI (Av. of 3 cylinders)
(N-E)
- Godown Grade Beam(West side)- 4172 PSI (Av. of 3 cylinders)
- Godown Grade Beam (A1 - A7) 3702 PSI (Av. of 3 cylinders)
- Godown Grade Beam (A7 - E7) 3515 PSI (Av. of 5 cylinders)
- Godown Grade Beam (E1 - E7) 3229 PSI (Av. of 3 cylinders)

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REVISED WORK SCHEDULE OF WAREHOUSE

S1	Month	Activities	July '84	Aug.	Sept.	Oct.	Nov.	Dec.	Jan!85	Feb.
1		Filling	=====	=====						
2		Exterior col. upto bottom of beam.	=====	=====						
3		Exterior Brick work i/c bottom vents.		=====	=====					
4		Interior footing and Tie beam.	=====							
5		Interior Columns.		=====	=====					
6		1st half roof slab i/c beams			=====	=====				
7		2nd half roof slab i/c beams					=====	=====		
8		Fitting, fixing ventilators and doors.						=====		
9		Electrical wiring and fixtures			=====	=====	=====	=====	=====	
10		Roof vents i/c water proofing				=====	=====	=====		
11		Flooring work					=====	=====	=====	
12		Cleaning, ractification and hand over								=====

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C. Ancillary Buildings - cont'd

R2: C1 Brick flat soling	-	34%
C2 Plain Concrete Fdn	-	35%
C3 Brickwork to P.L.	22%	88%
C4 Damp Proof course	75%	100%
C5 Brickwork above P.L.	20%	29%
C6 R.C. Column	8%	8%
C9 Reinforcing Steel	9%	9%

D. Water Supply, Sanitary and Plumbing

D6 Concrete Sewer Pipe		
a) 6" dia.	-	6%
b) 4" dia.	-	88%
D7 Inspection Pit	-	10%
D8 Septic Tank	-	2%
D9 Soak Well	-	10%

2.1 Approved Materials On-Site

Portland Cement	- 240 bags = 7 T
Reinforcing Steel	- 77 T
Brick, 1st Class	- 60,000 nos.
Boulders/Crushed Aggregate	- 15,000 cft
Sand, Coarse	- 32,000 cft
Select Fill } Ordinary Fill }	- 26,000 cft
Mortar Sand	- 13,000 cft
Lumber (Formwork)	- 35 cft
Lime	- 8 bags

2.2 Major Equipment On-Site

- 1- Concrete Mixer
- 1- Water pump (Diesel)
- 1- Water pump (Electric)
- 2- Vibrators (Electric)
- 1- Vibrator (Diesel)
- 1- Tractor with trailor
- 1- 1350 kg steel roller

3.0 Problems and Delays

- . Reconstruction of two roadway culverts by Municipality since 8 July 84 hampering carrying of fill materials to site.
- . Strike by Contractor's labourers for 2 days for settlement of wages.
- . Lack of sufficient laborers.
- . Shortage of construction and surcharge material.
- . No daily/weekly work schedule detailing specific targets and responsibilities available at site.
- . Lack of management and planning
- . Non-submittal of working (shop) drawings in time.

4.0 Action Required

- BADC : . Arrange with BR removal of condemned railway wagons, rails and coal from the siding alignment.
. Arrange land from BR as per siding layout.
. Arrange for incoming electric power line.
. Approve insurance policy.
. Action on claim for time extension.
. Settle north boundary line.
- Contractor : . Submit working (shop) drawings sufficiently in advance to construction
. Submit Schedule of Events for godown and ancillary buildings.
. Submit concrete mix design.
. Submit time vs. percent completion schedule.
. Submit construction photographs.
. Comply with insurance warranty concerning fire fighting.
. Engage sufficient laborers to complete surcharge filling early.
. Improve site management.

5.0 Claims This Month: Nil

6.0 Work Schedule for Next Month

The Contractor failed to maintain the construction schedule submitted. The Engineer has directed contractor to submit revised realistic schedule in critical path form.

Refer to Contractor's Schedule for August.

7.0 Shop Drawings

<u>Drawing No.</u>	<u>Date</u>	<u>Title</u>	<u>Action</u>
		Rebar Schedule Engineer's Field Office	B
		Drawing for fixing wooden beam	B
		Beam joint details for EFO	B
R1/SPD-1	15.04	Footing, Column, Stair, Porch, Louver R1, R2 and R3	B
R1/SPD-2	15.05	Public Toilet Slab	B
R1/SPD-2-1	15.05	Floor slab, Roof Slab R1	A
R1/SPD-2-2	15.05	Floor Slab, Roof Slab R1	A
R/SPD/3	- .05	Lintels and Sunshade R1, R2 & R3	B
R/SPD/5	16.06	Reinf. Floor & Roof Slab & Beam details R2	B
R/SPD/6	20.05	False Slab, Tally Office, Chimney, Pump House, Guard House, Gate Pillars, etc.	B
SPD-S-1	-	Sanitary & Plumbing R1, R2 & R3	B

7.0 Shop Drawing - cont'd

24	15.06	Reinf. Floor & Roof Slab & Beam details R2	B
25	16.06	-do-	B
26	18.06	Reinf. Floor & Roof Slab & Beam details R3	B
27	18.06	Reinf. Floor & Roof Slab & Beam details R3	B
53/ELE	17.07	Stair Roof (Typ.)	C
12/Elec.	09.06	Electrical R1	B
13/Elec.	11.06	Electrical R2	B
16/Elec. RJ	13.06	Electrical Public Toilet	A
14/Elec.	.06	Electrical Darwan Qrt.	C

8.0 Financial

<u>Invoice No.</u>	<u>Item</u>	<u>Amount Invoice</u>	<u>Payment</u>	<u>USAID Voucher No.</u>
05-01	Material Prepayment	Tk. 14,96,000	Tk.14,96,000	1225
05-02	Material Prepayment	Tk. 12,16,750	Tk.12,16,750	1571

9.0 General

The overall performance of this Contractor is lagging and much behind the schedule. With planned 90 days settlement period the placing of surcharge was anticipated to be completed by May 84 which would have allowed full monsoon period (June, Jult, August) as preloading time. Contractor's failure to complete this critical item will delay the completion time. Unless the Contractor takes real initiative and drive this site may not be completed before June 1985.

The absence of the Contractor's Project Engineer from the site and when he does appear at mid-morning is not effective site management.

CONSOLIDATED MATERIALS TESTING REPORT

Project: Fertilizer Warehouses Phase III

For the month July 1984

Site : Parbatipur

Material/Test	Spec. No.	No. of Tests	No. Approved	No. Dis-Approved	Remarks/Requirement
A. Select Fill	2E.01-a	2	2	0	Requires F.M. greater than 1.5 and less than 5% passing sieve No.200
B. Concrete Sand	3A.02-b.1	1	1	0	
C. Surcharge Fill	2E.01-a	9	6	3	
D. Concrete Coarse Aggregate	3A.02-b.2	5	4	1	
E. Bricks: Frogmark: W-B	4A.02	10	6	4	
F. Cement	3A.02-a	2	1	1	Cement brand Olympia approved and brand Five flag disapproved
G. Field Density Tests: Select Fill	2E.01	5	5	0	95% MDD
H. Surcharge Field Wet density		7	-	-	Av. wet density 104.0 pcf.

No. of test at
3 days 7 days 28 days

I. Concrete: Compressive Strength Test	3A.03 3A.05		16	12	Requires 3000 PSI at 28 day
---	----------------	--	----	----	-----------------------------

Average 28 day Strength of Concrete:

- E.F.O. Lintel & Sun shade - 2610 PSI (Av. of 2 cylinders)
- E.F.O. Roof Slab - 4076 PSI (Av. of 2 cylinders)
- R.C.C. Column upto lintel for R1 Building - 3643 PSI (Av. of 2 cylinders)
- E.F.O. Floor - 3639 PSI (Av. of 4 cylinders)

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MONTHLY REPORT

Ware House Phase - III

31st July, 1984,

Invitation No. - 09

Site :- 05-Parbatipur.

Contractor :- The Elite Engineers Ltd.

1. General Statement of Progress :-

- a) Surcharge for Pre-load, 5th and 6th layer under Progress, EL. 121.25 and 125.30'.
- b) Completed the Engineers Field Office.
- c) R-1 Building :- Brick work upto (G.F.) roof level, Shuttering for roof completed and started the placing of Reinforcement. Shuttering and reinforcement placing for 2nd Flight of stair case under progress.
- d) R-2 Building :- Casting of Lintel for G.F. Completed. Prepare for stair case and column.

2. Financial

Amount Invoice to-date

Tk. 55,17,316.30

Invoice No.

3

Payment to-date:-

Tk. 25,94,550.00

3. Man Power in favour of Contractor.

<u>Sl.No.</u>	<u>Trade</u>	<u>No.</u>	<u>Working days.</u>	<u>Working hrs.</u>	<u>Total hours.</u>
1.	Project Director	1	19	8	152
2.	Project Engineer	1	21	8	168
3.	Technical Adviser	1	13	4	52
4.	Site Suptd.	1	27	10	270
5.	Site Engineer	4 (4)	27	10	270
6.	Supervisor	4	27	10	270
7.	Accountant	1	27	10	270
8.	Cashier	1	27	10	270
9.	Foreman	3	27	10	270
10.	Driver	1	22	10	220
11.	Operator	1	25	10	250
12.	Store Keeper	1	21	10	210
13.	Tally Clerk	1	27	10	270

3. Man Power

Contd.....P/2.....

3. MAN POWER.

<u>Sl.No.</u>	<u>Trade</u>	<u>No.</u>	<u>Working days</u>	<u>Working hrs.</u>	<u>Total hrs.</u>	<u>Remarks.</u>
1.	Security Guard	6	27	10	1,626	
2.	Office Peon	2	27	10	360	
3.	Mason	153	27	10	1,530	
4.	Skilled Labour	240	27	10	2,400	
5.	Ordinary Labour	1,436	27	10	14,360	
6.	Electrician	27	27	10	270	
7.	Barbender	147	27	10	1,470	
8.	Carpenter	15	27	10	150	
9.	Sanitary Mason	20	27	10	200	

4. EQUIPMENT AT SITE :

<u>Sl.No.</u>	<u>Description</u>	<u>No.</u>	<u>Total Working hrs.</u>	<u>Remarks.</u>
1.	Water Pump	1	310	
2.	Mixture Machine	1	56	
3.	Vibrator	2	51	
4.	Diesel Hammar	1	--	
5.	Electrical Vibrator	2	--	
6.	Small Steel Roller	1	--	

5. MATERIALS AT SITE :

<u>Sl.No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit</u>	<u>Remarks.</u>
1.	M.S. Rod	77	M.Ton.	
2.	Cement	241	Bags.	
3.	Bricks	60,000	Nos.	
4.	Mortar Sand	13,100	Cft.	
5.	Concrete Sand	32,172	Cft.	
6.	Boulder & Chips	15,009	Cft.	
7.	Surcharge Materials Select Fill	30,000	Cft.	
8.	Timber	35	Cft.	
9.	Line	8	Bags.	

6. Over all Progress.

<u>This Period</u>	<u>Schedule</u>	<u>Actual</u>
2.93	49.04	34.73

7. Bottlenecks and Delay :- Main Road was cut off. due to culvert reconstruction. All Select Fill sources were flooded. Continuous rain hampers work almost 2/3 days per week.

Contd..... P/3.....

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- 8. Action Required :- Main Road to be opened.
- 9. Claim Field :- Progress Payment.
- 10. Next Month Schedule :- Submitted.
- 11. Progress Chart :- Enclosed herewith.
- 12. Under Photography :- Under Developt.

<u>Sl.No.</u>	<u>Description</u>	<u>Date of Com. as per schedule</u>	<u>Percentage of completed</u>	<u>Days Required</u>
1.	Mobilisation	10-3-84	100%	----
2.	Preparation of Site	22-4-84	96%	10 days.
3.	E. F. O.	21-4-84	100%	----
4.	Boundary Wall	31-12-84	20%	No more Foundation Excavation due to Seepage of water and heavy Rain.
5.	Public Toilet	10-5-84	75%	15 days.
6.	Select Fill on Godown Area	15-4-84	100%	----
7.	Filling on Railway Embankment and paved Area	30-7-84	10%	Stop the filling due to surcharge for pre-load.
8.	Filling on Anc. Building Area	30-4-84	40%	Heavy Rain fall B-2, B-3 Area under water.
9.	Sanitary	31-12-84	5%	148 days.
10.	Anc. Building B-1, B-2 --	30-11-84	25%	150 days.
11.	Surcharge for Pre-load	30-4-84	30%	15 days.

Work Schedule for Parbatipur Site (05)

Period from 1-8-84 to 31-8-84.

Event	Description	Percentage of completion.	Time Estimate	Schedule		Actual		Remarks.
				Start	Finish	Start	Finish	
1.	Collection of Materials	1%	31 days	1-8-84	31-8-84			1. Surcharge Materials - 1,00,000 cft. 2. Cement - 250 bags. 3. Lime - 20 bags. 4. Bamboo - 150 Nos. 5. Timber - 250 cft.
2.	Surcharge for Pre-Load	70%	15 days	1-8-84	15-8-84			100% Completed.
3.	Public Toilet	5%	7 days	25-8-84	31-8-84			Floor Casting, Plaster Work, Sanitary etc.
4.	B-1 Building	30%	27 days	1-8-84	31-8-84			G.F. roof complet and B/W for 1st floor upto lintel level.
5.	B-2 Building	20%	26 days	3-1-84	31-8-84			B/W upto roof level and Casting of G.F. Slab.
6.	B-3 Building	—	2 days	30-8-84	31-8-84			Lay-out completed.

31 July 1984

INVITATION NO.8 : L4-DOMAR

CONTRACTOR : M.S. Khan & Heirs Ltd.

Total Contract Price : Tk.74,99,255.00

Change Orders : Tk.

Revised Contract Price : Tk.74,99,255.00

Payments To Date : Tk.

Retention To Date : Tk.

L/Com. No. : 388-002410

Date of L/Com. : 31.01.84

Issue Date of L/Com. : 02.02.84

Amount of L/Com. : Tk.74,99,255.00

(\$301,590.00)

L/Com. Amendment No.1 : 14.02.84

Date of Contract : 12.01.84

Site Handed Over : 25.01.84

Notice To Proceed : 02.02.84

Contract Terminated : 04.03.84

CONTRACT TERMINATED by CE Memo No.2995, 04.03.84 under Clause 80 of Conditions of Contract. Contractor's final claim under assessment by the Engineer.

II. CONSULTANT'S ACTIVITIES

FINANCIAL - PROGRESS SCHEDULE

FINANCIAL

Total Procurement Budget	- \$ 2,014,567
Special Project Activity	- \$ 245,498
Total Contract Budget	- \$ 2,260,065

Estimated Expenditures To-Date - \$ 1,251,122

% Expenditure to Total Contract Budget - 55.4%

PROGRESS

Elapsed Contract Time	- 600 days
Remaining Contract Time	- 334 days
% Elapsed Time	- 64.2%

B. ADMINISTRATION

1. The Consultant's Agreement

- . Contract Agreement signed - 09 December 1982
- . Effective Date - 09 December 1982
- . AID Letter of Commitment No.388-0024-3-30381 - 15 December 1982
- . Duration - 30 June 1985* (30.74 mos)
- . Months Completed - 19.74 months

* Amendment No.1 dated 28.03.84

2. Expatriate Staff

		<u>Man-Months</u>	
		<u>Allocated</u>	<u>Utilized</u>
George A. Pecht	- Project Manager	27	18.25
Klaus Thieme	- Chief Construction Engineer	25	13.78
C.N. McCormick	- Foundation Engineer	11	11.17
	- Structural Engineer	6	4.91
Y.O. Kim	- Project Engineer	16	4.93

3. Contract Administration

- . Mr. Klaus Thieme arrived in Dhaka on 25 July and took up his duties as Chief Construction Engineer.
- . USAID extending Project Assistance Completion Date (PACD) to July 28, 1986 (AID Letter No.671, 03.05.84)
- . Engineer's Field Offices are being furnished for overnight lodging and eating accommodations for key personnel.

4. Meetings

- . BADC/USAID/A&W monthly review meeting
- . Consultant's periodic staff review meetings.
- . Meetings with construction contractors.

B. ADMINISTRATION

1. The Consultant's Agreement

- | | |
|--|-----------------------------|
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4. Meetings

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- . Meetings with construction contractors.

II. Consultant's Activities

5. Supporting Bangladeshi Personnel

5.1 WEL and SSL Personnel (Sub-Contractor)

<u>Designation</u>	<u>Man-Month</u>	
	<u>Allocated</u>	<u>Utilized</u>
Deputy Project Manager	27	18.8279
S&M Engineer	24	21.2728
Structural Engineer	9*	9.0388
Architect	4	3.8389
Electrical Engineer	6	6.0000
Railway Engineer	24	16.9089
Office Engineer	26	18.8656
Land Procurement Officer	18*	16.1366
Surveyor	25	17.6096
Instrument Man	25	17.5664
Rodman	25	11.8222
Chainman	25	17.2215
Draftsman	69*	53.8458
Laboratory Technician	56	46.1569
Laboratory Assistant	56	26.6474
Estimator	48	23.8943
Senior Field Engineer	60	35.7146
Field Engineer	80	24.6931
Inspectors	128	40.1951
Drivers	94	22.4000
Messenger	34	-
Peon	34	-
Guard	68	-
Clerk	34	-
Typist	34	-

5.2 Administrative Personnel

Administrative Manager	27	19.2324
Senior Accountant	27	19.5844
Assistant Accountant	44	17.8839
Secretary	27	19.5368
Printer	27	17.9069
Typist	72	47.6417
Clerk	45	24.3623
Drivers	103	73.2897
Messenger	45	16.8160
Peon	72	50.5433
Guard	90	85.7518
Radio Operator	48	-
Office Superintendent/Asst.Accountant	34	6.3478

Adjusted

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II. Consultant's Activities

6. Project Expenditures
(Estimated Project Cost Incurred)

<u>Item</u>	<u>Agreement Budget</u>	<u>Adjusted Budget</u>	<u>This Month</u>	<u>Cumulative</u>
Services in Bangladesh \$	746,188	\$ 790,172	\$ 25,381	\$ 509,052
Services in Home Office	176,178	176,178	-	133,499
International Travel, etc	85,740	85,740	2,770	24,158
Housing Allowances				
Per Diem etc.	91,075	102,775	2,505	61,019
Logistic Costs	223,400	223,400	4,430	91,864
Supporting Staff	382,404	387,842	13,002	171,021
Misc. Direct Costs	43,000	43,000	81	9,516
Fixed Fee	205,460	205,460	7,610	152,200
	<u>\$ 1,953,445</u>	<u>\$ 2,014,567</u>	<u>\$ 55,779</u>	<u>\$ 1,152,329</u>
Percent of Estimated Budget			2.77%	57.20%
Percent Contract Time (To 30.06.85)				64.22%
Special Project Activity	306,620	245,498	725	98,793
	<u>\$ 2,260,065</u>	<u>\$ 2,260,065</u>	<u>\$ 56,504</u>	<u>\$ 1,251,122</u>
	=====	=====	=====	=====

7. Billing and Payment

<u>Invoice</u>	<u>Period Ending</u>	<u>Billing</u>	<u>Payment</u>
01-15	31 May 84	\$ 1,082,039.61	\$ 1,075,586.43
16	30 Jun 84	\$ 57,113.96	Under Process

8. Reports

- . Monthly Progress Report No.19 for June 1984 submitted by letter /2085, 12 July 1984

C. TECHNICAL1. Summary of Consultant's Activities During This Month

Mr. Klaus Thome arrived in Bangladesh and took up his duties as Chief Construction Engineer.

The Engineer continued monitoring the construction work of the Contractors at each of the sites. Concrete cylinders were prepared from each concrete pour and tested a 7-day and 28-day to determine if strength conformed to specification requirements. In two cases, Chandpur and Lakshmipur, the concrete work was rejected because of low strength and the contractors directed to take corrective action.

Brick samples were tested at the sites to determine if they met specification requirements as to strength and dimensions.

Other materials (select fill, mortar sand, cement) were tested in the field and Dhaka laboratory to determine acceptance level for the project.

The field staff prepared punch list for items of work nearing completion for contractor's action to complete/rectify/repair as required. Of special concern to the Engineer is the complete lack of painting techniques and non-compliance to painting specification demonstrated by all contractors except at Chandpur. The Engineer called each contractor's attention to Section 9A of Specification which calls for removal of hardware and use of drop cloths.

The Project Manager and Deputy Project Manager, supplement the site monitoring by the Chief Construction and Project Engineer by weekly site inspection trips.

The Soils and Materials Engineer was directed to present at each site the following series of slides on soil and concrete testing demonstrating proper techniques to be used.

SOIL TESTING SERIES

- | | | |
|-------|--|-----------|
| F-132 | - Test for density of soil in-place by the sand cone method | - 25 min. |
| F-111 | - Test for moisture-density relations of soils-modified compaction | - 25 min. |

CONCRETE TESTING SERIES

- | | | |
|-------|---|-----------|
| F-203 | - Testing for slump of portland cement concrete | - 17 min. |
| F-200 | - Compressive strength of molded concrete cylinders | - 20 min. |

In the office the Engineer is engaged in checking working (shop) drawings submitted by the contractors, preparing supplemental and clarifying details, preparing Change Orders, and construction administrative functions. Work at each site is monitored by daily thru radio communication network and timey decisions made on site problems or questions raised.

Comments by BADC and USAID personnel on their site inspection visits receive immediate attention of the Project Manager.

- Analyzing contractor's claims and informing contractors of Engineer's decision.
- Preparing Change Orders as required.
- Determine variations (overruns and underruns) due to changed field conditions.
- Continuing testing at central laboratory and in field of materials to be incorporated in permanent work.
- Issued reminders to the contractors to comply with the Conditions of Contract and Technical Specifications by submitting required documents
- Issued field message giving directions to contractors as required.
- Follow up on compliance with field message.
- Prepare instruction for contractors' and Engineer's personnel guidance in control of work and materials.
- Prepare and submit Monthly Progress Report.
- Monitoring resolution of site possession and removal of obstructions.
- Kept Manager (Storage) BADC, informed of obstructions and other problems at site.
- Held scheduled meetings with each of the Contractors' and Consultant's key personnel.
- Continued site inspection, construction surveillance, and filing reports for action by key staff members.
- Continued monitoring availability of construction materials.
- Key staff members continuing inspecting sites and instructing Engineer's and Contractors' personnel on procedures.
- Spot checking materials and work approved by field staff.
- Checking shop drawings submitted.
- Monitoring contractors' progress against their construction schedules.
- Reviewing contractors' revised work schedule.
- Processing contractors' invoices for payments.
- Monitoring contractors' proposed preloading sequence and subsequent material utilization.
- Monitoring settlement platform elevations at sites surcharged.
- Processing contractors' claims.

- Items requiring follow-up:
 - . Monitoring field testing procedures and test results
 - . Monitoring activity and performance of field staff
 - . Monitoring compliance to field message issued by field staff
 - . Resolving of land problems by BADC
 - . Obtaining clearance from BR by BADC
 - . BADC action in obtaining incoming power line to sites
 - . Continue monitoring results of settlement platforms
 - . Assist contractor at Lakshmipur to develop sequence of paving operations so not to hinder off-take/on-take of fertilizer
 - . Review drainage design at each site on basis of experience during this monsoon period
 - . Review methods of stabilizing soils from erosion and rain-cuts.



2. Railway Siding

BR proposed to hand over 0.63 acres of land to BADC for the construction of railway siding at Kishoreganj. The proposal was looked into and the Engineer demarcated area (0.63 acre) to be taken over by BADC from BR. Follow up by BADC as required (/2003, 16.6.84).

BADC to request BR to take action for removal of box cars, carriages, stockpile of coal, etc. from portion of alignment of the proposed siding at Parbatipur to enable the Contractor to do the embankment work uninterrupted.

Summarizing outstanding issues:

1. Approval of Kishoreganj siding layout plan (/2003, 16.06.84)
2. Cost estimate for three phase III sidings. (/1712, 07.05.84)
3. Materials/equipment to be furnished by BR. (/1712, 07.05.84)
4. Resolve issue at Parbatipur site noted above. (/2059, 03.07.84)