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**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. 28**

**JANUARY 1982**

**CONSULTING  
ENGINEERS**

**INTERNATIONAL ENGINEERING COMPANY, INC.**

**A MORRISON MUEHLER COMPANY**

**Bangladesh Agricultural Development Corporation  
USAID Fertilizer Distribution  
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INTERNATIONAL ENGINEERING COMPANY, INC.  
A REGISTERED SERVICE COMPANY**

INTERNATIONAL ENGINEERING COMPANY, INC.  
CONSULTING ENGINEERS

MONTHLY PROGRESS REPORT NO. 28  
MONTH OF JANUARY, 1982

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CONTRACT 9074

12 February, 1982

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

INTERNATIONAL ENGINEERING COMPANY, INC.  
CONSULTING ENGINEERS

MONTHLY PROGRESS REPORT NO. 28  
FOR THE PERIOD JANUARY 1-31, 1982

1. GENERAL

IECO inspected KDC's construction operations at the initial nine sites, in addition to Muladuli and Comilla sites which KDC opened up for development during January (both sites are KDC Zone headquarters). With the Comilla site in possession, IECO made arrangements to open up its Zone I office. The Zone III office building at Ishurdi is still incomplete. The Zone II office at Bogra is in full operation.

Substantial progress with site filling was attained at Brahmanbaria, and progress with filling work was made at Santahar and Bogra. Fill construction progress was slowed at several sites due variously to improper subgrade preparation, importation of non-specification materials, and requirements for remedial work. Most importantly, a general sitewise shortage of earthwork construction equipment was a delaying factor. The contractor actively searched for equipment and suitable materials. IECO requested that KDC submit revised, realistic schedules for the priority sites, reflecting equipment availability.

Overall progress of construction after this third month stood at 2.56% of the estimated contract work complete in place, with another 1.47% earned for materials imported to depots or sites.

DCS staff totaled 72 personnel at end of January. IECO staff numbered 16. Force Reports for IECO and DCS are appended.

## 2. CONTRACT ADMINISTRATION

Radio Licence	At a meeting on 20 January between BADC and the Ministries of Agriculture, Home, Foreign Affairs and the T&T department it was decided that a licence would be issued to BADC, not to IECO. This will suffice. At month end the actual licence had not yet been issued.
BR/BADC Agreement	USAID approved the agreement subject to certain conditions. BADC will now have to meet with BR to deal with these conditions.
Change Orders	Change Order 01-001 for Dinajpur is at BADC for signature. Change Order 002 awaits formal USAID comment.
KDC Invoice	The process of field data collection, review, checking and invoice submittal is becoming regularized.
KDC Equipment	Master lists of equipment transferred from the Jamuna River Crossing and the BADC Tubewell Projects as well as a list of equipment purchased in-country were submitted at month end.
Mobilization Advance	Discussions were held with KDC and USAID regarding further advances and rescheduling KDC's pay back. The matter was unresolved at month end.
Performance Guarantee	A formula for relating the declining guarantee balance to the work completed was investigated. No conclusion has been reached.
Zone Office	With the opening of the Comilla site and progress on the temporary buildings IECO established its Zone I Office on-site at Comilla.

### 3. CONTRACT EXPENDITURES

January Taka expenditures reimbursable by USAID were:

Local Salary	68,486.50
Office Supplies and Expenses	33,756.25
Dacca Office Rent/Maint./Utilities	9,089.50
Area Office Rent/Maint./Utilities	7,302.00
Furniture and Equipment	53,967.10
Vehicle Operation and Local Travel	167,970.67
Education	6,146.00
House Rent/Maint./Utilities	32,954.49
House Furniture	4,660.00
DCS	301,055.71
Custom Clearance	1,797.50
Expat. Per Diem and Hotel	5,610.00
Other	3,614.50

Total Taka 696,410.22

Expenses reimbursable through BADC's Taxes and Duties Fund were Taka 176,049.60.

December's expenditure budget and schedules are appended.

### 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

Mr. D. H. Workman returned to Dacca from the U. S. on 19 January, 1962.

### 5. MEETINGS

19 January BADC/AID  
KDC/IECO

Progress Meeting No. 4. Topics: Comilla possession secured; Madhupur site to be relocated; radio licence; KDC progress report by site; material and equipment importation and in-country transfer; BR/BADC agreement; KDC work schedules and GOB issuance of customs books for KDC personnel.

- 20 January BADC/T&T  
Ministry of  
Home, Min. of  
Agr., Min. of  
Foreign Aff. An interministerial meeting on  
IECO's radio licence application.  
It was decided that a licence could  
not be issued to a foreign firm but  
that it would be issued to BADC.
- 20 January AID/KDC/IECO Discussed was a revision of the pay-  
ments clause of the contract, changes  
in the mobilization advance, and a  
system to reduce the value of the  
performance guarantee based on work  
completed.
- 25 January AID/KDC/IECO Details of the payments clause were  
discussed.

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.

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. Payment of lease money, which BIWTA asked for in advance, was not made by BADC in January. |
| Atrai     | - Eviction of squatters and demolition of dwellings awaited completion. Partial clearing was effected in December.                             |
| Netrakona | - Removal of 11 KV transmission tower off-site was not effected by PDB in January. The matter should be pursued.                               |

- Rangpur -- Off-site reconstruction of water supply facilities and rehousing of railway personnel remained pending in January. BR is reported to be awaiting financial concurrence of BADC for the estimated cost. A meeting held between Burmah Eastern, BR and IECO scheduled a site inspection for February in order to resolve any potential difficulty in operating through one dead end siding now used by Burmah Eastern.
- Mahendranagar -- BR awaiting financial sanction from BADC for the estimated cost of rehousing BR personnel off-site.
- Shibganj -- As before, railway residences remained occupied in January. BR was awaiting BADC's financial concurrence in the estimated cost of relocation.

Arrangements with T&T for removal/relocation of telephone lines at various sites continued in progress during January. BADC placed fund, per T&T department's estimate, for removal/relocation of telephone lines.

3. Payment of IECO's Duties and Taxes Invoice for the period April through September 1981.
4. Follow-up for issuance of a radio licence.
5. Formal approval of costs for services of A. Htay.
6. Signature of Change Order 01-001 for Dinajpur Site.

#### 6.2 For Action by IECO

1. Pursue site occupancy and obstruction removal problems (Section 6.1, para 2) 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.
4. Complete and submit to BADC for approval the new site plan for Madhupur.

#### 6.3 For Action by AID

1. Payments of IECO's November invoice.

## 7. ENGINEERING ACTIVITIES

### 7.1 Soils and Materials Engineering

Gradation tests on soil materials, and field and laboratory density measurements were in progress throughout January for Daudkandi and Brahmanbaria in Zone I. for Santahar, Bogra, Panchagar and Shibganj in Zone II. and for Amnura, Muladuli, Chuadanga and Sakhira in Zone III.

Concrete cylinders for Daudkandi piles were made. Compressive strength tests were made at various ages, and results reported.

Tests for approval of samples, collected from local suppliers and submitted by KDC, of soil materials, bricks, concrete sand and gravels from Shibganj, Bogra, Panchagar, Chuadanga, Santahar, Amnura, Muladuli, Comilla, Daudkandi and Brahmanbaria continued at IECO's Dacca laboratory all month.

### 7.2 Office Engineering

Preliminary cross-sections for Muladuli site and railway siding embankment for Bogra site were drawn up. Revisions to site plans of Pohanpur, Bhola, Bogra, Kushtia, Shibganj and Feni were completed in January. Site location control drawings for Feni, Mahendranagar, Netrakona and Bogra were under revision. The Bhola site location control drawing was prepared. Pontoon drawings, with modifications incorporated, were transmitted to BADC for obtaining BIWTA approval. At month end, a site plan for Madhunur at a new, nearby site, was in development. Reporting forms and charts for IECO's soils laboratory were also drafted.

### 7.3 Field Engineering

Survey and re-monumentation of Feni site was done in January, incorporating adjustments to the site boundary. Revision to the Feni site location control drawing will be completed in early February. Preliminary survey of a new Madhunur warehouse site within the BADC Seed Farm was performed. Comilla site was surveyed and boundaries monumented on possession of the site. The site location control drawing for Comilla will be completed in February.

## 8. CONSTRUCTION SURVEILLANCE

### 8.1 General

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

### 8.2 Zone I (Comilla)

#### I2 Brahmanbaria

Engineered fill in the godown area was brought up to grade during the month. Machine compaction attained densities in all lifts exceeding 90%. The area is thus ready for foundation excavation. Some delay is anticipated in the start of foundation concrete operations: at month's end KDC had not yet stocked cement, rebar or coarse aggregate. No field mix design had been submitted to permit prior trial batching.

A second septic tank/soak well was completed, and the setting of pre-cast concrete fence posts was 75% complete.

Fill effort at month's end was at a standstill, equipment having been moved to open the Comilla site.

#### I3 Daudkandi

During the month KDC poured 176 35-foot concrete piles. 68 of these were rejected at month's end: 50 due to sub-standard concrete and 18 due to unacceptable coarse aggregate. The remaining 108 piles exhibit, as appears visually, serious linear and sectional irregularities. String-line scrutiny will be applied to each pile and linear deviation and section dimensions will be taken in 3 planes at length intervals of 3 feet. Those piles within tolerances shown in ACI 347-78 for pre-cast concrete will be accepted. All others will be rejected. KDC has been so informed. Examination of individual piles by IECO field personnel will start the first week in February.

Inherited soil problems in the unconsolidated hydraulic fill are being evidenced through density tests taken 3 to 4 feet below grade. Densities range from 68 to 75%. After mechanical tamper application for compaction densities improve, attaining at 74 to 81% range. This is still below acceptable minimums. The matter is under study.

To make further sub-surface determinations KDC performed Dutch Cone Penetrometer tests adjacent to each indicator pile. Eight tests were made, each to a depth of 45 feet. In addition 3 similar tests were made in the area to be occupied by building B1. Correlated results of these tests will be available for study the first week in February.

One septic tank/soak well was completed in January.

## 11 Comilla

KDC took possession of the Comilla site on 11 January. This is to be their Zone headquarters. At month's end the pre-fab office building was within a few days of being occupable. Other buildings, of brick, were 70% complete. IECO established its Zone I headquarters also, with arrival of the Zone Manager at month end.

IECO surveyors set site corner monuments and completed the perimeter traverse. A site location control drawing will be issued the first week in February.

## 8.2 Zone II (Bogra)

### M1 Santahar

Temporary facilities have now been completed. KDC continued dewatering and stripping low areas at site. Engineered fill and common fill hauling continued throughout the month. Most of the material being delivered is suitable only for common fill so Contractor has resorted to blending coarser material with common fill to fulfill the requirement of engineered fill. Some placing and compaction of this blended material started late in the month. Lack of compaction equipment is hindering progress at site.

Nine expatriates are currently at Santahar. Equipment and vehicles were same as December.

### M3 Bogra

No work has yet started on temporary facilities. These will be started as soon as fill is sufficiently high. Contractor is presently using a bamboo-and-tin shack as an office. Stripping continued throughout the month and is about 95% complete. Hauling, placing and compacting of common and engineered fill was started this month and work on these items continues. Lack of suitable compaction equipment is hindering progress. Material suitability is no problem at this site. The 80' long, 2'  $\phi$  pipe culvert was placed in position this month.

Five expatriates are presently at this site. Local personnel number around 70. Equipment consists of 1 pay-loader, 1 motor grader, 2 dump trucks, 1 steel drum roller (4 Ton), one farm tractor and one 3' pump.

## O2 Shibganj

No KDC personnel and equipment at site. Local subcontractor has however started work on temporary facilities ( living quarters, toilets, cement godown and stores) and these are approximately 90% complete. Stripping was about 95% complete by end of month. engineered and common fill work started on the 22nd of this month. All hauling and compaction is being done manually. Local personnel by end of month numbered around 300 men. Equipment at site consisted of 1 truck, 1 rick-up and a 3'  $\emptyset$  nump. No problems with suitability of engineered fill at this site.

## O3 Panchagar

KDC continued work on temporary buildings and this work is approximately 80% complete. Hauling and compacting engineered fill were started this month. Majority of fill hauled in has been placed for the approach road by hand compaction methods. Lack of compaction equipment is hindering work at this site. KDC staff numbered 3 men and local personnel consisted of 71 men at end of month. No problems with suitability of fill material at this site.

## 8.4 Zone III (Ishurdi)

### K2 Annura

Structures of temporary buildings to be used as offices and quarters were completed, but the installation of temporary facilities for these buildings was still in progress. IECO's Field Engineer and Site Inspector were accommodated in the quarters on site on 11 January. Stripping was completed but field density tests indicate certain areas requiring remedial work for correction of soft areas. Imported materials for fill were stockpiled on site and at month's end, the first layer of filling material was placed on the areas where the subgrade was approved. The Contractor did not furnish a Construction Schedule for the site, but based on the progress so far, the work appears to be lagging. At this rate, foundation work cannot be completed before the start of the monsoon season. No cement, rebar, sand and aggregates have been delivered to site.

### N1 Muladuli

Construction of temporary buildings to be used as offices was completed, including temporary facilities. At month's end the Contractor started foundation work for temporary quarters. Subgrades were tested for compaction before approvals were given for filling work. The work was not properly organized and prosecuted, and as a result IECO issued a number of deviation logs. Technical guidance was given by IECO's personnel to improve the speed and quality of the work. Only 52% of the subgrade area was approved for filling and about 15% of filling work was accomplished. Due to non-compliance by the Contractor in carrying out filling in 6' layers for which remedial work is necessary, time was lost and this way delay completion of foundation works before start of the monsoon season. Although the D7 bulldozer on site can attain 90% compaction with enough effort, test results indicate that it cannot achieve 95% compaction. Filling work will have to be stopped for the last one foot layer unless the Contractor can bring in better equipment such as rubber tyred rollers to produce the required 95% compaction. No cement, rebar, sand and aggregates have been delivered to site. The Contractor did not furnish a Construction Schedule.

### T1 Chudanga

Construction of temporary buildings to be used as offices and quarters was completed. Temporary facilities were almost complete. Stripping and grubbing of roots was accomplished. The Contractor provided payloader for compaction of the subgrade, but initial tests indicate that 90% compaction was not achieved. Remedial work was in progress at month's end. Due to lack of knowledgeable technical personnel the remedial work on the subgrade was not properly done by the Contractor despite IECO's advice given to them. The equipment provided is not suitable for the work. No cement, rebar, sand and aggregates have been delivered to site. The Contractor did not furnish a Construction Schedule for the site and based on factual information, the work appears to be behind schedule and foundation work cannot be completed before the start of the monsoon season. The site was set out and a serious error in setting out the temporary office building was detected.

## Pl Satkhira

Construction of temporary buildings to be used as offices and quarters including temporary facilities was about 90% complete. An existing building on site was demolished. Clearing and grubbing of tree roots was in progress and about 85% done. Some trees were earmarked for uprooting. Stripping is in progress with about 35% done, but with only one dump truck to remove the debris work was slow. Even without a construction schedule from the Contractor, it was obvious that the progress of the work was deplorable mainly due to lack of equipment. It appears that the Contractor will have great difficulty in completing foundation works before the start of the monsoon season. No materials for permanent works were delivered to site.

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

#### 9.1 General

On lapse of three contract months through January, Korea Development Corporation completed 47 percent overall mobilization including construction of temporary buildings and attendant facilities.

By month end, KDC had in Bangladesh 66 expatriate personnel out of 77 originally estimated total. But KDC anticipates that the final total will soon exceed the estimated number.

The total work completion by month end was 3 percent against a scheduled 4 percent progress. The delay was attributed mainly to shortage of equipment, substandard quality of the imported fill materials and slow delivery of materials by local suppliers. KDC proposed to solve the equipment problem by hiring local equipment and expediting the scheduled importation.

Procurement and import schedule of equipment is given as follows:

<u>Item</u>	<u>Quantity Procured</u>	<u>Expected Date of Shipment</u>	<u>Place of Shipment</u>	<u>Vessel</u>
Steel Forms & Supports.	11,175 Ea.	31 Jan. 82	Korea	U.S.
Vib. Roller	3 Ea.	30 Dec. 81	Singapore	Bangladesh
Vib. Compactor	4 Ea.	31 Jan. 82	Korea	U.S.
Concrete Mixer	10 Ea.	31 Jan. 82	Korea	U.S.
Cone Hoist Winch	8 Ea.	31 Jan. 82	Korea	U.S.
Water Pump	8 Ea.	31 Jan. 82	Korea	U.S.
Cone Vibrator	30 Ea.	31 Jan. 82	Korea	U.S.
Generator	10 Ea.	28 Jan. 82	Singapore	Bangladesh

<u>Item</u>	<u>Quantity Procured</u>	<u>Expected Date of Shipment</u>	<u>Place of Shipment</u>	<u>Vessel</u>
Payloader	3 Ea.	6 Feb. 82	Singapore	Bangladesh
Concrete Dumper	3 Ea.	28 Jan. 82	Singapore	Bangladesh
Truck Crane	1 Ea.	6 Feb. 82	Singapore	Bangladesh
Tractor	4 Ea.	6 Feb. 82	Singapore	Bangladesh
Fridge/Freezer	16 Ea.	6 Feb. 82	Singapore	Bangladesh
Air Conditioner	15 Ea.	6 Feb. 82	Singapore	Bangladesh
Water Heater	9 Ea.	6 Feb. 82	Singapore	Bangladesh
Pick-up	10 Ea.	25 Feb. 82	U.S.	U.S.

Imported equipment so far arrived includes eight diesel engines for concrete tower hoists and twelve items of survey instruments.

Local purchase of approved filling and construction materials is in progress at various sites. The following imported materials arrived in Bangladesh in January:

<u>Item</u>	<u>Unit</u>	<u>Total Quantity</u>	<u>Quantity Arrived</u>	<u>Balance Quantity</u>
Cement	Ton	25 000	1,000	24,000
Rebar	Ton	5,000	2,520	2,480
Tie Wire	Ton	80	80	--
Wire Mesh	Ton	415	180	235
Bar MS	Ton	45.5	45.5	--
Plywood	Ton	160	20	140

An armed robbery was reported to have taken place at Bogra in January when KDC had official cash to the tune of Taka 147,900 and US \$ 655, and some personal valuables lost.

## 9.2 Zone I (Comilla)

In January KDC established its zonal office at Comilla on possession of site. Sitewise progress of work is presented in this section as follows:

### I2 Brahmanbaria

Works completed in January at this site include site stripping, septic tank and soakwell, tubewell, and filling in the warehouse area. Filling work in road and parking area and fencing on the boundaries were in progress, yet to be completed. Actual overall achievement of work was 11 percent, ahead of the targeted 9 percent.

A considerable reduction to both expatriate and local on-site employees of KDC was made. The January staff position is shown below:

<u>Category and Title</u>	<u>No. of the Position</u>
<u>Expatriates</u>	
Engineer	1
<u>Locals</u>	
Engineer	3
Administrative Asst.	13
Supervisor	3
Technician	12
Skilled Labour	15
Unskilled Labour	19
Total :	63

Equipment complement at Brahmanbaria included one bulldozer, one generator and one welding machine.

### I3 Daudkandi

Mobilization to site, per KDC's estimate, was 66 percent completed. Works 100 percent accomplished include stripping, tubewell, septic tank and soakwell. Due to non-compliance with specifications 68 out of 176 concrete piles were rejected by IECO and the remaining will be examined by IECO in early February. Box culvert construction continued all month. Actual status of work was 7 percent complete as against 9 percent achievement stipulated.

In January, KDC reduced the number of expatriates, but increased that of locals. The January staff placement is shown below:

<u>Expatriates</u>	<u>No. of Positions</u>	<u>Local Personnel</u>	<u>No. of Positions</u>
Engineer	1	Admin. Asst.	16
Equipment Operator	1	Supervisor	2
Technician	1	Technician	24
		Skilled Labour	11
		Unskilled Labour	28
Total :	3	Total :	81

The following following equipment and vehicles were on hand at Daudkandi:

<u>Item</u>	<u>Number</u>	<u>Item</u>	<u>Number</u>
Soil Compactor	1	Diesel Pile Hammer	1
Dump Truck	1	Vib. Pile Hammer	1
Compressor	1	Crane	1
Conc. Mixer Truck	1		

### Il Comilla

KDC started mobilization, on possession of site, on 11 January and by month end achieved 31.5 percent.

The following staff was mobilized by KDC to site:

<u>Expatriates</u>	<u>No. of Positions</u>	<u>Local Personnel</u>	<u>No. of Positions</u>
Superintendent	1	Engineer	2
Engineer	2	Admin. Asst.	10
Manager	2	Supervisor	4
Mechanic	1	Technician	28
Technician	1	Skilled Labour	31
		Unskilled Labour	20
Total	7	Total :	95

Equipment and vehicles at Comilla site were as follows:

<u>Item</u>	<u>Number</u>	<u>Item</u>	<u>Number</u>
Payloader	1	Welding Machine	1
Cargo Truck	1	Bar Cutter	1
Dump Truck	1	Grinder	1
Conc. Mixer Truck	1	Pick-up	1
Generator	1	Jeep	1
Compressor	1		

### .9.3. Zone II (Bogra)

#### M1 Santahar

Construction of temporary buildings and facilities was 90 percent accomplished in January. Stripping work continued throughout the month and was 98 percent complete by month end. KDC reported problems with the quality of fill materials delivered by local suppliers, resulting in only 3 percent achievement of filling and compaction target. Boundary wall septic tank and soakwell construction was not begun as scheduled, for want of approved materials.

KDC reduced number of local staff by 56 in January. KDC manpower position at site is shown below:

<u>Expatriates</u>	<u>No. of Positions</u>	<u>Local Personnel</u>	<u>No. of Positions</u>
Superintendent	1	Engineer	2
Engineer	1	Administrator	2
Administrator	2	Accountant	1
Mechanic	1	Supply Suptd.	1
Foreman	1	Store Keeper	1
Cook	1	Foreman	3
		Labour	120
<b>Total</b>	<b>7</b>	<b>Total</b>	<b>130</b>

Equipment and vehicles at Santchar site in January as follows:

<u>Item</u>	<u>Number</u>	<u>Item</u>	<u>Number</u>
Payloader	2	Swaco Pump 6 Ø	1
Vib. Roller	1	Water Pump 3 Ø	1
Compressor	2	Welding Machine	1
Dump Truck	6	Pick-up	1
Tank Lorry	1	Jeep	1
Cargo Truck	2	Tyre Roller	1
Generator	2	Grader 3 7M	1
Concrete Dumper	1	Bulldozer	1
Soil Compactor	1	Side Boom	1
Transmixer Truck	1		

### M3 Bogra

Construction of temporary facilities did not start. Site mobilization was about 35 percent complete. Clearing and grubbing was 50 percent complete. Site filling and construction continued throughout the month. Pipe culvert construction was complete. Achievement of progress, per KDC's estimate, is 7 percent over the targeted 9 percent for the month.

The following KDC personnel worked at Bogra site in January:

<u>Expatriates</u>	<u>No. of Positions</u>	<u>Local Personnel</u>	<u>No. of Positions</u>
Superintendent	1	Administrator	1
Engineer	1	Engineer	1
Administrator	1	Surveyor	1
Foreman	1	Supply Suptd.	1
Mechanic	2	Lab. Tech.	1
		Driver	5
		Mechanic	3
		Operator	2
		Labour	90
<b>Total</b>	<b>7</b>	<b>Total</b>	<b>97</b>

The following equipment and vehicles were reported in place at the site.

<u>Item</u>	<u>Number</u>	<u>Item</u>	<u>Number</u>
Payloader	1	Vib. Roller	1
Dump Truck	3	Pick-up	1
Tyre Roller	1	Tractor	1
Grader 3.7M	1		

### 02 Shibganj

Site work at Shibganj is being done by the KDC - appointed subcontractor. KDC reported two engineers, one administrator, one accountant, one foreman and eighty labour, all local personnel, at work on site.

Temporary buildings and facilities construction was 90 percent complete and clearing and grubbing 100 percent achieved. Site filling and connection was performed on an area of 70 000 CF. At month end, overall progress of work, per KDC estimate, was only 3 percent against 9 percent planned.

### 03 Panchagar

Temporary buildings and facilities construction was almost 90 percent complete at month end. Clearing and grubbing was 50 percent complete. Site filling with imported material started (behind schedule) on 26th January. The overall cumulative progress of work was 6 percent compared to 9 percent targeted.

The following KDC personnel worked at site in January:

<u>Expatriates</u>	<u>No. of Positions</u>	<u>Local Personnel</u>	<u>No. of Positions</u>
Superintendent	1	Administrator	2
Engineer	1	Accountant	1
Supply Suptd	1	Store Keeper	1
Accountant	1	Labour	70
Total	4	Total	74

Vehicles and equipment consisted of one pick-up, one dump truck and one payloader.

9.4 Zone III (Ishurdi)

K2 Amnura

Construction of temporary buildings and facilities continued in January to 90 percent completion. Clearing and grubbing work also was 90 percent complete. Site filling was started. Other works behind schedule at this site were boundary wall foundation, and septic tank and soak-well construction. Cumulative progress of site work was 5 percent, half of the planned target.

Present staff at Amnura are as follows:

<u>Expatriates</u>	<u>No. of Positions</u>	<u>Local Personnel</u>	<u>No. of Positions</u>
Engineer	1	Foreman	1
Administrator	2	Equipment Operator	3
Mechanic	1	Labour	20
		Cook	1
		Guard	4
Total :	4	Total	29

KDC site equipment consisted of the following:

<u>Item</u>	<u>Number</u>	<u>Item</u>	<u>Number</u>
Bulldozer	1	Generator	1
Excavator	1	Compactor	1
Cargo Truck	1	Water Pump	1

N1 Muladuli

Temporary constructions were complete and site mobilization was half accomplished in January. Clearing and grubbing work continued all month to near completion. Site filling commenced on 10 January while stripping was completed on the 28th. Work accomplishment was 6 percent.

KDC increased the local workforce significantly. The personnel complement follows:

<u>Expatriates</u>	<u>No. of Positions</u>	<u>Local Personnel</u>	<u>No. of Positions</u>
Superintendent	1	Admin. Asst.	1
Engineer	1	Accounts Asst.	1
Accountant	1	Materials Asst.	1
Materials Manager	1	Mason	2
Mechanic	1	Printer	2
		Foreman	3
		Labour	55
		Driver	2
		Guard	3
		Cook	2
Total :	5	Total :	74

Equipment and vehicles on site were as follows:

<u>Item</u>	<u>Number</u>	<u>Item</u>	<u>Number</u>
Bulldozer	1	Water Pump	1
Dump Truck	1	Jeep	1
Soil Compactor	1	Pick-up	1
Compressor	1		

#### T1 Chuadanga

Temporary buildings and facilities were 100 percent and site mobilization 50 percent completed in January. By month end, clearing and grubbing was 85 percent accomplished. Stripping began on the 12th. Work on filling and boundary wall foundation, scheduled to commence in January, was not initiated. Actual cumulative progress of work was 5 percent, half of the scheduled progress.

KDC made a substantial increase in the local workforce, categorized below:

<u>Expatriates</u>	<u>No. of Positions</u>	<u>Local Personnel</u>	<u>No. of Positions</u>
Supervisor	1	Administrator	1
Engineer	1	Carpenter	1
Foreman	1	Mason	1
Mechanic	1	Equipment Operator	4
		Driver	1
		Foreman	1
		Labour	35
		Guard	6
		Cook	2
		Cleaner	1
Total :	<u>4</u>	Total :	<u>54</u>

The contingent of vehicles and equipment on site consisted of the following:

<u>Item</u>	<u>Number</u>	<u>Item</u>	<u>Number</u>
Dump Truck	1	Welding Machine	1
Payloader	1	Soil Compactor	1
Tractor	1	Pick-up	1
Water Truck	1		

#### Pl Satkhira

Mobilization was 40 percent complete, and temporary buildings and facilities were 90 percent complete. Stripping, clearing and grubbing work continued all month. Fill construction, boundary wall foundation, construction of septic tank and soak well, all scheduled for January, did not begin. Actual cumulative progress, per KDC's estimate, is 4 percent, against a scheduled 9 percent.

Following addition of a large number of local employees, KDC personnel at Satkhira numbered 55, categorized below:

<u>Expatriates</u>	<u>No. of Positions</u>	<u>Local Personnel</u>	<u>No. of Positions</u>
Administrator	1	Administrator	1
Carpenter	1	Carpenter	3
Cook	1	Mason	3
		Driver	1
		Labour	43
		Cook	1
Total :	<u>3</u>	Total :	<u>52</u>

No equipment except a dump truck was on site in January.

## 9.5 Deviations

A number of deviation logs were issued by IEEO and corrective actions required of KDC.

<u>Site</u>	<u>Log No.</u>	<u>Date</u>	<u>B.O.Item/ Specs. Clause</u>	<u>Nature of Deviation</u>
Mualduli	N1/4	5 Jan.	3.03 A&B	Non-removal of tree roots.
	N1/5	7 Jan.	4.10A.3	Contractor started filling on an unapproved subgrade without scarifying the ground and removing tree roots.
	N1/6	13 Jan.	4.10A.1	Contractor started filling on an unapproved subgrade.
	N1/7	13 Jan.	4.10A.3	Dumping of imported material on an unapproved subgrade.
	N1/8	13 Jan.	3.03, 3.04	Non-removal of tree roots in structure area.
	N1/9	26 Jan.	4.10B.3a	Filling layer exceeding 6". Average thickness 1.095'.
Amnura	K2/3	11 Jan.	4.10A.3	Dumping of imported materials on an unapproved subgrade.
	K2/7	26 Jan.	4.10A.3	Subgrade not remedied for detected soft zones.
Chuadanga	T1/2	23 Jan.	4.09C	Unauthorized excavation and backfill with unauthorized material.
	T1/3	28 Jan.	4.04A, 4.05B 4.10A.4	Lack of control of proper moisture content for compaction of exposed subgrade.
	T1/4	28 Jan.	4.10A.3	Subgrade compaction failed to achieve desired density.
	T1/5	29 Jan.	4.04A, 4.05B 4.10A.4	Contractor flooded and damaged the exposed subgrade.

9.6 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	30 634.99	104,291.86	6.48
Brahmanbaria	1,478 514	67 354.23	149,665.58	10.12
Comilla	2,444 371	70 660.17	70,770.17	2.89
<u>ZONE II</u>				
Santahar	6 205 593	95,562.84	361,317.54	5.82
Bogra	2 939 369	102,615.19	183,934.10	6.26
Panchagar	1 200 629	24,501.18	54,859.10	4.57
Shibganj	2 067 631	39,165.61	48,650.91	2.35
<u>ZONE III</u>				
Muladuli	1 673 284	32,574.67	94,606.22	5.65
Chuadanga	2,016 028	20,127.64	39,839.27	4.46
Amnura	1 584 027	17,640.26	71,029.54	4.48
Satkhira	1,081,278	20,842.07	35,577.24	3.29
TOTAL (ALL SITES)	49 438 399.83	521,678.85	1 264,431.53	2.54
MATERIALS		729 838.90	729,838.90	-
ALL SITES	49 438 399.83	1 251 517.75	1 993 923.35	4.03
RETENTION	1 000 000	52 167.89	126,443.15	-

## INTERNATIONAL ENGINEERING COMPANY, INC.

## FORCE REPORT

31 JANUARY 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. A. Rashid *	Office Boy
11. Md. Tayeb	Driver
12. 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 Beggs	Driver

**D. Zone III Office at Ishurdi**

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

\* Terminated in January, 1982

DEVELOPMENT CO.'SULTANCY SERVICES LTD.  
FORCE REPORT  
31 JANUARY 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. Sk. Rezaul Haque	Engineer
5. Mahbubur Rahman	Engineer
6. Md. Shahid Khan	Soil/Mat. Lab. Tech.
7. Rebeka Sultana	Soil/Mat. Lab. Tech.
8. Mojibur Rahman	Soil Assistant
9. Rezaul Karim	Accounts Assistant
10. Q. Ahmed Najee	Expeditior (at BADC)
11. Moazzam Hossain Sarker	Expeditior (at BADC)
12. Md. Delwar Hossain	Secretary
13. Akshay Kumar Roy	Draftsman
14. Rafia Akhtar	Draftsman
15. Albert Kalyan Khan	Inspector (Survey)
16. Nazrul Islam	Inspector (Survey)
17. A. Mutaleb	Instrumentman
18. Md. Nizamuddin	Chainman
19. Md. Hanif	Rodman
20. Shamin Ahmed	Driver
21. Shamsul Haque	Driver
22. Asghar Ali *	Driver
23. Md. Haider	Driver
24. Abdul Karim	Driver
25. Delwar Hossain	Driver (at BADC)
26. Daliluddin *	Driver
27. Faiz Chowdhury	Messenger
28. Stephen Grant	Messenger
29. Abdus Salam	Messenger
30. Mizanuddin *	Messenger
31. Jahanara Begum	Messenger/Receptionist
32. Aminuddin	Guard

B. Zone I Office at Comilla

1. Amalendu Debnath	Sr. Field Engineer
2. Mozharul Islam	Field Engineer (Brahmanbaria & Daudkandi Sites)
3. Azmal Khan	Inspector (Brahmanbaria Site)
4. Pulin Bihari Badya*	Inspector (Daudkandi Site)
5. Humayun Kabir Khan	Soil/Mat. Lab. Tech.

- |    |                   |                |
|----|-------------------|----------------|
| 6. | Tajul Islam Khan  | Soil Assistant |
| 7. | Nurul Momen Khan  | Soil Assistant |
| 8. | Abdul Malek Fakir | Driver         |
| 9. | Sultan Ahmed      | Driver         |

C. Zone II Office at Bogra

- |     |                          |                                |
|-----|--------------------------|--------------------------------|
| 1.  | A. H. M. Rafiqus Salehin | Sr. Field Engineer             |
| 2.  | Saiful Islam             | Field Engineer (Santahar Site) |
| 3.  | Mostahar Ali             | Field Engineer (Shibganj Site) |
| 4.  | Abdur Rashid             | Field Engineer (Bogra Site)    |
| 5.  | Rabindra Nath Sarker     | Inspector (Bogra Site)         |
| 6.  | Anil Chandra Sarker      | Inspector (Santahar Site)      |
| 7.  | Susil Chandra Howlader   | Inspector (Shibganj Site)      |
| 8.  | Abdul Bari               | Inspector (Panchagar Site)     |
| 9.  | Sk. Zameul Haque         | Soil/Mat. Lab Tech.            |
| 10. | Abdur Rashid             | Soil/Mat. Lab. Tech.           |
| 11. | Fazlur Rahman *          | Soil Assistant                 |
| 12. | Md. Khaiz Ahmed          | Soil Assistant                 |
| 13. | Shamsur Rahman           | Soil Assistant                 |
| 14. | Md. Kamal                | Driver                         |
| 15. | Rahmatullah              | Driver                         |
| 16. | Peter Joseph Penherio    | Messenger                      |
| 17. | Yunus Miah               | Camp Assistant                 |
| 18. | Raisuddin                | Guard                          |
| 19. | Md. Babar                | Driver                         |

D. Zone III Office at Ishurdi

- |     |                       |                                 |
|-----|-----------------------|---------------------------------|
| 1.  | Nazrul Islam          | Sr. Field Engineer              |
| 2.  | Rubayet Islam         | Field Engineer (Satkhira Site)  |
| 3.  | Alauddin Ahmed        | Field Engineer (Chuadanga Site) |
| 4.  | Bhabesh Chandra Roy   | Field Engineer (Amnura Site)    |
| 5.  | Sk. Shah Mohammad     | Inspector (Amnura Site)         |
| 6.  | Sirajul Islam Khan    | Inspector (Chuadanga Site)      |
| 7.  | Omar Ali              | Inspector (Satkhira Site)       |
| 8.  | Meer Mozammel Hossain | Inspector                       |
| 9.  | Pinaki Sen Gupta *    | Soil/Mat. Lab. Tech.            |
| 10. | Md. Shahjahan         | Soil Assistant                  |
| 11. | Syed Zahid Hossain    | Soil Assistant                  |
| 12. | Sabbir Hossain        | Soil Assistant                  |
| 13. | Tajul Islam Chowdhury | Accounts Assistant              |
| 14. | Md. Shakur            | Driver                          |
| 15. | Ali Hossain           | Driver                          |
| 16. | Shafiqur Rahman       | Driver                          |
| 17. | Subhash Chandra Das   | Driver                          |
| 18. | Mizanur Rahman Sikder | Messenger                       |

\* Resigned/was terminated in January, 1982

CONSULTANCY EXPENDITURE BUDGET

Schedule I	Budget	JOB TO DATE		DECEMBER 1981		Balance
		Dollars	Taka As Dollars	Dollars	Taka As Dollars	
<u>Resident Consultant Related Cost</u>						
A. Salaries	719,020	421,710.41	-	15,403.67	-	297,309.59
B. Payroll	747,780	438,578.83	-	16,019.82	-	309,201.17
C. Overhead Cost:						
D. Air Travel	64,000	24,035.47	-	-	-	39,964.53
E. Freight Cost	54,000	20,500.00	-	-	-	33,500.00
F. Excess Baggage	9,060	1,072.04	-	-	-	7,987.96
G. Processing Cost	2,550	1,687.38	225.60	-	-	637.02
H. Personal Automobiles	10,000	-	-	-	-	10,000.00
I. Settling-in Cost	31,620	31,240.91	-	-	-	379.09
J. Housing Allowance	117,000	-	71,318.46	-	2,307.19	45,681.54
K. Furniture & Equipment	88,000	28,390.96	25,025.47	-	-	34,583.57
L. Education Allowance	18,900	1,075.00	405.20	-	-	17,419.80
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	6,248.28	750.28	-	-	7,401.44
P. In-country Travel Per Diem	15,680	-	2,443.77	-	183.96	13,236.23
	<u>\$1,953,170</u>	<u>974,539.28</u>	<u>100,897.94</u>	<u>31,423.49</u>	<u>2,491.15</u>	<u>877,732.78</u>
Say	<u>\$1,953,000</u>					<u>877,562.78</u>

CONSULTANCY EXPENDITURE BUDGET

<u>Schedule II</u>	<u>JOB TO DATE</u>			<u>DECEMBER 1981</u>		<u>Balance</u>
	<u>Budget</u>	<u>Dollars</u>	<u>Taka As Dollars</u>	<u>Dollars</u>	<u>Taka As Dollars</u>	
<u>Short Term Consultant Related Cost</u>						
A. Salaries	12,000	10,992.70	-	-	-	1,007.30
B. Payroll						
C. Overhead Cost	14,640	13,411.10	-	-	-	1,228.90
D. Specialist Consultants Fees	14,700	17,529.72	-	-	-	(2,829.72)
E. Air Travel	6,000	6,988.00	-	-	-	(988.00)
F. Excess Baggage	906	87.40	-	-	-	818.60
G. Processing Cost	600	24.00	-	-	-	576.00
H. Temporary Accommodation	10,640	9,313.69	-	-	-	1,326.31
I. Int'l Travel Per Diem	1,350	1,520.65	-	-	-	(170.65)
	<u>\$60,836</u>	<u>59,867.26</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>968.74</u>
Say	<u>\$61,000</u>					<u>1,132.74</u>

CONSULTANCY EXPENDITURE BUDGET

Schedule III	Budget	JOB TO DATE		DECEMBER 1981		Balance
		Dollars	Taka As Dollars	Dollars	Taka As Dollars	
<u>A. Office Rental, Equipment and Maintenance</u>						
1. Dacca Office	65,000	-	37,609.76	-	148.44	27,390.24
2. Area Office Including Lab.	48,000	-	6,736.25	-	2,016.72	41,263.75
3. Furnishing & Equipment	47,000	14,996.58	32,660.34	-	1,176.93	(656.92)
4. Office Supplies & Stationary	9,500	11,115.22	17,267.43	-	706.96	(18,882.65)
5. Reproduction Costs	50,000	383.88	37,247.95	-	763.94	12,368.17
6. Communication Costs	11,400	60.00	6,733.03	-	186.33	4,606.97
<u>B. Vehicle Operation &amp; Maint.</u>						
1. Vehicle Rental	32,000	-	8,068.84	-	-	23,931.16
2. Consultant Purchased Vehicles	211,200	-	106,295.89	-	7,728.64	104,904.11
3. Motorcycles	21,120	-	-	-	-	21,120.00
4. Boats	19,800	-	-	-	-	19,800.00
<u>C. Direct Hire Local Admin. Personnel</u>	89,180	-	68,818.19	-	3,328.66	20,361.81
<u>D. Soil Testing Charges</u>	5,000	-	28,204.63	-	59.11	(23,204.63)
<u>E. Subcontract DCS for Local Technical and Admin.</u>						
1. Salaries Including Overhead and Fixed Fee	660,600	-	284,777.39	-	11,890.10	375,822.61
2. Per Diem & Site Allowances	78,900	-	32,329.35	-	1,257.35	46,570.65
3. Local Travel	10,000	-	400.93	-	-	9,599.07
<u>F. Misc. Field &amp; Office Expenses</u>	18,000	25.00	7,683.73	-	147.12	10,286.27
	<u>\$1,376,700</u>	<u>26,580.68</u>	<u>674,838.71</u>	-	<u>29,410.30</u>	<u>675,280.61</u>
Sav	<u>\$1,377,000</u>					<u>675,580.61</u>

CONSULTANCY EXPENDITURE BUDGET

Schedule IV	Budget	JOB TO DATE		DECEMBER 1981		Balance
		Dollars	Taka As Dollars	Dollars	Taka As Dollars	
<u>TECO Headquarter Related Cost</u>						
A. Salaries	74,500	81,647.97	-	163.62	-	(7,147.97)
B. Payroll Cost						
C. Overhead Cost	90,890	99,369.08	-	199.62	-	(8,479.08)
D. Officers' & Managers' Visits	17,000	18,537.78	-	-	-	(1,537.73)
E. Computer Cost	5,000	11,852.00	-	-	-	(6,852.00)
F. Communication Cost	9,500	6,567.87	-	209.92	-	2,932.13
G. Reproduction Cost	10,000	2,695.06	-	-	-	7,304.94
H. Bond Cost & Commission	-	2,684.08	-	-	-	(2,684.08)
	<u>\$206,890</u>	<u>223,353.84</u>	<u>-</u>	<u>573.16</u>	<u>-</u>	<u>(16,463.84)</u>
	<u>\$207,000</u>					<u>(16,353.84)</u>
<u>Schedule V</u>						
A. <u>Equipment Purchased For Project</u>						
1. Transportation Equipment	135,800	17,500.00	4,686.34	-	-	113,613.66
2. Survey Equipment	9,600	18,933.63	-	-	-	(9,333.63)
3. Soils Lab. Equipment	21,000	8,063.36	3,424.01	-	83.63	9,512.63
4. Materials Lab. Equipment	31,000	19,699.30	220.44	-	220.44	11,080.26
5. Communication Equipment	-	-	-	-	-	-
6. Minor Equipment Tools and Spare Parts	35,000	9,524.95	-	-	-	25,475.05
B. <u>Shipping, Insurance and Clearance Costs</u>	<u>95,600</u>	<u>35,195.63</u>	<u>4,664.20</u>	<u>-</u>	<u>-</u>	<u>55,740.17</u>
	<u>328,000</u>	<u>108,916.87</u>	<u>12,994.99</u>	<u>-</u>	<u>304.07</u>	<u>206,088.14</u>
<u>Schedule VI</u>						
Fixed Fee	392,000	278,526.33	-	10,315.79	-	113,473.67
	<u>\$4,318,000</u>	<u>1,671,784.26</u>	<u>788,731.64</u>	<u>42,312.44</u>	<u>32,205.52</u>	<u>1,857,484.10</u>
Total Expenditure to Date = 2,460,515.90						
Percent of Budget Spent to Date = 56.98%						
Contract Time Elapsed = 71.56%						

# IECO PHASE II SERVICES EXPENDITURE SCHEDULE

