

**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. 36**

**SEPTEMBER 1982**

**CONSULTING  
ENGINEERS**

**INTERNATIONAL ENGINEERING COMPANY, INC.**

**A HARRISON-KNUDSEN COMPANY**

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

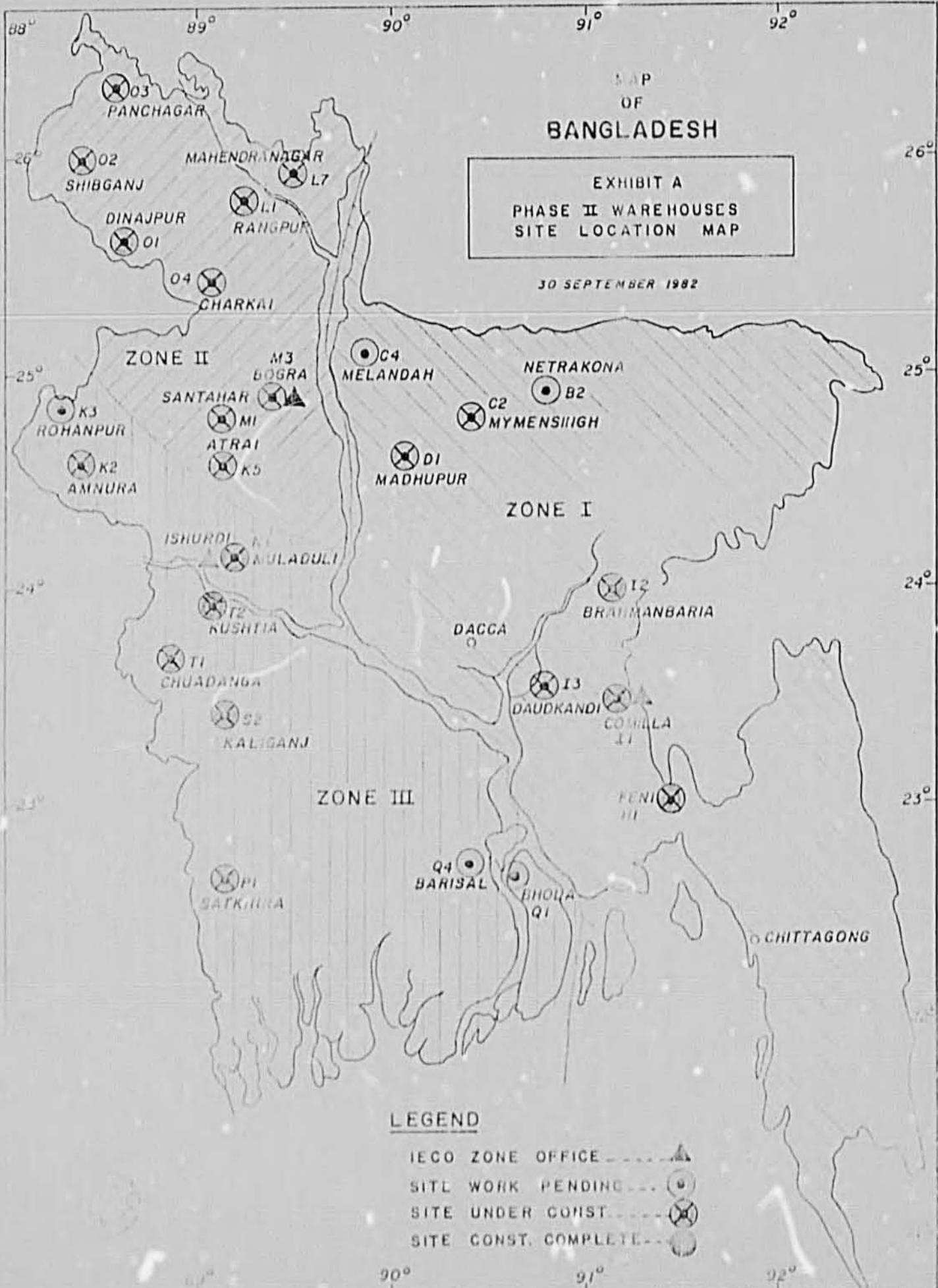
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MONTH OF SEPTEMBER, 1982

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CONTRACT 9074  
15 OCTOBER, 1982

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

INTERNATIONAL ENGINEERING COMPANY, INC.  
CONSULTING ENGINEERS

MONTHLY PROGRESS REPORT NO. 36  
FOR THE PERIOD SEPTEMBER 1-30, 1982

1. GENERAL

Three more sites were opened up for construction in September - Dinajpur, Charkai and Atrai - and with the re-activation of Annura the active sites totaled twenty one. Sitework schedules for the final sites (Netrakona, Melandah Bazar, Bhola and Barisal) were under discussion between KDC and IECO - and arrangements for procurement of required equipment and materials for R.C. piling manufacture and installation were in progress by KDC. These CPM Schedules were not readied for submission in September, but an overall piling program plus sitewise bar chart schedules were developed by KDC. These were under review by IECO at month-end. These schedules will serve for development of detailed CPM activity programs for implementation. The sites are to be opened up in October-November 1982 and the construction is to be completed by end-January 1984.

At the end of September, the overall construction program stands at 20% complete with 11 months of the 27 month construction schedule elapsed. There is a 2% shortfall from the overall 22% target completion. This target is still undergoing modification with a revised program for Comilla to be adopted. Scheduled progress at Comilla is unrealistically high and actual work lags which accounts for half of the shortfall in scheduled accomplishment. The remaining shortfall results from minor deficits in accomplished work at Brahmanbaria, Santahar and Satkhira - but progress on these sites is very satisfactory now and overtaking the programmed schedule at this time.

Progress was made by BADC in arrangements to finalize the BADC/RR siding construction agreement, but these had not been completed by end of the month. The continuing delay prevents timely materials procurement and prevents construction arrangements for these sidings.

Minor changes in field personnel were made in September. DCS staff numbered 111 and IECO local staff remained at 18. IECO and DCS force reports are appended.

## 2. CONTRACT ADMINISTRATION

- Change Orders -- C2-007 Mymensingh, incorporating concrete piles. Not signed by KDC.
- H1-006 Peni sitework: earthwork changes. Not signed by KDC.
- Amendment No. 1 to BADC/KDC Contract -- Not under active consideration by BADC during September.
- Amendment No. 4 to BADC/IECO Contract -- Final revisions were made and negotiations with BADC concluded. Submitted to the Ministry of Agriculture for review and approval.
- BR/BADC Agreement -- Draft agreement under Ministry review. Meetings between Agriculture and Communications ministries aimed at early agreement.
- IECO Jeeps -- The import permit was pursued throuout the month, in joint efforts by IECO and BADC. These efforts were not successful. Port authorities in the meantime gave notice of intention to sell the vehicles at auction. IECO requested deferral of such action.

## 3. CONTRACT EXPENDITURES

September 1982 Taka expenditures reimbursable by USAID were:

Local salaries	59,013.00
Office supplies & expenses	15,598.32
Dhaka office rent/maint/utilities	4,519.12
Area office rent/maint/utilities	3,719.16
Furniture & equipment	40,934.00
Vehicle operation	110,165.80
House rent/maint/utilities	50,396.38
House furniture	180.00
Education	158,258.80
DCS	442,821.87
Local travel	12,600.40
Expat Perdiem & hotel	4,957.00
Int. Air travel	5,377.00
Other	465.00
Total Taka	<u>909,005.85</u>

Expenses reimbursable through BADC's Duties & Taxes Account were Taka 5,029.21.

August expenditure budget and schedule are appended.

4. EXPATRIATE STAFF - IECC

In-country expatriate staff during September:

F.E. Isrig	Project Manager
D.H. Workman	Chief Construction Engineer
D. Lovely	Contract Administrator (on leave in U.S. from 5 September)
M. Lim	Construction Engineer
S.J. Hewick	Construction Engineer
A. Htay	Materials Engineer

5. MEETINGS

16 September KDC/IECC/USAID - Discussion of construction contract provisions. Change Orders.

19 September BADC/IECC/KDC - Construction contract terms and conditions. Claims Issues.

19 September USAID/BADC/IECC - Review of works quantifications. concreting construction procedures.

20 September BADC/KDC/AID/IECC - Progress Meeting No. 12. BR/BADC Agreement, CPM Schedules, KDC Progress Reports, Construction Work Hours, Amendment #4 to IECC Contract.

6. PENDING ACTIVITIES AND ACTIVITIES IN PROGRESS

6.1 For Action by BADC

1. Agreement by BR and BADC on the BADC/BR memorandum of understanding for construction of rail sidings. The draft memorandum of understanding was under review by Ministry of Agriculture and Ministry of Communication officials. Further meetings are scheduled for October, to reach agreement on all terms.

2. Site Clearance/Obstruction Removal activities:

Ranapur - On-site railway quarters, sheds, and well-pumping machinery are impeding sitework. An agreement with the Burmah Eastern for extension of existing decanting pipelines is still pending. The telephone and power pole lines are to be re-located (per IECC drawing) to facilitate site

access road construction. The open drainage outfall requires diversion by BR (per IECO drawing). Arrangements for all the above relocations and removals are in progress.

Comilla - The ghumty ghar remains an obstruction to completion of rail sidine embankment construction.

Mahendranagar - The telegraph and telephone wires overhanging the site access road require raising (per IECO drawing).

Madhupur - Telephone pole line requires relocation to clear construction

Mymensingh - Relocation of telephone line overhanging the site by arrangement with T&T Board is pending.

3. Give final consideration to the proposed Amendment No. 1 to the KDC Contract.
4. Obtain government approval of Amendment No. 4 to the IECO Contract.
5. Assist in obtaining the required permit for IECO to import Jeens: fund the duties and taxes due.
6. Fund KDC's duties and tax account to the extent required to cover imports.

#### 6.2 For Action by IECO

1. Pursue site occupancy and obstruction removal problems in collaboration with BADC, BR, Burmah-Eastern, Roads & Highways etc.
2. Review cost proposals for temporary brick flooring at Atrai, Barisal, Melandah, Mymensingh and Netrakona.
3. Daudkandi - Issue Change Order for modified foreshore works, based on modified drawings.
4. Bhola - Issue information Change Order modifyine (reducing) earthwork.
5. Barisal - Prepare Change Order for modified (relocated) site access road and related layout changes plus modification to RC pile works. Obtain KDC price quote.
6. Netrakona & Melandah - Prepare Change Orders covering modification to RC pile foundations. Obtain KDC price quote.

7. Brahmanbaria - Review cost estimate for water supply system.
8. Most sites - Develop sketch layouts for water supply systems. Obtain KDC proposals for installations.

## 7. ENGINEERING ACTIVITIES

### 7.1 Materials and Foundations Engineering

Gradation tests on soils and concrete aggregates, and field density tests on engineered fill were performed at Santahar, Muladuli, Kushtia, Amnura, Kaligani, Mymensingh and Madhupur.

Bricks, imported soils, fine and coarse aggregate samples collected from local suppliers and submitted by KDC, were tested for use at Atrai, Muladuli, Chudanea, Kushtia, Panchagar, Rangpur, Mahendranagar, Barisal, Bhola, Mymensingh, Amnura, Netrakona and Melandah.

Laboratory tests on insitu soils were completed at Mahendranagar. Results were evaluated and recommendations made to reuse the excavated soils in common fill and in engineered fill outside the building areas.

Dutch cone penetration tests were carried out at Melandah Bazar. Pile penetration and bearing capacity analyses were made and the design lengths established.

Precast concrete piling was started at Comilla in September. Driving records of sixty eight piles were reviewed and found satisfactory.

At Netrakona, Dutch cone penetration testing originally planned for mid-September was postponed due to submergence of parts of the site under water. Revised estimates of pile penetration were made using the available SPT and sample data, to be confirmed by the cone penetration data when available.

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

### 7.2 Office and Field Engineering

Modifications were made to the Daudkandi foreshore topography contours. For Rangpur site, a plan and details of relocation of telegraph and power lines at site approach road; a plan and details of a drainage diversion channel; and provision of a perimeter access road for the RDRS godown were completed. Drawings depicting finishing details for the ancillary buildings were finalized. Quantifications of ancillary building sitework (rechecks) were made. Finalization of layouts for water supply lines at various sites was in progress all month. Standard field forms for recording density tests were prepared. Utility relocation drawings for pole lines at Mahendranagar were prepared.

CONSOLIDATED REPORT  
MATERIALS TESTING

Laboratory Reporting:  
Dhaka

Reporting Period:  
From 26 Aug. To 25 Sept.

CONCRETE		No. of Tests at			Samples Passed at	Remarks	
Compressive Strength Test	Site	Location	7 days	14 days	28 days		
-	-	-	-	-	-		
Materials & Tests	Particulars				Tests Total	Tests Passed	Remarks
<u>BRICK</u>							
Frog Marks -							
Absorption Test	AZ'81, CAK'81,				7	7	AZ'81, CAK'81, CEM'82 SYZ passed
Compressive Strength Test	HSC, CEM'82, BIZLI, BOND, SYZ				7	4	
<u>FINE AGGREGATE</u>							
Gradation Test					6	6	1 for L1, 1 for O1 & O4, 1 for B2, C2 & C4, 2 for D1 and 1 for P1 & T1.
Specific gravity Test							
Unit weight Test							
Lab. Compaction Test							
<u>COARSE AGGREGATE</u>							
Gradation Test					3	1	01/04 sample passed.
Unit weight Test							
Specific gravity Test							
<u>IMPORTED MATERIALS</u>							
Gradation Test					17	5	Samples passed - 9 for L1, 4 for L7 & 2 for D1.
Atterberg Limit Test					1	-	D1 sample (failed).
Natural M/C							
Specific gravity Test							
Lab. Compaction Test					1	-	D1 sample (failed)
<u>SPECIAL</u>							
Cement Test							

CONSOLIDATED REPORT  
MATERIALS TESTING

Laboratory Report No.  
Zone I (Comilla)

Report Period:  
From 1 Sept. To 25 Sept.

CONCRETE		No. of Tests at			Samples	Remarks	
Compressive Strength Test Site	Location	7 days	14 days	28 days	Passed at 28 days		
Comilla (II)	Precast RC piles	8	-	8	8	In addition, 1 field cured sample from I2 passed and three-day tests were made on 6 concrete cylinders from II, 1 cylinder from I2, 4 from I3 for barbed wire post, roof slab, sunshade lintel, godown floor slab, pavement, canopy & shear wall.	
Erskanbaria (I2)	Godown roof slab	28	12	16	14		
Daudkandi (I3)	Column	19	7	19	17		
Feni (III)	Roof slab Blde Cl & public toilet	3	1	2	2		
Materials & Tests		Particulars			Tests Total	Tests Passed	Remarks
BRICK		Prog Marks -					
Absorption Test		A. Khaleque, CKB			2	1	A. Khaleque (for II site) passed
Compressive Strength Test					2	2	
FINE AGGREGATE							
Gradation Test					9	8	Samples passed: 3 for II, 3 for I2, 1 for I3 & 1 for III.
Specific gravity Test							
Unit weight Test							
Lab. Compaction Test							
COARSE AGGREGATE							
Gradation Test					10	10	Samples passed: 2 for II, 4 for I2, 2 for I3 & 2 for III.
Unit Weight Test							
Specific gravity Test							
ROCKETED MATERIALS							
Gradation Test					16	12	Samples passed: 1 for I3, 1 for H1 & 10 for D1
Atterberg Limit Test							
Natural M/C							
Specific gravity Test							
Lab. Compaction Test							
SPECIAL							
Cement Test							

CONSOLIDATED REPORT  
MATERIALS TESTING

Laboratory Reporting:  
Zone II (Bogra)

Reporting Period:  
From 1 Sept. To 30 Sept.

CONCRETE		No. of Tests at			Samples passed at 28 days	Remarks	
Compressive Strength Test Site	Location	7 days	14 days	28 days			
Shibganj (02)	Godown Anc. bldg.	7	14	39	31		
Panchagar (03)	Godown	3	3	7	6		
Bogra (M3)	Godown Anc. bldg.	20	-	22	16		
Santahar (M1)	Godown	34	2	38	38		
Materials & Tests		Particulars			Tests Total	Tests Passed	Remarks
<u>BRICK</u>		Frog Marks -					
Absorption Test		DBM, MSR			4	4	DBM (03 site) passed all tests. MSR (M1 site) failed strength test.
Compressive Strength Test		DBM, MSR			4	3	
<u>FINE AGGREGATE</u>							
Gradation Test					10	8	For M1 site
Specific gravity Test							
Unit weight Test							
Field Compaction Test		Field density test for sand floor slab			61	54	For M3 site
<u>COARSE AGGREGATE</u>							
Gradation Test					8	5	For M1 site
Unit weight Test							
Specific gravity Test							
<u>IMPORTED MATERIALS</u>							
Gradation Test					13	12	For M1 site
Atterberg Limit Test							
Natural M/C							
Specific gravity Test							
Field Compaction Test		Field density for engineered fill			1359 11	1115 9	For M1 site For M3 site
<u>SPECIAL</u>							
Cement Test							

CONSOLIDATED REPORT  
MATERIALS TESTING

Laboratory Reporting:  
Zone-III (Ishurdi)

Reporting Period:  
From 26 Aug. To 25 Sept.

CONCRETE		No. of Tests at			Samples Passed at 28 days	Remarks	
Compressive Strength Test Site	Location	7 days	14 days	28 days			
Muladuli (N1)	Piles foundation	13	7	7	7	All passed.	
Chudanga (T1)	"	8	18	13	12	1 sample failed.	
Satkaira (D1)	"	14	12	10	9	1 sample failed.	
Materials & Tests		Particulars			Tests Total	Tests Passed	Remarks
<u>BRICK</u>		Frog Marks -					
Absorption Test		Jublee			1	1	Jublee (for S2) had both tests. IU82(N1) & ABC82(T1) had strength test only. ABC82 failed
Compressive Strength Test		IU 82, ABC 82, Jublee			3	2	
<u>FINE AGGREGATE</u>							
Gradation Test					5	5	4 of these are K2 samples and 1 S2 sample.
Specific gravity Test							
Unit weight Test							
Lab. Compaction Test							
<u>COARSE AGGREGATE</u>							
Gradation Test							
Unit weight Test							
Specific gravity Test							
<u>IMPORTED MATERIALS</u>							
Gradation Test					3	3	2 T2 samples failed, 1 S2 sample passed.
Atterberg Limit Test							
Natural M/C							
Specific gravity Test							
Lab. Compaction Test							
<u>SPECIAL</u>							
Cement							

## 8. CONSTRUCTION SURVEILLANCE

### 8.1 General

IECO continued inspection of warehouse site construction activities in all three zones of operation in September. The number of active sites stood at 21 with opening of Dinajpur, Charkai and Atrai in Zone-II.

Preliminary site work at Rohanpur, expected to begin in September was not started due to KDC's failure to mobilize site personnel. IECO's Rohanpur construction supervision crew continued to assist Amnura staff all month.

Discussions were held between IECO and KDC on site construction program scheduling, pile casting operations, and equipment mobilization for the five piling sites of Bhola, Barisa, Atrai, Natrakona and Melandah. IECO asked KDC to submit implementable work schedules for these sites, with work to begin in October and November. KDC was asked to revise CPM schedules for Chuadanga and Comilla sites incorporating changed work sequences and matching planned and actual progress of activities. A revised Dinajpur work schedule was also called for.

All sites underway are now furnished with complete sets of shop drawing approved to date. Residential building shop drawings were transmitted to sites where residential buildings are currently under construction. Sets of supplemental drawings detailing finishes of the ancillary buildings were sent to the concerned sites.

Site-specific activity in September was as follows:

### 8.2 Zone-I (Comilla)

#### Il Comilla

The number of precast RC piles driven totalled 105 to date with 36 piles placed in September. Of forty interior pile caps prepared for casting, twenty were cast during the month. The pile head treatment is lagging by 14 weeks. Ninety five barbed wire fence posts cast in September marked the completion of all 440 fence posts to be poured. About of one-fourth of these posts were installed.

In the B1 ancillary building, first floor slab casting and brickwork to 4' elevation was completed. Foundation excavation for the C1 building was accomplished.

### I2 Brahmanbaria

In the godown building, concrete slab on grade was completed on 23 September. Plastering of both interior and exterior walls was completed. Pouring of concrete canopies was underway, and 90% accomplished.

In the A1 ancillary building, completed works include exterior plastering and fitting of door and window frames. In-progress work involved interior plastering (75% done) and initiation of sanitary work.

In the B1 and C1 buildings, door and window frames were fitted and sanitary work initiated. Plastering of the exterior walls of the B1 building was 90% completed.

Roadway concreting in September included the 34' pavement on the east of the godown. The 34' pavement on west side of the godown was half completed. The 18' site entrance road terminating at the west side of the godown was completed.

### I3 Daudkandi

All exterior godown columns were cast to roof beam level. Three shear walls were cast to roof beam level: the fourth to 8' level. Formwork for the last lift was completed and casting scheduled for early October. All but four interior columns were poured up to roof beam level. The remaining 4 columns were completed to 8' lift and formwork for the next lift was underway. Brickwork was completed up to the first lintel beam on the eastern side.

In the A1 ancillary building formwork and rebar placement for the first roof slab approached completion. Concreting is scheduled for early October. Ancillary building B1 penthouse roof slab and parapet brickwall were completed during the month. The roof slab was cast in the C1 building.

Roadway construction in the eastern side was 100% and in the northern side 50% complete. Guardpost brickwork and top slab was also completed.

### H1 Feni

The C1 ancillary building falsework was dismantled, brickwall plastering was in progress and floor slabs were cast. In the public toilet, brickwork and roof slab were completed and exterior plastering started. In the godown area, 15% of the unsuitable soils remain to be removed, and the partially flooded excavated hole is not yet accessible for re-excavation work.

## C2 Mymensingh

At month end, site mobilization was 67% complete. Engineered and common fill construction was 90% complete to date. Construction of temporary office buildings proceeded to 80% completion and temporary facilities including approach road, workshop, storage space, sanitary system etc. were about 75% constructed.

The contractor has erected two platforms of 40'x30' size on the rented property adjacent to site for pre-cast pile manufacture. The work scheduled for starting in September will now begin late in October. The required equipment and materials for this work are yet to arrive at site.

Materials stockpiled in September includes coarse sand, cement, deformed rebars # 5 & 6, common filling sand and bricks.

## D1 Madhupur

Mobilization was 25% complete at end of September. Temporary office construction was 80% done and is in progress. Stripping and clearing was completed. Construction of engineered fill continued and the first 6" layer was placed in the godown, pavement and ancillary building areas.

Equipment and materials so far imported to site include a bulldozer and some 90,000 cf of engineered fill.

## 8.3 Zone-II (Bogra)

### M1 Santahar

West Godown (10,000 tons): Placing and compacting sand under the floor area continued throughout the month and is now approximately 80% completed. The remaining 28 interior columns and 23 exterior columns were completed as well as all bond beams, canopies and shear walls. Three bays of roof slab and beams were poured; formwork and placing of rebar were in progress for this area.

East-1 Godown (6,000 tons): Works included forming and placing concrete for wall foundations, interior and exterior columns and compacting sand under the floor area. To date 98% of wall foundations, 100% of interior columns, 15% of exterior columns and 80% of sand fill under floor area have been completed.

East-2 Godown (6,000 tons): Placing and compacting of engineered fill was again started and approximately 40% of the fill was completed by month end.

Actual progress including on-going work to date was at 52% against a scheduled 35.1%.

### M3 Bogra

Completed works include pouring exterior columns up to roof level, all remaining bond beams and shear walls. Work continued on 10" masonry walls and was about 40% complete. The total volume of roof slab and beams poured during the month amounted to 298 cubic yards. Formwork continued. Four hundred feet of 18' approach road was constructed.

The ground floor roof slab of ancillary building A1 was poured and brickwork up to 3' above roof slab was completed. B1 building brickwork was completed up to lintel level of the second story. Building C brickwork was placed to two feet above ground level.

Overall progress for this site stands at 52% against 49% planned on the revised CPM schedule.

### O2 Shibgani

Wall foundations and all interior columns were completed. Thirty exterior columns were poured up to roof level, and rebar has been placed for the remaining thirty six columns. Twelve shear walls were completed to roof level and shuttering is underway for the remaining four. Forming and pouring of bond beams and canopies proceeded throughout the month. Twentysix bond beams at the lower level have been completed together with 4 canopies and 26 bond beams at upper level. Brickwalls were started during the month: to date 26 bays have been completed to elevation 10 feet, and 12 bays to elevation 15 feet. Placing and compacting of coarse sand under floor area continued. Brickwork for rail loading platform was completed.

Brickwork and roof casting of ancillary buildings A1 and C1, public toilet and guard house were completed. Two septic tanks were also completed. Concrete coping and barbed wire fence for boundary wall was underway. Progress stood at 45% against a scheduled 35% at month end.

### O3 Panchagar

Placing and compacting of coarse sand proceeded throughout the month and the third layer was completed. Four remaining shear walls were poured as well as all the remaining interior and exterior columns. Bond beams at elevation 10 feet were poured on the north side of godown and formwork for this item continued. Forming for roof beams and slab was started. Coping and angle iron fitting for boundary wall was underway.

Foundation excavation for A1 building and brickwork foundation for B1 building were completed during September.

Actual work progress stood at 34% against a scheduled 36% at month end.

#### L1 Ranapur

Attempts to pump water from low area were not successful due to present high water table, and were discontinued. A new work schedule submitted by KDC indicates that excavation of unsuitable material will start in early October. Construction of an off-site field office was underway.

Equipment at site consists of two water pumps and a small motor grader.

#### L7 Mahendranagar

Stripping of topsoil was completed and work on the temporary field office was started. Railroad quarters at site were demolished.

A new work schedule submitted by the Contractor indicates KDC's intention to start excavation work in the first week of October.

#### 01 Dinajpur

Stripping of topsoil was started and was 60% completed at month end. Construction of temporary office was started. There was no equipment and no permanent KDC representative on site.

#### 04 Charkai

Contractor started stripping of topsoil on the first of the month and completed 80% of the work. Stockpiling of materials for construction of temporary office was started. The site does not have any equipment nor any permanent KDC representative.

#### K5 Atrai

In mid-September IECO and KDC jointly surveyed the original ground. Stockpiling of materials for temporary office was started. No equipment has yet arrived at site. KDC has yet to place its staff on this site.

#### 8.4 Zone III(Ishurdi)

##### K2 Amnura

Siteworks were re-started on 2 September '82. Foundation excavation for columns and wall footings was accomplished and 66% completed. Sand fill in footings achieved 11,000 cf or 10%. Overall progress achieved is 11.50% against 12.0% planned. Work is on schedule as per approved CPM. A tubewell for construction water supply must be sunk to expedite construction work.

##### N1 Muladuli

All pile caps were cast. Wall foundations for platforms and grade beams were completed except for one bay being used for working access. Half of the interior columns were cast to 7'0" height and another 50% were cast to 14'0" height. Work is progressing to complete the interior columns to required height and starting on exterior columns. Formwork and rebar for shear walls are also in progress.

Brickwork for seven truck loading platforms is completed, and engineered fill placed in the loading platforms.

Progress achieved is 29.4% against 28% as planned. Work is six weeks ahead of CPM schedule.

##### T2 Kushtia

No progress was made in engineered fill work due to non-availability of imported select materials. The temporary office building was completed. Work began on a cement storage building and is about 35% complete.

Pile reinforcement cages were placed in formwork but concreting cannot proceed until the defective concrete mixer engine is repaired.

Progress achieved for the month is 5.7%, lagging the 11% planned.

##### T1 Chuadanga

No filline work was performed in September. All wall foundations were completed with 120 cy of concrete poured. Twenty-four exterior columns were cast to roof level and the rest were cast to 2'2" high, totalling 27 cy of concrete poured. Rebar and formwork for the remainder of the columns are in progress. Shear walls for four corners and one middle shear wall were completed to roof level with 80 cy of concrete poured. Work is progressing on the rest of the shear walls. Sand fill within the godown area is complete, with 146,990 cf placed. Sixty-one percent of concrete floor slab or 618 cy has been completed, and work is progressing on the rest of the floor slab. Six canopies and one double bay canopy are completed with 36 cy of concrete poured. First and second tier bond beams are completed to 300 LF.

With a substantial amount of sand fill and slab on grade completion in September, the value of work accomplishment to date achieved 37.9% of the site amount. This site requires a revised CPM reflecting the on-going works and matching planned and actual activities.

### S2 Kaliganj

The temporary office building and one cement storage building was completed. Engineered fill advanced another 18,800 cf, totalling 52,300 accomplished or 36% of total fill. Work is progressing to bring the fill in the godown area to required elevation.

A full time Korean architect-engineer arrived on site. Materials for manufacture of RC piles have been mobilized. The concrete batching plant has not been mobilized.

Work accomplished was 5.9%, near the 6% planned. Site progress and activities are on schedule as per CPM.

### P1 Satkhira

No progress was reported for site filling work. Eighty-one LF of entrance approach road was paved. Sand fill within the godown area was completed, with 66,000 cf placed. Vapor barrier for 26,100 sf of floor area was laid and 313 cy of concrete for floor slab was poured. Two shear walls were completed to required height and another two completed to 8'2" height. Seven exterior columns were completed to required height and the rest cast to 6'0". Fifty percent of the interior columns were completed to required height and another fifty percent (20 each) to 8'6" height. One canopy was completed. Brickwork for ten truck loading platforms were completed. Damp-proof course for godown brickwork was also completed. Formwork and rebar for interior and exterior columns, canopies and shear walls are in process of placement.

Progress recorded for electrical work includes 125 LF of 1" dia. G.I. pipe and 216 LF of 1" dia PVC pipe.

Progress achieved during the month is 12.0% and overall progress achieved is 36.3% is ahead of the 27% planned.

A revised CPM is needed to monitor and reflect the sequence of on-going site activities.

### K3 Rohanpur

KDC failed to mobilize site personnel in September as planned. Mobilization is rescheduled to start in October. A bulldozer from Kaliganj site will be transferred to Rohanpur. IECC's personnel are mobilized and temporarily stationed at Azura site.

## 9. CONTRACTOR'S ACTIVITIES

The following are excerpts from KDC's monthly report No. 11 for the month of September 1982.

### 1. OVERALL PROJECT ACTIVITIES

#### 1.1 GENERAL STATEMENT OF PROGRESS

Overall project completion is estimated to date as 20% against a planned 22%.

Overall progress for each zone is approximately as follows:-

Zone - I	Planned	7%
	Actual	6%
Zone - II	Planned	11%
	Actual	11%
Zone - III	Planned	4%
	Actual	3%

As from 1 October 22 sites shall be in operation. These are as follows:-

Zone - I	Comilla, Daudkandi, Brahmanbaria, Feni, Mymensingh and Madhupur.
Zone - II	Santahar, Bogra, Shibganj, Panchagar, Pabna, Mahendrapur, Dinajpur, Charkai and Araf.
Zone -III	Muladuli, Chudanda, Setkhira, Annura, Kaliganj, Kushtia and Rohanpur.

Total expatriate staff now equals 95 persons against the original planned estimate of 75 persons.

## 1.4 EQUIPMENT

### 1.4.1 HEAD QUARTERS AND WORKSHOP

<u>Description</u>	<u>No.</u>
Traller	1
Crane	1
Generator 58 KW	1
Welding Machine	1
Cargo Truck	1
Penetrometer	1
Concrete Vibrator	11
Batch Plant	1
Pick-Up	2
Water Pump	1
Barge	1
Vehicle	3
Bulldozer	1

### 1.4.2 CRUSHING PLANT

Crusher	1
Payloader	1
Launch Boat	1
Generator	1
Dump Truck	1
Jeep	1

### 1.4.3 KHULNA DEPOT

Crane	1
Jeep	1
Diesel Welder	1
Bar Bender	1
Generator	1

1.5 MATERIAL PROCUREMENT AND SHIPMENT

AS OF SEPTEMBER 30, 1982

IMPORTED MATERIALS

Description	Quantity (Tons)			Grand Total	Remarks Shipment Number/ Vessel Name
	Arrival Up to July	Arrival in August	In Ship- ment		
Cement	1,003.000	-	-	1,003.000	14th
Rebar	2,696.257	-	757.339	3,453.596	14th 18th & 20th
Tie Wire	80.320	-	-	80.320	14th
Wire Mesh	779.870	-	-	779.870	14th, 15th & 18th
Bar W05	45.682	-	-	45.682	14th
Plywood	857.041	-	-	857.041	14th
PVC Channel Strip	23.200	-	-	23.200	15th
Form Tie and Septa	27.190	-	-	27.190	15th
Lecco Form	743.170	-	-	743.170	15th & 16th
Steel Form and Angle	113.348	34.560	-	148.108	15th 16th, 18th & 19th
Steel Pipe Support	461.680	-	-	461.680	15th
Form Oil	9.390	-	15.650	25.040	16th & 20th
Shuttering Board	448.350	-	-	448.350	M/V Al-Salma (E.D. Flag)
U.S. Pipe and Socket	38.180	-	-	38.180	18th
Insert	7.100	-	-	7.100	18th
Vinyl Sheet	33.779	-	-	33.779	18th
Asphalt Primer, etc.	67.818	-	-	67.818	M/V Robert E. Lee (USA Flag)
Compound and Crout	31.137	-	-	31.137	M/V Stonewall Jackson (USA Flag)
OS Roofers Base Sheet etc.	-	-	1,286.224	1,286.224	M/V Banglar Kakoli (E.D. Flag)
W. Barbed Wire	-	19.350	-	19.350	19th
Pench Post	-	27.968	-	27.968	19th
EMP Asphalt	-	269.200	316.100	585.300	19th & 20th
Steel Louver, Door & Window	-	-	257.141	257.141	20th
Gravel Stop, Gangway Material etc.	-	-	61.241	61.241	20th
Miscellaneous	54.900	9.912	6.420	65.312	14th, 15th, 18th, 19th & 20th
<b>TOTAL</b>	<b>7,521.692</b>	<b>360.990</b>	<b>2,694.115</b>	<b>10,576.797</b>	

Summary

Korean Flag	4,319.377
Bangladesh Flag	1,984.604
U.S.A. Flag	4,272.816
<b>Total Tons:</b>	<b><u>10,576.797</u></b>

Reference

14th Shipment Via M/V Ivory Dragon (Korean Flag)  
 15th Shipment Via M/V Button Gwinnett (U.S.A. Flag)  
 16th Shipment Via Banglar Swapna (Bangladesh Flag)  
 18th Shipment Via Benjamin Harrison (U.S.A. Flag)  
 19th Shipment Via George Wythe (U.S.A. Flag)  
 20th Shipment Via Sam Houston (U.S.A. Flag)

1.5 EQUIPMENT PROCUREMENT AND SHIPMENT

AS OF SEPTEMBER 30, 1982

Vessel	Flag	From	Items	No.	B/L Ton	Remarks
o Ivory Dragon Arrived on 23.1.82	Korea	Korea	Diesel Engine	8	3.2	All Delivered To Site
o Benjamin Garrison Arrived on 3.3.82	U.S.A.	U.S.A.	Vibratory Roller	3	20	All Delivered To Site
o Al-Soyest Arrived on 7.3.82	Bangladesh	Singapore	Shaft for Concrete Vibrator	3	1.06	
			Freezer	8		
			Refrigerator	10		
			Air Conditioner	15	27.22	
			Water Heater	9		
			Transformer	8		
			Concrete Dumper	7	37.75	
			Generator	10	87.98	
			Wheel Loader	3	46.15	
			Truck Crane	1	91.39	
			Tractor	4	78.45	
					370.00	All Delivered To Site
o Button Swinnett Arrived on 31.3.82	U.S.A.	Korea	Tower Winch	8	43.18	All Delivered To Site
			Plate Compactor	4		
			Submersible Pump	4		
			Water Pump (Gasoline)	4		
			Conc. Vibrator	15	10.92	All Delivered To Site
			Conc. Vibrator Length	20		
			Conc. Vibrator (Elect)	15		
					54.10	
o Ben-lar Swana Arrived on 21.4.82	Bangladesh	Korea	Concrete Mixer	10	421.40	All Delivered To Site
o Al-Saba Arrived on 21.5.82	Bangladesh	Singapore	Air Conditioner	54	27.00	All Delivered To Site
			Refrigerator	4		
o Button Swinnett Arrived on 21.7.82	U.S.A.	U.S.A.	Pick-Up	10	124.00	All Delivered To Site
o Banglar Treoti Arrived on 20.9.82	Bangladesh	Japan	Crushing Plant Accessories		5.5	All Delivered To Site

S U M M A R Y

Vessel	Equipment	Material	Total
Korean Flag	3.20	4,319.377	4,322.577
U.S.A. Flag	198.10	4,272.816	4,470.916
Bangladesh Flag	823.90	1,984.604	2,808.504
Total Tons:	1,025.20	10,576.797	11,601.997

## II. SPECIFIC SITE ACTIVITIES

### 1. ZONE-I

#### 1.1 GENERAL STATEMENT OF PROGRESS

##### Comilla-II

Pre-cast concrete pile manufacturing is 100% complete. Pile driving work is in progress and shall be 100% complete in October. Pile cap concrete pour has commenced and shall be progressed next month. Compacted coarse sand filling under floor shall be done simultaneously during October.

Ancillary building B1 first floor slab has been poured. Brickwork up to first floor is in progress. Type C foundation brickwork and superstructure brickwall shall be started next month.

Barbed wire fence work is progressing.

Planned activity to date is 56%.

Actual achieved progress is 36%.

##### Brahmanbaria-I2

Godown floor slab concrete pour is in progress and estimated to complete by early October. Plastering is complete. Pointing and neat cement finishing to outside surface shall complete in mid-October. Concrete pour to canopy has completed.

Ancillary building plastering work has commenced and shall be completed by end of October. Doors and windows are being fixed and shall be completed by end of October.

Sanitary, plumbing and electrical works are in progress.

Concrete pour to roads and parking areas shall be progressed during October. Fence posts were installed with barbed wire.

Planned activity to date is 94%.

Actual achieved progress is 80%.

##### Daudkandi-I3

Godown column & shear wall is now about 90% complete. Installation of formwork & rebar to roof slab shall commence in the middle of the next month and concrete pour to roof slab will be started in the third week.

Ancillary building A1 brickwork upto first floor slab is complete and placing of formwork and rebar to roof slab has started. Concrete shall be poured in early October.

Type C1 roof slab has been poured and formwork shall be complete by mid-October. Plastering work in ancillary buildings shall be done during next month.

Concrete pour to road has commenced and shall continue.

Planned activity to date is 37%.

Actual achieved progress is 37%.

#### Feni-H1

Mobilization is now about 53% complete.

Excavated unsuitable material approx. 95% has been disposed as instructed by the Engineer and shall complete by next month's end.

Ancillary building construction shall proceed during October. Electrical work is 25% complete and plumbing 25% complete now.

Planned activity to date is 7%.

Actual achieved progress is 9%.

#### Mymensingh-C2

Mobilization is now about 67% complete.

Manufacturing of precast concrete piles shall commence in the middle of the next month.

Planned activity to date is 7%.

Actual achieved progress is 8%.

#### Madhupur-D1

Mobilization is now 25% complete.

Temporary building including all facilities about 95% complete.

Engineered fill to the area is approximately 50% complete and shall be in progress during October.

R.C.C. fence post manufacturing to be started by October.

Planned activity to date is 2%.

Actual achieved progress is 3%.

### 1.3 PLANT AND EQUIPMENT

<u>Site</u>	<u>Description</u>	<u>No.</u>	<u>Description</u>	<u>No.</u>
Comilla-I1	Payloader	1	Crane	2
	Mixer Truck	2	Batcher Plant	2
	Generator	2	Air Compressor	1
	Vib. Roller	1	Pile Hammer	2
	Tractor	1	Dump Truck	2
	Cargo Truck	1	Pick-Up	1
	Jeep	1	Water Pump	3
	Swaco Pump	1	Welder Motor	2
	Soil Compactor	2	Bar Cutter	1
	Conc. Vibrator	4	Battery Charger	1
Brahmanbaria-I2	Conc. Mixer	2	Generator	1
	Air Compressor	1	Conc. Dumper	2
	Pick-Up	1	Water Pump	2
	Motor Cycle	1	Conc. Vibrator	4
	Tower Winch	2	Trolley	1
Daudkandi-I3	Payloader	1	Mixer Truck	1
	Batcher Plant	1	Generator	1
	Tractor	1	Conc. Dumper	1
	Water Pump	3	Submersible Pump	1
	Diesel Welder	1	Bar Cutter	1
	Conc. Vibrator	5		
Feni-H1	Cargo Truck	4	Water Pump	1
	Conc. Mixer	1	Pick-Up	1
Mymensingh-C2	Bulldozer	1	Vib. Hammer	1
	Conc. Mixer	1	Pick-Up	2
	Arc Welder	1		
Madhupur-D1	Bulldozer	1	Water Pump 4" $\phi$	1
	Pick-Up	1	Mixer Machine	1

## 2. ZONE-II

### 2.1 GENERAL STATEMENT OF PROGRESS

#### Santahar-M1

Godown-West columns, bond beams & canopies concrete pour has been completed on 27 September. Installation of formwork & rebar to roof slab and beam at west-end has commenced on September 9 & 18 respectively. First concrete pour to roof slab & beam started on the 25th and second pour on 27th September. Placing of formwork re-bar & concrete to roof slab & beam wall be progressed during October and is estimated to be completed by end-November. Stripping formwork shall be progressed during October. Compacted coarse sand fill under floor 4th layer is complete and the top layer shall be completed by end-October. Brickwork to superstructure wall shall commence in the middle of next month.

Godown East-I internal columns have been compacted on the 26th. Grade beam has completed on the 7th September. External columns shall be completed by end-October. Compacted coarse sand fill in top layer and concrete pour to floor slab shall simultaneously be progressed during October.

Godown East-II engineered fill is complete upto Elev. 98.5 and shall continue in October.

Parking area engineered fill at Elev. 100.0 has completed.

Three septic tanks attached to ancillary buildings A1, B1 and C have been completed.

Planned activity to date is 42%.

Actual achieved progress is 40%.

#### Bogra-M3

Godown columns & shear wall concrete pour has completed on the 9th and 25th September respectively. Installation of formwork & re-bar to roof slab & beam has commenced at east side of expansion joint in early September. Concrete pour to roof slab is in progress and east half roof slab & beam concrete pour shall complete by 20.10.82. West half from expansion joint is scheduled to start by 25.10.82 and complete by end-November. Concrete pour to canopies shall start by mid-October. Compacted coarse sand fill under floor top layer shall be completed next month. Simultaneously concrete pour to floor slab shall also be done.

A total of 390 LF of road concrete was poured by month-end and the work shall be progressed during October.

Ancillary building B1 first floor brickwall is complete upto lintel and roof slab pour is estimated to complete in mid-October. Type A1 first floor brickwall is complete upto window level, roof slab is estimated to be poured by end-October. Type C brickwall is complete upto window level and shall be progressed during October.

Boundary wall iron angles for barbed wire fence have been installed. Coping pour is in progress. Installation of barbed wire is estimated to complete in October.

Planned activity to date is 47%.

Actual achieved progress is 51%.

### Panchagar-03

Godown columns and shear wall concrete pour has completed. Installation of formwork to roof slab and beam shall commence next month. Concrete pour to bond beam shall be progressed simltenously. Compacted coarse sand fill under floor top layer is in progress and shall complete by end-October. Concrete pour to floor slab shall commence in early October.

Ancillary building B1 superstructure brickwall is in progress.

Boundary wall iron angles for barbed wire fence have been installed. Installation of barbed wire and coping is in progress.

Planned activity to date is 34%.

Actual achieved progress is 32%.

### Shibganj-02

Godown columns and shear wall concrete pour is 85% complete. Concrete pour to bond beam and canopy shall be underway during October. Compacted coarse sand fill under floor slab is in progress. Installation of formwork and rebar to roof slab shall commence in early October.

Ancillary building type A and B1 slab was poured. Type C1 roof slab shall be poured in mid-October.

Installation of angle iron and barbed wire, and concrete pour to coping shall be underway next month. Guard House is complete.

Planned activity to date is 41%.

Actual achieved progress is 38%.

Rangpur-L1

Mobilization is now 54% complete.

Stripping and dewatering works are in progress.

Planned activity to date is 9%.

Actual achieved progress is 5%.

Mahendranager L7

Mobilization is approximately 35% complete.

Construction of temporary building is about 60% complete and shall continue during October.

Site clearing and preparations including temporary facilities are complete.

Site stripping work is about 70% complete and expected to be finished end of next month.

Engineered fill will commence by the end of October.

Planned activity to date is 3%.

Actual achieved progress is 3%.

Dinajpur-01

Mobilization has commenced on 1 September and is about one-fourth complete.

Temporary buildings are now approximately 80% complete.

Removal of existing structures is about 80% complete.

Site clearing and grubbing is now 80% complete.

Stripping has commenced early this month and is now half completed and the remaining half of the work will be completed by middle of October. Engineered fill to site shall commence by the same time.

Planned activity to date is 3%.

Actual achieved progress is 3%.

Charkai-04

Mobilization has commenced on 6 September and is 24% complete to date.

Temporary buildings are approximately 70% complete.

Clearing and grubbing work is now 95% complete.

Site stripping has commenced in mid-September and is now 50% finished.

Planned activity to date is nil.

Actual achieved progress is 2%.

Atrai-K5

Mobilization has commenced on 15 September and is about 24% complete.

Construction of temporary building has commenced.

Site stripping will be in early October.

Planned activity to date is nil.

Actual achieved progress is 2%.

2.3 PLANT AND EQUIPMENT

<u>Site</u>	<u>Description</u>	<u>No.</u>	<u>Description</u>	<u>No.</u>
Santahar-M1	Bulldozer	1	Payloader	2
	Tower Crane	1	Motor Grader	1
	Vib. Roller	2	Generator	3
	Mixer Truck	3	Air Compressor	1
	Batcher Plant	2	Dump Truck	6
	Cargo Truck	1	Jeep	1
	Pick-Up	3	Conc. Dumper	1
	Tank Lorrey	1	Tractor	1
	Diesel Welder	1	Conc. Vibrator(Engg.)	5
	Conc. Vibrator(Motor)	4	Soil Compactor	1
	Turbine Pump	3	Swaco Pump	
	Screw Motor	2	Bar Cutter	1
	Water Pump	3	Submersible Pump	4
	Sand Washer	1	Vib. Screen	1
	Battery Charger	1	Trolley	1
	Motorcycle	1	Conc. Mixer	1
	Tower Winch	3	Conc. Pump	1
Tire Roller	1			
Bogra-M3	Payloader	1	Generator	1
	Mixer Truck	2	Air Compressor	1
	Batcher Plant	1	Dump Truck	2
	Pick-Up	1	Conc. Dump	1
	Diesel Welder	1	Conc. Vibrator(Engg.)	4
	Conc. Vibrator(Motor)	3	Soil Compactor	1
	Water Pump	3	Trolley	1
	Conc. Mixer	1	Tower Winch	2
Panchagar-03	Payloader	1	Generator	1
	Dump Truck	1	Pick-Up	1
	Conc. Dump	1	Conc. Vibrator(Engg.)	3
	Conc. Vibrator(Motor)	3	Soil Compactor	1
	Water Pump	2	Conc. Mixer	1
	Tower Winch	1		
Rangpur-L1	Side Boom	1	Vib. Roller	1
	Generator	1	Dump Truck	2
	Pick-Up	2	Tractor	1
	Water Pump	2		
Mahendranagar-L7	Dump Truck	1	Tractor	1
	Water Pump	2		
Dinajpur-01	Pick-Up	1	Bulldozer	1
	Cargo Track	3	Water Pump	2
Shibganj-02	Pick-Up	1	Vibrator Compactor	1
	Cargo Track	2	Road Roller	1
	Water Pump	3	Tractor	2
	Conc. Mixer	2	Conc. Vibrator	2
Charkai-04	Pick-Up	1	Cargo Track	1
Atrai-K5	Pick-Up	1	Cargo Track	1

### 3. ZONE-III

#### 3.1 GENERAL STATEMENT OF PROGRESS

##### Muladuli-N1

Mobilization is now 88% complete.

Concrete pour top pile cap and grade beam are 100% complete. Rebar formwork and concrete pour to column, shear wall, band beam & canopy have commenced and shall be progressed during October. Brickwork to superstructure wall shall continue in October.

Construction of ancillary building and boundary wall is estimated to start by mid-October

Planned activity to date is 28%.

Actual achieved progress is 32%.

##### Chuadanga-T1

Mobilization is approximately 88% complete.

Codeown column, grade beam, shear wall and compacted coarse sand fill are complete. Concrete pour ground floor slab has commenced and shall be progressed during October. Formwork, rebar work to roof slab has already commenced and first pour to roof slab shall be started by early October.

Construction of boundary wall shall be progressed during October.

Planned activity to date is 23%.

Actual achieved progress is 40%.

##### Annura-R2

Mobilization is approximately 79% complete.

Engineered fill to the area is now approximately 80% complete.

Excavation to column footing in codeown has commenced on 14 September. Compacted sand filling, formwork & rebar work to footing and concrete pour shall be progressed during October.

Planned activity to date is 14%.

Actual achieved progress is 14%.

Satkhira-P1

Mobilization is now approximately 88% complete.

Godown column footings and grade beam are complete. Concrete pour to columns has started and shall be completed at end-October. Compacted coarse sand filling under floor is almost complete. Electrical installation in godown has commenced.

Planned activity to date is 27%.

Actual achieved progress is 39%.

Kushtia-T2

Mobilization is now approximately 58% complete.

Concrete pour to precast pile has commenced and shall continue during October.

Planned activity to date is 9%.

Actual achieved progress is 8%.

Kaliganj-S2

Mobilization is about 57% complete.

Engineered fill is approximately 21% complete and shall continue in October.

Planned activity to date is 4%.

Actual achieved progress is 6%.

Rohanpur-R3

Mobilization will commence in early October. Temporary building construction shall commence about the same time.

Planned activity to date is 2%.

Actual achieved progress is nil.

### 3.3 PLANT AND EQUIPMENT

<u>Site</u>	<u>Description</u>	<u>No.</u>	<u>Description</u>	<u>No.</u>
Muladuli-N1	Payloader	1	Generator	1
	Air Compressor	1	Dump Truck	3
	Cargo Truck	1	Pick-Up	1
	Jeep	1	Tractor	2
	Diesel Welder	2	Battery Charger	1
	Drill Rig	1	Batcher Plant	1
	Conc. Mixer	1	Tower Winch	2
	Conc. Vibrator	3		
Chuadanga-T1	Generator	1	Air Compressor	1
	Dump Truck	1	Pick-Up	1
	Conc. Dumper	1	Soil Compactor	1
	Welding Motor	1	Tractor	1
	Conc. Mixer	1	Tower Winch	1
	Conc. Vibrator	2		
Amnura-K2	Excavator	1	Generator	1
	Pick-Up	1	Submersible Pump	3
Satkhira-P1	Generator	1	Dump Truck	1
	Pick-Up	1	Conc. Dumper	1
	Soil Compactor	1	Welding Motor	1
	Tractor	1	Conc. Mixer	1
	Conc. Vibrator	3		
Kushtia-T2	Crane	2	Vib. Roller	1
	Conc. Dumper	1	Tractor	1
	Conc. Mixer	1	Conc. Vibrator	3
Kaliganj-S2	Payloader	1	Soil Compactor	1

Contract Financial Summary - Dollars

<u>Site</u>	<u>Contract Amount</u>	<u>Current Month*</u>	<u>Job To Date \$</u>	<u>Job To Date %</u>
<u>ZONE-I</u>				
Daudkandi	1,658,552.00	55,437.87	594,035.75	35.82
Brahmanbaria	1,478,514.00	186,077.93	1,063,331.21	71.92
Comilla	2,442,360.52	53,639.17	684,223.45	28.01
Mymensingh	871,031.00	9,590.04	70,843.39	8.13
Feni	773,349.00	11,362.88	67,945.76	8.78
Madhupur	1,465,750.20	10,343.85	40,265.25	2.75
<u>ZONE-II</u>				
Santabar	6,205,593.00	455,014.88	2,051,383.16	33.05
Bojra	2,938,369.00	224,915.20	1,288,083.38	43.82
Panchagar	1,260,629.00	44,551.23	304,311.59	25.35
Shibganj	2,067,631.00	137,168.23	730,568.55	35.33
Rangpur	1,676,469.00	15,381.60	83,780.64	5.00
Mahendranagar	2,973,074.00	71,869.39	98,256.90	3.30
Dinajpur	2,070,406.00	36,970.73	36,970.73	1.78
Charkai	1,850,779.00	41,621.91	41,621.91	2.25
Atrai	1,829,302.00	39,442.16	39,442.16	2.15
<u>ZONE-III</u>				
Muladuli	1,673,284.00	53,801.30	491,439.31	29.37
Chuadanga	2,016,028.00	358,921.26	764,386.83	37.91
Amnura	1,584,027.00	34,380.80	182,235.47	11.50
Satkhira	1,081,278.00	129,858.70	392,367.53	36.29
Kushtia	1,316,085.00	6,919.03	74,640.89	5.67
Kaliganj	1,356,079.00	16,261.47	80,307.38	5.92
TOTAL (All Sites)	49,485,499.35	1,953,530.19	9,180,441.23	18.55
MATERIALS	-	101,130.83	1,001,684.17	-
ALL SITES	49,485,499.35	2,054,661.02	10,182,125.40	20.57
RETENTION	1,000,000.00	199,353.02	918,044.12	-

\*Preliminary data.



KOREA  
DEVELOPMENT  
CORPORATION

# PROJECT SCHEDULE CONSTRUCTION

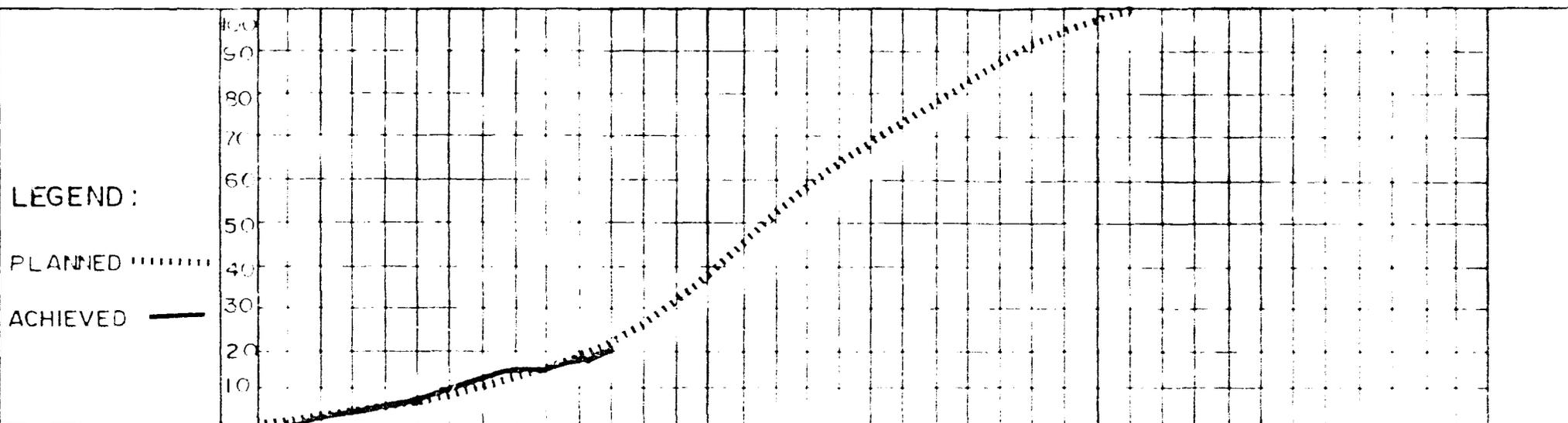
REPORT NO II  
DATE : 30 SEPT, 1982  
SITES : OVERALL

CLIENT : B A D C

FERTILIZER WAREHOUSE PROJECT PHASE - II

CONSULTANT : IECO

## OVERALL CONSTRUCTION PROGRESS CONTROL CURVE



MONTH		1981												1982												1983												1984												% AGE WT.																															
YEAR		1981												1982												1983												1984																																											
G3	PANCHAGAR	P	2	6	7	9	12	20	20	27	31	33	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	2.43																	
O1	DINAJPUR	P	2	5	7	9	12	20	27	29	30	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	3.05
O4	CHARKAI	P	2	5	7	9	12	20	27	29	30	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	3.74
M1	SANTAHAR	P	2	5	7	9	12	20	25	30	34	36	40	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	12.55								
K3	ROHANPUR	P	2	5	7	9	12	20	25	30	34	36	40	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	3.27								
L7	MAHENDRA-NAGAR	P	2	5	7	9	12	20	25	30	34	36	40	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	6.01								



10. 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	Dinajpur - 3000 ton godown 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
13-004	18 May 82	Daudkandi - Remove and recompact fill	\$ 49,610.00	\$ 49,485,499.35
D1-005	16 June 82	Madhupur - Site relocated	\$ (4,293.80)	\$ 49,481,205.55
H1-006	21 July 82	Feni - Earthwork Modification	\$ 35,119.00	(Pendine)
C2-007	7 July 82	Mymensingh - Modified foundation to concrete piling	\$ (99,194.02)	(Pendine)

INTERNATIONAL ENGINEERING COMPANY, INC.  
FORCE REPORT  
30 SEPTEMBER, 1982

A. Dacca Office

1. K.F. Ahmed	Sr. Accountant
2. A.H.M.R. Salam	Accountant
3. A.K. Chowdhury	Expeditor
4. Niranjan Paul	Expeditor
5. Najma Anwar	Secretary
6. Md. Delwar Hossain	Secretary
7. Khurshid Ahsan	Admin. Assistant
8. Robert O'Brien	Mechanic
9. Danzil Gonsalves	Printer
10. Idris M. Khan	Driver
11. Md. Arifullah Khan	Guard
12. Nuruzzaman Sarker	Janitor

B. Zone I (Comilla)

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

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

D. Zone III (Ushurdi)

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

## DEVELOPMENT CONSULTANCY SERVICES LTD.

## FORCE REPORT

30 SEPTEMBER, 1982

A. Dacca Office & Lab.

1. Ouazi Hamidur Rahman	Associate Project Manager (Part Time)
2. M.K. Zaman	Office Engineer
3. Fazlul Wahhab	Tech. Asst. to P.M.
4. Ashraf Ali	Sr. Engineer(Design)
5. Sk. Rezaul Haque	Materials Engineer
6. Mahbubur Rahman	Engineer
7. Md. Mohsin Ali	Field Engineer
8. Abdul Baset **	Field Engineer
9. Q. Ahmed Najee	Land Procurement Officer(at BADC)
10. Moazzam Hossain Sarker	Land Procurement Officer(at BADC)
11. Sk. Zameul Haque	Mat. Lab. Tech.
12. Md. Shahid Khan	Mat. Lab. Tech.
13. Rebeka Sultana	Mat. Lab. Tech.
14. Akshay Kumar Roy	Draftsman
15. Rafia Akhter	Draftsman
16. Rezaul Karim	Accounts Assistant
17. T.I. Chowdhury	Accounts Assistant
18. Aftab Alam	Typist(at BADC)
19. Mizanur Rahman Sikder	Clerk
20. Mojibur Rahman	Mat. Lab. Assistant
21. Abdur Rashid	Mat. Lab. Assistant
22. A. Motaleb	Instrumentman
23. Md. Nizamuddin	Chainman
24. Md. Hanif	Rodman
25. Badruddin	Driver
26. Rahmatullah	Driver
27. Md. Haider	Driver
28. Md. Aminul Islam	Driver
29. Dalwar Hossain	Driver(at BADC)
30. Faiz Chowdhury	Messenger
31. Ulfat Ali	Messenger
32. Jahanara Begum	Messenger/Receptionist
33. Aminuddin	Guard

B. Zone I (Comilla)

1. Amalendu Debnath	Sr. Field Engineer
2. Mozharul Islam	Field Engineer(Comilla)
3. Munshi Abu Jaffar	Field Engineer(Brahmanbaria)
4. Idris Majumder	Field Engineer(Daudkandi)
5. S.M. Khalilur Rahman	Field Engineer(Feni)
6. Md. Rezaul Karim	Field Engineer(Mymensingh)
7. Haider Farooq	Field Engineer(Madhupur)
8. Nazrul Islam	Inspector(Comilla)
9. Akhtaruzzaman	Inspector(Brahmanbaria)
10. Azmal Khan	Inspector(Daudkandi)
11. Mukshed Khan*	Inspector(Feni)
12. Sk. Shah Mohammad	Inspector(Feni w.e.f. 1 Oct.)
13. Nimai Chandra Paul	Inspector(Mymensingh)
14. Humayun Kabir Khan	Mat. Lab. Tech. (Comilla)
15. Md. Abdur Rouf	Mat. Lab. Tech. (Mymensingh/Madhupur)
16. Nurul Momen Khan	Mat. Lab. Asst. (Comilla)
17. Tajul Islam Khan	Mat. Lab. Asst. (Comilla)
18. Rafique Uddin Ahmed	Mat. Lab. Asst. (Mymensingh/Madhupur)
19. Abdul Malek Fakir	Driver
20. Sultan Ahmed	Driver
21. Daliluddin Biswas	Driver
22. Abdul Karim*	Driver
23. Abdus Sattar	Driver
24. Md. Shahabuddin	Messenger

C. Zone II (Bogra)

1. Rafiqus Salehin	Sr. Field Engineer
2. Nuruzzaman Khan	Field Engineer(Santahar)
3. Habibur Rahman Khan	Field Engineer(Bogra)
4. Gazi Mohiuddin Ahmed	Field Engineer(Panchagar)
5. Noor Azam Khan	Field Engineer(Shibganj)
6. Mostahar Ali	Field Engineer(Dinajpur)
7. Abdur Razzaque	Field Engineer(Rangpur)
8. Sagar Krishna Chakraborty	Field Engineer(Mahendranagar)
9. Abdur Rashid Khan	Inspector(Survey)
10. Anil Chandra Sarker	Inspector(Santahar)
11. Md. Abdul Bari	Inspector(Santahar)
12. Rabindranath Sarker	Inspector(Bogra)
13. Khaiz Ahmed	Inspector(Panchagar)
14. Susil Chandra Howlader	Inspector(Shibganj)
15. Md. Sekendar Ali	Inspector(Dinajpur)
16. Sheikh Md. Farooq	Inspector(Rangpur)

17. Mofazzal Hossain	Inspector (Mahendranagar)
18. Shamsur Rahman	Mat. Lab. Tech. (Santahar)
19. Abdur Rashid	Mat. Lab. Tech. (Rangpur/Mahendranagar)
20. Shahjahan Sarker	Mat. Lab. Tech. (Bogra)
21. Sabbir Hossain	Mat. Lab. Tech. (Dinajpur)
22. Abu Taher	Mat. Lab. Asst. (Bogra)
23. Md. Raisuddin	Mat. Lab. Asst. (Santahar)
24. Md. Abdul Nader	Mat. Lab. Asst. (Panchagar)
25. Shamimul Haque Chowdhury*	Mat. Lab. Asst. (Rangpur/Mahendranagar)
26. Shamim Ahmed	Driver
27. Golam Ahmed Dastagir	Driver
28. Dulal Chandra Mohanta	Driver
29. Md. Belal	Messenger
30. Ali Ahmed	Guard

D. Zone III (Ishurdi)

1. Nazrul Islam	Sr. Field Engineer
2. Saiful Islam	Field Engineer (Muladuli)
3. Kh. Anwar Hossain	Field Engineer (Kushtia)
4. Alauddin Ahmed	Field Engineer (Chuadanga)
5. Bhabesh Ch. Roy	Field Engineer (Kaliganj)
6. S. Rubayet Islam	Field Engineer (Satkhira)
7. Md. Muhiuddin Nasirabadi	Field Engineer (Amnura)
8. Md. Saimum Haque	Field Engineer (Rohanpur)
9. Meer Mozammel Hossain	Inspector (Muladuli)
10. Manwar Hossain Chowdhury	Inspector (Kushtia)
11. Sirajul Islam Khan	Inspector (Chuadanga)
12. S.A. Asghar	Inspector (Kaliganj)
13. Omar Ali	Inspector (Satkhira)
14. Md. Badiuzzaman	Inspector (Amnura)
15. S. Zahid Hossain	Mat. Lab. Tech. (Muladuli)
16. Rafatullah	Mat. Lab. Tech. (Chuadanga/Kaliganj)
17. Md. Golam Rabbani	Mat. Lab. Tech. (Satkhira)
18. Talukder Obaidur Rahman	Mat. Lab. Tech. (Amnura/Rohanpur)
19. Anil Kumar Chowhan	Mat. Lab. Asst. (Muladuli)
20. Tofazzal Hossain Sarker	Mat. Lab. Asst. (Chuadanga/Kaliganj)
21. Md. Shahjahan Talukder	Mat. Lab. Asst. (Satkhira)
22. Shamsul Islam	Mat. Lab. Asst. (Amnura/Rohanpur)
23. Ali Hossain	Driver
24. Shafiqur Rahman	Driver
25. Md. Kamal	Driver
26. Md. Mohamul Haque	Guard
27. Md. Zahiruddin	Camp Assistant

\* Resigned/was terminated in September.

\*\* Suspended.

Schedule I	Budget	JOB TO DATE		AUGUST 1982		Balance
		Dollars	Taka As Dollars	Dollars	Taka As Dollars	
<u>Resident Consultant Related Cost</u>						
A. Salaries	719,020	583,815.31	-	23,170.00	-	135,204.69
B. Payroll ;	747,780	607,167.93	-	24,096.80	-	140,612.07
C. Overhead ,						
D. Air Travel	64,000	31,986.51	871.88	-	461.52	31,141.61
E. Freight Cost	54,000	27,503.00	-	-	-	26,500.00
F. Excess Baggage	9,060	1,072.04	-	-	-	7,987.96
G. Processing Cost	2,550	2,105.38	225.60	-	-	219.02
H. Personal Automobiles	10,000	-	-	-	-	10,000.00
I. Settling-in Cost	31,620	31,240.71	-	-	-	379.09
J. Housing Allowance	117,000	-	97,772.61	-	2,030.94	19,227.39
K. Furniture & Equipment	88,000	28,464.59	30,336.47	73.63	-	29,198.94
L. Education Allowance	18,900	1,075.00	849.28	-	-	16,975.72
M. Terminal Leave	47,940	-	-	-	-	47,940.00
N. Medical Care	13,220	-	729.16	-	-	12,490.84
O. Int'l Travel Per Diem	14,400	6,525.59	1,004.59	-	-	6,869.82
P. In-country Travel Per Diem	15,680	-	4,719.58	-	350.99	10,960.42
	<u>\$1,953,170</u>	<u>1,320,953.26</u>	<u>136,509.17</u>	<u>47,340.43</u>	<u>2,843.45</u>	<u>495,707.57</u>
Say	<u>\$1,953,000</u>					<u>495,537.57</u>



Schedule III	Budget	JOB TO DMTF		AUGUST, 1982		Balance
		Dollars	Take As Dollars	Dollars	Take As Dollars	
<b>A. Office Rental, Equipment and Maintenance</b>						
1. Dacca Office	65,000	-	39,571.95	-	129.77	25,428.05
2. Area Office Including Lab.	48,000	-	15,713.26	-	116.20	32,286.74
3. Furnishing & Equipment	47,000	14,996.58	44,823.97	-	269.54	(12,820.55)
4. Office Supplies & Stationery	9,500	11,842.68	21,536.07	-	1,069.90	(23,929.75)
5. Reproduction Costs	50,000	333.88	41,541.33	-	238.95	8,074.79
6. Communication Costs	11,400	50.00	8,536.15	-	68.51	2,803.85
<b>B. Vehicle Operation &amp; Maint.</b>						
1. Vehicle Rental	32,000	-	10,662.33	-	709.80	21,337.67
2. Consultant Purchased Vehicles	211,200	-	164,893.73	-	4,527.50	46,306.27
3. Motorcycles	21,120	-	-	-	-	21,120.00
4. Boats	19,800	-	-	-	-	19,800.00
<b>C. Direct Hire Local Admin. Personnel</b>	89,180	-	95,776.19	-	2,810.96	(6,596.19)
<b>D. Soil Testing Charges</b>	5,000	-	20,587.46	-	-	(23,587.46)
<b>E. Subcontract DCS for Local Technical and Admin.</b>						
1. Salaries Including Overhead and Fixed Fee	660,600	-	412,398.21	-	17,452.39	248,201.79
2. Per Diem & Site Allowances	78,900	-	50,800.34	-	1,980.96	28,099.66
3. Local Travel	10,000	-	7,069.83	-	814.32	2,930.17
<b>F. Misc. Field &amp; Office Expenses</b>	18,000	25.00	8,288.61	-	77.39	9,686.39
	<u>\$1,376,700</u>	<u>27,338.14</u>	<u>950,249.43</u>	-	<u>30,265.19</u>	<u>399,142.43</u>
Say	<u>\$1,377,000</u>					<u>399,442.43</u>

Schedule IV	Budget	JOB TO DATE		AUGUST, 1982		Balance
		Dollars	Taka As Dollars	Dollars	Taka As Dollars	
<u>IECO Headquarter Related Cost</u>						
A. Salaries	74,500	88,443.48	-	632.45	-	(13,949.48)
B. Payroll Cost :	90,890	107,665.92	-	771.59	-	(16,776.92)
C. Overhead Cost,						
D. Officers' & Managers' Visits	17,000	18,537.73	-	-	-	(1,537.73)
E. Computer Cost	5,000	11,852.00	-	-	-	(6,852.00)
F. Communication Cost	9,500	8,876.88	-	289.58	-	623.12
G. Reproduction Cost	10,000	2,747.46	-	-	-	7,252.54
H. Bond Cost & Commission	-	2,684.08	-	-	-	(2,684.08)
	<u>\$206,890</u>	<u>240,814.60</u>	<u>-</u>	<u>1,693.62</u>	<u>-</u>	<u>(33,924.60)</u>
Sav	<u>\$207,000</u>					<u>(33,814.60)</u>
 <u>Schedule V</u>						
A. <u>Equipment Purchased for Project</u>						
1. Transportation Equipment	135,800	75,520.00	14,975.71	-	-	45,304.29
2. Survey Equipment	9,600	19,262.63	781.00	-	-	(10,443.63)
3. Soils Lab. Equipment	21,000	10,121.54	5,491.20	-	-	5,387.26
4. Materials Lab. Equipment	31,000	19,699.30	12,788.25	-	1.77	(1,487.55)
5. Communication Equipment	-	-	-	-	-	-
6. Minor Equipment, Tools and Spare Parts	35,000	14,771.93	160.30	-	-	20,067.77
B. <u>Shipping, Insurance and Clearance Costs</u>						
	95,600	51,974.83	4,964.90	81.85	59.05	38,660.27
	<u>328,000</u>	<u>191,350.23</u>	<u>39,161.36</u>	<u>81.85</u>	<u>60.82</u>	<u>97,498.41</u>
 <u>Schedule VI</u>						
Fixed Fee	392,000	361,052.65	-	10,315.79	-	30,947.35
	<u>\$4,318,000</u>	<u>2,201,346.14</u>	<u>1,125,919.96</u>	<u>59,431.69</u>	<u>33,169.46</u>	<u>990,733.90</u>
Total Expenditure to Date	=	3,327,266.10				
Percent of Budget Spent to Date	=	77.06%				
Contract Time Elapsed	=	92.57%				

