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THE REPUBLIC OF UGANDA  
MINISTRY OF AGRICULTURE,  
ANIMAL INDUSTRY & FISHERIES

AND

UNITED NATIONS INDUSTRIAL  
DEVELOPMENT ORGANISATION

REHABILITATION OF SOROTI  
AGRICULTURAL IMPLEMENTS &  
MACHINERY MANUFACTURING  
COMPANY (SAIMMCO)  
PROJECT NO. DP/UGA/86/015

BUILDING AND CIVIL WORKS  
FINAL REPORT

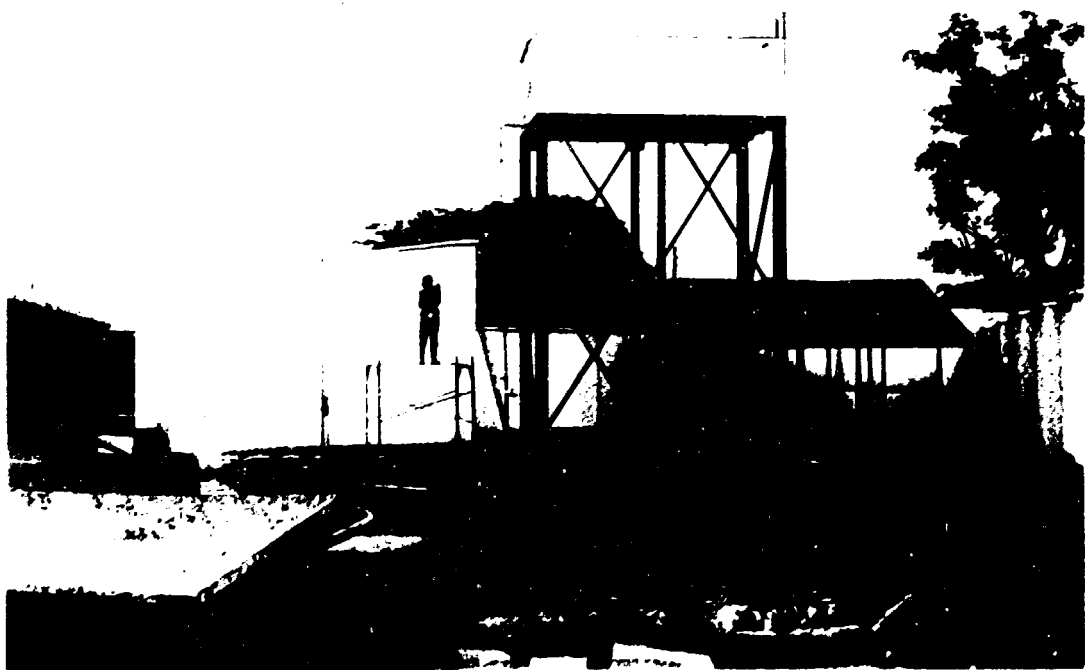
SEKA ASSOCIATES,  
CONSULTING ENGINEERS,  
13TH FLOOR CRESTED TOWERS,  
P.O. BOX 1354,  
KAMPALA, UGANDA.

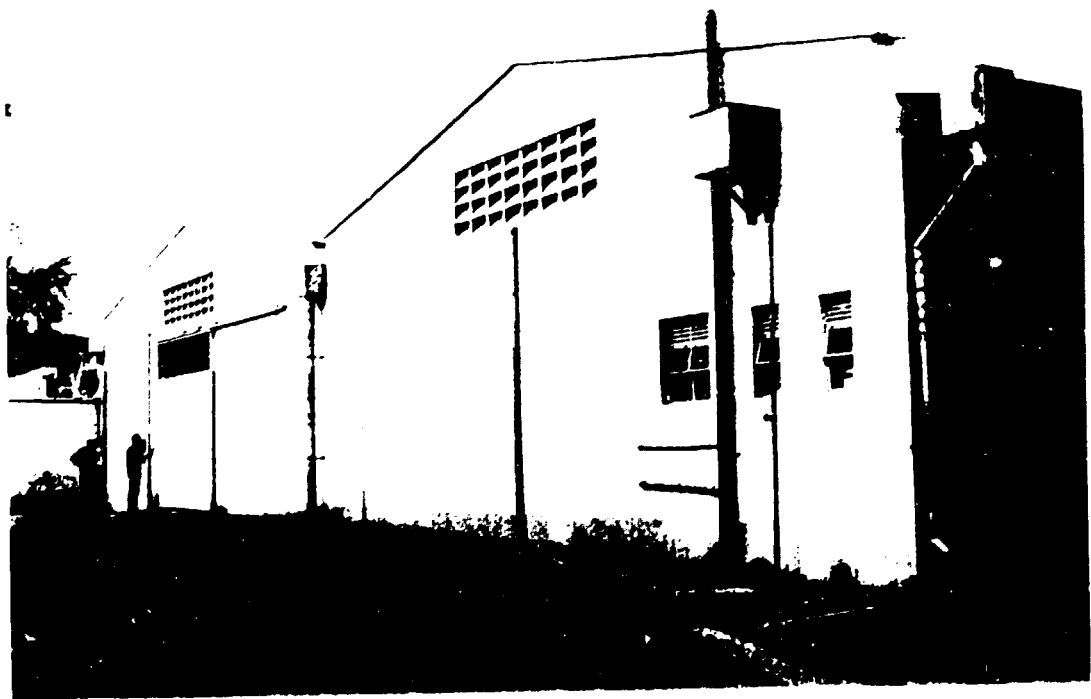
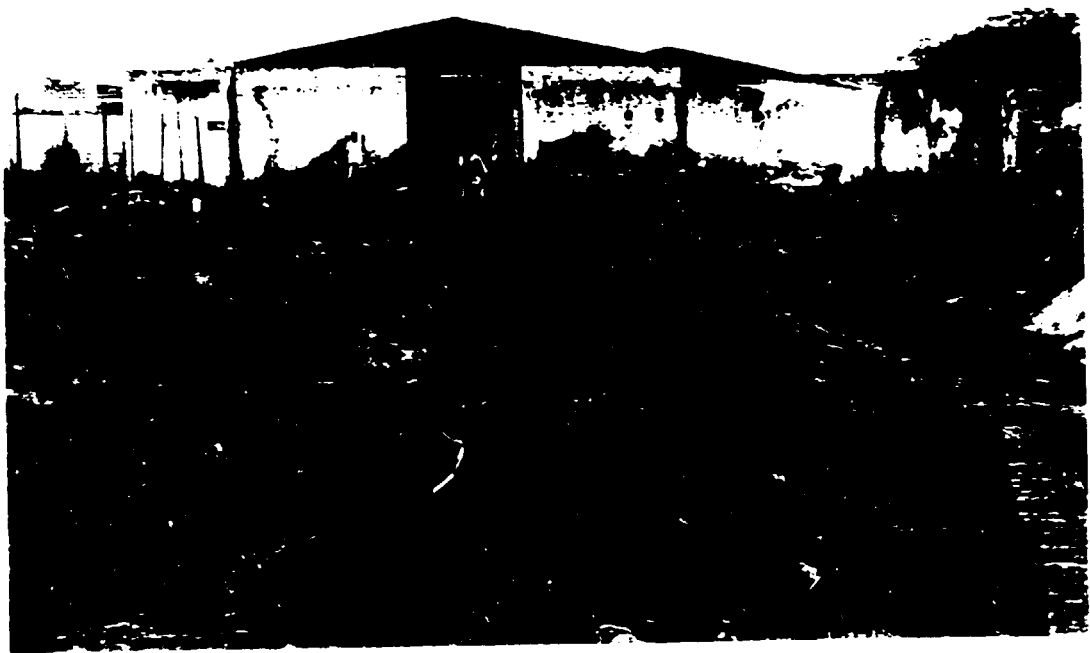
SEPTEMBER, 1995.

## SAIMMCO

### 8.1.0 INTRODUCTION

- 8.1.1 When Seka Associates was appointed to carry out supervision of the civil works at the SAIMMCO complex, it was made clear that UNIDO and the Government of Uganda attached great importance to this project. The rehabilitation of the Workshop meant the resumption of production of agricultural implements which the farming public could not easily get in the country. The complex has now been rehabilitated and production has started once again.
- 8.1.2 The rehabilitation also meant an assurance to the workforce at SAIMMCO, such that with the improved production and sales, their earnings were bound to improve. Job satisfaction will be inevitable.
- 8.1.3 Under these circumstances, the contract to carry out the rehabilitation of the complex was signed in October 1993 but a month later the works were suspended. In May 1994 work resumed on site and continued to February 1995 when the rehabilitated facility was considered substantially completed and was handed over by M/S Wade Adams to Hassall/SAIMMCO to the delight of everybody involved in the project.
- 8.1.4 There is no doubt work was disrupted by the suspension at the very beginning but it is also true that the Sub-Contractor (Wade Adams) could have done better within the time frame given. The Sub-Contractor's materials supply system was so erratic that the contract was delayed by four months.
- 8.1.5 When the Sub-Contractor requested for extension of the contract by one month, it was generally thought the request was genuine, considering the period the works remained suspended. The contract period however went by another three months. It is now up to the relevant parties to apply or waive the penalty clause, in view of the pending claims already submitted by the Wade Adams to Hassall.





8.1.6 During the course of construction and after practical completion, the Sub-Contractor submitted claims which they felt entitled to as a result of the suspension of works in November 1993. This issue has not been resolved although it was discussed at one stage, during the site meeting of 1-9-94. Of late the Sub-Contractor has officially submitted the claims to Hassall through Kagga and Partners.

8.1.7 Payments to the Sub-Contractor were made regularly as and when valuations were made and certified. There is no bitter complaint raised against Hassall & Associates as far as payments are concerned.

8.1.8 The public has always been keen on this project and where possible Government Departments and other concerned bodies in the area have been supportive. The onus is now on SAIMMCO to sustain reasonable production for the benefit of the people.

The Sub-Contractor remains responsible for defects identified and all remedial work necessary. When the defects are finally fully rectified, SAIMMCO will take over the complex and assume fully responsibility.

8.2.0 General Remarks on the Rehabilitation

8.2.1 The reconstruction of the complex took a total of ten months to come to practical completion, nine of which were after the suspension of the works in November 1993. Prior to the suspension, the contract was supposed to take six months.

8.2.2 After the resumption of the works, the contractor was inconsistent in a number of aspects namely the delivery of materials on site. Delivery of materials affected the works programme and to a great extent performance of the workers.

The materials used in the construction were mainly, steel, sand, aggregates, paint, timber and prepainted roofing sheets. These were used to make up solid load bearing walls, plastered and painted and the roof structure.

8.2.3 The workforce was generally adequate for all the time but very often there was under utilisation or disruption of proper deployment of the labour because

During the contract period, we did not witness or hear any labour dispute. We did not hear or get any complaint about default on the Sub-Contractor's financial obligations to the workers and to the local materials suppliers.

8.2.4 Supervision and Workmanship

SEKA ASSOCIATES was represented at every monthly site meeting. We also made regular intermediate visits. These visits were spaced accordingly to be able to check on the quality of materials as they were delivered on site and the workmanship. Materials whose quality was doubtful were rejected and removed from site (although this predominantly happened at the beginning) The imported materials were checked and found to conform to the specifications.

Workmanship was good and there is no doubt we are all satisfied except for dusty workshop floor. The little bit denying the contractor 100% perfection can be attributed to one major factor and that is irregular supply of materials to the site. This did not only cause delays in completion of the works but also disrupted consistency in good workmanship. Very often when certain materials were lacking labour was switched from one operation to another.

8.2.5 Electrical works

8.2.5 (a) When the Sub-Contractor received consignments of the electrical materials, there was rapid action and occasionally they worked deep into the night. This move enabled the Sub-Contractor to recover some of the time lost on this element and at handover 95% of all the electrical work had been done. What remained was mainly Uganda Electricity Board's input and this has all been done.

8.2.5 (b) The Uganda Electricity Board (U.E.B) which is the Government Corporation incharge of generating and distributing electricity in the country, was paid for a new transformer and all the necessary connections to the SAIMMCO Distribution Board. U.E.B. on their part carried out the installation and the electrical works were 100% complete by the end of February 1995. Completion of the electrical supply facilitated SAIMMCO to embark on their production programme immediately.

8.3.0 COMPLETED WORKS

8.3.1 ANCILLARY BUILDINGS

(a) (Paint, Assembly & Store)

This is a new building constructed on traditional concrete strip footings, burnt brick walls below and above ground, compacted backfill in foundation and below ground slab, bed of well compacted hardcore, reinforced concrete ground slab, concrete ring beams, steel casement windows, concrete louvre vents, steel roof trusses and purlins and prepainted corrugated roofing sheets. The walls are plastered and painted internally and externally.

The snags listed in this block at Substantial Completion stage included:

- i) Proper alignment of casement windows and their fittings - done.
- ii) General cleaning of trusses, floor, vents and apron - done.
- iii) There was a crack between Paint Room and Assembly Shop which was to be observed before remedial measures were taken - No extension of the crack was observed and accordingly the crack was sealed.
- iv) Walls need general paint touch up - to be done immediately.

b) Toilet Block

This is a new structure of similar construction as above except for the roof which is made of timber trusses and purlins. The roof sheets are prepainted like in other structures.

The snags identified at substantial completion stage included:

- i) Stopping leakages on the plumbing system - done.
- ii) Cleaning the fittings - further cleaning required.





- iii) Adding another coat of paint - done.
- iv) Cleaning the benching in the manholes (M.H) - done.
- v) Making M.H. airtight - done.
- vi) Straightening the fascia - done.
- vii) Providing cloth hangers in the changing rooms - done.

#### 8.3.2 RAW MATERIALS STORE

This is a totally new building constructed on traditional concrete strip footings, burnt walls below and above ground slab, reinforced concrete ground slab with a trowel finish, concrete ring beam, concrete louver vents, steel doors, steel roof trusses and purlins and pre-painted corrugated roofing sheets. The walls have been plastered and painted both internally and externally. The access into the building has been done well and storm water drainage around it is quite adequate.

This building was accepted as substantially completed with a list of snags for the contractor to attend to immediately.

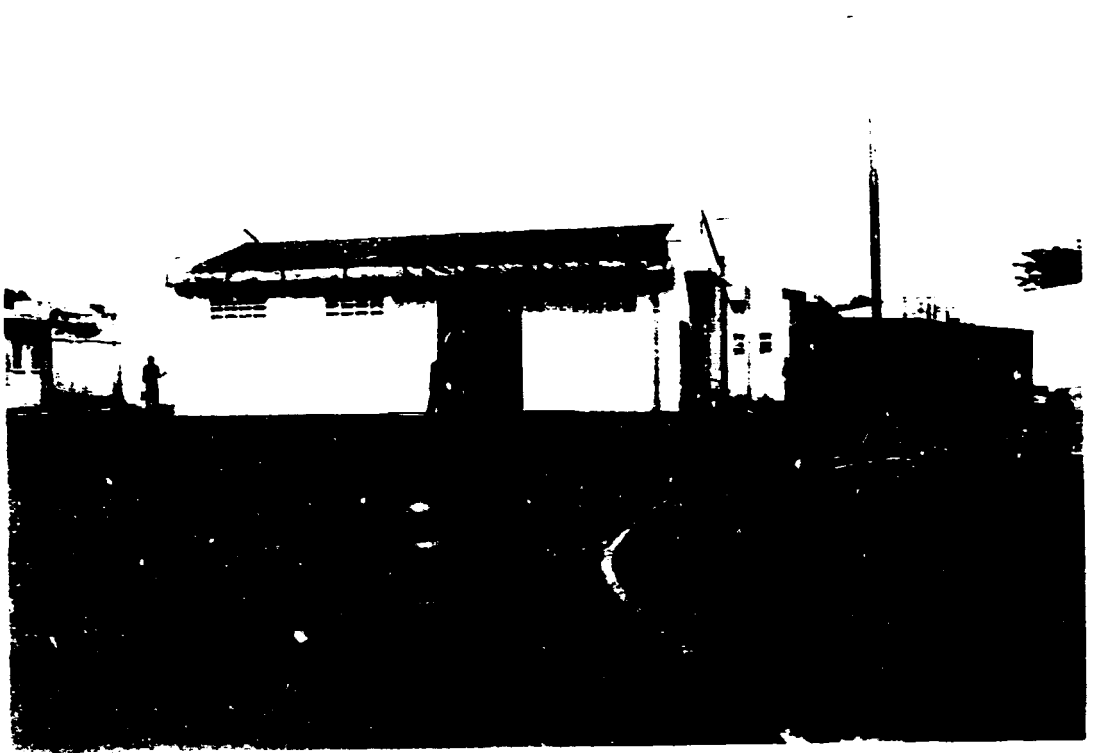
The snags included:

- 1) Improvement on the sliding and locking mechanisms of the steel doors - there is more still to be done and the contractor has promised prompt action.
- ii) Re-touching paint work in selected areas - this was done.

#### 2.3.3 FACTORY BUILDING

##### a) Office, Kitchen & Canteen

This was partly an existing building which was replanned to provide more and better office space was renovated with new brick walling where specified, and new ceiling. The roof was re-structured with new steel trusses, purlins and pre-painted corrugated roof sheets.



View of the industrial building and chimney stack from the field.



View of the residential area and wooded area from the field.

A new extension constructed on concrete strip footings, brick walls, concrete slab, steel trusses and purlins, pre-painted corrugated roofing sheets, celotex ceiling boards and timber flush doors, provides additional office space and toilet facilities for both male and female senior staff.

A new kitchen and open canteen were created next to the offices in a building which existed before as part of the workshop but which was renovated. The renovations included re-roofing the structure using steel framing and prepainted roofing sheets, plastering and painting the walls, fixing kitchen cabinet, drawers and other fittings, installing plumbing and drainage.

These facilities were accepted and a snag list compiled for the contractor to attend to immediately. SAIMMCO however immediately moved in to occupy the offices, made use of the kitchen and canteen while the contractor rectified the snags identified.

The snags identified included:-

- i) Painting steel columns, pelmet boxes, and re-touching on walls in general - done.
- ii) Ceiling access hatch to be provided - still pending.
- iii) Flush doors and frames identified as warped to be replaced - done.
- iv) Ceiling cover in the electric switch board room, incomplete - done.
- v) Some battened doors not properly fixed and others lacking fittings - done.
- vi) Steel casement door needs the lock replaced or refixed to function properly - lock still needs further attention.
- vii) Some window stays and fasteners were missing - provided.
- viii) Biddings to timber window frames, still to be fixed - fixed.

8.3.3. a Cont'd.

- ix) One faulty water closet to be replaced - replaced with a sitting type which SAIMMCO has opted for. Sit and cover still to be fixed.
- x) Kitchen sink leakages to be rectified - done.
- xi) Wall tiles with hollow sound to be refixed - done.
- xii) Locks on kitchen cabinet to be provided - still pending.
- xiii) Paint re-touch over identified areas- still pending.
- xiv) Floor to be cleaned thoroughly - done.

b) Manufacturing Area

The structure was re-roofed with new steel trusses, purlins and pre-painted corrugated sheets. The roof level was maintained rendering it necessary to provide additional ventilation. An extra fan system is to be accommodated properly in the roof and further down the factory a jack roof (vent monitor) is to be fixed. This is among the extra works but for the moment the factory is quite hot during sunny days. The cracks in the old walls were sealed before plastering and painting. A new reinforced concrete ground slab with a trowel finish was cast on top of the old ground slab. This slab was not only meant to provide a strong base for the machines installed but also a pleasant surface for the workers on the shop floor. However, the shop floor has eventually turned out dusty due to some fault in the screed. The Contractor is to attend to it immediately.

Between the new office extension and workshop area is a tools store which was renovated along a similar design as the rest of the factory building.

A new roof structure was fixed, the old walls were repaired as necessary, repainted, and a new reinforced ground slab cast.

This store is being used as a temporary store for all SAIMMCO's materials and new equipment which have been delivered to Soroti. The stores will be re-arranged at a later date.

The snags identified at Substantial Completion stage and which the contractor tackled included:

- i) General cleaning of trusses and the floor and application of another coat of paint on the trusses - done, although a bonding agent or alternative material to contain the dust is still to be applied by the Subcontractor.
- ii) Battened door shutters need to be rectified or replaced - done.
- iii) Roof gutters need to be sealed properly - done.
- iv) Main factory rain water covered channel needs to be dressed with a smooth finish internally - done.
- v) Some flush doors do not close properly and need to be rectified or replaced - done.
- vi) The old W.C. still to be covered - done.
- vii) A tap on the factory sink is to be unblocked or replaced - done.

8.3.4

#### EXTERNAL WORKS

##### a) Plumbing & Drainage

The main water tank on a steel tower is in place with all the plumbing work done. Water flows to the tank directly because the immersion pump has been installed in the borehole. The Municipal public water system is still not operational.

The water pump which was supplied through arrangements by SAIMMCO has just been installed and water is now flowing normally to all corners of the complex.

A number of snags identified at Substantial Completion Stage included:-

- 1) Another coat of non-toxic paint was required inside the main tank - already done.
- ii) Joints on the pipe systems were to be tightened and sealed - done.
- iii) Cracked heavy duty manhole cover to be replaced - done.
- iv) Surface water drainage channel along the Ancillary building should have the slope and internal finishing improved - done.
- v) All down pipes should have provision guiding the rainwater into the collection channel - done.

b) Generator House

The structure constructed out of steel framing and weldmesh with steel purlins and roofed with pre-painted corrugated sheets, had been finished. It has a concrete floor prepared to receive the generator unit. This unit is yet to be delivered.

A snag noted here was part of the fascia board which was not yet fixed - fixed.

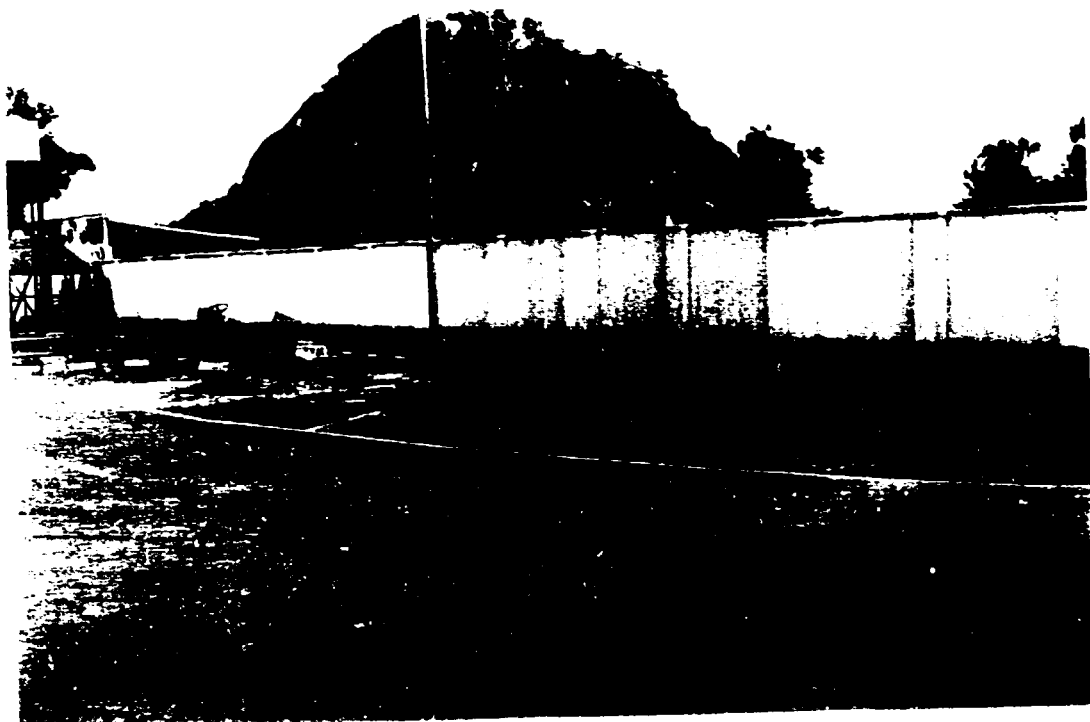
c) Guard House

This has been constructed using burnt bricks on traditional strip foundation footings. The roofing is with pre-painted corrugated sheets on timber purlins.

The floor is a mass concrete slab finished with a cement/sand screed.

d) Boundary Wall & Main Entrance Gate

The wall is a solid burnt brick wall properly built, plastered and painted both sides. It is stiffened by brick buttresses at 3.0 metre intervals.







The top is finished with precast copings with drips on either side of the wall to cut off rain water.

The wall which goes all around the complex is built on a traditional concrete strip footing.

The entrance gate consisting of two leaves which open inwards was fabricated out of steel frames and weld mesh. It was stiffened by the addition of steel plates which were welded at the bottom half. The gate has been fully painted.

The snags identified included:-

- i) Backfilling the trench along the external face of the wall - done.
  - ii) The junction between the public sewer and the drainage channel from the complex to be properly finished - done.
  - iii) A retouch on the paint over the gate - done.
  - iv) The locking system of the gate to be improved - done.
- e) External Lighting

This is already in place.  
We consider it adequate and therefore accepted.

#### 8.3.5 Extra Works

There are extra works which were not part of the original contract but considered vital e.g. the Jack Roof (Vent monitor) over the manufacturing area.

The Sub-Contractor submitted his quotation for these works to Hassall & Associates who have not taken a decision yet.

Should the contingency fund be enough to cover these costs then Hassall will go about it in the normal way. If on the other hand the cost costs is well above the contingency funds, then Hassall will seek U.N.D.P.'s approval to allocate alternative funds within the project.

8.3.6

General Comments

The handing over of the complex meant the completion of the works. There are still snags to be attended to by the contractor but arrangements have been made to allow the Sub-Contractor carry out final remedial works while SAIMCO is in production.

"As Built" drawings will be prepared by Kagga & Partners under Hassall & Associates to make the the handover complete.

8.4.0            CONTRACT SUMMARY

Project            :    REHABILITATION OF SOROTI AGRICULTURAL IMPLEMENTS  
                             & MACHINERY MANUFACTURING COMPANY (SAIMMCO).  
                             PROJECT NO. DP/UGA/86/015.

Employer                                :    Hassall & Associates Pty Ltd.

Contractor                              :    Wade Adams Ltd.

Contract Sum                            :    Ug. Shs. 750,054,092/=

Final Contract  
Sum                                      :    Still to be finalised.

Date of Commencement                  :    13-9-1993

Date of Suspension                     :    1-11-1993

Date of Resumption  
of the works                            :    2-5-1994

Intended Completion  
Date                                    :    30-10-1994

Actual Completion  
Date                                    :    2-2- 1995

Maintenance Period                    :    Six Months.

E N D.