

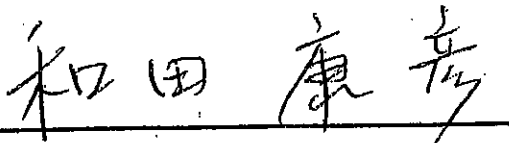
MINUTES OF DISCUSSIONS  
ON  
BASIC DESIGN STUDY  
ON  
THE PROJECT FOR REHABILITATION OF FLOATING PUMP STATIONS IN  
UPPER EGYPT  
(PHASE IV)  
IN  
THE ARAB REPUBLIC OF EGYPT

In response to a request from the Government of the Arab Republic of Egypt (hereinafter referred to as "Egypt"), the Government of Japan decided to conduct a Basic Design Study on the Project for Rehabilitation of Floating Pump Stations in Upper Egypt (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

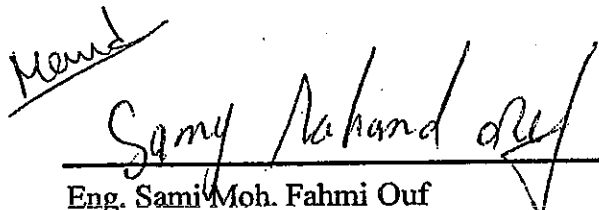
JICA sent to Egypt the Basic Design Study Team (hereinafter referred to as "the Team"), which was headed by Mr. Yasuhiko WADA, Deputy Resident Representative, Egypt Office, JICA and was scheduled to stay in the country from February 22<sup>nd</sup> to March 22<sup>nd</sup>, 2006.

The Team held a discussion with the officials concerned of the Government of Egypt and conducted a field survey at the study area. In the course of discussions and field survey, both parties confirmed the main items described on the attached sheets.

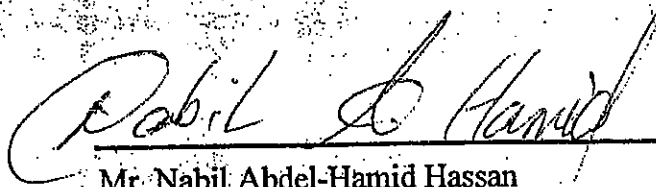
Cairo, February 28<sup>th</sup>, 2006



Mr. Yasuhiko Wada  
Leader  
Basic Design Study Team  
Japan International Cooperation Agency  
(JICA)



Eng. Sami Moh. Fahmi Ouf  
Chairman  
Mechanical and Electrical Department  
Ministry of Water Resources and Irrigation  
Arab Republic of Egypt



Mr. Nabil Abdel-Hamid Hassan  
Undersecretary  
Central Department for Asia  
Ministry of International Cooperation  
Arab Republic of Egypt

## ATTACHMENT

### 1 Objective of the Project

The objective of the Project is to rehabilitate the function and capacity of the nine existing deteriorated pump stations through the provision of necessary equipments and materials.

### 2 Project site

The Project site will be at nine pump stations in Upper Egypt, and their locations are described in as Annex- I .

### 3 Responsible and Implementing Agency

3.1 The responsible agency is Ministry of Water Resources and Irrigation (hereinafter referred to as "MWRI").

3.2 The implementing agency is Mechanical and Electrical Department of MWRI.

3.3 The organization chart of MWRI is attached as Annex - II .

### 4 Items requested by the Government of Egypt

After discussions with the Team, the components described below were finally requested by the Government of Egypt. JICA will assess the appropriateness of the request and will summarize it into the draft basic design report.

4.1 Procurement of equipments, such as main pumps, vacuum pumps, valves, discharge pipes with joint balls, control boards etc., for rehabilitation of the below nine pump stations;

- Gezeret Meneha
- El-Sarag
- Gezeret El-Fawaza El-Keblia
- Middle Fawaza
- Gezeret El-Kobania Kebly
- Sahel Al-Khatara
- Sahel El-Akab Bahary
- Gezeret Abo Arafa
- El-Hegs El-Mostagda

4.2 Procurement of self-mobile maintenance ship

### 5 Japan's Grant Aid Scheme

The Egyptian side understood Japan's Grant Aid Scheme and would take necessary measures, described in Annex - III for smooth implementation of the Project, as a condition for the Japan's Grant Aid to be implemented.

### 6 Further Schedule of the Study

6.1 The consultant members will proceed to further study in Egypt until 22<sup>nd</sup> March, 2006.

6.2 JICA will prepare a draft report in English and dispatch a mission in order to explain its contents around July 2006.

6.3 In case the content of the draft report is accepted in principle by the Government of Egypt, JICA will complete a final report and send it to the Government of Egypt by the end of August, 2006.

### 7 Other relevant issues

7.1 Priorities of rehabilitation

Since the objective of the Project is rehabilitation of the deteriorated pumps, it is important to analyze the necessity and urgency of rehabilitation of each pump station. So, both sides confirmed that the consultant members will assess the current condition of deterioration and its reason, validity of irrigated area and other related factors through the field survey and discussion with the Egyptian side, in order to prioritize the necessity of rehabilitation of each nine pump stations. Then, the Japanese side will assess the appropriateness of the rehabilitations under the Project, and will reflect the result in the draft final report. Only if some equipments of the pump stations are found to be still usable, they shall be under consideration of further utilization, instead of replacement.

#### 7.2 Type of pump stations

Through the discussion with the Egyptian side and the field survey, the consultant members will confirm the appropriate type of pump station (either floating or fixed) to be provided under the Project, and will reflect the result in the draft final report.

#### 7.3 Capacity of pumps

Both sides confirmed that the capacity of new pumps should be determined based on the capacity of the current pumps, irrigating area, amount of scarce water, cropping pattern, operation hours, and irrigation efficiency etc. In addition, the Team expressed that the most important thing is to know the original calculation to determine the capacities of the nine pump stations. Mechanical Electrical Department of MWRI agreed to coordinate well with Irrigation Department and Ministry of Agriculture and Land Reclamation to provide the data and information about the nine existing pump stations to the Japanese side.

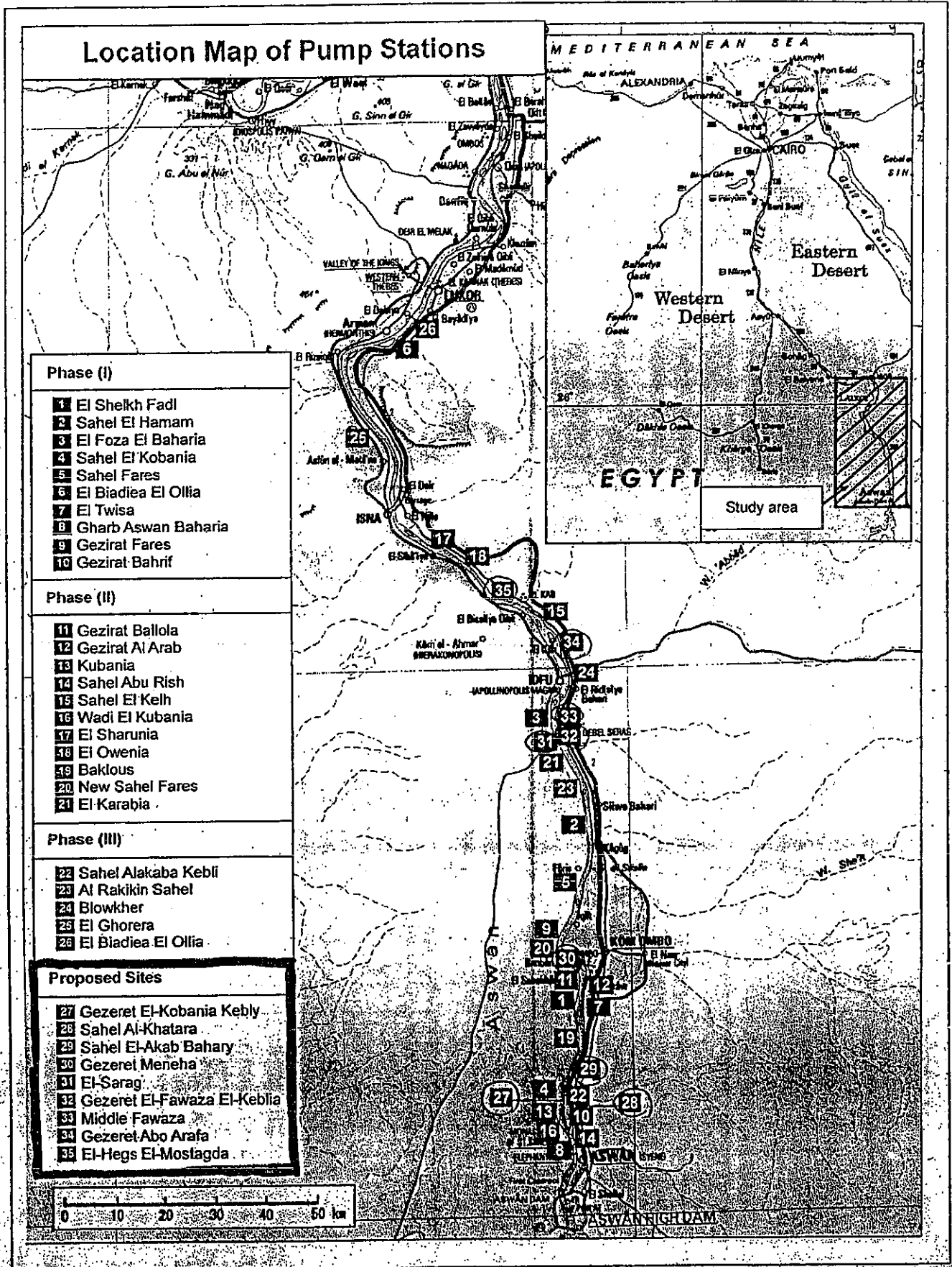
#### 7.4 Maintenance ship

Both sides understood that in order to verify the necessity and validity of new self-mobile maintenance ship, it is significant to investigate the operation frequency of the maintenance barge provided under Phase-III, maintenance needs in the Project site, and the current activity & capacity of the workshop in Aswan, in detail. In case the new self mobile maintenance ship found to be less necessary, the exclusion of the new maintenance ship would be considered.

#### 7.5 Items to be taken by the Egyptian side

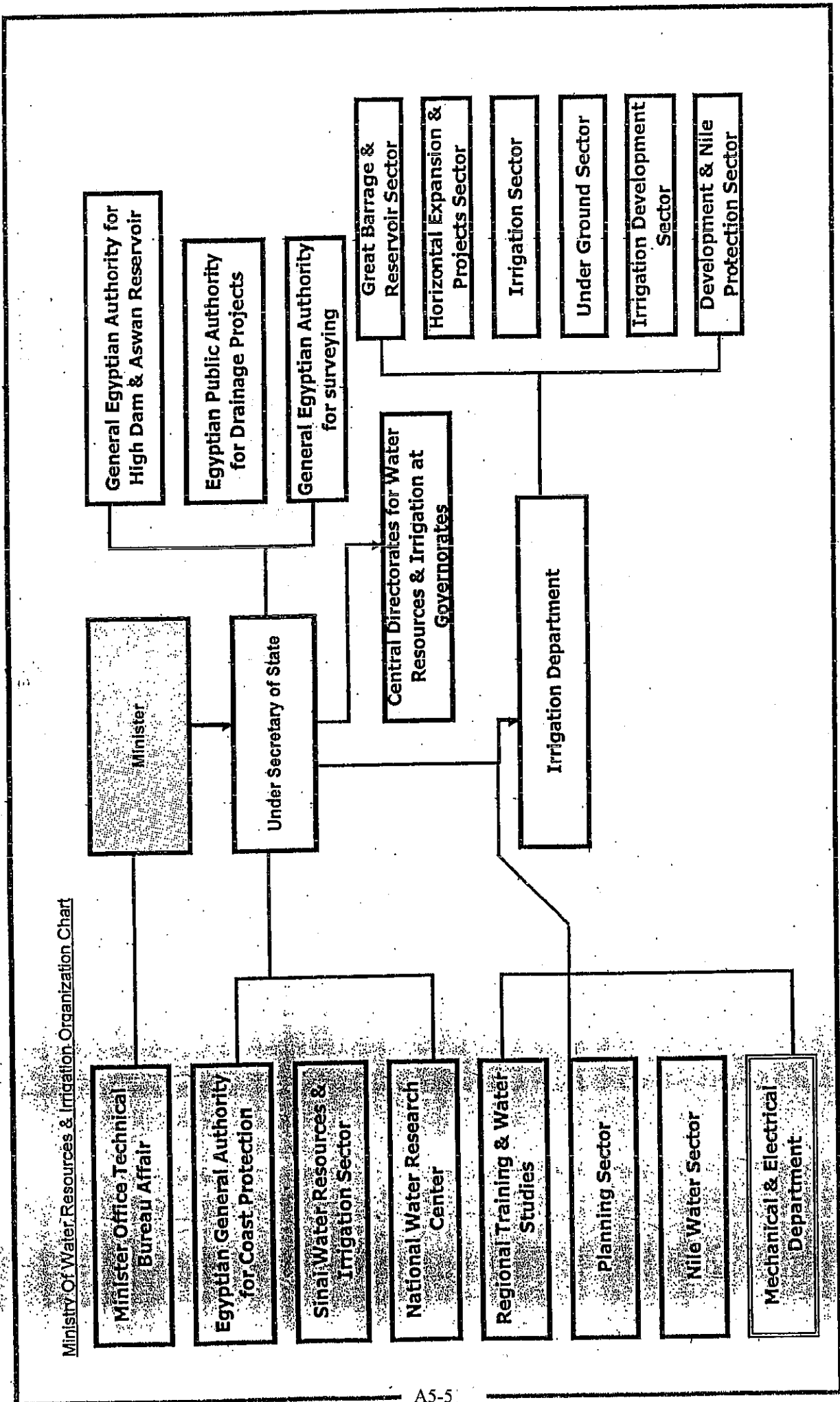
- (1) The Egyptian side explained that they will take necessary measures including coordination among the different ministries, security of persons concerned of the study, and facilitation of interview survey to the farmers in order to support the smooth implementation of further study by the consultant members.
- (2) Both sides confirmed that the tower, discharge pipe, electric cable, main irrigation canal, and the house (in case of fixed type) had to be improved and/or replaced by the Egyptian side in proper timing to secure the full function of the new pump stations, provided the Government of Japan would finally decide the implementation of the Project. Moreover, in case any compensation to the farmers is needed during the installation or replacing works of pumps, the Egyptian side will take all the necessary measures.
- (3) The Team explained that under the Japan's Grant Aid project, it is duty of the recipient side to secure necessary budget, personnel and any other measures to conduct proper operation and continuous maintenance. In this context, the situation on the operation and maintenance of the floating pump stations provided under the previous Japan's Grant Aid will be carefully examined in the further study by the consultant members.

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## Japan's Grant Aid Scheme

The Grant Aid Scheme provides a recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant laws and regulations of Japan. The Grant Aid is not supplied through the donation of materials as such.

### A. Grant Aid Procedure

1) Japan's Grant Aid Program is executed through the following procedures.

Application (Request made by a recipient country)

Study (Preparatory Study and Basic Design Study conducted by JICA)

Appraisal & Approval (Appraisal by the Government of Japan and Approval by Cabinet)

Determination of Implementation (The Notes exchanged between the Governments of Japan and the recipient country)

2) Firstly, the application or request for a Grant Aid project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA to conduct a study on the request. If necessary, JICA send a Preparatory Study Team to the recipient country to confirm the contents of the request.

Secondly, JICA conducts the study (Basic Design Study), using Japanese consulting firms.

Thirdly, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid Programme, based on the Basic Design Study report prepared by JICA, and the results are then submitted to the Cabinet for approval.

Fourthly, the project, once approved by the Cabinet, becomes official with the Exchange of Notes signed by the Governments of Japan and the recipient country.

Finally, for the implementation of the project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

### B. Basic Design Study

1) Contents of the Study

The aim of the Basic Design Study (hereinafter referred to as "the Study"), conducted by JICA on a

requested project (hereinafter referred to as "the Project"), is to provide a basic document necessary for the appraisal of the Project by the Government of Japan. The contents of the Study are as follows:

- a) Confirmation of the background, objectives and benefits of the Project and also institutional capacity of agencies concerned of the recipient country necessary for the Project's implementation;
- b) Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from the technical, social and economic points of view;
- c) Confirmation of items agreed on by both parties concerning the basic concept of the Project;
- d) Preparation of a basic design of the Project; and
- e) Estimation of costs of the Project.

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid project. The Basic Design of the Project is confirmed considering the guidelines of Japan's Grant Aid Scheme.

The Government of Japan requests the Government of the recipient country to take whatever measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even through they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

## 2) Selection of Consultants

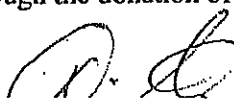
For the smooth implementation of the Study, JICA uses a Japanese consulting firm selected through its own procedure (competitive proposal). The selected firm participates the Study and prepares a report based upon the terms of reference set by JICA.

At the beginning of implementation after the Exchange of Notes, for the services of the Detailed Design and Construction Supervision of the Project, JICA recommends the same consulting firm which participated in the Study to the recipient country, in order to maintain the technical consistency between the Basic Design and Detailed Design as well as to avoid any undue delay caused by the selection of a new consulting firm.

## C. Japan's Grant Aid Scheme

### 1) What is Grant Aid?

The Grant Aid Program provides a recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant laws and regulations of Japan. Grant Aid is not supplied through the donation of materials as such.

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2) Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the project, period of execution, conditions and amount of the Grant Aid, etc., are confirmed.

3) "The period of the Grant" means the one fiscal year which the Cabinet approves the project for. Within the fiscal year, all procedure such as exchanging of the Notes, concluding contracts with consulting firms and contractors and final payment to them must be completed.

However, in case of delays in delivery, installation or construction due to unforeseen factors such as weather, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

4) Under the Grant, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country.

However, the prime contractors, namely consulting, contracting and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

5) Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. This "Verification" is deemed necessary to secure accountability of Japanese taxpayers:

6) Undertakings required to the Government of the recipient country

- a) To secure a lot of land necessary for the construction of the Project and to clear the site;
- b) To provide facilities for distribution of electricity, water supply and drainage and other incidental facilities outside the site;
- c) To ensure prompt unloading and customs clearance at ports of disembarkation in the recipient country and internal transportation therein of the products purchased under the Grant Aid;
- d) To exempt Japanese nationals from customs duties, internal taxes and fiscal levies, which may be imposed in the recipient country with respect to the supply of the products and services under the verified



contracts?

e) To accord Japanese nationals whose services may be required in connection with the supply of the products and services under the verified contracts such as facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work;

f) To ensure that the facilities constructed and products purchased under the Grant Aid be maintained and used properly and effectively for the Project; and

g) To bear all the expenses, other than those covered by the Grant Aid, necessary for the Project.

7) "Proper Use"

The recipient country is required to maintain and use the facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign the necessary staff for operation and maintenance of them as well as to bear all the expenses other than those covered by the Grant Aid.

8) "Re-export"

The products purchased under the Grant Aid shall not be re-exported from the recipient country.

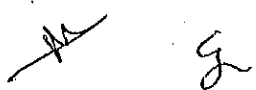
9) Banking Arrangement (B/A)

a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in an authorized foreign exchange bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the verified contracts.

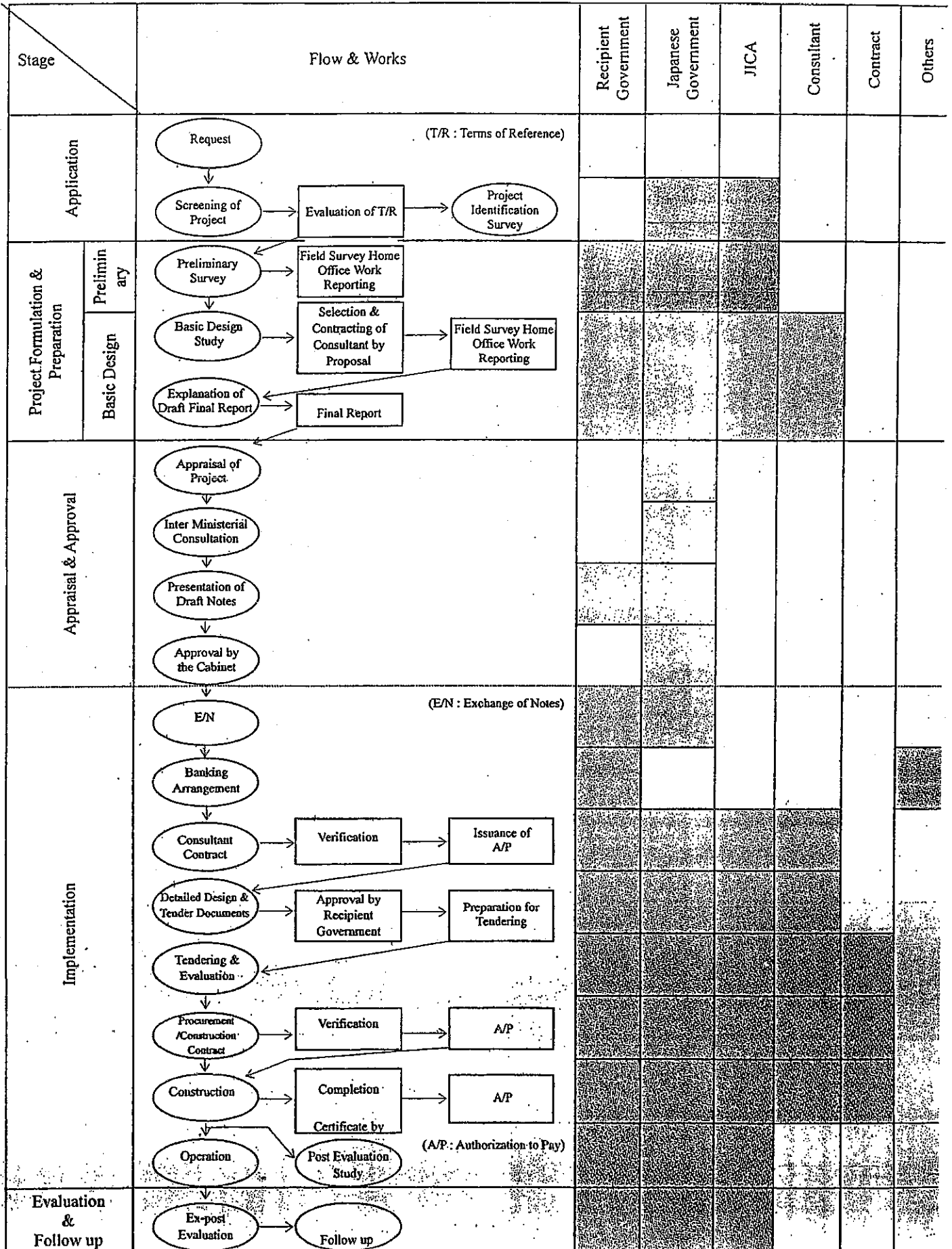
b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an Authorization to Pay (A/P) issued by the Government of recipient country or its designated authority.

10) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions to the Bank.



## FLOW CHART OF JAPAN'S GRANT AID PROCEDURES



Major Undertakings to be taken by Each Government

NO	Items	To be covered by Grant Aid	To be covered by Recipient side
1	To bear the following commissions to a bank of Japan for the banking services based upon the B/A		
	1) Advising commission of A/P		•
	2) Payment commission		•
2	To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country		
	1) Marine(Air) transportation of the products from Japan to the recipient country	•	
	2) Tax exemption and custom clearance of the products at the port of disembarkation		•
	3) Internal transportation from the port of disembarkation to the project site		•
3	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		•
4	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract		•
5	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid		•
6	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for the transportation and installation of the equipment		•

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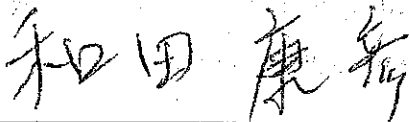
**MINUTES OF DISCUSSIONS  
ON  
THE BASIC DESIGN STUDY  
ON  
THE PROJECT FOR REHABILITATION OF FLOATING PUMP STATIONS IN  
UPPER EGYPT  
(PHASE – IV)  
IN THE ARAB REPUBLIC OF EGYPT  
(EXPLANATION OF DRAFT FINAL REPORT)**

In March 2006, the Japan International Cooperation Agency (hereinafter referred to as “JICA”) dispatched a Basic Design Study Team on the Project for Rehabilitation of Floating Pump Stations in Upper Egypt (hereinafter referred to as “the Project”) to the Arab Republic of Egypt (hereinafter referred to as “Egypt”), and through discussion, field survey, and technical examination in Japan, JICA prepared a draft final report of the study.

In order to explain and to consult with officials concerned of the Government of the Arab Republic of Egypt on the components of the draft final report, JICA sent to Egypt the Draft Report Explanation Team (hereinafter referred to as “the Team”), which was headed by Mr. Yasuhiko WADA, Deputy Resident Representative, JICA Egypt Office and was scheduled to stay in the country from 1<sup>st</sup> August to 7<sup>th</sup> August, 2006.

As a result of discussion, both parties confirmed the main items described on the attached sheets.

Cairo, August 7, 2006



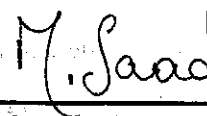
**Mr. Yasuhiko WADA**  
Deputy Resident Representative  
Japan International Cooperation Agency  
Egypt Office

**Eng. Sami Moh. Fahmi Ouf**  
Chairman  
Mechanical and Electrical Department  
Ministry of Water Resources and Irrigation  
Arab Republic of Egypt

Witness



**Mr. Nabil Abdel-Hamid Hassan**  
Undersecretary  
Central Department for Asia  
Ministry of International Cooperation  
Arab Republic of Egypt



**Dr. Mohammed Bahaa Eldin Saad**  
Senior Undersecretary and Chairman  
Irrigation Department  
Ministry of Water Resources and Irrigation  
Arab Republic of Egypt

## ATTACHMENT

### 1. Explanation of the Draft Final Report

The Government of Egypt agreed and accepted in principle the contents of the draft final report explained by the Team.

### 2. Japan's Grant Aid Scheme

The Egyptian side understood the Japan's Grant Aid Scheme and the necessary measures to be taken by the Government of Egypt as explained by the Team and described in Annex-III and Annex-IV of the Minutes of Discussions signed by both parties on 28<sup>th</sup> February, 2006.

### 3. Schedule of the Study

JICA will complete the final report in accordance with the confirmed items and send it to the Ministry of Water Resources and Irrigation representing the Government of Egypt by the end of September, 2006.

### 4. Other Relevant Issues

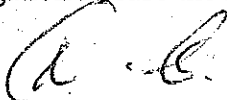
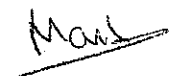
#### 4-1. Components of the Project

Both sides confirmed that the Project would be composed of the items listed in Annex- I in case the Japanese Government would finally decide to implement the Project.

#### 4-2. Undertakings by the Egyptian side

(1) Both sides confirmed that, for the smooth implementation of the Project, it should be indispensable for the Egyptian side to implement its undertakings described in Annex- II and III, according to the Tentative Implementation Schedule shown in Annex-IV in case the Japanese Government would finally decide to implement the Project.

(2) Both sides confirmed that the Mechanical and Electrical Department would bear overall responsibility for the coordination and implementation of all the undertakings by the Egyptian side under the supervision of the Irrigation Department of Ministry of Water Resources and Irrigation in case the Japanese Government would finally decide to implement the Project.

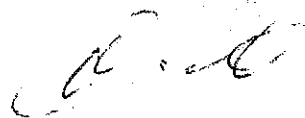
  
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(3) Both sides confirmed that the Egyptian side would report the progress and completion of its undertakings every three months to the Japanese side (Embassy of Japan in Egypt and JICA Egypt Office) according to the schedule indicated in Annex-IV in case the Japanese Government would finally decide to implement the Project. The Egyptian side agreed to provide the reason of delay and future action plan if the undertakings would not progress nor been completed according to the schedule.

(4) Both sides confirmed that, in order to ensure the benefit to the end users over a long period by utilizing the facilities to be rehabilitated under the Project, it should be indispensable for the Egyptian side to implement proper operation and continuous maintenance works, and secure adequate budget for these purposes.

END

- Annex - I      Components of the Project
- Annex - II     Contents of the Undertakings by the Egyptian Side
- Annex - III    Map of Each Pump Station Describing Undertakings by the Egyptian Side
- Annex - IV    Tentative Implementation Schedule



M. Saad

Mansour



**Components of the Project**

**Procurement of Equipment for the following pump stations;**

No. 27 Gezeret El-Kobania (floating → floating)

No. 29 Sahel El-Akab Bahary (floating → floating)

No. 30 Gezeret Meneha (fixed → floating)

No. 31 El-Sarag (fixed → floating)

No. 32 Gezeret El-Fawaza (fixed → floating)

No. 33 Middle Fawaza (fixed → fixed)

No. 34 Gezeret Abo Arafa (floating → floating)

No. 35 El-Hegs El-Mostagda (floating → floating)

\* The current pump stations would be replaced by the new pump stations and there would not be the current and new pump stations working at the same time.

\* Procurement of equipment for No. 28 Sahel Al-Khatara pump station and a self-mobile maintenance ship will not be considered under the Project.

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## Contents of the Undertakings by the Egyptian Side

Pump Station	Water Tower (for Discharge)	Discharge Pipe	Transformer	Electric Cable	Discharge Canal	Others
No.27 Gezeret El-Kobania Kebli	Vertical extension of water tower, Painting	Replacement of pipe with inner diameter 600mm×34m	Replacement of transformer with 200KVA/ 400V	Replacement of cable with 600V 3c 14mm <sup>2</sup> L=50m	Repairing of canal lining at L=30m (MED)	—
No.29 Sahel El-Akab Bahary	Painting, removal of second tower	Replacement of pipe with inner diameter 600mm×45m, lifting-up of horizontal level of pipe	Replacement of transformer with 300KVA/ 400V	Replacement of cable with 600V 3c 38mm <sup>2</sup> L=50m	Repairing of canal lining at L=30m (MED)	Improvement of siphon structure of irrigation canal crossing drainage (ID)
No.30 Gezeret Meneha	New installation of vertical type water tower with outer diameter 1000mm, suction intake with inner diameter 450mm×4pcs	New installation of pipe with inner diameter 600mm×33m	Replacement of transformer with 200KVA/ 400V	Replacement of cable with 600V 3c 14mm <sup>2</sup> L=40m	Repairing of canal lining at L=30m (MED)	Dismantlement of current pump station (MED)
No.31 El-Sarag	New installation of vertical type water tower with outer diameter 1000mm, suction intake with inner diameter 350mm×4pcs	New installation of pipe with inner diameter 450mm×23m	Replacement of transformer with 200KVA/ 400V	Replacement of cable with 600V 3c 5.5mm <sup>2</sup> L=40m	Repairing of canal lining at L=30m (MED)	Dismantlement of current pump station (MED)
No.32 Gezeret El -Fawaza El-Kebli	New installation of vertical type water tower at outer diameter 1000mm, suction intake at inner diameter 450mm×4pcs	New installation of pipe with inner diameter 600mm×16m	Replacement of transformer with 200KVA/ 400V	Replacement of cable with 600V 3c 14mm <sup>2</sup> L=30m	Repairing of canal lining at L=30m (MED)	Dismantlement of current pump station (MED)
No.33 Middle Fawaza	—	Replacement of pipe with inner diameter 450mm×14m	—	Replacement of cable with 600V 3c 5.5mm <sup>2</sup> L=20m	Repairing of canal lining at L=30m (MED)	Removal of pump shed & equipment, Foundation Works, Adjustment of Suction Pipes, Compensated water supply during rehabilitation works*(MED)
No.34 Gezeret Abo Arafa	—	Painting of existing pipe, Installation of two (2) flexible pipe supports	Replacement of transformer with 200KVA/ 400V	Replacement of cable with 600V 3c 8mm <sup>2</sup> L=40m	Repairing of canal lining at L=30m (MED)	Dredging around Pump Station (MED)
No.35 El-Hegs El-Mostagda	Painting	Replacement of pipe with inner diameter 750mm×27m with flap valve	—	Replacement of cable with 600V 3c 100mm <sup>2</sup> L=50m	Removal of water weed (MED)	Checking of canal capacity, enlargement of canal section if necessary, improvement of pipe structure crossing path and drainage (ID)
Implementat ion Order (see Annex IV)	1	2	1	1	3	No.29:2(stage1) No.30~32:3(stage2) No.33 :1(stage2) No.34 :2(stage1) No.35 :2(stage1)

Note: MED is responsible for discharge reservoir and connection canal to 30m in length from the end of discharge pipe. ID is responsible for the remaining main and secondary canals.

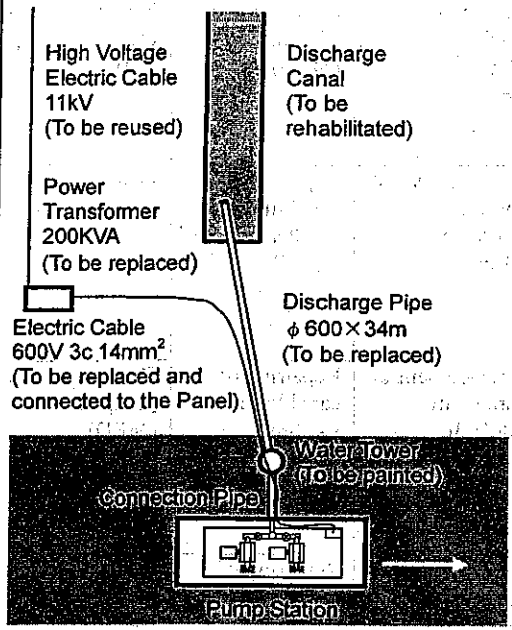
\* MED is responsible for installing emergency pump(s) to supply enough amount of irrigation water during the period of rehabilitation works for No.33 pump station.

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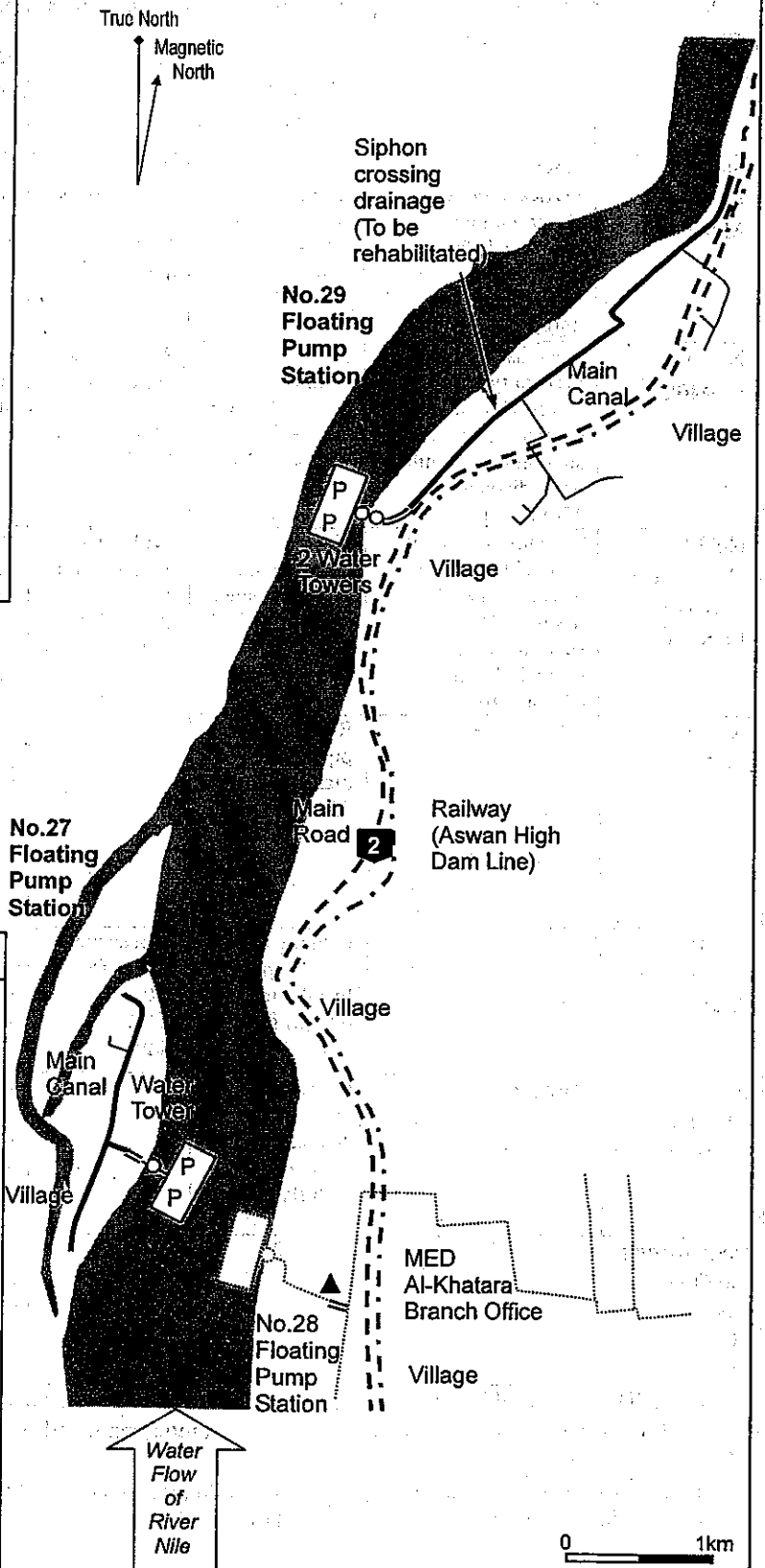
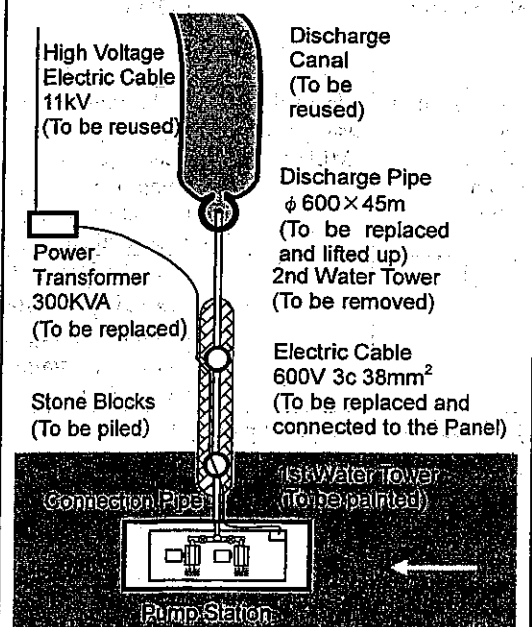


No.27 Gezerat El-Kobania Kebly Pump Station and  
 No.29 Sahel El-Akab Bahary Pump Station  
 (Floating Pump Type for No.27 and No.29)

Work Plan for No.27 Pump Station

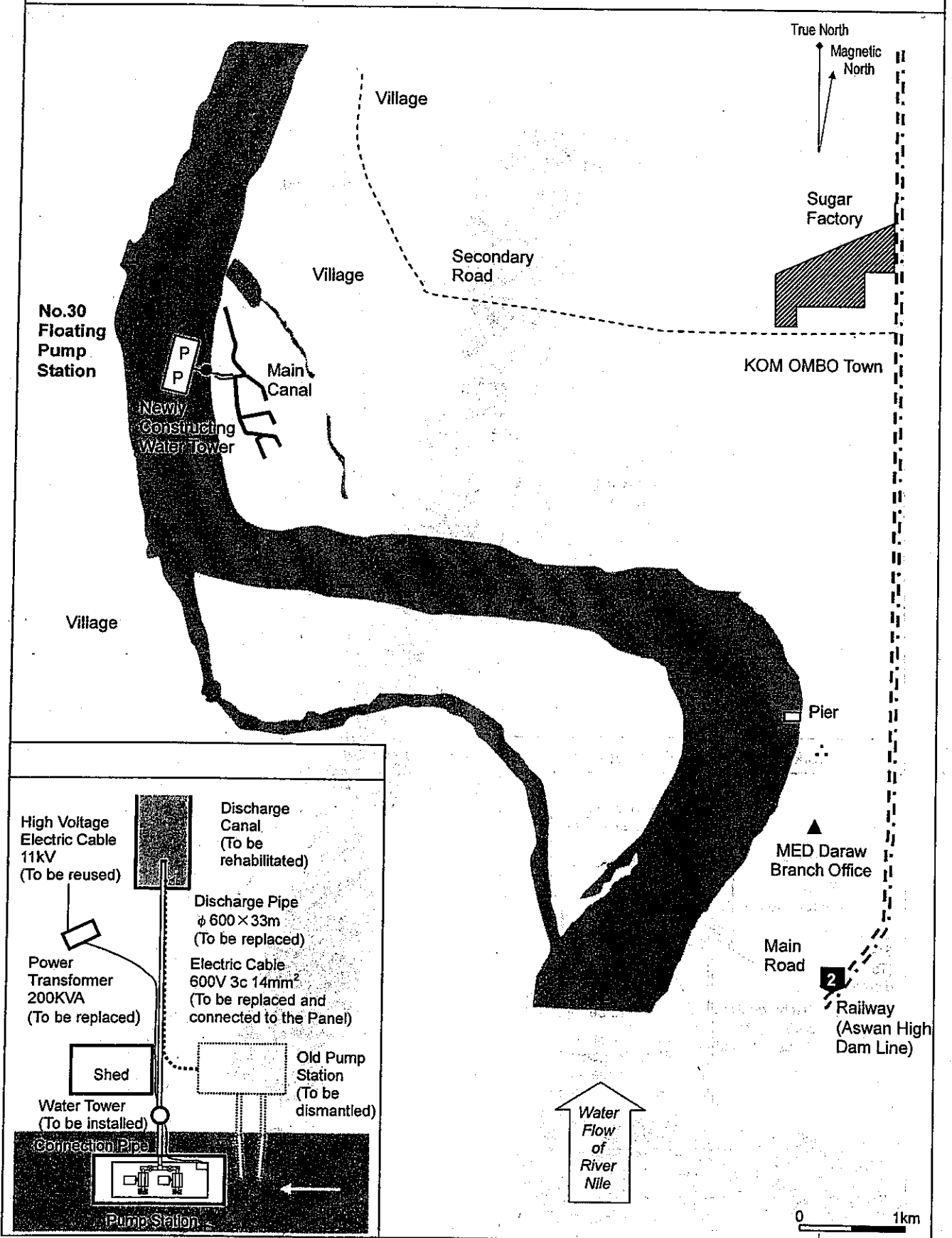


Work Plan for No.29 Pump Station



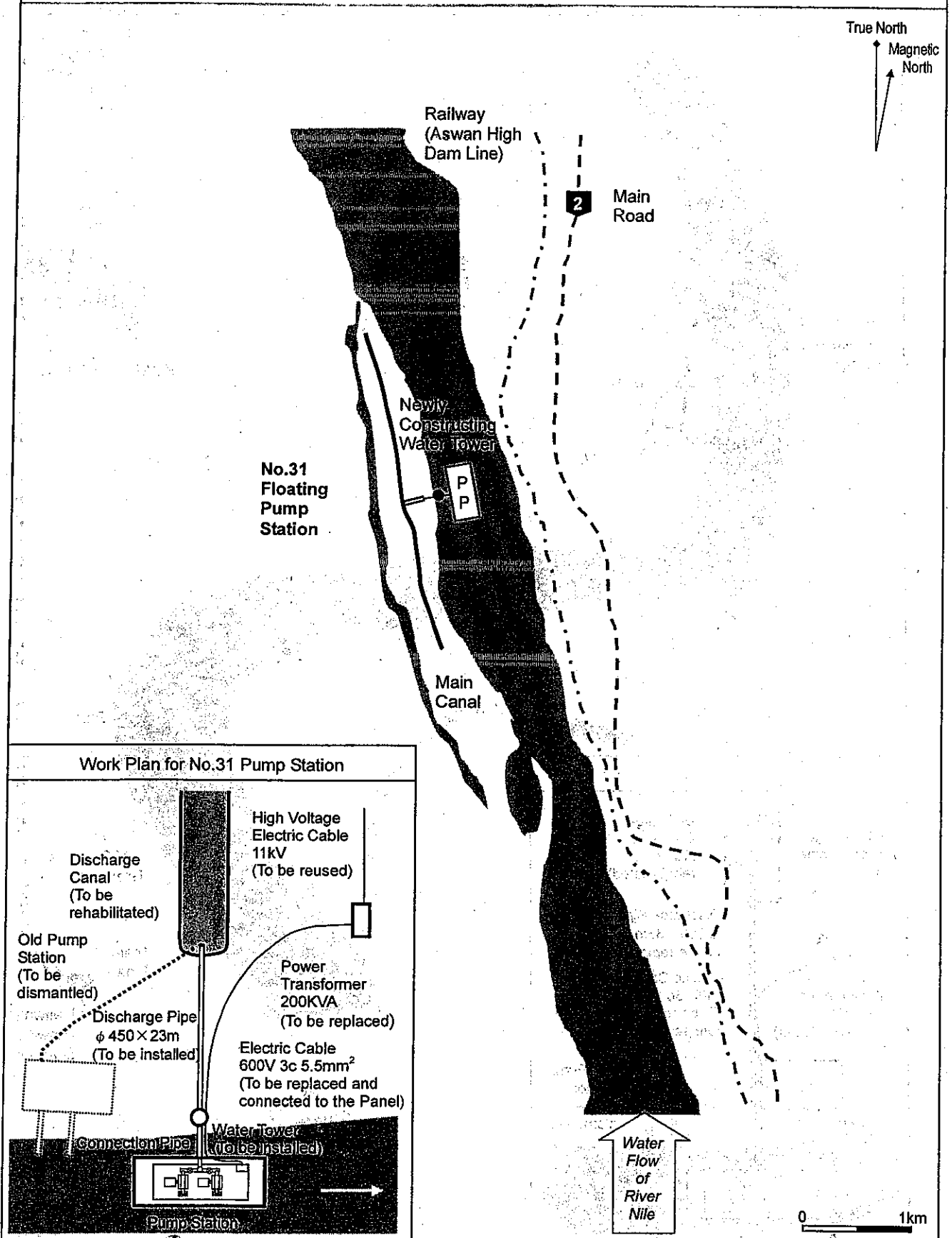
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# No.30 Gezeret Maneha Pump Station (Floating Pump Type)



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# No.31 El-Sarag Pump Station (Floating Pump Type)



*d. e. M. Saad*  
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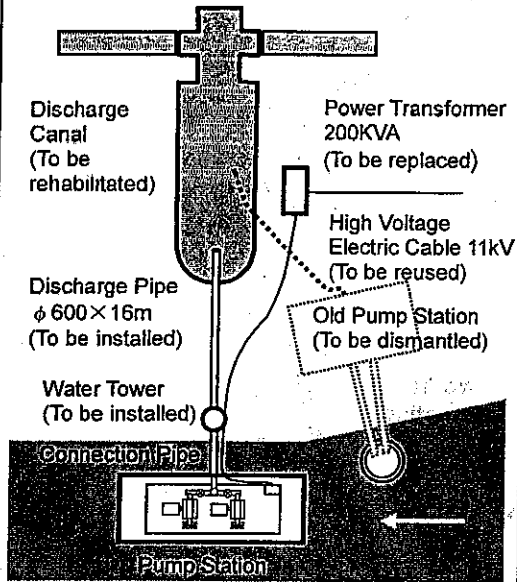
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*S. G.*

# No.32 Gezeret El-Fawaza El-Keblia Pump Station and No.33 Middle Fawaza Pump Station

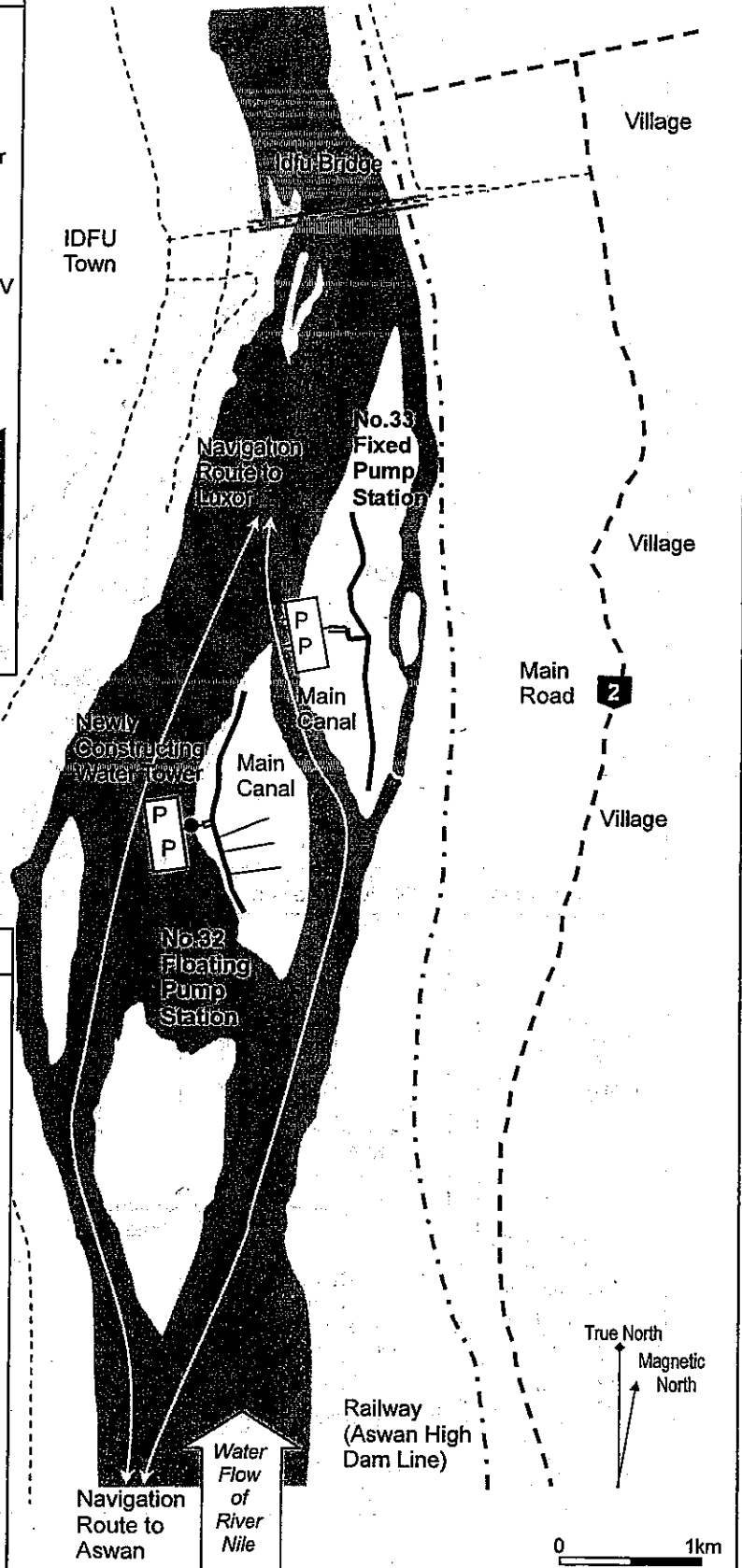
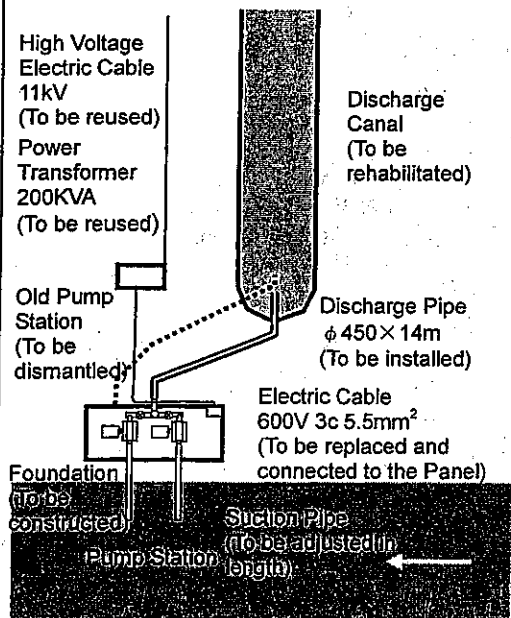
(Floating Pump Type for No.32 and Fixed Pump Type for No.33)

### Work Plan for No.32 Pump Station



Electric Cable 600V 3c 14mm<sup>2</sup>  
(To be replaced and connected to the Panel)

### Work Plan for No.33 Pump Station



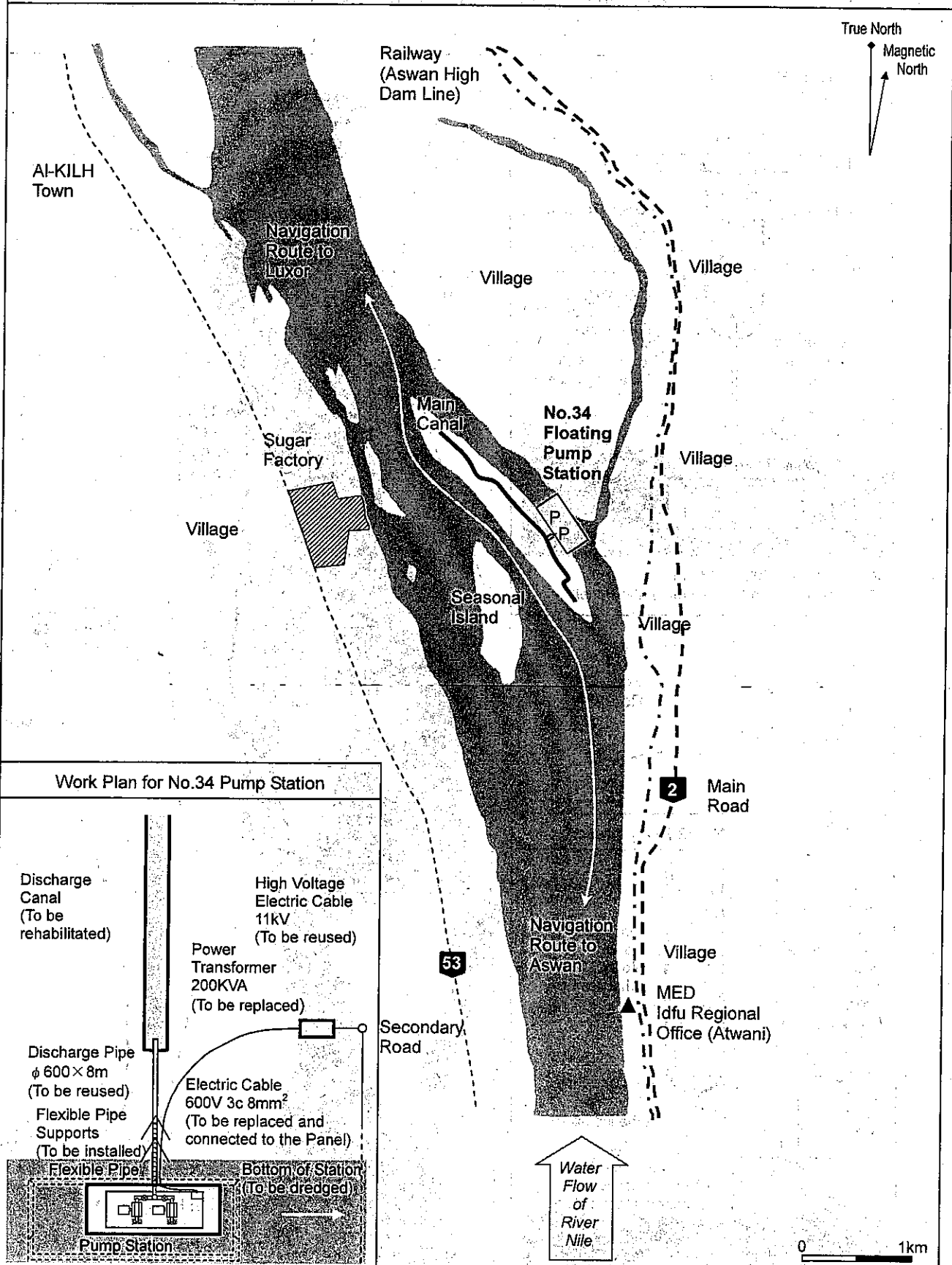
*A. S. M. Saad*  
AS-20

*Mansour*

*G*

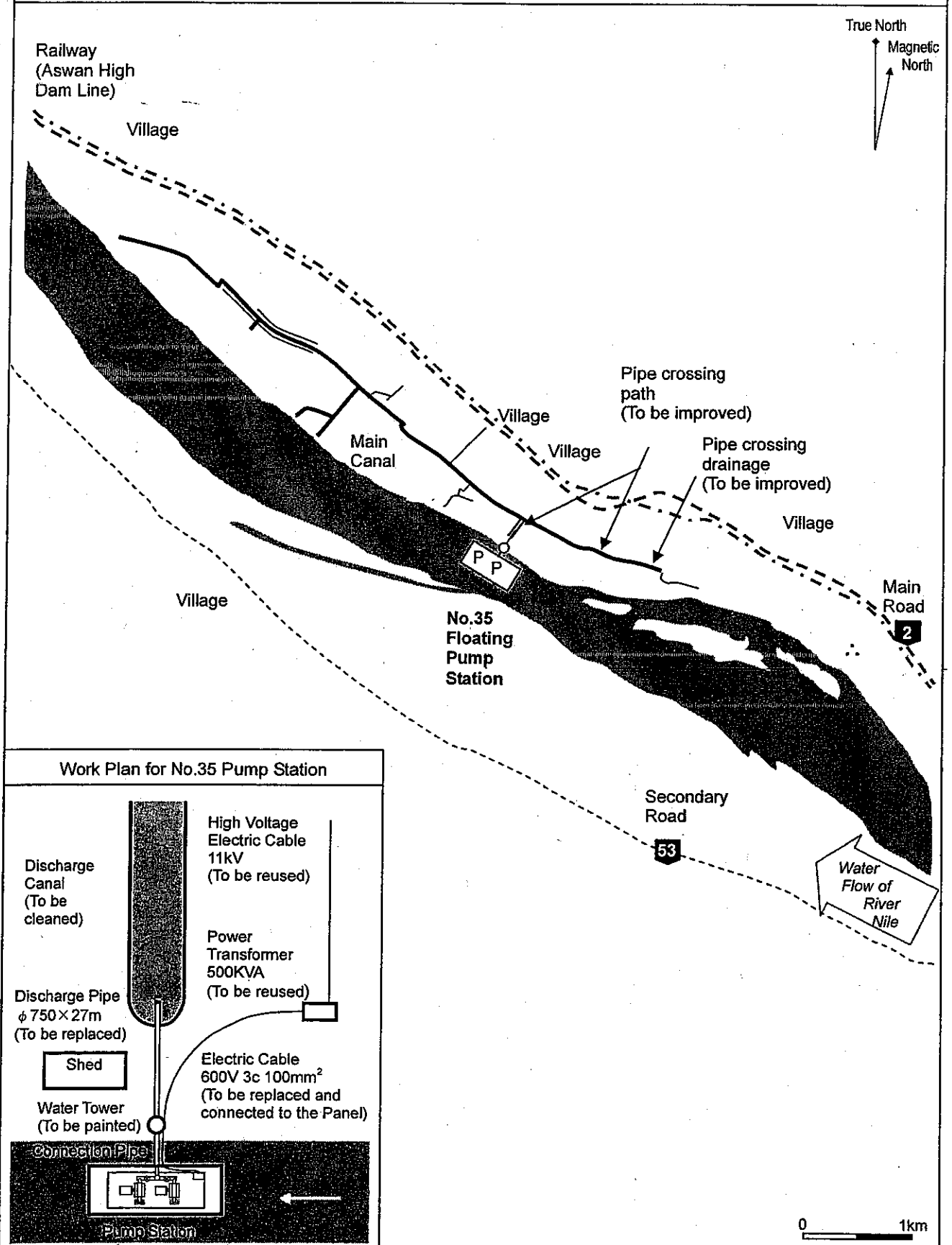
# No.34 Gezerat Abo Arafa Pump Station

(Floating Pump Type)



*A. K.*      *M. Saad*      *Mansour*      *g*  
 A5-21

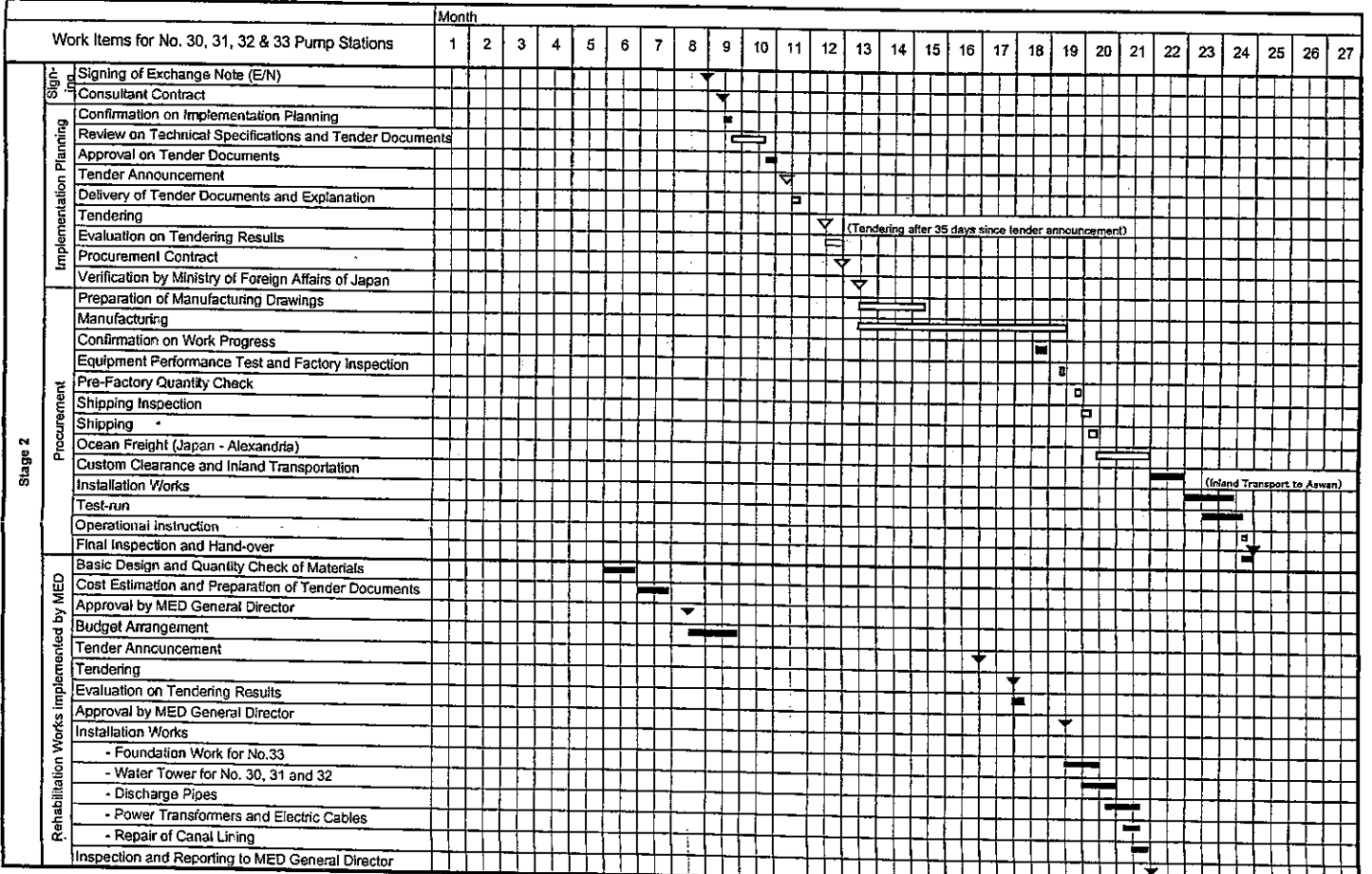
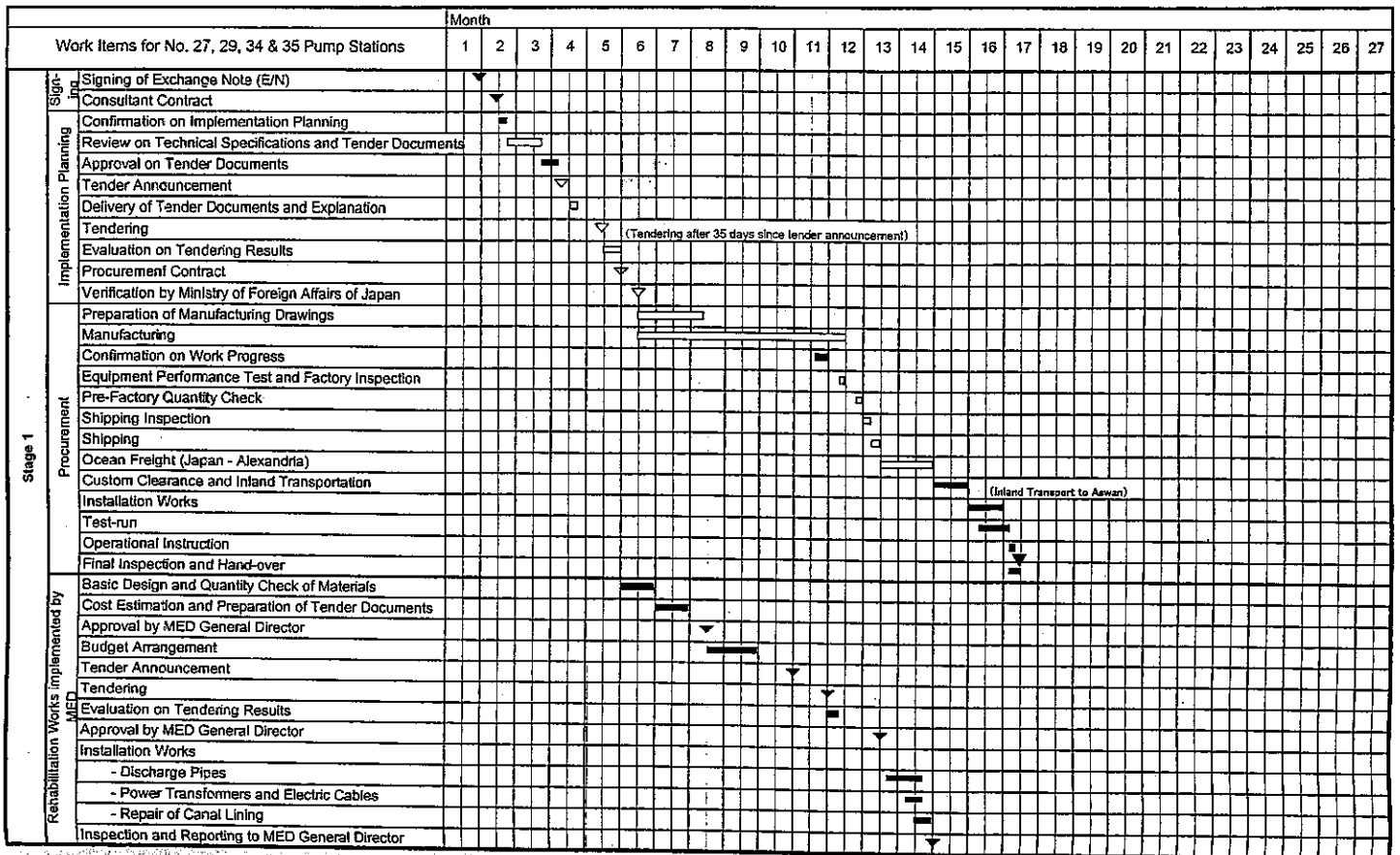
# No.35 El-Hegs El-Mostagda Pump Station (Floating Pump Type)



*(Signature)* M. Saad *(Signature)*  
 A5-22

Tentative Implementation Schedule

Project Title: The Project for Rehabilitation of Floating Pump Stations in Upper Egypt (Phase-IV)



Legend: ■ Works in Egypt □ Works in Japan

Handwritten signature/initials on the left margin.

Handwritten signature: M. Saad

## 資料 6 . 事業事前計画表

### 事業事前計画表

1 . 案件名
エジプト・アラブ共和国第 4 次上エジプト灌漑施設改修計画基本設計調査
2 . 要請の背景 (協力の必要性・位置付け)
<p>エジプト・アラブ共和国(以下「エ」国という)の GDP における農業セクターのシェアは、2003 年において 16%を占め、サービス業(50%)および工業(34%)について 3 番目の主要産業として位置付けられている。一方では、「エ」国は世界有数の食料輸入国であり、農産物輸入は全輸入の 27% (2003 年)となっている。食料自給率の改善とともに、近年の人口増加により国内の食料需要が増大していることや貧困緩和のためにも農業生産の拡大が重要課題である。</p> <p>農業部門ではこれまでも農業生産性の拡大、生産コストの低減及び農家所得の増大を図る農業政策を掲げ、灌漑施設等農業用施設の整備促進を進めてきている。しかし、近年では用排水施設整備の遅れ等から農産物の生産性の向上が阻害されてきており、用排水施設の体系的な整備が急務となっている。水資源灌漑省は灌漑及び排水ポンプ場の改修を全土にわたり推進してきており、本プロジェクトはこの事業計画の一環として位置付けられる。</p> <p>上エジプト地区のナイル河沿いには現在 86 箇所のポンプ場があり、その内 45 ヶ所がフローティングポンプ施設である。これらフローティングポンプ施設は、ポンプ設置から既に 40 年以上経過しており充分機能していない状況にある。1991～93 年、1996～98 年および 2003～2004 年に実施された第 1 次、第 2 次および第 3 次上エジプト・フローティング灌漑施設改修計画の無償資金協力により 26 ヶ所のポンプ場の機能が回復された。しかし、対象地区外のポンプ場は未整備状況のもとに置かれており、特に 8 箇所のポンプ場については、老朽化による機能低下が深刻な状況にあり、早急にポンプ場機材の改修・更新を行い灌漑施設の機能回復を計る必要がある。</p>
3 . プロジェクト全体計画概要
(1) プロジェクト全体計画の目標
<p>上エジプト地区のナイル河沿いにある 8 ヶ所のポンプ場の改修に必要な機材の調達を行うことにより、灌漑施設の機能回復が達せられる。</p> <p>裨益対象の範囲および規模：「エ」国アスワン県アスワン地区 8 ヶ所のポンプ場 受益農民 15,300 人(2006 年) 裨益面積 2,255 フェダン(947ha)</p>



- (2) プロジェクト全体計画の成果  
 ア 8ヶ所のポンプ場が本来有すべきポンプ機能を回復する。
- (3) プロジェクト全体計画の主要活動  
 ア ポンプ場資機材を改修する。  
 イ 灌漑水路を整備する。
- (4) 投入(インプット)  
 ア 日本側: 無償資金協力 7.42 億円  
 イ 「エ」国側:  
 (ア)本無償資金協力案件の実施に係わる負担額:0.86 億円  
 (イ)本無償資金協力案件対象施設の改修後の維持管理経費:年平均 0.08 億円
- (1) 実施体制  
 主管官庁:水資源灌漑省  
 実施機関: 水資源灌漑省機械電気局  
 水資源灌漑省灌漑局

#### 4 . 無償資金協力案件の内容

- (1) サイト  
 「エ」国アスワン県アスワン地区
- (2) 概要  
 8ヶ所のポンプ場の改修
- (3) 相手国負担事項  
 ・送水タワー、送水パイプ、吐水槽、灌漑水路の新設・改修  
 ・変圧器、動力ケーブルの更新  
 ・固定式ポンプ場 1ヶ所の既存機材撤去および補強基礎工事  
 ・フローティングポンプの据付・調整  
 ・通関・内陸輸送
- (4) 概算事業費  
 概算事業費 8.28 億円 (日本側負担 7.42 億円、「エ」国側負担 0.86 億円)
- (5) 工期  
 実施設計・入札期間を含め 23 ヶ月
- (6) 貧困、ジェンダー、環境及び社会面の配慮  
 ポンプ場更新期間中、仮設ポンプによる灌漑用水の補償を行う。

#### 5 . 外部要因リスク (プロジェクト全体計画の目標達成に関して)

大かんばんが起らない。

## 6．過去の類似案件からの教訓の活用

特になし。

## 7．プロジェクト全体計画の事後評価に係わる提案

### (1) プロジェクト全体計画の目標達成を示す成果指標

ポンプ送水量 28.6 百万 $\text{m}^3$  / 年が 24% 増大する。

ポンプ効率が 30~40% から 80% に改善される。

作物収量 19,500 トン / 年が 27% 増大する。

### (2) その他の成果指標

農家の所得 8,000 エジプト・ポンド / 戸 / 年が 21% 増加する。

### (3) 評価のタイミング

プロジェクト終了時の 2009 年以降

資料7. 参考資料/収集資料リスト

番号	名称	形態 図書・ビデオ 地図・写真等	オリジナル /コピー	発行機関	発行年
1	The State's General Budget for the Financial Year 2005/2006		オリジナル	The Middle East Library for Economic Series	
2	National Water Resources Plan for Egypt 2017		オリジナル	Ministry of Water Resources and Irrigation Planning Sector	
3	The Statistical Year Book 2004		オリジナル	Central Agency for Public Mobilization and Statistics	
4	The Area belongs to Each Pumping Stations in Aswan Governorate		コピー		2003 Dec
5	Project for the Rehabilitation of Floating Pump Stations in Upper Egypt (Phase no.4)		コピー		2003. 7. 6
6	Actual Discharge of High Dam Reservoir in m <sup>3</sup> /day for the period from 2001-2005		コピー		
7	Average Level of Water Behind High Dam Level in "M" from 2001-2005		コピー		
8	Cultivated Crops per Feddan		コピー	Aswan Agricultural Department	
9	Area per Feddan		コピー	Aswan Agricultural Department	
10	The Area, Important Crops and number of Farmers in 1)Aswan, 2)Kom Ombo, 3)Edfu		コピー	Aswan Agricultural Department	
11	Final Report for Maize Crop for 2004-2005 in Aswan Governorate		コピー	Aswan Agricultural Department	
12	Final Report for Sugar Cane Crop for 2004-2005 in Aswan Governorate		コピー	Aswan Agricultural Department	
13	Distance from Aswan High Dam		コピー		
14	Water Level in Pumping Stations (1996-1998, 2001-2005)				
15	Water Level in El Ghovera Pump Station				
16	Climatic Condition in Upper Egypt				
17	Chemical Test Analysis for Sample taken in front of Feryal Mesurement (East Bank) during February				
18	Water Resources and Irrigation Engineering for Aswan Engineering Sketch of Canals				

番号	名称	形態 図書・ビデオ 地図・写真等	オリジナル /コピー	発行機関	発行年
19	Water Resources and Irrigation Engineering for Idfu Engineering Sketch of Canals				
20	エジプト分担工事入札図書例		コピー		
21	Name of Main Contractors who have awarded Construction and rehabilitation works for Pumping Stations Projects in MED		メモ	MED	
22	List of Pump Suppliers		メモ	MED	
23	MED'S Projects		メモ	MED	
24	Cost of Local Works related to the Project		メモ	MED	
25	Pumping Stations Rehabilitation Project to be Financed from KFW		メモ	MED	
26	Import and Export Law Dec.2005		original	The Middle East Library for Economic Service (MELES)	
27	Stamp Duty Law Jan. 2004		original	MELES	
28	The Executive Statues vof the General Sales Tax Law Jan. 2005		original	MELES	
29	The General Sales Tax Law October, 2003		original	MELES	
30	Customs Tariff Jan. 2005		original	MELES	
31	The Executive Decrees of the Labour Law Sep. 2005		original	MELES	
32	Labour Law Jan. 2006		original	MELES	
33	The Import and Export and the System of Procedures of Examination and Control of Imported and Exported Commodities		original	MELES	
34	Organization Chart for MED		コピー	MED	
35	Organization Chart for General Directorate Upper Egypt (IDFU)		コピー	MED IDFU	
36	The Number of O & M Staff				
37	Operation Hours Record for Pump Stations				
38	Annual O & M Cost for Pump Stations				
39	Price List (Aswan)				
40	Price List (Cairo)				
41	Used Spare Parts List				

番号	名称	形態 図書・ビデオ 地図・写真等	オリジナル /コピー	発行機関	発行年
42	The Port Said Engineering Works S.A.E. Affiliated to Suezu Canal Authority Rgypt		original	Port Said Engineering Works	
43	BEHERA COMPANY		original	BEHERA COMPANY	
44	TERSANA SHIPYARD		original	The Egyptian General Irrigation Workshops Company	
45					
46					
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