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Libby

**Bangladesh Agricultural Development Corporation
USAID Fertilizer Distribution
Improvement Grant 388-0024**

**Engineering Consultancy Services
Contract for Bagged Product
Fertilizer Warehouses Project**

MONTHLY PROGRESS REPORT NO. 44

MAY 1983

**CONSULTING
ENGINEERS**

INTERNATIONAL ENGINEERING COMPANY, INC.

A HARRISON-KNUDSEN COMPANY

**Bangladesh Agricultural Development Corporation
USAID Fertilizer Distribution
Improvement Grant 388-0024**

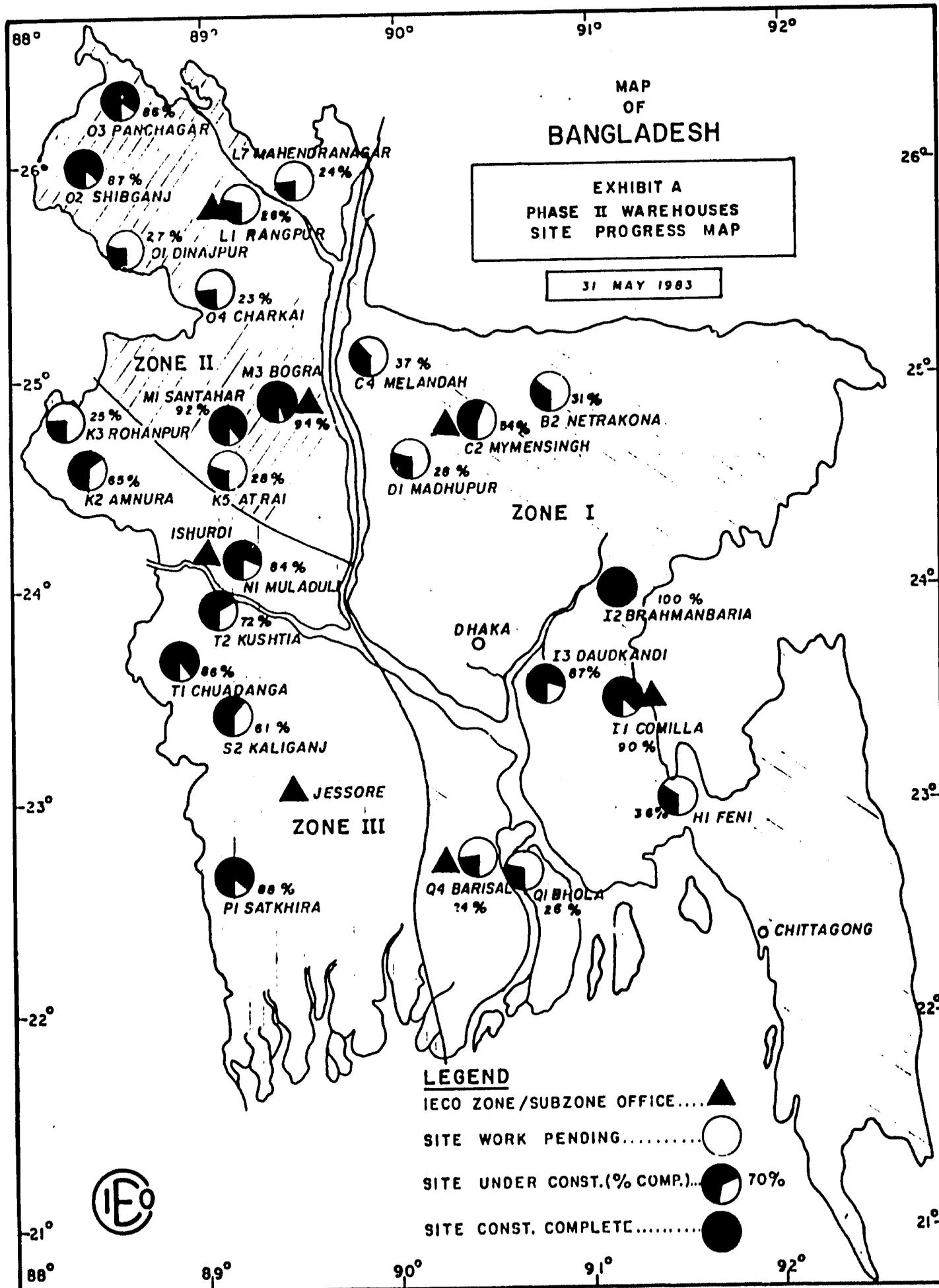
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Drawn : A. K. Roy.

MONTHLY PROGRESS REPORT NO. 44
MONTH OF MAY, 1983
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CONTRACT 9074
9 June 1983

BANGLADESH AGRICULTURAL DEVELOPMENT CORPORATION
ENGINEERING CONSULTANCY SERVICES CONTRACT
FOR BAGGED PRODUCT FERTILIZER
WAREHOUSE PROJECT

INTERNATIONAL ENGINEERING COMPANY, INC.
CONSULTING ENGINEERS

MONTHLY PROGRESS REPORT NO. 44
FOR THE PERIOD MAY 1-31, 1983

1. GENERAL

Construction progress in May generally matched work programs on the new bar chart schedules for individual sites, with only a few exceptions. The new overall progress schedule herein following the report texts incorporates the new sitewise completion schedules in summary form. The individual site reports in Section 8 provide details of the work accomplished.

The account of progress at the end of May versus scheduled progress on this date is included in the following summation. The status of the work program in each of the Zones is as follows:

The ten Zone-I sites in the east, north and south (see map) together represent 32.3% of the Phase-II construction program in terms of anticipated construction cost. This anticipated cost has been adjusted in the Contract Financial Summary included following the report texts. Work completion in Zone-I has reached 52.7% against 51% in the new schedules. Sitework completion ranges from 100% at Brahmanbaria and 90% at Comilla down to 24.4% at Darisal. Site completions are scheduled for end of July at Comilla and Daudkandi.

The nine Zone-II sites in the northwest (see map) represent 46.0% of the re-projected construction cost of the Phase-II program and the sites are 62.7% complete against the 64.3% in the new schedules. Work completions range from 93.5% at Bogra (reassessed) down to 22.9% at Charkai. The two sites due to be finished at end of June, Bogra and Shibganj, will probably not be completed until July, though special efforts are being made by the Engineer to assist the Contractor in scheduling final tasks.

The seven Zone-III sites in the southwest (see map) represent 21.7% of the estimated construction cost of the Phase-II program and the sites are 68.1% constructed against the 67.7% scheduled in the new bar charts. Sitework completions range from 88.0% at Satkhira and 86.3% at Chuadanga down to 24.6% at Rohanpur. The former two are scheduled to be completed by end of July, and special efforts are being made by the Engineer to assist the Contractor in programming and carrying out the finishing works to meet this schedule.

Overall, the Phase-II construction program is 60.6% complete against the 60.8% planned in the new bar chart schedules. Progress in May was 6.2%, almost matching the 6.4% scheduled for accomplishment. With one site now completed and nine other sites nearing completion KDC must organize crews to carry out the necessary finishing works as promptly as possible. IECO is preparing punch lists of finishing works and is scheduling special inspection assignments to assist KDC in programming the work.

DCS staff increased by 3 to 149 personnel at end of May, and IECO local staff increased by one to 20. IECO and DCS force reports are appended.

2. CONTRACT ADMINISTRATION

Change Orders

- At DADC for signature approval:

C2-007 Mymensingh Files
C4-009 Malandah Files
D2-010 Natrakona Files
Revised Water Supply System C.O.'s
I2-011 Brahmanbaria
I1-012 Comilla
I3-013 Daudkandi
O3-014 Panchagar
M1-015 Santahar
O2-016 Shibganj
M3-017 Logra
P1-018 Satkhira
T1-019 Chuadanga
N1-020 Muladuli

Railway Siding Material Procurement

- Addendum 4 which extended the bid opening date to 15 June was issued. Sale of Tender Documents closed 3 May.

Amendment No. 1 to DADC/KDC Contract

- Under review by Ministry of Agriculture and DADC.

Subcontracts

- KDC submitted a subcontract for Madhupur Ancillary Buildings.

3. CONTRACT EXPENDITURES

May, 1983 Taka expenditures reimbursable by USAID were:

Local Salary	75,993.00
Office Supplies & Expenses	43,822.30
Dhaka Office Rent/Maint./Utilities	14,093.08
Area Office Rent/Maint./Utilities	19,308.14
Office Furniture & Equipment	8,035.00
Vehicle Operation	104,749.34
Soils Lab. Works	1,093.00
House Rent/Maint./Utilities	7,855.25
DCS	795,433.84
Local Travel	30,262.50
Custom Clearance	71.20
Expat Per-diem & Hotel	9,955.00
Miscellaneous	7,402.10

Total Taka:

1,118,073.75

Expenses reimbursable through DADC's Duties & Taxes Account were Taka 44,505.02.

April's expenditure budget is appended.

4. EXPATRIATE STAFF - IECO

In-country expatriate staff during May:

F.E. Isgrig	Project Manager
C.F. Leonhardt	Chief Field & Construction Engineer
D. Lovely	Contract Administrator
M. Lim	Construction Engineer
S.J. Hewick	Construction Engineer
H. Tchen	Construction Engineer
A. Htay	Materials Engineer (Demobilizing 7 June)

5. MEETINGS

17 May	BADC/IECO KDC	Dayworks responsibilities, Duty and Tax account funding.
23 May	BADC/KDC USAID/IECO	Progress Meeting No. 23. Brahmanbaria Takeover, Materials, Construction Problems, Schedules, Amendment No. 1, Instructions to Contractor, Change Orders, Progress Report by site.

6. PENDING ACTIVITIES AND ACTIVITIES IN PROGRESS

6.1 For action by DADC

1. Site clearance /obstruction removal activities:

- Rangpur - Burma-Eastern sought some modifications in the draft memorandum of understanding for construction of pipelines and decanting sumps. IECO has given its comments. DADC to finalize the agreement. One power pole and one telegraph post coming in the alignment of DE's extended siding need relocation.
- Comilla - Guy poles blocking access for construction of rail siding, embankment have been removed.
- Netrakona - Power pole on the access road has been relocated.
- Dogra - One guy wire still remains in the alignment of off-site railway embankment. This requires relocation.

6.2 For action by IECO

Finalise cost estimates of rail siding in conjunction with DR and have ER submit them to DADC for approval of DADC & USAID. To compile cost estimates with agreed items of works, representatives of ER and IECO are scheduled to meet at the beginning of June.

7. ENGINEERING ACTIVITIES

7.1 Materials & Foundation Engineering

Driving of precast concrete piles was completed during this month at Atrai, the last of the eleven sites requiring pile foundations.

Onsite soil samples were collected from Rohanpur for triaxial strength tests. The test results will be used in the stability calculations of the slope protection works. A complete set of drawings, charts and preliminary stability calculations for Rohanpur were sent to IECO/San Francisco for further detailed analysis. Soil parameters will be telexed when soil tests are completed.

Gradation tests on concrete aggregates and imported soil materials, and field density tests on engineered fill, were carried out at Comilla, Feni, Dhola, Darisal, Mymensingh, Madhupur, Melondah Bazar, Natrakona, Dinajpur, Charkai, Atrai, Rohanpur, Amnura, Kushtia, Kaliganj, Chuadanga and Satkhira.

Crushing strength tests were carried out at Dhaka and at the zonal laboratories on concrete cylinders from Comilla, Feni, Daudkandi, Dhola, Darisal, Mymensingh, Madhupur, Melondah Bazar, Natrakona, Shibganj, Santahar, Atrai, Rohanpur, Amnura, Muladuli, Kushtia, Kaliganj, Chuadanga and Satkhira.

Bricks, concrete sand, and aggregate samples were tested at Dhaka laboratory for possible use at Comilla, Feni, Dhola, Darisal, Madhupur, Melondah Bazar, Natrakona, Rangpur, Mahendranagar, Dinajpur and Atrai.

Consistency, setting time, and mortar tests were carried out on "UNIVERSAL" brand cement samples, with satisfactory results.

Consolidated reports on materials tests carried out at the IECO laboratories in Dhaka and at the Zonal offices are presented in the following pages.

7.2 Office and Field Engineering

The Rohanpur site plan was modified with revised limits for fill construction. Finishing details of public toilet were developed. Atrai parking area, boat basin and drainage channel at Atrai are under study for modification. Standard details of apron of godown were added and sections of ballasting MG and FG track were modified.

Darisal post stripping survey data was plotted up. Pontoon anchor block details at Daudkandi were finalised. An as-built site plan of Brahmanbaria was developed for finalizing. Detailed manufacturing drawings of railway points and crossings (turnouts) were being traced for the guidance of successful tenderers.

The alignment of special layouts connecting railway yard and BADC siding at Santahar was surveyed. Development of drawing is in progress.

Netrakone and Melandah sites were jointly inspected by representatives of IECO and DR and items of siding construction works agreed upon. Thirteen sites have now been jointly inspected and agreed items identified. The site remaining for joint inspection is Cmilla. Cost estimates are in preparation by DR, and joint review of these costs with IECO is to be made early in June.

CONSOLIDATED REPORT
MATERIALS TESTING

Laboratory Reporting:
Dhaka

Reporting Period:
From 26 Apr. To 25 May

CONCRETE		No. of Tests at			Samples Passed at 28 days	Remarks
Compressive Strength Test Site	Location	7 days	14 days	28 days		
Mymensingh	Shear wall, column, platform. road pavement.	2	-	4	3	Lab. cyl. failed. Field cyl. also failed. Hammer tested & okay.
Melandah	Pile cap.	-	-	3	3	All passed
Madhupur	Shear wall & column.	-	-	4	4	All passed
Barisal	Trial Mix	1	-	1	1	All passed
Bhola	Extension of R.C. pile.	1	-	-	-	-
Feni	Wall foundation, grade beam, int. & ext. column, shear wall, trial mix.	9	2	7	4	Three lab. cyl. failed. Two considered passed on the basis of 7 day result. Requested field cyl. for the third.
Comilla	Platform, stair of platform, floor slab, lintel & sunshade of ancl. building.	6	-	8	7	One lab. cyl. failed. Asked for field-cured cylinder.
Daudkandi	Brick gabion, river slope protection, river pavement marine area.	-	-	10	8	Two lab. cylinders failed. Field-cured cylinders tested and passed.

Contd...

CONSOLIDATED REPORT
MATERIALS TESTING

Laboratory Reporting:
Dhaka

Reporting Period:
From 26 Apr. To 25 May

Materials & Tests	Particulars	Tests Total	Tests Passed	Remarks
<u>BRICK</u> Absorption Test	From Marks- JBC, L/T-83, DM-83, MAR, MAF, SONALI, CBM, MAM, RBC, RANA-83, NAZ- 83, PROGOTI-83, PADMA, KCL, JONI-83, MHU, KMC, GAZI-83, SBM, HBM, CBI, ROYAL, NABARUN, BIE.	24	17	From marks passed: L/T-83(01), DM-83(L1, L7), MAR(D1), SONALI(D1), CBM (I1), MAM(I1), RANA-83 (K5), JONI-83(L1), MHU (D1, B2), KMC(C4), GAZI-83 (04), CBI(01), ROYAL(01), NABARUN(01), BIE(01), NAZ-83(01), KCL(L1).
Compressive Strength Test		24		
Stack Test	ABM, CBM, LUWA-83, MAK	102	44+58	44 stacks passed: 7 ABM(01), 8 LUWA-83 (04), 29 CBM(I1). 58 stacks need resorting 3 ABM, 22 LUWA-83, 28 CBM & 5 MAK.
<u>FINE AGGREGATE</u> Gradation Test		14	7	Tests passed: 4(L1), 1(H1), 2(04).
Field Density Test		58	53	Tests passed: 40(I1), 13(H1).
<u>COARSE AGGREGATE</u> Gradation Test		12	12	Tests passed: 4(L1), 1(H1), 3(01) & 4(04).
<u>IMPORTED MATERIALS</u> Gradation Test		136	117	Tests passed: 117(04).
Field Density Test		65	63	Tests passed: 24(I1), 39(04).
<u>SPECIAL</u> Cement Test Universal Brand	Setting time, 2" mortar cube strength test (3-day, & 7-day)	6	6	

CONSOLIDATED REPORT
MATERIALS TESTING

Laboratory Reporting:
Mymensingh

Reporting Period:
From 26 Apr. To 25 May

CONCRETE		No. of Tests at			Samples Passed at 28 days	Remarks	
Compressive Strength Test Site	Location	7 days	14 days	28 days			
Mymensingh	Shear wall, road pavements, interior col., tie beam	7	-	4	4	All passed	
Madhupur	Roof slab of godown, shear wall, interior column etc.	8	-	4	4	All passed.	
Melandah	Pile cap, grade beam, shear wall	3	-	2	1	One lab-cured cyl. failed, but field-cured cyl. tested & passed.	
Netrakona	Precast R.C. pile, river stair, pile cap	7	1	4	3	One cyl. failed, but field-cured sample passed. Also one cyl. tested at 10-day age.	
Materials & Tests		Particulars			Tests Total	Tests Passed	Remarks
BRICK (STACK TEST)		From Marks -					
Compressive Strength Test		A. BARI, PURBANI, MAR, AAS, R&B			72	17+55	17 stacks passed 5 A. BARI (C2), 1 MAR (D1), 2 AAS (C4), 9 R&B (B2). 55 stacks need resorting. 7 A. BARI, 9 MAR, 5 PURBANI, 18 AAS, 16 R&B.
FINE AGGREGATE							
Gradation Test					7	6	Tests passed 1(D1), 2(C4), 3(E4)
Lab Compaction Test.					2		
Field Density Test					8	0	
COARSE AGGREGATE							
Gradation Tests					14	10	Tests passed 1 (C2), 5 (D1) 1 (C4), 3 (B2)
IMPORTED MATERIALS							
Lab. Compaction Test.							
Field Density Test.					48	44	Tests passed 14 (D1), 30 (C4)
SPECIAL							
Cement Test							

CONSOLIDATED REPORT
MATERIALS TESTING

Sheet 1 of 2

Laboratory Reporting:
Rangpur

Reporting Period:
From 26 Apr. To 25 May

CONCRETE		No. of Tests at			Samples Passed at 28 days	Remarks	
Compressive Strength Test Site	Location	7 days	14 days	28 days			
Santahar	Godown ancl. road, bound. wall	19	7	44	43	One lab. cyl. failed. Field cyl. also failed. Hammer tested & okay.	
Shibganj	Godown road	1	5	25	24	One lab. cylinder failed. One field cyl. failed also. Hammer tested and failed. Conc. removed.	
Rangpur	Godown	2	-	-	-	-	
Pan-bagar	Ancl. bldg.	-	-	2	2	All passed	
Mohendra-nagar	Godown	14	3	4	4	All passed	
Dinajpur	Godown ancl. bldg.	13	6	12	12	All passed	
Atrai	R.C. Pile	6	2	10	10	All passed	
Charkai	Godown	13	1	5	3	Two lab. cyl. failed. One field cured cyl. tested and found okay. Other field cyl. to be tested.	
Materials & Tests		Particulars			Tests Total	Tests Passed	Remarks
BRICK STACK TEST		Frog Marks -			308	201+106	201 stacks passed: 64 STAR(M1), 37 MU-83(M1) 24 UC(M1), 25UBP(M1), 30 BSB(M1), 4MB(M1), 1 PW-83N(O2), 2WM-83(L7) 1 DBM(O1), 7KB(K5), 5 MB(K5), 1 DBM(O4). 106 stacks needs re-sorting: 17 STAR, 11MU-83, 11 MU-83, 12UC, 19UBP, 11 BSB, 8MB, 3WM-83, 2 DMB, 1KB, 6MB, 2DMB, 1 PW-83N.
Compressive Strength Test		MU-83, UC, UBP, STAR, BSB, MB, PW-83N, WM-83, DBM, KB, MB, DBM.					

Contd...

CONSOLIDATED REPORT
MATERIALS TESTING

Laboratory Reporting:
Rangpur

Reporting Period:
From 26 Apr. To 25 May

Materials & Tests	Particulars	Tests Total	Tests Passed	Remarks
<u>FINE AGGREGATE</u>				
Gradation Test		12	12	Tests passed: 2(L1), 6(L7), 4(O4).
Unit Weight Test		1	-	-
Field Density Test		695	695	Tests passed: 68(M1), 139(L1), 157(L7), 128(O1), 203(O4).
<u>COARSE AGGREGATE</u>				
Gradation Test		5	2	Tests passed: 1(L1), 1(L7).
<u>IMPORTED MATERIALS</u>				
Gradation Test		108	108	Tests passed: 27(M1), 8(L1), 68(K5) 5(O4).
Field Density Test	Engineered fill	724	724	Tests passed: 399(M1), 17(O2), 146(L1), 12(L7), 142(K5), 8(O4).
<u>SPECIAL</u>				
Cement Test		-	-	-

**CONSOLIDATED REPORT
MATERIALS TESTING**

Laboratory Reporting:
Ishurdi

Reporting Period:
From 26 Apr. To 25 May

<u>CONCRETE</u> Compressive Strength Test		No. of Tests at		Samples	Remarks
Site	Location	7 days	28 days	Passed at 28 days	
Amnura	Roof slab, road pillar, anc. bldg. platform	15	18	17	One failed but reserved cyl. passed
Muladuli	Fence pillar, railway platform, penthouse, roof slab.	3	6	6	All passed
Satkhira	Expt. floor slab, anc. bldg. slab on gate penthouse.	2	2	2	All passed
Kaliganj	Roof slab lintel, road, public toilet, stair case.	14	11	11	All passed
Chuadanga	Roof slab, penthouse, slab on grade.	1	5	3	2 failed but two reserved cyl. passed.
Kushtia	Platform, anc. bldg. road pavement	7	12	11	One failed but reserved cyl. passed.
Rohanpur	Wall foundation, col. footings platform, exterior col.	3	6	3	3 failed. 2 reserve cyl. passed, 3rd one requested.
<u>CONCRETE:</u>	<u>Test Hammer</u>			<u>Tests</u>	<u>Tests</u>
Site	Location			Total	Passed
Rohanpur				8	8
					All passed 8 (K3)
<u>Materials & Tests</u>		<u>Particulars</u>			
<u>BRICK (STACK TEST)</u>		Frog Marks - ARK		41	31
Compressive Strength Test		HYE		50	43
<u>FINE AGGREGATE</u>					
Gradation Test				2	2
Sand Fill Density Test				432	377
Lab. Compaction Test		Domar Sand		1	-
<u>COARSE AGGREGATE</u>					
Gradation Test				3	3
<u>IMPORTED MATERIALS</u>					
Gradation Test				1	1
Field Density Test		Eng'd Fill		454	447
On-site Materials				14	14
Lab. Compaction Test				3	-
<u>SPECIAL</u>					
Cement Test		Paper-bagged Olympia		2	2

8. CONSTRUCTION SURVEILLANCE

8.1 General

Individual site status reports in this section relate the progress attained to the new bar chart schedules adopted for the program. An overall assessment of the construction status is made in Section 1.

Site-specific performance in May was as follows:

8.2 Zone I (Coxilla)

I2 Brahmanbaria

During the month final finishing works were in progress. KDC successfully completed the 24-hour water system pressure test and chlorination of the water system. The Engineer issued the Completion Certificate to KDC for this site, with effect from 9 May 1983.

During the 6-month maintenance period some additional works are to be accomplished including the following:

- 1) Install door stops to protect the wall plaster in all ancillary buildings (additional work).
- 2) Install water stops on all godown doors to prevent entry of water during storms (additional work).
- 3) Install steel plate edge protectors on loading dock slabs (additional work).
- 4) Enlarge the urinals in Public Toilets (modification).
- 5) Perform in-use water system testing (spec. requirement).
- 6) Re-grade slope sod, for pavement drainage (rectification).
- 7) Repaint the deteriorating exterior whitewash on godown and ancillary buildings (repair & maintenance).

The permanent connection to the PDB electrical power supply remains to be arranged by BADC. This is a critical item as power supply is required for residence of BADC staff. It is expected that BADC will occupy the site and initiate operations in early June.

11

I3 Daudkandi

The remaining 4000 SF of godown temporary brick floor soling was completed during the month, as were the brick aprons around the godown. All godown plastering was completed by month end. During the month, godown window glass-panels were installed, and painting of doors and louvers was completed. Electrical wiring inside the godown was ongoing and the installation of light fixtures was in progress. Testing of a trial whitewash mix was made on a section of godown exterior wall. Results remain to be determined, after observation.

At month end, approximately 95% of the brick soling work was completed in the parking area. A permanent tubewell was sunk 80' deep for water supply to the ancillary buildings.

Plastering in all ancillary buildings was completed during the month. Electrical wiring, plumbing, sanitary lines, fixing of window grills and installation of doors and windows continued on the ancillary buildings.

The frame, hull, sides and deck of the 100' pontoon barge were fabricated at KDC's Narayanganj yard during May. The pontoon is 65% complete.

During May approximately 18.9% progress (adjusted basis) was achieved against 9.2% planned. Overall progress of work at the end of May stands at 86.9% against 77.5% planned under the new schedule. It is expected that the site can be completed by the end of July or early in August 1983.

I1 Comilla

The remaining 23,888 SF of built-up roofing was installed during May and at month end the roofing work was 100% complete. In addition, 1094 SF of steel louvers were installed to complete the required 2394 SF. At month end 20,000 SF of plastering was added on the godown walls, bringing this work to 95% complete. Neat cement finishing was 97% complete by the end of May. Ten godown steel doors were installed and approximately 43 cy of concrete slab was poured on eight platforms. Inside the godown, approximately three bays of temporary brick soling were completed and the brickwork on the outside aprons was 75% complete.

On exterior sitework, rail siding fill construction was completed and grass sodding placed.

The brickwork for ancillary building A1 was completed during the month, including penthouse. The penthouse roof slab was poured. Door and window frames were being installed and inside plastering continued. Built-up roofing was completed on the B1 and C1

buildings and door and window frames were being installed. All brickwork and the roof slab for the public toilet were completed and brickwork for installation of sanitary inspection pits continued.

During May approximately 11.0% progress was achieved against 8.0% planned. The overall progress of work at the end of May stands at 90% against the 88% scheduled. KDC made good progress at this site during the month. If the temporary brick floor soling of godown and the sanitary and electrical work of ancillary buildings are continued in progress, KDC will be able to complete this site by the end of July, as now scheduled.

H1 Feni

During the month, all interior footings were completed, while the exterior footings including wall footings were approximately 95% complete. Concrete columns and shear walls were 25% constructed against the 30% planned. At month end, the sand fill inside the godown was also started.

The concrete support system for water storage tanks on the C1 building was installed. About 800 LF, or 87%, of boundary wall was complete at month end.

No progress was made on the drainage channel during May due to local flooding and soaked ground. Special efforts are being made to have this channel completed during the month of June.

During May approximately 9.7% progress was achieved against 7.5% planned.

The overall progress of site-work at the end of May stands at 36.0% against the 33.9% planned under the new KDC bar chart schedule.

C2 Mymensingh

During May some 26 cy of concrete was poured on interior columns, for 94% completion against 100% scheduled. In addition, 25 cy of concrete was also poured in tie beams and canopies, resulting in 75% of that work being completed against 40% scheduled. About 67 cy of concrete was poured in roof beams and roof slab; 12% of that work now complete against 20% scheduled. Approximately 1488 SF of godown brick wall was placed during the month to bring the work to 80% complete against 100% scheduled. The progress on electrical work was 8% against 10% scheduled.

About 40% of road pavement was completed by the end of the month, ahead of planned schedule. Some 250' of boundary wall was constructed, bringing the percent complete to 65% against 60% scheduled. The drainage channel was 70% complete at month end.

During May approximately 10.7% progress was achieved against 8.0% planned. Overall progress of sitework at the end of May stands at 54% against the 51.2% planned in the new KDC bar chart schedule.

D1 Madhupur

During May approximately 12,500 cf of sand fill was placed inside the godown area bringing the completion to 56% against 60% scheduled. About 22 cy of concrete were poured in columns and shear walls during the month resulting in 80.6% of that work completed against 85% scheduled. Approximately 210 cy of concrete was poured in roof beams and slab, for 29% completion against 20% scheduled. Electrical work was 11.6% complete against the 15% scheduled at month end. About 1750 sf of godown brick walls were constructed resulting in 29% of that work now completed, ahead of schedule.

Brickwork foundations of A1 and D1 ancillary buildings were completed during this month, meeting the planned schedule of 2% complete.

During May approximately 6.1% progress was achieved against 6.3% planned. The overall progress of sitework at the end of May stands at 28.1% complete against the 28.3% planned in the new KDC bar chart schedule.

C4 Melandah Dazar

During May some 93 cy of concrete were poured on the grade beams resulting in 98% complete against the 100% scheduled. In addition 19 cy of concrete were poured in the exterior columns and shear walls resulting in that work being 1.2% complete against the 60% scheduled.

At month end about 16,000 cf of sand fill was placed inside the godown, for 90% completion against 30% scheduled. Ten interior columns were prepared with formwork and rebar to the first lift. 513 sf of brickwall was installed, for 10% completion of this item at month end. Foundation excavation was completed for the railside platform.

Construction of the boundary wall on the railway side was for 300 lf up to an average of 3 high. Boundary wall is 3% complete against 20% scheduled.

During the month brickwork for E1 building was completed to lintel level, and foundation brickwork for C1 building was also started.

During May approximately 8.1% progress was achieved against 5.8% planned under the new KDC bar schedule. The overall progress of the sitework stands at 37.1% complete against the 34.8% planned in the new KDC bar chart schedule.

B2 Netrokona

During this month the remaining 181 R.C. Piles were driven to final grade. Some 121 cy of concrete was poured in pile caps and grade beam during the month, and by the end of the month 76.1% of that work had been accomplished against 30.0% planned.

By the end of May, all the footings and two flights of river steps had been poured in the river loading area. Preparation for brick gabion installation was begun during the month.

The remaining PDE power pole obstructing the access road was removed. Foundation work for the boundary wall on the railway platform side was completed for a total length of 846' during the month. No progress was made on the construction of the ancillary buildings, though only a minor amount of work had been scheduled.

During May approximately 7.2% progress was achieved against 6.0% planned. The overall progress on sitework at the end of May stands at 31.4% against the 30.2% planned in the new KDC bar chart schedule.

Q1 Bhola

During May formwork and rebar for the first 25 pile caps were complete while the welding of rebar for the rest of pile caps was in progress. Progress was extremely slow due to lack of skilled labor and the late arrival of construction materials. Approximately 7,000 CF of shinglas, 154 tons of reinforcing bar and 2,106 bags of cement were delivered to site during the month, by barge. In addition approximately 100,000 bricks were barged to the site.

Foundation excavation for the B1 ancillary building was completed and the lean concrete placed. Engineered fill was also started on the C1 ancillary building and in the public toilet areas.

The property dispute at the north side of the godown has still not been resolved by BADC, and resulting in further delays in the boundary wall work. The overall progress of sitework at the end of May stands at 26.0% against the 27.1% planned in the new KDC revised bar chart schedule. KDC must improve the paces of the work at this site to maintain schedule and meet the January 1984 completion date.

Q4 Barisal

During the month some 16 cy of concrete were poured on 14 pile caps, measuring about 20% complete against 60% scheduled for that work. Welding for the rest of pile caps was in progress at the end of the month.

At month end, approximately 150 feet of boundary wall was completed, progressing ahead of planned schedule. Approximately 2800 SF of brick gabion on the marine loading facility was installed during the month. An additional 32,000 CF of engineered fill was placed and compacted in the parking and the access road areas. Some 50,000 bricks, 7000 CF of shingles and 7000 CF of sand were brought to site and stockpiled.

No progress on the ancillary buildings was made during the month. KDC has been requested to start the work immediately.

During May 3.4% progress was achieved, and overall progress of work at the end of May stands at 24.4% against the 24.5% planned in the new KDC bar chart schedule.

8.3 Zone II (Dogra)

03 Panchagar

Godown: Neat cement finish was completed during the month and whitewashing was in progress. Remedial work for cracks in plaster had not yet been taken up. Window glazing was not satisfactory and rectification work was ordered. Tally clerk office doors and windows remain to be installed. Electrical switches, distribution and subdistribution boards were installed during this period. Godown construction is 96% complete, while electrical installations are only 32% complete.

Ancillary Buildings: Flooring and skirting was completed in all buildings, and whitewashing was in progress. Some door and window frames were installed. Forty percent of work remains to be done, involving grills, doors and windows, smoke hoods, and whitewashing. Piping installations for water supply and sewerage systems for the ancillary buildings were completed. The tube well for water supply was sunk, the water pump installed, and the pumphouse built; however no arrangements have yet been made for testing of the water supply system.

Site Preparation: The only active earthwork during the month involved repairs to slopes damaged by heavy rains; levelling and dressing of slopes was taken up. Repair of boundary wall and replacement of road slab joints remains to be done.

During May approximately 6.3% progress was achieved against 8.0% hoped for. At month end overall completion of this site was 86.3%. The site is scheduled for completion at the end of July 1983, but significant taskwork remains to be done to install water system appurtenances, and to install 68% of the electrical system components. A punch list of work items is being made by IECO, and KDC is being asked to schedule the work for earliest accomplishment.

02 Shibganj

Godown: All 40 PVC downspouts were installed and finishing work on godown interior was in progress, including final electrical installations. Remaining work to be done on the godown includes whitewashing, window glass installation, painting of louvers and godown doors, and remedial work to repair cracks that developed on plastered brick surfaces. Three percent of work remains to be done.

Ancillary Buildings: The installation of doors and window frames was still pending at the end of the month. Frames which were rejected by the Engineer are still in place and frames which were approved still await installation. Performance by the subcontractor (offsite, to supply/install doors and windows) is slow,

and the delay of this particular item of work is also causing delay in the installation of grills, finishing and painting. Flooring and skirting were completed on the ground floor of the A1 building, but this work for all buildings is only 25 percent complete. Installation of pipelines was in progress for both sewerage and water supply systems, and sanitary inspection pits were completed. The tubewall for the water supply system has not yet been sunk, but this is expected to be completed in June. Work on ancillary buildings is less than 50% complete.

Site Preparation: Concreting of the approach road was finished during the month, but some 1400 sq ft of apron pavement failed all tests for strength and was rejected. Demolition is in progress, and the pavement is to be re-poured early in June. Bad quality cement was responsible for this failure. KDC has been cautioned about deterioration of cement stocks. In all other respects aprons at godown and ancillary buildings were completed during the month, and the installation of guard posts was in progress.

During May only 1.7% progress was achieved. On an adjusted basis, overall completion is at 87.2%, lagging the 96.0% planned. KDC removed its supervisory staff, and this has contributed to the slowdown in activities. At month-end IECO conducted an on-site review with KDC Zonal Management, and is requiring that KDC program and prosecute the remaining work as vigorously as possible. It is evident that completion by end of June will not be possible. The target date for completion is now end-July.

M1 Santahar

West Godown (10,000 tons): Plastering of exterior walls was completed and whitewashing of the exterior walls was initiated and completed during the period. Installation of window glass was complete and painting of louvers was in progress. The painting of godown doors was pending. Fifty PVC downspouts of the total of 52 were installed. Electrical work including installation of switches, bulbs, etc. was accomplished; however, the electrical system grounding facility has not yet been installed, nor the on-site pole line to PDB supply point.

East 1 Godown (6000 tons): Whitewashing of godown interior walls was completed and two coats applied to godown exterior wall surfaces. A total of 33 PVC downspouts of the total of 36 were installed. All electrical work was completed except for the installation of the grounding system. Painting of godown doors was not yet started.

East 2 Godown (6000 tons): Pouring of concrete slab on both railway and road side loading docks was 100% complete during the month.

Plastering of the exterior walls was also completed and two coats of whitewash were made on both the exterior and interior walls. Installation of window glass panels was completed on 30 bays of the total 34 bays required. Fifteen godown doors were installed. Brickwork, plastering and installation of doors and window frames in tally clerk's office was completed. Except for the grounding system, all electrical installations for this godown were completed.

Ancillary Buildings: Placement and compaction of sand fill under the floor of the C Office Building was completed, and the concrete floor slab poured. Flooring and skirting was also completed. Doors and window frames were installed and brick soling for the aprons completed. Installation of C.I. pipes, R.C. pipes and G.S. pipes for sewerage and water supply systems was also in progress on the office building.

On the E1 building the placement and compaction of sand fill under the floor was completed, as well as concreting of floor slab. Plastering of outside wall was also completed along with the brickwork for the parapet wall. The built-up bituminous roofing and flashing was started and completed, and laying of pipes for sewerage and water lines was in progress.

On the A1 building, placement and compaction of sand fill under the floor was completed and the roof slab and water tank slab poured during the period. Brickwork for the parapet wall was completed. The bituminous roofing was not yet taken up.

Site Preparation: Placement and compaction of engineered fill in the remaining railway siding area was 100% complete at the end of the month. During this period 151,000 cf of engineered fill was placed and compacted and the overall fill position stands at 97.5% complete. Construction of the boundary wall was in progress, and some 5050 lf of the required 6000 lf completed. In the parking area, the brick pavement was 100% complete with some of 16,900 SF laid during the period. The installation of guard posts was completed and all service roads paved except in the railway crossing areas. Brick pavement in aprons adjacent to the godowns was installed complete.

Schedule A sitework at Santahar was 89.4% complete at end of May; Schedule B godown work 99.5% complete; Schedule C ancillary structures 49.3% complete; Schedule D sanitary and water works 80.3% complete; and Schedule E electrical installations 72.4% complete.

The value of work accomplished during the month of May was 4.7 percent against 5.5% planned. The overall completion stands at 92.2 percent against a planned 93%. This site is scheduled to be completed by end of July 1983. Efforts are being made to have KDC expedite the finishing work in order to turn over the site to BADC at that time.

M3 Bogra

Work on this site is virtually complete, but KDC did not pursue the remaining tasks. KDC transferred its laborers and craftsmen to other sites and the site superintendent is spending time on other site works. A contingent of skilled workers under an efficient foreman is required to complete the finishing and remedial work as soon as possible.

Site Development: Portions of the fill adjacent to the rail siding and also the parking area were damaged by heavy rains. Grass sodding slope protection also requires repair, as does a part of the brick parking area which was damaged by washout. Some fill slope re-grading is also required.

Godown: Almost all work on the godown has been completed except for rectification of cracks in the brick wall plaster, installation of doors and windows on the Tally Clerk's office, and completion of painting. In addition some electrical work remains to be completed.

Ancillary Buildings: Remaining work on ancillary buildings includes installation of doors, windows and grills which were only about 75% completed by the end of May; whitewashing, installation of plumbing system fittings, and completion of electrical work. Value of the remaining work is about 35% of the building costs.

The sitework was adjusted and revalued, and as little progress was made in May, completion stood at 93.5% at month end. A special effort is required to finish this site by end of June, and the Engineer has made special inspection assignments to assist KDC to schedule and complete the work.

K5 Atrai

Godown: Driving of precast R.C.C. piles for godown foundation was accomplished complete during the month. Two other piles were driven near the river for anchoring the boat loading and unloading platform.

Site Preparation: Placing and compaction of engineered fill and common fill continued throughout the month, with some 55,000 cf of engineered fill placed for 98% completion, and some 135,000 cf of common fill placed for 88% completion.

Formwork materials for pile caps were sent to the site during the month along with 24 tons of cement. However, stockpiling of shingles, coarse sand and bricks has not been done. Bricks for Atrai are on hand at Santahar, for shipment by rail.

A joint survey was conducted by IECO and KDC to check existing boundary monuments. In addition a survey was made of the area occupied by existing railway sidings on the western side of the site in order to deal with expected drainage runoff problems during the monsoon season. These data are under study. Also, a special detail survey was made at the river front, to adjust details of the ramp installation and mooring the loading pontoon. Adjustments to the parking area pavement and possible elimination of the country boat basin were under review.

During May approximately 5.9% progress was achieved and overall progress of sitework stands at 27.6% against the 25.7% planned on the new bar chart schedule. For lack of brick KDC has failed to take up construction of boundary wall; however, all other items of work are running slightly ahead of schedule.

L7 Mahendranagar

Godown: Foundation excavation for the remaining column footings and exterior foundation walls was completed during May. Placing and compaction of sand fill under footings and foundation walls was also completed. All concrete footings for exterior, interior and corner columns were poured. Of the 266 columns, 50 were poured to required height and 108 poured up to the 12 foot level. Spreading and compaction of sand fill for the floor was in progress, and by the end of the month 99,300 cf of sand was placed and compacted in the godown area.

Site Preparation: Placing of engineered fill was almost complete except for levelling and dressing to bring the surface to required grade. KDC brought some 130,000 bricks to the site, but failed to take up construction of boundary wall as scheduled.

During May approximately 4.3% progress was achieved, and overall progress of work stood at 24.4% against 23.2% planned under the new bar chart schedule. Construction of the godown is running ahead of schedule.

L1 Rangpur

Godown: Excavation, backfilling and compaction for 24 column footings was completed during the period, for a total of 114 footings by end-month. Also excavation, backfilling and compaction was accomplished at 23 bays for foundation walls; half of the total. Spreading and compaction of sand fill was brought to within 1.5 feet of final grade in half of the godown. Concrete of footings was in progress, with two corner footings, 22 exterior footings and 36 interior footings completed. Concreting of

wall foundations was completed in 23 bays of the total 46. In addition 24 exterior columns were started, and poured to the top of the wall foundation.

Ancillary Buildings: Fills were completed to required level for the A1 and B1 buildings and within one-foot of the required level for the C1 building. Further construction work could not be taken up on these ancillary buildings as procurement of bricks by KDC was still pending at the end of May.

Site Preparation: Placing and compaction of engineered fill was completed in godown and A1 and B1 ancillary building areas. On the access road, parking area and C1 building area, the fill was brought to within one-foot of the required level.

During May 6.2% progress was achieved against 8.7% planned under the new bar schedule. The overall progress of work stood at 26.2% against 28.7% on the basis of new bar chart schedule. Work is running behind schedule mainly because KDC has failed to collect bricks. This lack of bricks is holding up construction of the ancillary buildings, and next month may affect progress on boundary wall and godown works. The Engineer has urged KDC to acquire bricks on a priority basis; and proposes to test bricks in large lots (stacks) at the brickyard sources. It remains for KDC to find, designate and sort the bricks for testing.

01 Dinajpur

Godown: Concreting of footings of all exterior and interior columns was completed during the period, as well as concreting of foundation walls including their footings. Of a total of 84 interior columns 36 were poured to full height, another 32 poured to the 12 foot level, and 16 more poured to 15 foot level. Preparation for pouring exterior columns and shear walls was in progress. Spreading and compacting sand fill under the floor of the godown continued throughout May and was brought to within 1.5 feet of final grade.

Ancillary Buildings: The progress of work on the ancillary buildings continued to be insignificant, with only brickwork completed up to bottom level of first floor slab in the A1 and B1 buildings. After eight months only 11.6% of the ancillary building construction has been done. It is necessary to take this work out of the hands of this unsatisfactory subcontractor.

Site Preparation: Brickwork for the gate house was completed and the roof poured during the month, as well as the entrance gate pillars. The defective coping on the boundary wall has not yet been removed by KDC despite repeated instructions. A deduction from payment was made on the May invoice to encourage the remedial work required.

During May 10% progress was achieved, and the overall progress of work stands at 27% against the 24.6% planned on the newly adopted bar chart schedule. Construction on the godown is running ahead of schedule with the site development work on schedule. However, construction of the ancillary buildings is behind schedule, and a change is being made to deal with this problem.

04 Charkai

Godown: Concreting of all of the external and internal column footings was completed during the period. Foundation wall and footings were also completed. Of the total 84 internal columns 42 were poured the full height, 24 poured to the 15-foot level, and 16 poured to the 8-foot level. Concreting of the remaining four interior columns has not yet been taken up. In addition, four exterior and two corner columns were poured to full height as well as four of the sixteen shear walls. Spreading and compacting sand fill under the floor continued, and 30,000 cf of material was compacted during May; about 45 percent of the total requirement.

Site Preparation: Placing and compacting of engineered fill remained suspended during the period, with the item 72% complete. Approximately 120,000 bricks were brought to the site for construction of the boundary wall and ancillary buildings. KDC is planning to initiate those works in June, one month behind the newly adopted schedule.

Approximately 5.0% progress was achieved in May against 4.9% planned under the new schedule, and overall progress of work stands at 22.9% against 22.0% scheduled. Construction work of godown is running ahead of schedule but the engineered fill and ancillary buildings lag somewhat. There are good prospects that this work program can be caught up and maintained.

8.4 Zone III (Ishurdi)

K2 Rohanpur

During May, work concentrated on the godown and no fill foundation work was executed despite the urgency to protect the engineered fill from wash-out during the on-coming monsoon season.

Approximately 1400 cf of sand fill was placed under column footings on western half of the godown during the month. The total volume of concrete poured on the eastern half of the godown was 99.29 cy, representing 6.60 cy in wall foundations; 35.19 cy in columns; 32.50 cy in shear walls; and 25.00 cy in tie beams and canopies. Brickwork for rail loading platform was started and approximately 1026 sf completed.

On A1 building, brickwork was completed up to the plinth level during the month. No excavation work was accomplished on the other two ancillary buildings. A bulldozer was engaged in preparing the approach road and excavation and compaction of the road was in progress.

The estimated progress of work completed during May was 5.6% against the 11.1% planned on the new KDC schedule. Estimated overall completion at the end of May is 24.6% against 30.1% planned. The work lags the new bar schedule after this first month. This site is scheduled for completion at end January 1984, and is the only critical site with regard to meeting that schedule in Zone III.

K2 Ammura

During May placing of engineered fill continued in the road, parking areas, the truck and rail platforms and ancillary building areas with approximately 26,500 cf of material placed. Concrete road pavement was under construction with another 5,724 sf of roadway completed by the end of the month. Brick parking areas and aprons were in progress and approximately 13,000 sf and 2,000 sf were paved respectively. A total of 47 guard posts have been installed to date. Two entrance gates for the rail sidings were completed during the month and the boundary wall work was started and 915 lf completed.

In the godown, the entire roof was poured and bituminous roofing completed by month end. In the godown, 1970 lf of electrical conduit was cast within the roof slab. The remaining bay of wall foundation, which was used for access, was completed. Platform slabs were completed, with approximately 15.76 cy of concrete placed. Sand fill works inside the godown was in progress and 38,400 cf of fill placed. Brick walls for godown continued with another 3,400 sf constructed. Plastering was in progress and approximately 15,000 sf

of brick wall was plastered during the month. Neat cement finishing for godown platforms was in progress and some 380 sf completed. Twelve godown doors were installed, and some 1480 sf of steel louvers, vents and windows also placed.

Brickwork was in progress above the ground floor lintel level of A1 building during the month. The bituminous roofing for B1 and C1 buildings was 100% completed. Plastering was in progress in D1 and C1 buildings.

Work accomplished in May was 21.6%, well ahead of the 10.7% planned per the new KDC schedule. The estimated overall completion is 64.6%, ahead of the 53.7% planned in the new schedule. Completion of this site is targeted for end-November 1983 and this should be easily attained.

N1 Muladuli

Placing of concrete for the walkways was in progress during the month and approximately 150 sf was completed. In addition some 775 lf of boundary wall, as well as, 211 lf of barbed wire boundary fence was completed during the month. Another 5000 sf of grass sodding slope protective works were completed. No earthwork was executed during the month of May, and work on the relocated dirt road remains to be done.

In the godown, temporary brick flooring was completed but workmanship left something to be desired. Guidelines for future soling works at other sites were given to the KDC Zone III Superintendent and Site Supervisors. Neat cement finishing works on platform plinth surfaces were completed, with approximately 1365 sf completed. The last godown door was included for payment. All 28 PVC downspouts were installed and masonry walls for Tally Clerk's office were completed. The whitewash for the godown was in progress with approximately 22,600 sf painted by the end of the month.

On all ancillary buildings, plastic vapor barrier and compacted sand fill were completed. All slabs on grade were complete and a minor amount of neat cement finishing, amounting to 161 sf, was accomplished. Flooring and skirting was almost complete with 3,325 sf placed during the month. Whitewash for all ancillary buildings was in progress with 14,000 sf covered to date. Installation of sanitary works was in progress; however, the lines were not laid in accordance with the approved shop drawings and KDC has been requested to submit as-built information for approval. Plumbing installations were also in progress, and the four 400 gallon water tanks installed. Door and window frame installations were in progress.

Attainment in May for the Muladuli site amounted to 11.5% against the 7.6% planned on the new KDC bar schedule. Overall completion

at end of May is 83.9% against the 80.0% planned in the new bar schedule. This site is scheduled for completion at the end of August 1984.

T1 Chuadanga

Some 70,000 cf of common fill was placed during the month. Brick aprons were in progress around ancillary buildings and approximately 4,400 sf installed. All walkway pavements to ancillary buildings totalling 720 sf were completed at the end of the month. One entrance gate and one pedestrian gate were installed and grass sodding for slope protection covering about 7,900 sf was placed. Remedial work to raise the boundary wall to required height remains to be accomplished by KDC.

In the godown, 2600 sf of interior bond beams were plastered and thirty-six PVC downspouts installed. Caulking of louvres remained pending at the end of the month. Concrete topping on one-third of the godown floor awaits completion of similar work at Sathkira site in order to utilize the same crew.

Almost all concreting for the ancillary buildings was completed in May. Water tank structure on A1 building remains to be done, as well as modifications to chimney hood slabs in A1 and B1 buildings. Plastering of all buildings was in progress. Flooring and skirting of the ground floor of A1 building was completed with 1,424 sf installed. Whitewashing of the ancillary buildings was delayed due to non-availability of tartaric acid to wash down the walls prior to painting.

Progress of work during May is estimated at 3.0% against the 6.7% planned in the new KDC bar schedule. Overall work at Chuadanga site is 86.3% complete. This site is targeted for completion at the end of July 1983.

T2 Kushtia

Approximately 2500 cf of engineered fill was placed in the road, parking, apron and loading platform areas during the month. Filling work was also in progress on the eastern side of the site and 9800 cf of common fill placed to final grade. Stripping to provide the northern part of the existing godown with an additional 5 foot strip of parking area was done, to be replaced with engineered fill later. Brick paving for parking areas and apron areas continued with another 3071 sf and 215 sf completed respectively. A small area near the

south entrance gate was paved for pedestrian walkway. One entrance gate and one pedestrian gate were installed during the month. Boundary wall construction was in progress with 1,490 lf completed; however, barbed wire fencing has not yet started. Some 2,398 lf of expansion joint material were placed in concrete road pavements.

In the godown, the remaining 5,285 cf of sand fill was completed and 21,300 sf of vapor barrier placed. The first layer of brick soling for temporary floor was completed. KDC has been instructed not to repeat the marginal work done at Muladuli site in placing of the top flat brick soling: to lay a herringbone pattern to specified dimensions. Samples of the brick soling are to be put up for inspection and approval prior to proceeding further with the work. All twelve loading platforms were completed with cast-in-situ steps and some 28.20 cy of concrete poured. The remaining 1,740 sf of godown masonry walls were completed during the month. Plastering was in progress, with 2,500 sf of brick wall covered. Neat cement finish on the truck loading platforms was also in progress. Ten godown doors were installed, as were steel louvres and window frames. Glass pane installation and caulking remain to be done.

Work on the ancillary buildings continues to lag due to the shortage of masons. In the A1 Building, the first floor slab was cast and brickwork built up 2 feet. In B1 Building formwork and rebars for this one story roof was in progress. In C1 Building, all brickwork was completed to the roof slab level. In both the public toilet and guard house, brickwork was built up to 1st level.

Work accomplished during May is estimated at 11.0% against 8.4% planned on the new KDC bar schedule. Overall completion to end of May is 71.6%, exceeding the 69.0% targetted in the new bar schedule. This site is scheduled to be completed by the end of October 1984.

S2 Kaliganj

During May, engineered fill progressed another 24,600 cf in the approach road and parking areas. Construction of concrete road pavements was also in progress with 3,500 sf completed. Brick soling for parking area has started and all 13,140 sf was completed. Forty-four guard posts were installed. Brick apron paving work is to be executed in June. By the end of the month about 1000 lf of boundary wall was completed, and it is expected that the remainder of the wall will be completed in June. Some 351 lf of concrete expansion joints were placed in the concrete roadway. One span of road pavement on the approach road cannot be cast pending removal of existing rails by Bangladesh Railways.

In the godown the remaining part of the roof was completed with 238.91 cy of concrete placed. Masonry work on godown walls was almost completed with 2,500 sf built during the month. Plastering

of the walls remains pending approval of good quality sand with appropriate fineness modulus. Some 1,500 lf of electrical conduit was cast in the roof slab. Compaction of sand fill was in progress in the godown in order to prepare for laying of temporary brick soling floor. Bricks for the flat brick soling arrived on site and require sorting for uniformity of size prior to laying. Samples of temporary floor flat brick soling work will be ready for inspection and approval during the early part of June. Roof asphalt primer work was started at the end of May.

In the A1 Ancillary Building, the roof formwork was placed and placement of rebar is to follow. Brickwork was completed up to the underside of the roof. In the B1 Building the one story roof and penthouse was completed during the month. In the C1 Building, public toilet and guard house the roof slabs were completed. No plastering work was started on these buildings pending receipt of the specified sand. All three sets of septic tanks and soak walls were completed during the month.

During May progress attained 15.5% at the Kaliganj Site against the ambitious 19.3% planned. At the end of the month overall completion was 60.7% against the new scheduled target of 64.5%, somewhat lagging. This site is to be completed by the end of November 1983.

During the month some of KDC's site personnel were moved to the Rohanpur site from Kaliganj and on 23 May Mr. S.J. Kim arrived from the Aricha Project and was put in charge of administration. KDC's Chief Engineer, Mr. T.H. Kim now covers this site in addition to the Satkhira and Chuandan, a sites.

Pl Satkhira

Siteworks executed during the month of May included the completion of some 513 sf of concrete walkways to ancillary buildings, grass sod protection for 1,400 sf of embankment slopes, and slope stabilization works on the west side of the site near the A1 Building and the road pavement.

In the godown all twenty PVC downspouts were installed for the canopies. Work on trial concrete panels for the 1½ inch concrete topping for the godown floor continued during the month. All twelve trial concrete panels (10' x 10') and six small trial concrete panels (2.5' x 2.5') were completed and thoroughly tested for bondability. Results on all panels were found to be satisfactory. Five complete 10' x 10' panels and one partial panel were constructed using methods recommended by a U.S. concrete construction specialist and all were found to achieve satisfactory bond. Comprehensive guidelines and instructions were issued to KDC to execute the floor remedial work in the presence of IECO's Senior Field Engineer in order to avoid deviations in procedure. At month end the necessary materials, including crushed stone sand from Narayanganj crusher

was being mobilized to site.

Bituminous roofing for the A1, B1 and Public Toilet ancillary buildings was completed. Sanitary work was almost completed with cast iron soil pipe, concrete sewer pipe and inspection pits completed. In the bath rooms, all hand wash basins, towel rails, shower rose and soap plates were installed. Plumbing work for water supply lines were in progress. Fixing of doors and window frames was also in progress. Whitewashing was held up until tartaric acid is applied on the surfaces prior to painting.

During May, only 2.1% progress was achieved, and overall completion at the end of May was 88%. This lags the 90.0% targetted, but marginally. The Satkhira site is scheduled for completion at the end of July 1983.

9. CONTRACTOR'S ACTIVITIES

The following are excerpts from KDC's monthly report No. 19 for the month of May 1983.

1. OVERALL PROJECT ACTIVITIES

1.1 GENERAL STATEMENT OF PROGRESS

Overall project completion is estimated to date as 60.4% against a planned 60.8%.

Overall progress for each Zone as a percentage of total project cost is approximately as follows:-

Zone - I	Planned	16.5%
	Actual	16.8%
Zone - II	Planned	29.6%
	Actual	29.0%
Zone - III	Planned	14.7%
	Actual	14.6%

Zonal Progress for each Zone as a percentage of total work in each Zone only :

ZONE-I (32.30% of Total Project Cost):

Planned Progress upto current period :	51.0%
Actual Achieved Progress :	52.1%

ZONE-II (45.96% of Total Project Cost):

Planned Progress upto current period :	64.5%
Actual Achieved Progress :	63.0%

ZONE-III (21.74% of Total Project Cost):

Planned Progress upto current period :	67.7%
Actual Achieved Progress :	67.0%

All sites are in operation. Substantial certificate of completion has been received for one site.

Total expatriate staff now equals 118 persons against the original planned estimate of 75 persons.

1.2 PROBLEMS AND DELAYS

1. Due to non-payment of duties and taxes, roofing materials were held by customs officials at Khulna Port. This non-payment was due to sufficient deposits not being made to the Duties and Taxes Account by BADC in accordance with Clause 79 of the Conditions of Contract. Work was delayed at several sites including Brahmanbaria, Bogra and Santahar. It is estimated that a demurrage charge of approximately Tk.300,000.00 will be levied on the materials by Khulna Port officials. A claim shall be made to recover this additional cost.
2. The non-availability of bricks complying with Contract Specifications remains a serious problem. Insufficient (or lack of) brick supplies at the more distant sites continue to cause delays. Problems also remain with the IECO testing procedure which continues to cause delays at the remoter sites.
3. The non-availability of PDB grid 'tapping points' is causing problems. Despite repeated requests, 'tapping points' for electrical power for the warehouse sites have not been provided, delaying the finalization of electrical shop drawings and subsequent procurement of required materials. It is apprehended that such delays may cause delays in the overall work schedule.
4. A notice of intention to claim a time extension for the overall project has been served on IECO. Specific reasons for claiming a time extension include: late issuance of radio licence, changing of specified sand piles to pre-cast pile foundations, delayed possession of some sites, delay in removal of structures obstructing work at some sites, appreciable changes in originally specified contract work, local labour problems etc.

1.4 EQUIPMENT

DESCRIPTION	NO.
<u>HEAD OFFICE</u>	
Generator	1
Pick-up	2
Sedan	2
Microbus	1
<u>WORKSHOP & CRUSHING PLANT NARAYANGANJ</u>	
Excavator	1
Vib. Hammer	3
Cargo Truck	1
Tractor	1
Trailer	1
Penetrometer	1
Conc. Vibrator	10
Welding Machine	3
Barge	1
Battery Charger	1
Pile Leader	1
Angle Leader	1
Crusher	1
Crawler Crane	1
Payloader	1
Generator	1
Batching Plant	1
Dump Truck	1
Jeep	1
Launch Boat	1
<u>KHULNA DEPOT</u>	
Crawler Crane	1
Jeep	1
Diesel Welder	1
Bar Cutter	1
Generator	1

1.5 MATERIAL PROCUREMENT AND SHIPMENT Same as in April 1983.

1.6 EQUIPMENT PROCUREMENT AND SHIPMENT Same as in November 1982.

II. SPECIFIC SITE ACTIVITIES

1. ZONE - I

1.1 GENERAL STATEMENT OF PROGRESS

Brahmanbaria-I2

A 'substantial certificate of completion' has been received from IECO with effect from May 9. Some extra work has been identified for completion during the six-month maintenance period. This site had been officially inaugurated on March 21.

Planned progress to date is 100.0%. Actual achieved progress is 100.0%.

Daudkandi-I3

Roads and parking areas were brought near completion this month and a small amount of gabion placement for river bank slope protection constituted the sum total of work performed in the non-structural site work category. In the warehouse itself, the brick-soled floor was nearly complete at the end of the month. The ancillary buildings had some good progress with the installation of steel grills and door and window frame and sash assembly.

Planned progress to date is 77.5%. Actual achieved progress is 86.9%.

Comilla-I1

Fill placement was completed this month in its totality for this site. Also accomplished was some paving work on the apron around the warehouse.

Finishing work predominated in the warehouse. The last bit of compacted sand fill was put in place, the plastic vapour barrier installed and the brick soling work for the floor of the warehouse begun. Twelve doors were installed in the warehouse and roof weather-proofing was finally accomplished. The ancillary building structures were nearly complete at the end of the month. Work on the floor, roof weather proofing, plastering and painting and neat cement finishing were major activities in the ancillary buildings.

Planned progress to date is 88.0%. Actual achieved progress is 84.5%.

Feni-H1

A small amount of engineered fill was put in place during this month and the boundary wall was about half-complete at month's end.

In the warehouse area, concrete pour of the footings and the wall foundations proceeded during the month and was nearly complete at the end of the reporting period. Concrete pour of the columns and shear walls was initiated.

Planned progress to date is 33.9%. Actual achieved progress is 34.7%.

Mymensingh-C2

A small amount of stripping and filling and some work on the boundary wall constituted site preparation work accomplished this month.

In the warehouse work was nearly complete on concrete pour of columns and the initiation of pour in the tie beams and roof slab portions. Masonry work also continued.

Planned progress to date is 51.2%. Actual achieved progress is 54.9%.

Madhupur-D1

Further concrete pour of the warehouse columns and initiation of concrete pour in the roof slab dominated site activities this month.

For the ancillary buildings, the excavation of the foundation and the construction of the brick footings of the foundation was nearly complete at month-end.

Planned progress to date is 28.3%. Actual achieved progress is 30.5%.

Melandah Bazar-C4

Mobilization progress, completion of clearing and grubbing work and the placement of a small amount of fill were the main constituents of site preparation work at this site.

In the warehouse, concrete pour of wall foundations and shear walls was initiated.

Planned progress to date is 34.8%. Actual achieved progress is 33.4%.

Netrakona-B2

Pile driving was totally accomplished at the beginning of the month. By the end of the month, pile capping was also complete. A small amount of grass-sod slope protection placement was also completed.

Planned progress to date is 30.2%. Actual achieved progress is 31.0%.

Bhola-Q1

Site mobilization progressed to 79.5% on a payment basis. A further 45,000 cubic feet of engineered fill was placed on site. Pile capping for the warehouse was initiated this month.

Planned progress to date is 26.9%. Actual achieved progress is 27.5%.

Barisal-Q4

Mobilization registered a further 6.5% increase and engineered fill was 115% of the original BQ-specified quantity at month's end. Gabion work for river slope protection was 65% complete. Work on the property boundary wall was initiated and 21% completed at month-end.

Pile capping for the warehouse was nearly complete.

Planned progress to date is 24.8%. Actual achieved progress is 27.5%.

1.3 PLANT AND EQUIPMENT

<u>Site</u>	<u>Description</u>	<u>No.</u>	<u>Description</u>	<u>No.</u>
Comilla-I1	Payloader	1	Pickup	2
	Sand Compactor	2	Dump Truck	1
	Vib. Roller	1	Cargo Truck	1
	Water Pump	1	Crane	1
	Tractor	1	Jeen	1
	Mixer Machine	1		
Brahmanbaria-I2	Concrete Dumper	2	Generator	1
	Compressor	1	Pick-up	1
	Tower Winch	4	Water Pump	1
	Concrete Mixer	1	Welding Machine	1
	Tractor	1		
Daudkandi-I3	Mixer Truck	2	Water Pump	2
	Generator	1	Concrete Vibrator	7
	Soil Compactor	1	Pick-up	1
Feni-H1	Payloader	1		
Mymensingh-C2	Crane	1	Bar Cutter	1
	Concrete Mixer	1	Concrete Dumper	1
	Welding Machine	1		
Madhupur-D1	Concrete Mixer	1	Wire Cutter	1
	Water Pump	2	Trolley	1
	Generator	1	Vibrator	3
	Winch	1	Welding Machine	1
Melandah Bazar-C4	Bulldozer	1	Generator	1
	Water Pump	1	Payloader	1
	Vibrator	1	Concrete Mixer	1
	Welding Machine	1		
Netrakona-B2	Shovel Tractor	1	Payloader	1
	Mixer Truck	1	Generator	1
	Crane	1	Welding Machine	1
	Conveyor Belt	1	Compressor	1
Barisal-Q4	Vibrator Compactor	1	Bulldozer	1
	Tire Roller	1		
Bhola-Q1	Water Pump	2	Generator	2
	Crane	1	Batching Plant	1
	Payloader	1	River Truck (Boat)	1
	Mixture Machine	1	Vibrator	3
	Welding Machine	1		

2. ZONE-II

2.1 GENERAL STATEMENT OF PROGRESS

Santahar-M1

Mobilization progressed to 92% signifying the beginning of demobilization as this large site is nearing completion. A further 151,000 cubic feet of engineered fill was put in place. Work on the parking and other paved areas registered good progress.

Warehouse-West - Finishing work like the installation of louvers/windows and PVC downspouts, and painting were the work items registering progress this month.

Warehouse-East-1 - Here too, finishing work like installation of doors and downspouts, and painting work predominated.

Warehouse-East-2 - Finishing work here was at a early stage with plastering and painting and the installation of warehouse doors and windows predominating.

Ancillary Buildings- Structural work proceeded at some of the buildings and finishing work was accomplished on others. About 19% work progress on the buildings was recorded this month.

Planned progress to date is 93.0%. Actual achieved progress is 92.2%.

Bogra-M3

About 35,000 cubic feet of fill was put in place on this nearly complete site last month. This amount did not include an additional 36,000 cubic feet of fill for the off-site railway grade. In the ancillary buildings, plaster finishing or 'neat cement finishing' for walls and floors was accomplished. No further work was done on the completed warehouse. A small amount of electrical utility work was however undertaken.

Planned progress to date is 99.5%. Actual achieved progress is 94.7%.

Panchagar-03

Finishing work constituted all the warehouse construction activities for this month. They included the initiation and accomplishment of a fairly substantial amount of painting work. Cement finishing of plastered areas and installation of the

remaining doors and windows were also accomplished among the finishing work. Finishing work and the installation of sanitary and water supply plumbing fixtures were accomplished in the ancillary buildings during the month under review.

Planned progress to date is 88.0%. Actual achieved progress is 86.3%.

Shibganj-02

Nearly 7,000 square feet of paving work was done of the approach road, concrete walk and warehouse apron during this month. For the warehouse itself, installation of PVC downspouts constituted the main activity in the completed warehouse. In the ancillary buildings, finishing work on the floor and the installation of the water supply system constituted the main activity this month.

Planned progress to date is 96.0%. Actual achieved progress is 87.2%.

Rangpur-L1

A further 257,000 cubic feet of imported engineered fill was put in place this month. Concrete pour of footings and wall foundations was initiated and substantial progress was registered in this activity during this month. Concrete pour to some column formwork was also initiated.

Planned progress to date is 28.7%. Actual achieved progress is 26.2%.

Mahendranagar-L7

Concrete pour of the footings continued and together with sand filling and compaction (under the concrete layer) was near completion at the end of the month. The wall foundations were also nearly complete as concrete pour as well continued throughout the month. Concrete pour to columnar formwork was also initiated this month.

Planned progress to date is 23.7%. Actual achieved progress is 25.3%.

Dinajpur-01

Concrete work in the form of concrete pour of footings, wall foundations and columns was accomplished this month. Footing work continued while the remaining work items were actually initiated in this month.

Planned progress to date is 24.6%. Actual achieved progress is 24.5%.

Charkai-04

Footing work for the warehouse including sandfilling and compaction in the excavation area and the subsequent concrete pour for the footings was accomplished in the month under review. Work activities initiated this month include concrete pour of wall foundations, columns and shear wall formwork. Work associated with concreting, like rebar and formwork fabrication, proceeded fast.

Planned progress to date is 22.0%. Actual achieved progress is 22.9%.

Atrai-K5

Mobilization proceeded to 89.0% on a payment basis. More filling work was accomplished this month. Pile driving was started on the 11th of May and finally accomplished on the 18th. A total of 150 piles were driven. Pontoon construction was 20% accomplished.

Planned progress to date is 27.0%. Actual achieved progress is 30.7%.

2.3 PLANT AND EQUIPMENT

<u>Site</u>	<u>Description</u>	<u>No.</u>	<u>Description</u>	<u>No.</u>
Santahar-M1	Bulldozer	2	Dump Truck	2
	Payloader	1	Pick-up	2
	Batching Plant	2	Jeep	1
	Generator	3	Welding Machine	3
	Pipe Laver	1	Conc. Vibrator	10
	Concrete Dumper	1	Vibrator Screener	1
	Cargo Truck	1	Tractor	1
Rogra-M3	Mixer Truck	2	Concrete Dumper	1
	Generator	1	Dump Truck	2
	Air Compressor	1	Pick-up	1
	Tractor	1	Concrete Vibrator	2
	Mixer	1	Water Pump	3
	Trolley	10	Welding Machine	1
	Concrete Pump	1		
Panchagar-03	Vibrator Roller	1	Water Pump	2
	Generator	1	Soil Compactor	1
	Pick-up	1	Tractor	1
	Payloader	1	Concrete Dumper	1
	Mixer Truck	2		
Rangpur-L1	Vibrator Roller	1	Pick-up	1
	Generator	1	Payloader	2
	Dump Truck	2	Concrete Vibrator	2
	Trolley	1		
Mahendranagar-L7	Pick-up	1	Water Pump	1
	Soil Compactor	1		
Dinajpur-01	Pick-up	1	Water Pump	2
	Tractor	1	Electric Saw	1
	Concrete Dumper	1	Soil Compactor	1
Shibganj-02	Pick-up	1	Water Pump	3
	Cargo Truck	1	Concrete Mixer	2
	Concrete Vibrator	2	Welding Machine	1
	Level Machine	1		
Charkai-04	Bulldozer	1	Dump Truck	2
	Tire Poller	1	Generator	1
	Water Pump	1	Jeep	1
Atrai-K5	Pick-up	1	Water Pump	1

3. ZONE-III

3.1 GENERAL STATEMENT OF PROGRESS

Muladuli-NI

Some additional progress was registered on the boundary wall and work was initiated on barbed wire fences.

In the warehouse, brick laying on the floor was nearly complete while other finishing work like plastering and painting continued.

Floor slab casting was complete for all ancillary buildings. Finishing work like floor plastering and exterior painting continued. Water storage tanks were installed on the roof of the buildings.

Planned progress to date is 80.0%. Actual achieved progress is 83.0%.

Chudanga-TI

Site preparation work this month included some filling work, some paving work and the installation of two gates. On the warehouse, plastering and painting and the installation of PVC downspouts were completed. The main work accomplished in the ancillary buildings this month was the finish plastering of the floor.

Planned progress to date is 90.0%. Actual achieved progress is 85.9%.

Amura-K2

About a quarter of the total work progress scheduled for this entire site was achieved this month. Good progress was achieved on the roads and parking areas and the boundary wall was almost half complete after being initiated this month.

The main contribution to work progress in this site came from concrete pour of the roof slab (which was accomplished in its totality this month), sand filling under the floor slab, and built-up bituminous roofing and flashing. Also accomplished in warehouse construction was plastering work and the installation of louvers, vents and windows.

At month's end, the ancillary buildings were 70% complete. Work accomplished this month on these buildings include brick masonry work, roof weather-proofing and the installation of piping for the water supply system.

Planned progress to date is 53.7%. Actual achieved progress is 67.0%.

Satkhira-P1

Plumbing work was completed in the ancillary buildings at the end of May. The installation of PVC downspouts on the warehouse was completed and the concrete paved walk outside the warehouse was also completed this month.

Planned progress to date is 90.0%. Actual achieved progress is 87.1%.

Kushtia-T2

The major items registering progress this month among exterior site work items include brick paving work on the parking area, the initiation and substantial completion of the property boundary wall and the installation of some gates.

In the warehouse, completion of sand filling and compaction for the warehouse floor, the installation of the plastic vapour barrier and the initiation of concrete pour of the warehouse floor slab was accomplished this month. Installation of warehouse doors, some plastering work and the completion of brick masonry work were other work items accomplished.

In the ancillary buildings, plumbing work was completed and some structural work like concrete pour of the roof slab and some masonry work were also accomplished.

Planned progress to date is 69.0%. Actual achieved progress is 68.6%.

Kaliganj-S2

Site preparation work in May at this site included work on the road and parking areas and the initiation and substantial accomplishment of work on the property boundary wall.

Concrete pour of the remaining roof slab bays of the warehouse was finally completed and some further brick masonry work was accomplished.

In the ancillary buildings, some more structural work was accomplished. The water supply plumbing had already been completed earlier.

Planned progress to date is 64.5%. Actual achieved progress is 56.9%.

Rohanpur-K3

Concrete pour of wall foundations, columns, shear walls and the beams and canopies was accomplished this month. Some brick masonry work was also done during this period.

Foundation excavation and brick footing construction for the ancillary buildings was accomplished.

Planned progress to date is 30.1%. Actual achieved progress is 21.7%.

3.3 PLANT AND EQUIPMENT

<u>Site</u>	<u>Description</u>	<u>No.</u>	<u>Description</u>	<u>No.</u>
Muladuli-N1	Cargo Truck	1	Generator	1
	Jeep	1	Tractor	1
	Welding Machine	2	Water Pump	2
Chuadanga-T1	Conc. Dumper	1	Water Pump	1
Amnura-K2	Air Compressor	1	Generator	2
	Concrete Mixer	1	Concrete Dumper	1
	Pick-up	1	Welding Machine	1
	Dump Truck	1	Vibrator Compactor	1
	Water Pump	4	Electric Saw	1
	Payloader	1	Concrete Vibrator	3
Satkhira-P1	Pick-up	1	Conc. Dumper	1
	Conc. Vibrator	1	Water Pump	1
	Concrete Mixer	1		
Kushtia-T2	Concrete Mixer	1	Conc. Vibrator	2
	Water Pump 2" Ø	1	Tractor	1
	Welding Set	1		
Kaliganj-S2	Tractor	1	Water Pump	1
	Conc. Vibrator	1	Crane	1
	Dump Truck	1	Payloader	1
	Generator	1	Batching Plant	1
Rohanpur-K3	Soil Compactor	1	Generator	1
	Water Pump	1	Pump Engine	2
	Electric Vibrator	1	Mixture Machine	2
	Payloader	1	Tractor	1
	Electric Saw	1	Bulldozer	1
	Air Compressor	1		

OVERALL PROGRESS SCHEDULE

PROJECT: FERTILIZER WAREHOUSE

ZONE	NO.	SITE LOCATION	% AGE WT.	1983												1984		REMARK
				UP TO MAR	APR	UP TO MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB			
1	I ₂	BRAHMANBARIA	3.11	P		99.5	100											100
	I ₃	DAUDKANDI	3.21	P	99	100												
	I ₁	COMILLA	5.01	P		68.3	77.5	96.0	100									
	H ₁	FENI	1.71	P	63.3	85.9	86.0	96.6	100									
	C ₂	MYMENSINGH	1.44	P	71.4	84.5												
	D ₁	MADHUPUR	1.15	P		26.3	33.9	39.9	47.8	60.7	75.3	85.7	94.1	96.4	100			
	C ₄	MELANDAH BAZAR	3.35	P		22.6												
	B ₂	NETRAKONA	3.70	P		43.3	51.2	63.6	78.2	89.1	98.2	100						
	O ₁	BHOLA	4.32	P	38.0	54.9												
	O ₂	BARISAL	3.46	P	20.0	22.0	28.3	37.0	48.0	63.6	76.8	85.8	93.0	97.8	100			
2	M ₁	SANTAHAR	12.71	P		29.0	34.8	39.4	50.5	63.9	70.8	81.8	92.4	96.4	100			
	M ₃	BOGRA	6.49	P		24.2	30.2	35.7	41.5	53.9	67.7	77.7	90.5	97.4	100			
	O ₃	PANCHAGAR	2.42	P	19.0	31.0												
	O ₂	SHIBGANJ	4.45	P		25.1	28.9	32.6	37.4	45.4	58.7	75.5	85.9	98.5	100			
	L ₁	RANGPUR	3.47	P	23.4	27.5												
	L ₇	MAHENDRANAGAR	6.11	P		21.0	24.8	28.7	36.5	52.2	67.9	81.9	94.1	98.6	100			
	O ₁	DINAJPUR	3.14	P	16.2	27.5												
	O ₄	CHARKAI	3.93	P		87.5	93.0	97.0	100									
	K ₅	ATRAI	3.34	P	80.7	92.2												
	3	N ₁	MULADULI	3.34	P		98.6	99	100									
T ₁		CHUADANGA	4.17	P		94.5	97											
K ₂		AMNURA	3.48	P		80.0	88.0	96.0	100									
P ₁		SATKHIRA	2.17	P		73.4	85.3											
T ₂		KUSHTIA	2.52	P		70.5	94.0	100										
S ₂		KALIGANJ	2.98	P		80.5	87.2											
K ₃		ROHANPUR	3.40	P		20.0	28.7	37.6	43.5	52.6	62.8	76.3	85.1	95.9	100			
						14.7	26.2											
						20.0	25.7	30.2	38.5	51.2	66.5	79.8	89.6	98.8	100			
TOTAL			100.00	P														APPROVAL
PROGRESS PLAN				A		48.8	60.4	67.2	72.9	78.7	84.7	90.5	95.4	98.8	100			SUBMIT
PROGRESS ACTUAL				A		48.8	60.4											REVISE

ORIGINAL ---
REVISED -|---

10. CONTRACT FINANCIAL SUMMARY - DOLLARS

<u>Site</u>	<u>Projected Site Costs</u>	<u>Current Month *</u>	<u>Job To Date \$</u>	<u>Job To Date %</u>
<u>ZONE - I</u>				
Daudkandi	1,540,000.00	221,254.67	1,338,374.79	86.91
Brahmanbaria	1,492,000.00	3,930.49	1,490,227.79	99.88
Comilla	2,402,000.00	129,789.21	2,029,369.36	84.49
Mymensingh	710,000.00	48,377.94	389,518.15	54.86
Feni	820,000.00	32,545.50	246,453.27	30.05
Madhupur	1,415,000.00	118,490.00	431,944.98	30.53
Melandah	1,608,000.00	79,541.44	537,079.37	33.40
Netrakona	1,772,000.00	103,384.31	549,142.95	30.99
Barisal	1,660,000.00	123,554.00	456,671.66	27.51
Bhola	2,070,000.00	32,866.00	570,049.46	27.54
<u>ZONE - II</u>				
Santahar	6,095,000.00	255,577.95	5,618,989.71	92.19
Bogra	3,111,000.00	19,904.26	2,908,102.10	93.48
Panchagar	1,160,000.00	54,952.51	1,000,960.79	86.29
Shibganj	2,132,000.00	37,081.60	1,858,377.28	87.17
Rangpur	1,664,000.00	113,797.04	436,028.75	26.20
Mahendranagar	2,930,000.00	207,178.73	741,522.03	25.29
Charkai	1,835,000.00	125,376.02	421,210.32	22.95
Dinajpur	1,504,000.00	111,041.52	367,949.24	24.46
Atrai	1,600,000.00	144,568.75	491,256.23	30.70
<u>ZONE - III</u>				
Muladuli	1,600,000.00	120,868.35	1,328,474.59	83.03
Chuadanga	2,000,000.00	51,948.68	1,717,156.21	85.86
Amnura	1,670,000.00	382,319.95	1,061,379.17	63.56
Satkhira	1,038,000.00	21,682.70	904,053.94	87.10
Kushtia	1,207,000.00	69,411.34	828,518.93	68.64
Kaliganj	1,274,000.00	144,927.88	724,747.67	56.89
Rohanpur	1,630,000.00	47,426.50	353,399.82	21.68
TOTAL				
(All Sites)	47,939,000.00	2,801,797.34	28,800,958.56	60.08
MATERIALS (NET)	-	33,900.00	257,054.66	
ALL SITES	47,939,000.00	2,835,697.34	29,058,013.22	60.61
RETENTION	1,000,000.00	0	1,000,000.00	

Preliminary data.

11. CONSTRUCTION CONTRACT CHANGE ORDER STATUS

<u>Change Order Number</u>	<u>Date</u>	<u>Description</u>	<u>Change</u>	<u>Contract Amount</u>
-	16 Oct. 81	Contract signed	-	\$ 50,000,000.00
01-001	23 Oct. 81	Dinaipur - 3000 ton rodowm eliminated	\$ (561,600.17)	\$ 49,438,399.83
002	26 Jan. 82	Cost reduction	Rejected	\$ 49,438,399.83
11-003	25 May 82	Comilla - Change culvert	\$ (2,510.48)	\$ 49,435,889.35
I3-004	18 May 82	Daudkandi - Remove and recompact fill	\$ 49,610.00	\$ 49,485,499.35
D1-005	16 June 82	Madhurur - Site relocated	\$ (4,293.80)	\$ 49,481,205.55
H1-006	21 July 82	Feni - Earthwork Modification	\$ 46,258.00	\$ 49,527,463.55
C2-007*	22 Feb. 83	Mymensingh - Concrete piles Deleted sand piles and floor (A27 and B 11) Net	\$ 138,426.70 \$ (203,185.16) \$ (64,758.46)	\$ 49,462,705.09
I3-008	22 Feb. 83	Daudkandi - Marine landing	\$ (13,499.00)	\$ 49,449,206.04
C4-009*	22 Feb. 83	Melandah - Concrete piles Deleted sand piles and floor (A 27 and B 11) Net	\$ 143,144.91 \$ (422,950.88) \$ (279,805.97)	\$ 49,169,400.12
B2-010*	02 Feb. 83	Netrakona - Concrete piles Deleted sand piles and floor (A 27 and B 11) Net	\$ 153,692.38 \$ (377,553.60) \$ (223,861.22)	\$ 48,945,538.90
I2-011*	21 April 83	Brahmanbaria revised water svstem Delete - D21, 22 & 23 Net	\$ 10,666.91 \$ (19,152.00) \$ (8,485.09)	\$ 48,937,053.81

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* Not yet signed and approved.

CONSTRUCTION CONTRACT CHANGE ORDER STATUS (Continued)

<u>Change Order Number</u>	<u>Date</u>	<u>Description</u>	<u>Change</u>	<u>Contract Amount</u>
I1-012*	28 April 83	Comilla revised water system Delete D21, 22 & 23 Net	\$ 16,307.03 (19,152.00) (2,844.97)	\$ 48,934,208.84
I3-013*	28 April 83	Daudkandi revised water system Delete D21, 22 & 23 Net	\$ 12,695.78 (19,152.00) (6,456.22)	\$ 48,927,752.62
03-014*	28 April 83	Panchagar revised water system Delete D21, 22 & 23 Net	\$ 17,717.03 (19,152.00) (1,434.97)	\$ 48,926,317.65
01-015*	28 April 83	Santahar revised water system Delete D21, 22 & 23 Net	\$ 13,590.85 (19,152.00) (5,561.15)	\$ 48,920,756.50
02-016*	28 April 83	Shibganj revised water system Delete D21, 22 & 23 Net	\$ 12,359.85 (19,152.00) (6,792.15)	\$ 48,913,964.35
03-017*	28 April 83	Pofra revised water system Delete D21, 22 & 23 Net	\$ 14,388.85 (19,152.00) (4,763.15)	\$ 48,909,201.20
P1-018*	28 April 83	Satkhira revised water system Delete D21, 22 & 23 Net	\$ 12,866.21 (19,152.00) (6,285.79)	\$ 48,902,915.41
T1-019*	28 April 83	Chudanga revised water system Delete D21, 22 & 23 Net	\$ 15,777.35 (19,152.00) (3,374.65)	\$ 48,899,540.76
M1-020*	28 April 83	Muladuli revised water system Delete D21, 22 & 23 Net	\$ 9,021.43 (19,152.00) (10,130.57)	\$ 48,889,410.19

* Not yet signed and approved.

INTERNATIONAL ENGINEERING COMPANY, INC.

FORCE REPORT

31 MAY, 1983

A. Dhaka Office

1. K.F. Ahmed	Chief Accountant
2. A.H.M.R. Salam	Accountant
3. A.K. Chowdhury	Exmeditor
4. Niranjana Paul	Exmeditor
5. Khurshid Ahsan	Admin. Assistant
6. Mizanur Rahman Sikder	Admin. Assistant
7. Md. Enayetullah	Secretary
8. Na'ima Anwar	Secretary
9. Bernard Fernandez	Secretary
10. Robert O'Brien	Mechanic
11. Danzil Gonsalves	Printer
12. Idris M. Khan	Driver
13. Md. Arifullah Khan	Guard
14. Nuruzzaman Sarkar	Janitor

B. Zone I (Mymensingh)

1. M. Kabir	Area Office Manager
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C. Zone II (Bogra)

1. R.A. Drayne	Area Office Manager
2. Robin Rozario	Driver

D. Zone III (Ishurdi)

1. N.G. Khan	Area Office Manager
2. Benjamin Gores	Messenger/Typist
3. Md. Moazzam Hossain	Driver

DEVELOPMENT CONSULTANCY SERVICES LTD.

FORCE REPORT

31 MAY, 1983

A. Dhaka Office & Lab.

1. Quazi Hamidur Rahman	Associate Project Manager (Part Time)
2. M.K. Zaman	Office Engineer
3. Fazlul Wahhab	Tech. Asst. to P.M.
4. Syed Reza Ali	Senior Field Engineer
5. A.K.M. Manjur Hossain	Cost Engineer
6. Sk. Rezaul Haque	Materials Engineer
7. Parimal Bikash Sutradhar	Engineer
8. Q. Ahmed Najee	Land Procurement Officer (at BADC)
9. Moazzam Hossain Sarker	Land Procurement Officer (at BADC)
10. N.C. Lewis	Inspector (Pile Casting Yard)
11. Abdur Rashid Khan	Inspector (Survey)
12. Sk. Zameul Haque	Mat. Lab. Technician
13. Md. Shahid Khan	Mat. Lab. Technician
14. Rebeka Sultana	Mat. Lab. Technician
15. Akshay Kumar Roy	Draftsman
16. Rafia Akhter	Draftsman
17. Rezaul Karim	Accounts Assistant
18. T.I. Chowdhury	Accounts Assistant
19. Artab Alam	Typist (at BADC)
20. Mojibur Rahman	Mat. Lab. Assistant
21. Abdur Rashid	Mat. Lab. Assistant
22. A. Motalab	Instrumentman
23. Md. Nizamuddin	Chainman
24. Abul Basher	Rodman
25. Badruddin	Driver
26. Rahmatullah	Driver
27. Matiur Rahman	Driver
28. Mohammad Abrar	Driver
29. Daliluddin Biswas	Driver
30. Delwar Hossain	Driver (at BADC)
31. Faiz Chowdhury	Messenger
32. Ulfat Ali	Messenger
33. Jahanara Begum	Messenger/Receptionist
34. Aminuddin	Guard
35. Mukshed Ali Chowdhury	Guard
36. Shahabuddin Khan	Guard (at BADC)

B. Zone-ISub-Zone I-A (Comilla)

1. Amalenda Debnath	Senior Field Engineer
2. Munshi Abu Jaffer	Field Engineer (Brahmanbaria)
3. Idris Majumdar	Field Engineer (Daudkandi)
4. S.M. Khalilur Rahman	Field Engineer (Weni)
5. Akhtaruzzaman	Inspector (Comilla)
6. Azmal Khan	Inspector (Daudkandi)
7. Abdus Sattar	Inspector (Weni)
8. Sk. Shah Mohammad*	Inspector (Weni)
9. Abul Kalam Azad	Mat. Lab. Tech. (Comilla)
10. Nurul Momen Khan	Mat. Lab. Asst. (Comilla)
11. S.W.A. Prodhan	Office Asst.
12. Abdul Malek Fakir	Driver
13. Md. Haider	Driver

Sub-Zone I-B (Mymensingh)

1. Md. Rezaul Karim	Senior Field Engineer
2. Gazi M. Ahmed	Field Engineer (Mymensingh)
3. Haider Farooq	Field Engineer (Madhupur)
4. Mustafa Iqbal Azam	Field Engineer (Melandah)
5. Shafiqur Rahman	Field Engineer (Netrakona)
6. Mohammad Alam	Inspector (Mymensingh)
7. Monowar Ali Khan	Inspector (Madhupur)
8. Zahidul Islam	Inspector (Melandah)
9. Majedur Rahman	Inspector (Netrakona)
10. Md. Abdur Rouf	Mat. Lab. Tech. (Sub-Zone I-B)
11. Humayun Kabir Khan	Mat. Lab. Tech. (Sub-Zone I-B)
12. Tajul Islam Khan	Mat. Lab. Asst. (Sub-Zone I-B)
13. Shafique Uddin Ahmed	Mat. Lab. Asst. (Sub-Zone I-B)
14. Khurshid Alam	Mat. Lab. Asst. (Sub-Zone I-B)
15. Abdus Sattar	Driver
16. Md. Yusuf Ali	Driver
17. Sultan Ahmed	Driver
18. Md. Shahabuddin	Messenger

Sub-Zone I-C (Barisal)

1. Md. Mohsin Ali	Senior Field Engineer
2. Tanvirul Islam	Field Engineer (Barisal)
3. Syed Gasuddin Ahmed	Field Engineer (Bhola)
4. Nazimul Islam	Inspector (Barisal)
5. A.K.M. Harun-ur-Rashid	Inspector (Bhola)
6. M.A. Aminul Afzal	Mat. Lab. Tech. (Barisal/Bhola)
7. Syed Humayun	Mat. Lab. Asst. (Barisal/Bhola)
8. Shafiqur Rahman	Mat. Lab. Asst. (Barisal/Bhola)
9. Md. Alamgir (Alam)	Messenger

C. Zone II (Bogra)

1. Rafiqus Salehin	Senior Field Engineer
2. Mahbudur Rahman	Field Engineer (Zone Lab. In-charge)
3. Nuruzzaman Khan	Field Engineer (Santahar)
4. Habibur Rahman Khan	Field Engineer (Bogra)
5. Abdul Halim	Field Engineer (Panchagar)
6. Noor Azam Khan	Field Engineer (Shibganj)
7. Kh. Anwar Hossain	Field Engineer (Dinaipur)
8. Abdur Razaque	Field Engineer (Rangpur)
9. Sagar Krishna Chakraborty	Field Engineer (Mahendranagar)
10. M.M. Nasirabadi	Field Engineer (Atrai)
11. Md. Saimum Haque	Field Engineer (Charkai)
12. Md. Abdul Bari	Inspector (Santahar)
13. Anil Chandra Sarkar	Inspector (Santahar)
14. Khaiz Ahmed	Inspector (Panchagar)
15. Susil Chandra Howladar	Inspector (Shibganj)
16. Md. Sekandar Ali	Inspector (Dinaipur)
17. Sheikh Md. Farooq	Inspector (Mahendranagar)
18. Mofazzal Hossain	Inspector (Rangpur)
19. Rabindranath Sarkar	Inspector (Atrai)
20. Ejabuddin Patwary	Inspector (Charkai)
21. Shahjahan Sarkar	Mat. Lab. Tech. (Rangpur)
22. Shamsur Rahman	Mat. Lab. Tech. (Atrai)
23. Sabbir Hossain	Mat. Lab. Tech. (Dinaipur)
24. Abdur Rashid	Mat. Lab. Tech. (Mahendranagar)
25. Golam Mohammad	Mat. Lab. Tech. (Charkai)
26. Raisuddin	Mat. Lab. Asst. (Atrai)
27. Md. Abdul Nader	Mat. Lab. Asst. (Rangpur)
28. Abu Taher	Mat. Lab. Asst. (Rangpur)
29. Ataur Rahman	Mat. Lab. Asst. (Mahendranagar)
30. Syed Mohiuddin	Mat. Lab. Asst. (Charkai)
31. Kamrul Hassan Khan	Mat. Lab. Asst. (Dinaipur)
32. Javed Ahsan Mustafa Kamal	Office Assistant (Rangpur Office)
33. Golam Ahmed Dastagir	Driver (Rangpur)
34. Dulal Chandra Mohanta	Driver
35. Subodh Chandra Das	Driver
36. Md. Belal	Messenger
37. Ali Ahmed	Guard (Bogra Office)
38. Abdul Gani	Guard (Rangpur Office)

D. Zone III (Ishurdi)

1. Nazrul Islam	Senior Field Engineer (Sub-Zone III-A)
2. Mohi-uz-Zaman Quazi	Senior Field Engineer (Sub-Zone III-B)
3. M. Shafiqur Rahman*	Field Engineer (Zonal Lab. In-charge)
4. Saiful Islam	Field Engineer (Muladuli)
5. Md. Mozaharul Islam	Field Engineer (Kushtia)
6. A.H. Nazrul Islam	Field Engineer (Chuadanga)
7. Bhabesh Ch. Roy	Field Engineer (Kaliganj)
8. S. Rubayet Islam	Field Engineer (Satkhira)
9. Sujit Kumar Das	Field Engineer (Amnura)
10. Mostahar Ali	Field Engineer (Rohanpur)
11. Manwar Hossain Chowdhury	Inspector (Kushtia)
12. Meer Mozammel Hossain	Inspector (Muladuli)
13. Sirajul Islam Khan	Inspector (Chuadanga)
14. S.A. Asghar	Inspector (Kaliganj)
15. Md. Badiuzzaman	Inspector (Satkhira)
16. Munshi Mojaibur Rahman	Inspector (Amnura)
17. Bazlur Rahman	Inspector (Rohanpur)
18. Omar Ali*	Inspector (Amnura)
19. Md. Amirul Islam*	Inspector (Rohanpur)
20. Abdul Wahed	Mat. Lab. Tech. (Ishurdi/Muladuli)
21. Rafatullah	Mat. Lab. Tech. (Kaliganj)
22. Talukder Obaidur Rahman	Mat. Lab. Tech. (Amnura/Muladuli)
23. Md. Nuruzzaman	Mat. Lab. Tech. (Rohanpur)
24. Dilip Kumar Dey	Mat. Lab. Asst. (Muladuli)
25. Zahirul Islam Khan	Mat. Lab. Asst. (Ishurdi)
26. Md. Shahjahan Talukder	Mat. Lab. Asst. (Kushtia)
27. Suchit Kumar Das	Mat. Lab. Asst. (Chuadanga/Kaliganj)
28. Shamsul Islam	Mat. Lab. Asst. (Amnura/Muladuli)
29. Anil Kumar Chowhan	Mat. Lab. Asst. (Rohanpur)
30. Shafiqur Rahman	Driver
31. Md. Kamal	Driver
32. Ali Hossain	Driver (Sub-Zone III-B)
33. Md. Mohamul Haque	Guard (Ishurdi)
34. Mosharruf Hossain	Guard (Jessore)
35. Md. Zahiruddin	Camp Assistant
36. Tofayel Hossain Gazi	Messenger
37. Syed Md. Siddique*	Messenger

* Resigned/was terminated in May 1983.

USAID IMPROVEMENT GRANT

IECO CONTRACT 9074

CONSULTANCY EXPENDITURE BUDGET

APPENDIX III

Sheet 1 of 4

Schedule I	Budget	JOB TO DATE		APRIL 1983		Balance
		Dollars	Take As Dollars	Dollars	Take As Dollars	
<u>Resident Consultant Related Cost</u>						
A. Salary	1,029,900	782,336.07	-	26,937.55	-	247,563.93
B. Payroll	1,071,100	813,629.52	-	28,015.05	-	257,470.48
C. Overhead						
D. Air Travel	60,000	54,596.07	606.38	-	-	4,797.75
E. Freight Cost	51,000	31,000.00	-	-	-	20,000.00
F. Excess Baggage	9,966	1,939.53	-	-	-	8,026.47
G. Processing Cost	3,450	2,923.92	314.71	-	-	211.37
H. Personal Automobiles	5,000	-	-	-	-	5,000.00
I. Settling-in Cost	40,500	31,240.91	-	-	-	9,259.09
J. Housing Allowance	171,160	-	140,841.39	-	1,977.35	30,318.61
K. Furniture & Equipment	77,000	28,464.59	37,817.77	-	3,548.25	10,717.64
L. Education Allowance	15,000	4,425.00	17,598.97	-	-	(7,023.97)
M. Terminal Leave	68,620	-	-	-	-	68,620.00
N. Medical Care	16,425	48.19	729.16	-	-	15,647.65
O. Int'l Travel Per Diem	13,500	11,559.52	2,376.51	868.83	-	(436.03)
P. In-country Travel Per Diem	18,538	-	7,053.00	-	327.62	11,485.00
	\$ 2,651,159	1,762,163.32	207,337.69	55,821.43	5,853.22	681,657.99
Say	\$ 2,651,000					681,498.99

USAID IMPROVEMENT GRANT
IECO CONTRACT 9074

CONSULTANCY EXPENDITURE BUDGET

APPENDIX III
 Sheet 2 of 4

<u>Schedule II</u>	<u>Budget</u>	<u>JOB TO DATE</u>		<u>APRIL, 1983</u>		<u>Balance</u>
		<u>Dollars</u>	<u>Take As Dollars</u>	<u>Dollars</u>	<u>Take As Dollars</u>	
<u>Short Term Consultant Related Cost</u>						
A. Salaries	12,000	10,992.70	-	-	-	1,007.30
B. Payroll Cost	14,640	13,411.10	-	-	-	1,228.90
C. Overhead Cost						
D. Specialist Consultants Fees	14,700	17,529.72	-	-	-	(2,829.72)
E. Air Travel	6,000	6,938.00	-	-	-	(988.00)
F. Excess Baggage	906	87.40	-	-	-	818.60
G. Processing Cost	600	24.00	-	-	-	576.00
H. Temporary Accommodation	10,640	9,313.69	-	-	-	1,326.31
I. Int'l Travel Per Diem	1,350	1,520.65	-	-	-	(170.65)
	\$ <u>60,836</u>	<u>59,867.26</u>				<u>968.74</u>
Say	\$ <u>61,000</u>					<u>1,132.74</u>

USAID IMPROVEMENT GRANT

IECO CONTRACT 9074

APPENDIX III

Sheet 3 of 4

CONSULTANCY EXPENDITURE BUDGET

Schedule III	Budget	JOB TO DATE		APRIL, 1983		Balance
		Dollars	Taka As Dollars	Dollars	Taka As Dollars	
<u>A. Office Rental, Equipment and Maintenance</u>						
1. Dhaka Office	52,860	-	51,637.70	-	580.33	1,222.30
2. Area Office Including Lab.	25,450	-	20,884.63	-	201.04	4,565.37
3. Furniture & Equipment	55,800	15,331.32	51,910.42	-	199.04	(11,441.74)
4. Office Supplies & Stationery	40,125	12,380.44	25,976.64	436.65	518.63	1,767.92
5. Reproduction Cost	54,900	383.88	49,879.73	-	373.03	4,636.39
6. Communication Cost	13,050	60.00	9,839.87	-	144.15	3,150.13
<u>B. Vehicle Operation & Maint.</u>						
1. Vehicle Rental	11,250	-	12,049.13	-	-	(799.13)
2. Vehicle Operation Maintenance	255,050	-	210,584.44	-	5,846.78	44,465.56
<u>C. Direct Hire Local Admin. Personnel</u>	130,900	-	121,213.35	-	3,499.54	9,686.65
<u>D. Soil Testing Charges</u>	33,000	-	29,552.19	-	115.72	3,447.81
<u>E. Subcontract DCS (Table 6B)</u>	993,450	-	678,774.56	-	31,165.92	314,675.44
<u>F. Local Travel</u>	23,500	-	15,013.36	-	1,267.64	8,486.64
<u>G. Misc. Field & Office Expenses</u>	18,000	25.00	13,489.15	-	70.40	4,485.85
	\$ 1,707,335	28,180.64	1,290,805.17	436.65	43,982.22	388,349.19
Say	\$ 1,707,000					388,014.19

USAID IMPROVEMENT GRANT

IECO CONTRACT 9074

APPENDIX III

Sheet 4 of 4

CONSULTANCY EXPENDITURE BUDGET

Schedule IV	Budget	JOB TO DATE		APRIL, 1983		Balance
		Dollars	Taka As Dollars	Dollars	Taka As Dollars	
<u>IECO Headquarter Related Cost</u>						
A. Salaries	93,300	93,426.48	-	1,995.41	-	(126.48)
B. Payroll Cost	113,830	113,738.86	-	2,434.40	-	91.14
C. Overhead Cost						
D. Officers' & Managers' Visits	18,600	20,585.30	-	-	-	(1,985.30)
E. Computer Cost	7,000	11,852.00	-	-	-	(4,852.00)
F. Communication Cost	19,500	11,440.87	-	380.36	-	8,059.13
G. Reproduction Cost	10,000	3,145.37	-	224.00	-	6,854.63
H. Bond Cost & Commission	5,000	2,684.08	-	-	-	2,315.92
	\$ 267,230	256,872.96	-	5,034.17	-	10,357.04
Schedule V	267,000					10,127.04
<u>A. Equipment Purchased for Project</u>						
1. Transportation Equipment	156,700	75,520.00	14,995.56	-	-	66,184.44
2. Survey Equipment	19,000	19,036.63	871.00	-	-	(907.63)
3. Soil Lab. Equipment	21,700	10,242.89	8,181.64	-	-	3,275.47
4. Materials Lab.	26,000	21,730.30	12,955.95	-	-	(8,686.25)
5. Minor Equipment, Tools and Spare Parts	29,000	22,558.96	210.23	258.16	-	6,230.81
B. <u>Shipping, Insurance and Clearance Costs</u>	77,600	59,144.48	7,536.09	98.44	36.24	10,919.43
Schedule VI	330,000	208,233.26	44,750.47	356.60	36.24	77,016.27
Fixed Fee	501,000	428,333.35	-	7,266.67	-	72,666.65
	\$ 5,517,000	2,743,650.79	1,542,893.33	68,915.52	49,871.68	1,230,455.88

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 Total Expenditure to Date = 4,286,544.12
 Percent of Budget Spent to Date = 77.70%
 Contract Time Elapsed = 82.94%