

**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. 29**

**FEBRUARY 1982**

**CONSULTING  
ENGINEERS**

**INTERNATIONAL ENGINEERING COMPANY, INC.**

**A MORRISON-KNUDSEN COMPANY**

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

INTERNATIONAL ENGINEERING COMPANY, INC.  
CONSULTING ENGINEERS

MONTHLY PROGRESS REPORT NO. 29  
FOR THE PERIOD FEBRUARY 1-28, 1982

1. GENERAL

KDC's construction operations were in progress at ten sites throughout February, with earth filling in the building structure areas receiving a major share of the effort. The initial shipment of imported construction materials which arrived in January (cement, rebar, plywood forms, tie wire, etc.) was distributed to the various construction sites from KDC's depot at Khulna. A shipment of heavy earthwork and concreting equipment arrived from Singapore and was in process of port clearance in late February. Additional equipment is due to arrive in early March from Korea, with steel forms and other material. KDC has obtained other equipment from in-country sources, notably including units leased from Dacca Municipality.

Detailed CPM construction schedules were in development by KDC for each active site and under review by IECO, to facilitate scheduling and coordinating the multi-site activities. The progress of earth filling improved with allocation of equipment units to several sites; but the pace of earthwork at Chuadanga, Amnura and Muladuli sites continued to be hampered by improper moisture control and insufficient compactive effort. Measures being taken to correct this situation include additional equipment allocation and personnel changes. Work at Satkhira was suspended on 7 February due to a shortage of equipment. KDC plans to recommence on 10 March.

KDC's mobilization to the eleven initial sites varied from 40% at Chuadanga to 83% at Daudkandi, and averaged 56%. Overall progress at the eleven sites stood at 8.6% complete as against 10.4% planned. KDC expatriate staff now numbers 77 personnel, against the original estimated total of 75.

DCS staff increased by 10 to 82 personnel at month end. IECO local staff numbered 15 personnel. IECO and DCS force reports are appended.

## 2. CONTRACT ADMINISTRATION

<b>Radio Licence</b>	After T & T's decision to issue the licence to BADC a formal application was required of BADC. This was submitted. Issuance is now expected.
<b>BR/BADC Agreement</b>	No progress to report.
<b>Change Orders</b>	Change Order 01-001 for Dinajpur was signed by BADC. Change Order 002 was disapproved by USAID.
<b>KDC Material and Equipment</b>	Master lists were agreed upon for the use of all parties' technical and administrative control.
<b>Amendment No. 1</b>	The proposal to augment KDC's mobilization advance terms was given further consideration and a draft contract amendment was circulated.
<b>Spare Parts</b>	USAID determined that a waiver was not necessary for KDC's procurement of non-code 941 spare parts for prior-owned in-country equipment.
<b>Shipping Waiver</b>	KDC's request for a waiver of U.S. vessel requirements was denied.
<b>Field Staffing</b>	314 resumes were reviewed and good candidates interviewed to meet current and future IEEO field staffing needs.

### 3. CONTRACT EXPENDITURES

February Taka expenditures reimbursable by USAID were:

Local Salary	66,922.00
Office Supplies and Expenses	20,763.20
Dacca Office Rent/Maint./Utilities	7,299.85
Area Office Rent/Maint./Utilities	74,356.37
Furniture and Equipment	223,214.00
Vehicle Operation and Local Travel	168,148.87
Soils Laboratory Work	220.00
House Rent/Maint./Utilities	27,937.70
House Furniture	2,049.00
DCS	330,574.30
Int'l Air Travel	2,427.00
Int'l Travel & Per Diem	5,210.00
Expat. Per Diem and Hotel	7,001.00
Other	1,845.00
<b>Total Taka</b>	<b><u>937,968.29</u></b>

Expenses reimbursable through BADC's Taxes and Duties Fund were Taka 92.00.

### 4. EXPATRIATE STAFF

Current in-country expatriate staff:

F.E. Isgrig	Project Manager
D.H. Workman	Chief Construction Engineer
D. Lovely	Contract Administrator
M. Lim	Construction Engineer
S.J. Hewick	Construction Engineer

### 5. MEETINGS

- 1 February KDC/IECO - KDC organization, personnel and work procedures discussed, and IECO requirements identified. Piles, subgrade improvement at Daudkandi, and the soils blending operation at Santahar were discussed.
- 3 February BADC/AID/IECO - Topics were Change Orders 01-001 and 002, and the radio licence.
- 19 February BADC/KDC/  
AID/IECO - Progress meeting No. 5. Subjects: Encroachment on sites not under construction, radio licence, BR/BADC agreement, Change Order 01-001, Madhupur site relocation, brick quality, materials and equipment delivery schedules, CPM schedules and KDC's January invoice.

## 6. PENDING ACTIVITIES AND ACTIVITIES IN PROGRESS

### 6.1 For Action by BADC

1. Final agreement by BR and BADC on the BADC/BR Memorandum of Understanding for construction of rail sidings. Since the meeting of the Chairmen BR and BADC held in December 1981, no progress on settlement of BR's commission and service charges has been reported. Prompt settlement will permit procurement of railway siding materials.
2. Resolution of site possession and use rights, and removal of obstructions to construction. Site status as follows:
  - Barisal - Issuance of land lease document remained pending. In February, BADC asked its Barisal District Manager to place funds to BIWTA and to obtain land lease document.
  - Netrakona - Removal of 11 KV transmission tower off-site was not effected by PDB in February. The matter should be pursued by a BADC expeditor.
  - Daudkandi - Arrange for PDB to raise the power line crossing the main access road. This is required for access and to prevent a second electrical accident.
  - Rangpur - Off-site reconstruction of water supply facilities and rehousing of railway personnel remains pending. BADC could not make available to BR funds for relocation and reconstruction. The joint site inspection by Burmah Eastern, BR and IECO, scheduled for February, was not held. Burmah Eastern is to reschedule this visit.
  - Mahendranagar - As in January, BR awaiting financial sanction from BADC for the estimated cost of rehousing BR personnel off-site.
  - Shibganj - In late February, BR removed its personnel and started dismantling residential structures.

T & T's work on removal/relocation of telephone lines at Rangpur and Mahendranagar was in progress during January.
3. Follow-up for issuance of a radio licence.
4. Formal approval of costs for services of A. Htay.

## 6.2 For Action by IECO

1. Pursue site occupancy and obstruction removal problems in collaboration with BADC, BR, IWTA etc.
2. Survey and monument boundaries of Barisal site.
3. Revise site location control drawings for Feni, Mahendranagar, Netrakona and Bogra (performed: undergoing checking).
4. Revise and reissue Dinajpur BQ per Change Order 01-001.
5. Revise and reissue the Madhupur BQ to reflect the site relocation and requantification.

## 7. ENGINEERING ACTIVITIES

### 7.1 Soils and Materials Engineering

Gradation tests on soil materials, and field and laboratory density measurements continued throughout the month for Daudkandi, Brahmanbaria, Santahar, Bogra, Panchagar, Shibganj, Amnura, Muladuli and Chuadanga (nine sites).

Compressive strength tests on concrete cylinders for Daudkandi piles and Brahmanbaria wire fence posts were performed at 28 days age and results reported. Compressive strength tests on hydraulic cement mortars were also conducted and results finalized. Tensile strength tests for samples of steel bar, in use in the Santahar warehouse boundary wall, were performed at the Dacca Central Testing Laboratory and results obtained.

Tests for approval of samples, collected from local suppliers and submitted by KDC, of soil materials, bricks, concrete sand and gravels from Santahar, Bogra, Panchagar, Shibganj, Chuadanga, Daudkandi and Comilla continued at IECO's Dacca Laboratory all month. Similar tests for brick samples collected from Rangpur were also conducted.

A special investigation of subsoils at the new Madhupur site could not be made, due to growing crops on the Seed Farm. This will be rescheduled for mid-March.

### 7.2 Office Engineering

The site plan of new warehouse location at Madhupur was drawn up and transmitted to BADC for approval. Site location control drawing for Comilla was prepared and sent to BADC in mid-February. The Comilla site plan was completed at month end. Revisions to site plans of Mymensingh, Daudkandi, Panchagar, Brahmanbaria,

Atrai, Bhola, Feni and Rangpur were completed in February. Railway siding construction drawings for Shibganj and Comilla were prepared, and also initiated for Santahar. Other office engineering activity included preparation of reporting forms and charts for IECO's soils lab, and location logs of engineered fill for sites.

### 7.3 Field Engineering

Field survey party visited Comilla site to determine a convenient location of the site entrance in the north to facilitate railway operations. The survey party carried out pre-work cross-sectioning for approach road of warehouse sites at Chuadanga and Satkhira. At Ammura, pre-work cross-sectioning was done in the alignment of approach track from take-off points to warehouse entrance. Survey party also visited Muladuli and surveyed for relocation of the dirt access road on railway land.

## 8. CONSTRUCTION SURVEILLANCE

### 8.1 General

IECO inspected warehouse site construction activities in all three zones of operation in February, with work at eleven sites underway: three in Zone-I, four in Zone-II and four in Zone-III. Site-specific activity was as follows:

### 8.2 Zone-I (Comilla)

#### I2 Brahmanbaria

Engineered fill work was essentially completed during the month. The godown area is ready for concrete foundation work, now scheduled to start the first week in March. The concrete plant has been set up and aggregate stockpiling is underway. Trial batching produced acceptable cylinder breaks. Pre-cast concrete boundary fence posts have been placed on three sides of the site. A CPM schedule for the site was developed during the month. At month's end preparation for godown work were essentially on schedule, with non-critical engineered fill several weeks ahead of schedule.

#### I3 Daudkandi

In early February subgrade improvement work began in the godown area. The loose hydraulic fill was removed to three foot depth, and subgrade re-formed to required density. Localized soft spots were cured, by removing and replacing material. Machine compaction of subgrade was successful, yielding densities of 88-90%, and replacement of the fill material in compacted lifts was in progress over approximately one-half of the godown area.

A total of 57 piles were inspected, and are to be rejected due to alignment deficiencies. Fifty-one additional piles will be inspected.

Foundation work on the box culvert at the approach road was in progress all month.

### 11 Comilla

IECO personnel occupied site offices in early February. The site location control drawing was issued mid-month. KDC put down seven Dutch cone penetrations for sub-soil study in the area of the godown. This was done for purposes of corroborating previous pile length selection. The cone data is under examination.

The site temporary buildings were essentially completed. Since Comilla will be KDC's Zone-I headquarters, stocks of material (cement, rebar, plywood, gravel and so on) were built up during the month. Final stripping started at month's end.

## 8.3 Zone II (Bogra)

### M1 Santahar

In February KDC continued clearing, grubbing, and stripping and achieved about 95 percent completion. Other site works carried out were common fill and engineered fill, achieving about 21 and 19 percent respectively. Septic tank and soakwell construction was started, but was stopped after 15 percent completion. The number of expatriates at Santahar remained nine as in January. The equipment and vehicle complement was unchanged.

### M3 Bogra

Site mobilization including construction of temporary buildings and facilities was started and 43 percent completed in February. Work items completed by month-end included clearing and grubbing, and pipe culvert construction. Stripping and common fill work were about 87 and 82 percent complete, respectively. Engineered fill continued and was about 40 percent achieved. Bricks were collected. All site work was suspended for ten consecutive days due to labour strike, but resumed by month end.

### O2 Shibganj

All temporary facilities were completed in February. Placing of engineered fill continued throughout the month and was approximately 90 percent complete. Hauling of fill material was done by trucks, and compaction by tire and steel rollers. Good material available nearby helped progress of work. A KDC representative was on site, supervising the sub-contractor's work.

### 03 Panchagar

Work on temporary facilities was complete in February. KDC continued to place and compact engineered fill for the approach road and to stockpile fill for the warehouse site. Lack of compaction equipment continued to hamper progress of fill construction, which is to be completed in the godown area early in March.

## 8.4 Zone III (Ishurdi)

### N1 Muladuli

Temporary quarters construction continued all month and was almost complete at month's end. Approximately 23 percent of the overall fill work was accomplished. Subgrade preparation and fill work progressed slowly due to difficulty in attaining compaction with the on-site equipment. In late month, cement and plywood sheets were stocked on site, and rebar was in transit by rail from Khulna. IECO, with KDC, carried out a prework survey for the approach road, the boundary areas and the rail siding approach, to complete site data. KDC appears to be slightly behind in critical pile casting operations. This can be corrected by early site delivery of additional forms. On 18 February, IECO engineers conferred with BADC's Pabna District Manager concerning clearance of obstructions to work by squatters and trees.

### T1 Chuadanga

Materials, stockpiled on site by KDC in February, included fill materials, rebar, cement, plywood and welded wire fabric. KDC was advised that imported fill material did not qualify for use in engineered fill. The first layer, covering 20,000 cf, of the engineered fill for the godown area was certified for payment. Engineered fill in the godown area is slightly behind schedule, but a first foundation pour may still be met in early April. A rented D5 bulldozer was added to strengthen KDC's compaction ability. IECO requested Kushtia District Manager for assistance in removal of obstructions in the approach road area. IECO, jointly with KDC, carried out the prework survey of the approach road area.

### P1 Satkhira

On 7 February, KDC suspended all site activity for want of adequate equipment. At that time temporary buildings and facilities were 90 percent complete and stripping work was in progress. IECO's Inspector remained on site until a joint survey of the post-stripping elevations at 20 feet grid intervals was made. Site work is expected to resume on 10 March. Engineered fill in the godown should be completed on target in early April. The

possibility of lowering the warehouse plinth level by two feet was investigated during the month and was found to be not feasible. On the 20th, IECO requested BADC's Khulna District Manager for assistance in arranging for eviction of squatters on the approach road and for necessary permission to remove trees.

K2 Ammura

Fill construction was in progress throughout the month and judged a week behind schedule in the critical godown area. KDC equipment on site was inadequate for compaction work, and the D4 bulldozer was out of order. The IECO survey team, jointly with KDC, performed the pre-work survey of the off-site approach rail siding area. The contractor started stripping this area.

## 9. CONTRACTOR'S ACTIVITIES (KDC REPORT ABSTRACT)

The following are excerpts from KDC's monthly report No. 4 for the month of February, 1982.

### I. OVERALL PROJECT ACTIVITIES

#### 1.1 GENERAL STATEMENT OF PROGRESS

Approximately 56% overall mobilization has been completed to date to the initial sites and total Project completion is estimated as 5.0% against a planned 5.0%.

10 No. sites are now in operation and it is planned that work may commence at further sites during the month of March.

A team has been established to carry out sand piling works only and it is hoped that sand piling may commence at Mymensingh site during March.

Expatriate staff now equals a total of 77 persons against the original estimated total of approx 75 persons.

Equipment and materials are being shipped and we have also hired equipment locally while awaiting equipment being imported.

#### 1.4 PROBLEMS AND DELAYS

##### ZONE-1

##### Daudkandi

Additional work is being carried out due to substandard site filling having been carried out by others. This work is in hand.

##### ZONE-2

##### Bogra

All site activities stopped for seven days due to labor problems. Labour went on strike and demanded shorter working hours and increased payment. This situation was resolved on 21 February.

##### Santahar

Suppliers of engineered filling materials caused some problem by blockading the site access road. This occurred when we attempted to cancel the supply agreement with contractors who were not supplying according to programme. This situation has been resolved.

ZONE-3

No problems to report.

GENERAL

We must again report that radio licences have not yet been granted. This is causing serious communication problems with our sites in Zone 2 and 3 and causing some delays in progress especially at the more remote sites and we request that this be urgently resolved. At several sites we are concerned about the safety of our personnel should an accident occur or our personnel be attacked and seriously injured. If this should happen medical and other assistance will be difficult to obtain due to communication problems.

BRICKS

The project is being delayed due to the difficulty in obtaining bricks which meet the requirements of the specification. Most of the brick samples submitted so far have been rejected by the Engineer. Several brick manufactures are being contacted and problems associated with substandard bricks explained to them. Further samples are being submitted to the Engineer for testing and approval and the Engineer has advised that several of these may be of better quality than bricks previously submitted.

1.5 MATERIALS PROCUREMENT AND SHIPPING

IMPORTED MATERIALS

Description	Q u a n t i t y (Ton)				ETA
	Total	Deliv'd	Shipped	Balance	
Cement	1,000	1,000	-	-	-
Rebar	5,000	2,520	-	2,480	-
Tie Wire	80	80	-	-	-
Wire Mesh	415	180	204.56	30.44	24-2-82
Bar WG5	45.5	45.5	-	-	-
Plywood	750	150	246	354	24-2-82
PVC Chamfer	32	-	15.84	16.16	24-2-82
Form Ties	50	-	27.19	22.81	24-2-82
Total (Ton)	7,372.5	3,975.5	493.59	2,903.41	

	<u>Tons</u>
Shipped by Korea Flag Vessel	3,975.50
Shipped by Bangladesh Flag Vessel	493.59
	<u>4,469.09</u>

1.6 EQUIPMENT PROCUREMENT AND SHIPMENT

<u>Item</u>	<u>No.</u>	<u>Ton</u>	<u>Remarks</u>
-------------	------------	------------	----------------

Equipment purchased and shipped from Korea

Ship: Button Gwinnett

Flag: USA

ETA: 24-2-1982

Tyres and Tubes	-	4.42	Expendable Item
Tower/Winch/and Concrete Bucket	8 Sets	14.20	
Vibrating Plate Compactor	4		
Water Pump 3.5-5PS 4 Submersible Water	4	3.68	
Pump	4		
Concrete Vibrators	25		
Pecco Beams/Steel forms and Supports	-	589.12	
<b>Total Tonnage:</b>		<u>611.42</u>	

Equipment purchased and shipped from Singapore

Ship: Al-Sayestha

Flag: Bangladesh

ETA: 10-3-1982

Shafts for concrete Vibrator	3	0.66	Expendable Item
Freezer	8		
Refrigerator	10		
Air Conditioners	15	5.11	
Water Heaters	9		
Transformers	8		
Concrete Dumpers	7	6.67	
Generators	10	20.00	
Wheel Loader	3	-	
Truck Crane 20T	1	18.00	
Tractors	4	15.50	
<b>Total Tonnage:</b>		<u>65.94</u>	

Equipment purchased and shipped from the USA

Ship: Benjamin Harrison

Flag: USA

ETA: 5-3-1982

Vibratory Rollers	3	<u>20.00</u>
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Equipment shipped from Korea and in Country

Diesel Engines	8	1.71
Misc. Tools	-	<u>4.91</u>
<b>Total Tonnage:</b>		<u>6.62</u>

S U M M A R Y

<u>Vessel</u>	<u>Tonnage</u>		
	<u>Equip.</u>	<u>Matls.</u>	<u>Total</u>
Korea Flag	6.62	3,975.50	3,982.12
USA Flag	631.42	-	631.42
Bangladesh Flag	65.34	493.59	559.53
			<u>5,173.07</u>

1. ZONE-1

1.1 GENERAL STATEMENT OF PROGRESS

Brahmanbaria I2

Mobilization estimated as approx. 71% complete.

Filling and compaction works to the godown area complete 28-2-82.  
Excavation for godown foundations commenced 27-2-82.

A concrete mixer has been set up and concrete work on godown foundations is expected to commence 15 March.

Fencing works on going and erection of fencing posts approx. 75% complete.

Planned progress to date 14%.

Actual achieved progress 15%.

Daudkandi I3

Mobilization estimated as approximately 83% complete.

A precast concrete pile casting yard is being set out and a concrete batching plant is being erected for the production piles.

Excavation for the box culvert has been completed and will be ready for concreting 13th March.

The additional excavation to the bad ground to the area of the godown as instructed by the Engineer was completed. However further excavation is required to one section where soft spots have been discovered. The engineer advised that a clamshell be used to excavate this section as required. Backfilling to the excavated commenced 25-2-82.

Planned progress to date 10%

Actual achieved progress 11%

Comilla I1

Mobilization estimated as approximately 55% complete.

Temporary building and facilities have been completed.

Site survey complete.

Stripping works commenced and will be completed approximately on 4-3-83.

Sand filling and compacting expected to commence shortly.

Formwork and rebar work for precast concrete piling has commenced. A concrete batching plant has been set up on site.

Planned progress to date Nil %.

Actual achieved progress 6%.

## 2. ZONE-2

### 2.1 GENERAL STATEMENT OF PROGRESS

#### Santahar M1

Mobilization approximately 73.0% complete.

Construction of temporary building and facilities approximately 98.0% complete.

Additional toilet facilities for local employees as requested by IECO have been installed.

Site filling and compaction work is continuing and approx. 22% of B.Q. quantity complete. The remeasured quantity of site filling being increased to 5,400,000 cft. as per field measurement.

Installation of batch plant commenced on 16th February, 1982 and shall be complete by mid March.

Construction of boundary wall, septic tank and soakwell and ancillary buildings is being delayed due to lack of approved materials.

Planned activities to date is 13.0%.

Actual achieved progress is 12%.

#### Bogra M3

Mobilization approximately 43% complete.

Clearing and grubbing and stripping is 100.0% complete except to the railway track areas.

Filling and compaction 90.0% complete to the common fill area and the remaining including the railway track area planned for completion by end of March, 1982.

Engineered fill approximately 30% complete.

The godown area shall be completed by mid March, railway track, roads and ancillary buildings areas shall be completed by end of March, filling in parking areas shall commence on 16th March.

Construction work shall commence on barbed wire fencing and septic tank and soakwell early March pending approval of materials.

Site activities ceased for 7 days with effect from 15-2-1982 due to local labour problems.

Planned activities to date is 13.0%.

Actual achieved progress is 11%.

### Panchagar 03

Mobilization approximately 56.0% complete.

Temporary buildings 99.0% complete.

Site filling with imported select material in access road, ancillary building areas and godown area is in progress and 10.0% complete.

Soakwell complete and construction work for septic tank and boundary wall is delayed pending approved materials.

Planned activities to date is 11.0%.

Actual achieved progress is 7%.

### Shibganj 02

Mobilization approximately 53.0% complete.

Temporary buildings and facilities 100.0% complete.

Site filling and compaction is in progress and godown area shall be completed by mid March, 1982.

The godown foundation work is planned to commence mid March approved materials.

Boundary wall and septic tank shall commence immediately materials approved.

Planned activities to date is 19.0%.

Actual achieved progress is 9%.

3. ZONE-3

3.1 GENERAL STATEMENT OF PROGRESS

Muladuli N1

Mobilization approximately 47.0% complete.

Clearing and grubbing complete.

Site filling is in progress and is approximately 22% complete.

Boundary wall and ancillary buildings may commence immediately materials approved.

Planned activities to date 9%.

Actual achieved progress is 8%.

Amnura K2

Mobilization approximately 50% complete.

Temporary buildings shall be completed 1st week of March and temporary facilities will be completed the following week.

Clearing and grubbing complete except existing railway track area 55'-0" x 23'-0".

Engineered fill and compaction is in progress and approximately 23% complete.

Planned activities to date is 9.0%.

Actual achieved progress is 7%.

Chuadanga T1

Mobilization approximately 40.0% complete.

Clearing and grubbing 100.0% complete.

Stripping completed on 5-2-1982.

Engineered filling commenced on 8-2-82 and is approximately 48% complete.

Godown area filling expected to finish mid March, 1982. Other areas estimated to be complete early April, 1982.

Boundary wall can commence immediately but pending material approvals.

Godown foundation planned to start early April, 1982.

Planned activities to date is 11.0%.

Actual achieved progress is 5%.

Satkhira P1

Mobilization approximately 40% complete.

Temporary buildings 100.0% complete.

Activities were suspended with effect from 7-2-82 due to shortage of equipment. Work is scheduled to re-commence on 10-3-1982.

Planned activities to date is 6.0%.

Actual achieved progress is 4%.

KDC Invoice 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	1,608,942.00	46,251.99	150,543.85	9.34
Brahmanbaria	1,478,514.00	65,883.50	215,549.08	14.58
Comilla	2,444,871.00	58,067.35	128,837.52	5.27
<u>ZONE II</u>				
Santahar	6,205,593.00	265,851.23	627,168.77	10.41
Bogra	2,939,369.00	90,378.69	274,312.79	9.33
Panchagar	1,200,629.00	14,868.82	69,727.92	5.81
Shibganj	2,067,631.00	115,480.00	164,130.91	7.94
<u>ZONE III</u>				
Muladuli	1,673,284.00	21,502.89	116,109.11	6.94
Chuadanga	2,016,028.00	(9,252.17)	80,587.10	4.00
Amnura	1,584,027.00	19,449.32	90,478.86	5.71
Satkhira	1,081,278.00	0	35,577.24	3.29
TOTAL (All Sites)	49,438,399.83	688,481.62	1,952,913.15	3.95
MATERIALS	-	-	729,838.90	-
ALL SITES	49,438,399.83	688,481.62	2,682,464.97	5.39
RETENTION	1,000,000.00	68,848.16	195,291.31	-

\* Preliminary Data

INTERNATIONAL ENGINEERING COMPANY, INC.  
FORCE REPORT  
28 FEBRUARY 1982

A. Dacca Office

1. K. F. Ahmed	Sr. Accountant
2. S. D. Majid	Secretary
3. Najma Anwar	Secretary
4. A. K. Chowdhury	Expeditor
5. A.H.M.R. Salam	Accountant
6. Khurshid Ahsan	Admin. Assistant
7. Paul Gomes *	Typist
8. Robert O'Brien	Mechanic
9. Danzil Gonsalves	Printer
10. Md. Tayeb	Driver
11. Md. Arifullah	Guard

B. Zone I Office at Comilla

1. N. G. Khan	Area Office Manager
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C. Zone II Office at Bogra

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

D. Zone III Office at Ishurdi

1. M. Kabir	Area Office Manager
2. Benjamin Gomes	Messenger

\* Terminated in February, 1982

DEVELOPMENT CONSULTANCY SERVICES LTD.  
FORCE REPORT  
28 FEBRUARY, 1982

A. Dacca 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.	Ashraf Ali	Sr. Engineer (Design)
5.	Sk. Rezaul Haque	Materials Engineer
6.	Mahbubur Rahman	Engineer
7.	A.K.M. Habibur Rahman Khan	Field Engineer
8.	Md. Mahmud Alam	Field Engineer
9.	Md. Shahid Khan	Soil/Mat. Lab. Tech.
10.	Rebeka Sultana	Soil/Mat. Lab. Tech.
11.	Mojibur Rahman	Soil Assistant
12.	Rezaul Karim	Accounts Assistant
13.	Q. Ahmed Najee	Expeditor (at BADC)
14.	Moazzam Hossain Sarker	Expeditor (at BADC)
15.	Md. Delwar Hossain	Secretary
16.	Akshay Kumar Roy	Draftsman
17.	Rafia Akhtar	Draftsman
18.	Albert Kalyan Khan	Inspector (Survey)
19.	A. Motaleb	Instrumentman
20.	Md. Nizamuddin	Chainman
21.	Md. Hanif	Rodman
22.	Shamim Ahmed	Driver
23.	Shamsul Haque	Driver
24.	Md. Haider	Driver
25.	Abdul Karim	Driver
26.	Delwar Hossain	Driver (at BADC)
27.	Faiz Chowdhury	Messenger
28.	Stephen Grant	Messenger
29.	Abdus Salam	Messenger
30.	Ulfat Ali	Messenger
31.	Jahanara Begum	Messenger/Receptionist
32.	Aminuddin	Guard

B. Zone I Office at Comilla

1. Amalendu Debnath	Sr. Field Engineer
2. Abul Baset	Field Engineer (Brahmanbaria)
3. Mozharul Islam	Field Engineer (Daudkandi)
4. Azmal Khan	Inspector (Daudkandi)
5. D. M. Akhtaruzzaman	Inspector (Brahmanbaria)
6. Nazrul Islam	Inspector (Comilla)
7. Humayun Kabir Khan	Soil/Mat. Lab. Tech.
8. Tajul Islam Khan	Soil Assistant
9. Nurul Momen Khan	Soil Assistant
10. Abdul Malek Fakir	Driver
11. Sultan Ahmed	Driver
12. Daliluddin	Driver

C. Zone II Office at Bogra

1. A.H.M. Rafiqus Salehin	Sr. Field Engineer
2. Mostahar Ali	Field Engineer (Shibganj)
3. Nuruzzaman Khan	Field Engineer (Santahar)
4. Abdur Rashid *	Field Engineer (Bogra)
5. Rabindranath Sarker	Inspector (Bogra)
6. Anil Chandra Sarker	Inspector (Santahar)
7. Susil Chandra Howlader	Inspector ( on leave)
8. Abdul Bari	Inspector (Panchagar)
9. Mukshed Khan	Inspector (Shibganj)
10. Sk. Zameul Haque	Soil/Mat.Lab. Tech.
11. Abdur Rashid	Soil/Mat.Lab. Tech.
12. Md. Khaiz Ahmed	Soil Assistant
13. Shamsur Rahman	Soil Assistant
14. Abu Taher	Soil Assistant
15. Md. Kamal	Driver
16. Md. Babar	Driver
17. Abdus Sattar	Driver
18. Peter Joseph Penherio *	Messenger
19. Yunus Miah	Camp Assistant
20. Raisuddin	Guard

D. Zone III Office at Ishurdi

1.	Nazrul Islam	Sr. Field Engineer
2.	Saiful Islam	Field Engineer (Muladuli)
3.	Rubayet Islam	Field Engineer (Temporary duty at Muladuli).
4.	Alauddin Ahmed	Field Engineer (Chuadanga)
5.	Bhabesh Chandra Roy	Field Engineer (Amnura)
6.	Sk. Shah Mohammed	Inspector (Amnura)
7.	Sirazul Islam Khan	Inspector (Chuadanga)
8.	Omar Ali	Inspector (Satkhira)
9.	Meer Mozammel Hossain	Inspector (Muladuli)
10.	Rafatullah	Soil/Mat. Lab. Tech.
11.	Syed Zahid Hossain	Soil/Mat. Lab. Tech.
12.	Md. Shajahan	Soil Assistant
13.	Sabbir Hossain	Soil Assistant
14.	Tajul Islam Chowdhury	Accounts Assistant
15.	Md. Shakur *	Driver
16.	Ali Hossain	Driver
17.	Shafiqur Rahman	Driver
18.	Subash Chandra Das	Driver
19.	Abdul Mannan	Driver
20.	Rahmatullah	Driver
21.	Mizanur Rahman Sikder	Messenger

Resigned/was terminated in February, 1982



KOREA  
DEVELOPMENT  
CORPORATION

PROJECT SCHEDULE  
CONSTRUCTION

REPORT NO. 4  
DATE : 28.2.82  
SITES: OVERALL

CLIENT : B.A.D.C

FERTILIZER WAREHOUSE PROJECT PHASE II

CONSULTANT : I.E.C.O

OVERALL CONSTRUCTION PROGRESS CONTROL CURVE



