MINUTES OF DISCUSSIONS ON THE BASIC DESIGN STUDY ON THE PROJECT FOR SUPPLY OF EQUIPMENT FOR

REGIONAL ENVIRONMENTAL MONITORING NETWORK (Phase II) 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 has decided to conduct a Basic Design Study on the Project for Supply of Equipment for Regional Environmental Monitoring Network (Phase II) (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"), headed by Mr. Norio Shimomura, Managing Director, Office of Technical Cooperation and Examination, Grant Aid Management Department, JICA, and is scheduled to stay in the country from April 7 to May 4, 2002.

The Team held discussions with the officials concerned of the Government of Egypt, and conducted a field survey at the project sites.

In the course of discussions and field survey, both parties confirmed the main items described on the attached sheets. The Team will proceed to further works and prepare the Basic Design Study Report.

Cairo, 16 April, 2002

Mr. Norio Shimomura

Leader

Basic Design Study Team

Japan International Cooperation Agency

Japan

Dr. Jbrahim Abdel Gelil

Chief Executive Officer

Egyptian Environmental Affairs Agency

The Arab Republic of Egypt

Witnessed by: Mrs. Sanaa Hegazi

Under Secretary,

Asia & Australia, International Cooperation Department,

Ministry of Foreign Affairs The Arab Republic of Egypt

ATTACHMENT

1. Project Title

The title of the Project is "The Project for Supply of Equipment for the Regional Environmental Monitoring Network (Phase II)".

2. Objective

The objective of the Project is to establish the Regional Environmental Monitoring Network in Egypt in order for monitoring and promotion of the environmental protection through procurement of materials and equipment necessary for laboratories in respective Regional Branch Offices (hereinafter referred to as "RBOs").

3. Project Sites

The Project sites requested by the Egyptian side are as follows which are shown in annex-1.

- -Assuit Regional Branch Office (AST RBO)
- -Aswan Regional Branch Office (ASW RBO)
- -Hurghada Regional Branch Office (HGD RBO)
- -Cairo Central Center (CCC)
- -Greater Cairo Regional Branch Office (GC RBO)
- -Alexandria Regional Branch Office (ALX RBO)
- -Tanta Regional Branch Office (TNT RBO)
- -Mansura Regional Branch Office (MSR RBO)
- -Suez Regional Branch Office (SEZ RBO)

4. Responsible and Implementing Agencies

The responsible and implementing organization of the Project is the Egyptian Environmental Affairs Agency (hereinafter referred to as "EEAA").

The organization chart of the Agency is shown in annex-2.

5. Items Requested by the Government of Egypt

After discussions with the Team, the Egyptian side requested the items shown in annex-3. Items of the equipment and materials were rated in order of priority for necessity considering such factors as activity of each laboratory at the respective RBOs and operation and maintenance. The rating is as follows:

Priority A: Considered to be essential for the Project

Priority B: Careful examination of necessity is needed

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Priority C: Low priority

Both sides confirmed that the appropriateness of the request shall be assessed according to the results of further studies and analysis in Japan.

Criteria for selection of equipment are shown in annex-4.

6. Japan's Grant Aid System

- (1) The Egyptian side has understood Japan's Grant Aid system explained by the Team as described in annex-5.
- (2) The Egyptian side will take necessary measures, as described in annex-5 and annex-6, for smooth implementation of the Project, on condition that the Grant Aid Assistance by the Government of Japan is extended to the Project.

7. Schedule of the Study

- (1) The consultants of the Team will proceed to carry out further studies in Egypt until May 4, 2002.
- (2) Based on the Minutes of Discussions and technical examination of the study results, JICA will prepare a draft report in English and dispatch a mission to Egypt in order to explain its contents around July 2002.
- (3) If the contents of the draft report are accepted in principle by the Egyptian side, JICA will complete the final report and send it to the Egyptian side around August 2002.

8. Other Relevant Issues

The following issues were discussed and confirmed by both sides.

(1) Regional Environmental Monitoring Network for environmental protection

Both sides agreed the importance of effective utilization of monitored/ analyzed data provided by RBO's laboratories for national environmental protection activities.

The Egyptian side explained the situation of regional environmental monitoring network as follows:

According to the Environmental Policy that is under examination for Cabinet approval, the Government of Egypt is to decentralize the environmental administration.

RBO's laboratories' function at the moment, to conduct point source monitoring as well as ambient monitoring in certain extent, is to be strengthened in the decentralization process.

In this context, importance of networking among RBOs and EEAA headquarters is increasing.

CCC is also to be strengthened and expected

- --- to be a training center for environmental technology
- --- to be a reference laboratory
- --- to provide technical support for RBO's laboratories, including maintenance of equipment.
- --- to manage quality assurance and quality control (QA/QC)

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(2) Staffing plan for the new RBO's laboratories

The Egyptian side assured the Team all the necessary staff for the new RBOs (ASW-RBO, AST-RBO, HGD-RBO) were to be assigned in time. Number and qualification of staff for each laboratory are shown in annex-7.

The Egyptian side fully understood the importance of the staff training and assured the Team to take necessary measures. EEAA provides necessary training program for new staff through CCC. CCC will be responsible for planning, implementation and follow-up of the training.

In relation to staff training, the Egyptian side strongly requested the Japanese side to consider technical assistance for the new 3 RBOs. The Team will report this request to the Japanese authorities concerned.

(3) Budgetary arrangement for operation and maintenance

The Egyptian side assured the Team to allocate sufficient budget necessary for the operation and maintenance for RBO's laboratories.

(4) Construction schedule of buildings for the new RBOs

The Egyptian side assured the Team to complete the construction of buildings for the new RBOs. As for Assuit and Aswan, construction will be completed by the end of June 2002 and for Hurghada, the end of August 2002.

Both sides agreed that it is necessary to hurry the construction work in Hurghada and monthly progress of the construction work should be reported to JICA Egypt Office by EEAA.

The schedule for construction of the new 3 RBOs is shown in annex-8.

(5) Environmental considerations

The Egyptian side ensured that an adequate disposal of the laboratory wastes such as hazardous liquid and solid substances should be maintained by applying a sound waste management practice and/or installing an appropriate treatment facility as required, so that any adverse environmental impact due to the operation of the laboratories must be avoided.

(6) Technical guidance services ("Soft component")

The Egyptian side requested the technical guidance by the Japanese side for operation and maintenance of the equipment to be included in the Project in order to ensure the sustainability.

(7) Safety and security

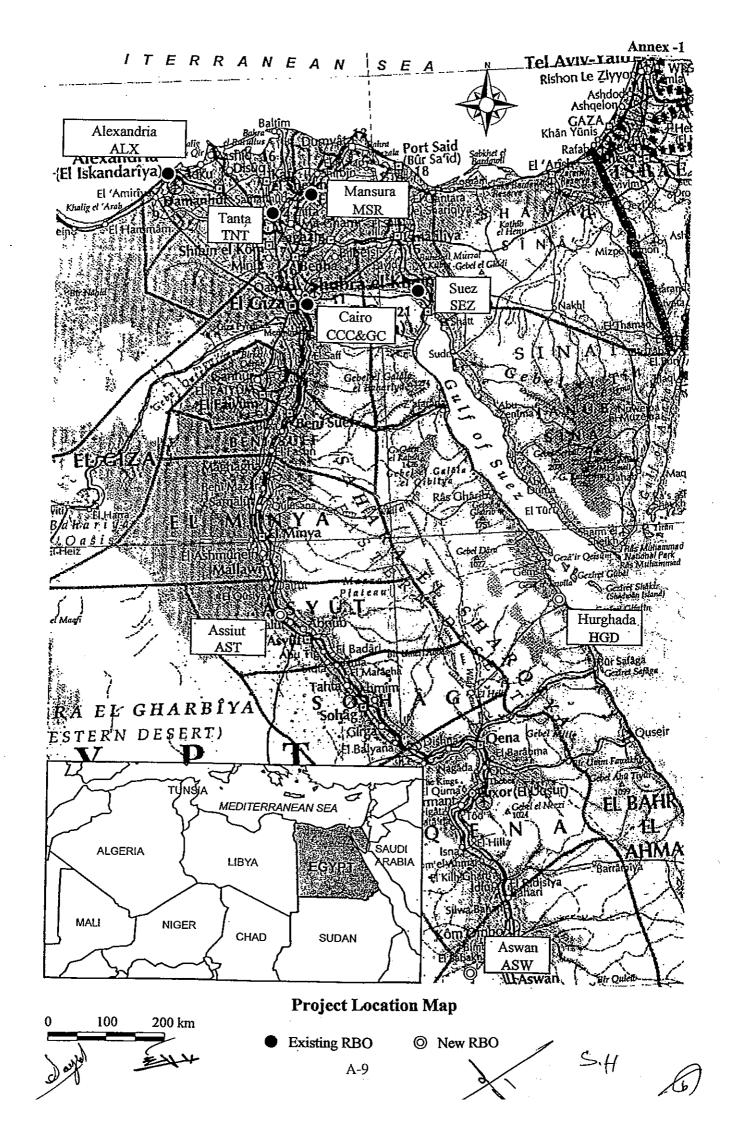
The Egyptian side agreed that necessary measures are taken for the safety and security of the Japanese nationals involved in the Project.

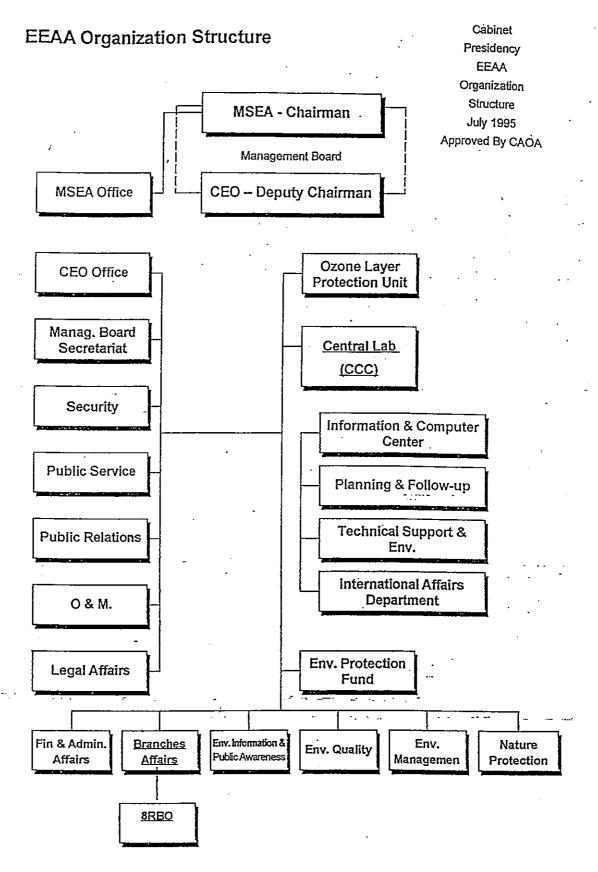


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Requested Equipment for New 3RBOs from Egyptian Side

	requested Equipment for N	T			i Side
Code	P		New RBO	<u>s</u>	
No.	Equipment Name	ASY	ASW	HRG	Remarks
	mom Analytical Equipment				
C-3 & 4	yrparament	Α	Α	Α	
C-6	UV/VIS Spectrophotometer (Double Beam)	A	Α	Α	
C-12	Ion Chromatograph	Α	Α	Α	
C-13	Stereoscopic Microscope	Α	Α	Α	
C-14	Microscope	А	Α	Α	
C-15	Handy Type pH Meter	· A	Α	Α	
C-16	Laboratory pH Meter	A	А	A	
C-18	Mercury Analyzer	A	Α	Α	
C-19	Glass Wares Set	A	A	A	
C-20	Reagents (w/Standard Samples)	A	A	A	<u> </u>
	ral Laboratory Equipment	<u> </u>			
G-1	Semi-Micro Analysis Balance	Α	A	A	
G-2	Micro Analysis Balance	A	Α	A	
G-4	Tabletop Type Centrifuge	A	A	A	
G-6	Muffle Furnace (for Organic)	A	A		
G-8	Constant Temperature Oven	A	A	A	
G-9	Middle Temperature Oven			A	
G-11	Oven for Glass Wares(Dryer)	A	A	A .	-
G-11	Autoclave (Vertical Type)	A	A	A	
G-12	Incubator	A	A	A	
G-13 G-14	Low Temperature Incubator	A	A	A	· · · · · · · · · · · · · · · · · · ·
G-14 G-15		A	A	A	
G-20	Rotary Evaporator	A	A	A	···
G-20 G-23	Shaker (Middle) Mixer	A	A	A	
G-23 G-24		A	A	A	
G-24 G-25	High Speed Homogenizer	Α	A	A	
	Hot Plate (Small)	A	A	A	
G-26	Magnetic Stirrer (w/Hop Plate)	A	Α	Α	
G-27	Multy Magnetic Stirrer	A	Α	A	
G-28	Constant Temperature Water Bath	A	Α	Α	
G-32	Water Bath	Α	Α	A	
G-33	Cooling Unit	A	Α	Α	
G-34	Ultrasonic Cleaner	A	A	Α	
G-37	Ultrasonic Pipette Cleaner	A	Α	A	
G-38	Ion Exchanger	A	Α	Α	
G-39	Water Distillation Unit	A	Α	A	
G-40	Clean Bench	A	Α	Α	
G-41	Draft Chamber w/Gas Cleaning Device	A	A	A	
G-42	Draft Chamber	A	Α	Α	
G-43	AC Stabilizer	Α	Α	Α	
G-46	Refrigerator	Α	Α	Α	
G-47	Freezer	Α	A	Α	
G-48	Ice Maker (Cube Ice)	Α	Α	Α	· · · · · · · · · · · · · · · · · · ·
G-49	Copy Machine	Ā	A	A	
G-50	Monitoring Car	Α	Α	А	
G-51	Tool Set	A	A	Α	
G-53	Locker for Reagents	Α	A	A	
G-55	Balance (6kg)	Α	A	A	
G-56	Infrared Heater	A	A	A	· · · · · · · · · · · · · · · · · · ·
G-57	Colony Counter	A	A	A	<u> </u>
G-58	Personal Computer (Arabic/English)	A	A	A	
	<u> </u>				

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*Note A: To be Essential, B: Further Examination, C: Low Priority
Request All sites 1/3

Requested Equipment for New 3RBOs from Egyptian Side

Code No. Equipment Name ASY ASW HRG		Acquested Equipment for 14e				
No. ASY ASW URG	8	Equipment Name		New RBO	S	D1
G-59 Video Camera w/Video Monitor Unit	No.	Equipment Hanc	ASV	ASW	HRC	Remarks
G-60 Camera A	G-59	Video Camera w/Video Monitor Unit		-		
G-61 Over Head Project (w/Screen) and Data Show Equi						
W. Water Quality Monitoring Equipment N-1 Total Organic Carbon Analyzer						
W-1	1	· · · · · · · · · · · · · · · · · · ·		<u> :: </u>		
W-2			A	- A	A	· · · · · · · · · · · · · · · · · · ·
W-3 Laboratory Type DO Meter					- 1	
W-4&5 Total Nitrogen/Total Phospate Analyzer		<u> </u>		 -		
W-8c				·	i	<u> </u>
W-9 Conductivity Meter/TDS				•		
W-9 Conductivity Meter/TDS	1				-	
W-10 Salt Meter (Na Ion Meter)						
W-11A Water Sampler(Hyroht Type)		<u> </u>		•		
W-11B Water Sampler(Pettenkohrfer Type)				·		
W-13 Ekman Barge Grab Sampler			·		<u>'</u>	<u> </u>
W-14 Plankton Net	1					·
W-15 Distillation Apparatus(for CN,NH4,F)						·
W-16 Oil Content Meter		I I	Δ	Δ		
W-18 BOD Analyzing Apparatus (Incubator)						
W-19 COD Analyzing Apparatus w/Closed Reflux (Cr) A						<u> </u>
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*Note A: To be Essential, B: Further Examination, C: Low Priority
Request All sites 2/3



Requested Equipment for New 3RBOs from Egyptian Side

Cada		<u> </u>	New RBO	s	
Code No.	Equipment Name				Remarks
NO.		ASY	ASW	HRG	
A-10A	Portable Stack Gas Sampler (for SOx)	Α	A	A	<u> </u>
A-10B	Portable Stack Gas Sampler (for NOx)	A	- A	A	
A-11	Gas Meter	A	Α	Α	
A-12	Rotor Meter	A	Α	Α	
A-13	Mass Flow Meter	Α	A	A	
A-15	Auto-Dry Desicator	Α	Α	Α	
A-17	Portable HC/CO Analyzer for Stack Gas	A	Α	Α	
A-18	Portable Auto. SOx Analyzer for Stack Gas	Α	Α	А	
A-19	Portable Auto. NOx Analyzer for Stack Gas	Α	Α	А	
A-20	High-volume Air Sampler	Α	А	A	
A-21	Low-volume Air Sampler	A	Α	A	
A-22	Deposit Gauge	Α	Α	A	·
A-23	Andersen Air Sampler	A	Α	A	
A-25	Standard Gas w/Cylinder & Regulator	Α	. A		
A-26	Air Bacteria Sampler (2-stage)	Α	Α	Α	
A-28	Ambient Air Analyzer	A	A	Ā	
	Total Dust Meter	Α	Α	A	
	PM 10 Meter (Portable)	Α	Α	Α	-
M. Mari	ne Survey Equipment				
M-I	Mobile Laboratory		_	С	
M-2	Boat for Monitoring/Sampling	_	-	Α	Withiin 10m in length
	Ocean Observation Buoy, Land Based Station for				
M-3	Data Collection and Analysis	_	_	С	
M-4	Remotely Operated Vessel (ROV)		_	С	
M-5	Tide Gauge	_	_	A	<u> </u>
M-6	Echo-sounder	_	_	Α	· · · · · · · · · · · · · · · · · · ·
M-7	Under Water Video Digital Camera	_	_	A	
M-8	Under Water Light Meter	_	-	Α	
	Gerographical Position System with Handled Unit		-		
l i	& USP/PDA Adapter & Different GPS Receiver				
M-9	And Recorder	_	-	Α	
M-10	Binoculars	_	_	A	
M-11	Fish Finder	_	-	A	-
M-12	Marine Radio w/built in Hailer		-	- <u>A</u>	
M-13	Handled VHF Radio	-		A	
M-14	Zoo Plankton Counting Tray	_	-	A	

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Requested Additional Equipment for Existing Laboratories from Egyptian Side

	Troquestou reactional Equipment for	Rank of Additional Equipment for Existing RBOs										
Code		Rank o	f Additio	nal Equi	oment for	Existin	g RBOs					
No.	Equipment Name	==										
		ALX	TNT	MSR	SEZ	GC	CCC	Remarks				
	mmom Analytical Equipment											
C-1	X-Ray Fluorescence Spectrophotometer	С					В					
C-2	FT-IR spectrometer	С					В					
C-4	A.A.S (Flame Attachment Unit)	В	В	В	_ B	В	В	Attachment				
C-6	UV/VIS Spectrophotometer /						В					
C-7	Gas Chromtograph Mass Spectrometer (GC-MS)	С	С		С							
C-8	FID/FPD Gas Chromatograph		В	В	В	В	В					
C-9	FID/FPD Gas Chromatograph				С							
	ECD/FPD Gas Chromatograph		В									
C-11	High Performance Liquid Chromatograph (HPLC)				С							
C-12	Ion Chromatograph	В	В	В	В	В						
C-15	Handy Type pH Meter			В			_					
C-19	Glass Wares Set	В			В	В						
C-20	Reagents (w/Standard Samples)	В		,	i							
	Spare Parts for Equipment							-				
	1. pH Electrode for Handy/Laboratoy Type pH Meter	В		В		В		-				
	2. DO Electrode for Handy/Laboratoy Type DO Meter	В			<u>i</u>							
	3. Lamp for UV/VIS Spectrophotometer	В	i	i			-	 -				
1	4. Hollow Cathode Lamp for A.A.S	В		<u>_</u>				Cr, Cd, Zn				
	5. Sample Cell for Turbidity Meter	В						Or, Od, Zii				
	6. Filter and Ion Exchanger	В										
	7. Ceramic Plate for Furnace	В										
	8. Mantle Heater for COD Analysis					В						
	9. Outer Container for Hg Analyzer	В			<u>:</u>							
	10. NH4 Electrode for Ion Meter	В										
	11. X-ray Detector for HPLC						В					
G. Ger	neral Laboratory Equipment											
	Analytical Balance (0 - 210 g, 4 dicimals)			В	В	В						
	Centrifuging Type Test Tube Evapo	В	<u>;</u>		C	<u>Б</u>	В					
	Test Tubu Evapo	В			C		В	 				
	Shaker (Middle)	В	<u> </u>		C	<u>i</u>	В					
	Digital Camera	<u>;</u>	<u> </u>			В	- C					
	Lyophilizer					ь	c	, <u></u>				
	Texture Analyzer			<u> </u>		- :	c	 				
	Polymerase Chain Reaction (PCR)						C					
	Viscosity Meter				- !							
-		- :				<u> </u>	В					
	ater Quality Monitoring Equipment Total Organic Carbon Analyzer											
	Portable Water Quality Test Kit	<u>:</u>		В	В	<u>i</u>						
	COD Reactor				В			·········				
	···	В										
-	Solidwaste Sampler						B					
	Soil Sampler						В					
A. Air	Quality Monitoring Equipment					<u> </u>						
 1	Combined Wind Vane and Anemomeer	В										
	Orsat Analyzer				В							
	Flow Meter				В]					
	High-volume Air Sampler	В	В	В	В							
	Low-volume Air Sampler	В			В							
	Ambient Air Analyzer	В			В	В]					
	Flow Injection for MIRAN	1		В								
	Analysis Unit for Portable Analyzer (NOx,SOx, HC, etc	В	В	В		В						

*Note A: To be Essential, B: Further Examination, C: Low Priority
Additional Request 1 / 2

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Requested Additional Equipment for Existing Laboratories from Egyptian Side

Code		Rank o						
No.	Equipment Name							
			TNT	MSR	SEZ	GC	CCC	Remarks
	Ambient Temp./Humidity Meter	В		В				
	Indoor Ambient Air Gas Detector (ppb)					В		
	Noise Meter	C				В		
	Digital Compass	В						
	GPS Unit /	В	-					
	Spare Parts for Equipment							
	Metal Fittings for Orzat Analyzer	_B						
	Detective Tubes for Ambient Gas	_B						
	Thermometer for Stack Gas Analyzer	В						
	Spare Part for Wet Gas Sampler				В			
<u>1. Ma</u>	rine Survey Equipment							
	Sieve Shaker "RO-Tap"	С						
	Sieve Set for Granulometry	С			_			
	Petroleum Hydrocarbon Sampler	В		,				
	Water Sampler (Bandon-type)	В						
	"Go-fic" Water Sampler with Teflon Coating Inside	В						·
	Messenger for Sampler	В			i			
	Spectrofluoro Meter (Dual Beam, Scanning Type)	В						·
	Forrel Scale for Water Color Comparison	В			<u>i</u>			
	Freeze-Dryer	В						· · · · · · · · · · · · · · · · · · ·
	Rubber Stoppers (Various Size, Glass and Teflon)	В						
	Plastic Spatulas	В						
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*Note A: To be Essential, B: Further Examination, C: Low Priority
Additional Request 2 / 2

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Criteria for selection of equipment

- 1. EEAA's capability of managing the Project
- 2. financial viability of the Project
- 3. competence of personnel in technical and administrative aspects
- 4. enough space and utilities for installation
- 5. budgetary allocation of the Japanese side
- 6. absence of duplication with other donors
- 7. capability for operation and maintenance



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JAPAN'S GRANT AID

1. Japan's Grant Aid System

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

Application

(Request made by a recipient country)

Study

, (Basic Design Study conducted by JICA)

- · Appraisal & Approval (Appraisal by the Government of Japan and Approval by the Cabinet)
- Determination of the implementation

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

- · Implementation
- (Implementation of the Project)
- Pirstly, 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.

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.

- (2) 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:

- i) 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;
- ii) Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, social and economic points of view;
- iii) Confirmation of items agreed on by both parties concerning the basic concept of the Project;
- iv) Preparation of a basic design of the Project; and
- v) 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.

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2) Selection of Consultants

For the smooth implementation of the Study, JICA uses a registered consulting firm. JICA selects a firm based on proposals submitted by interested firms. The firm selected carries out a Basic Design Study and writes a report, based upon terms of reference set by JICA.

The consultant firm used for the Study is recommended by JICA to the recipient country to also work in the Project's implementation after the Exchange of Notes, in order to maintain technical consistency and also to avoid any undue delay in implementation should the selection process be prepared.

- (3) 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.

- 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
 In the implementation of the Grant Aid project, the recipient country is required to undertake such necessary measures as the followings:
 - i) To secure land necessary for the sites of the Project and to clear, level and reclaim the land prior to commencement of the construction;
 - ii) To provide facilities for the distribution of electricity, water supply and drainage and other incidental facilities in and around the site:
 - iii) To secure buildings prior to the procurement in case the installation of the equipment;

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- iv) To ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid;
- v) 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 contracts;
- vi) 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;
- vii) "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 this operation and maintenance as well as to bear all the expenses other than those covered by the Grant Aid.

- viii) "Re-export"

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

2. Grant Aid Procedure

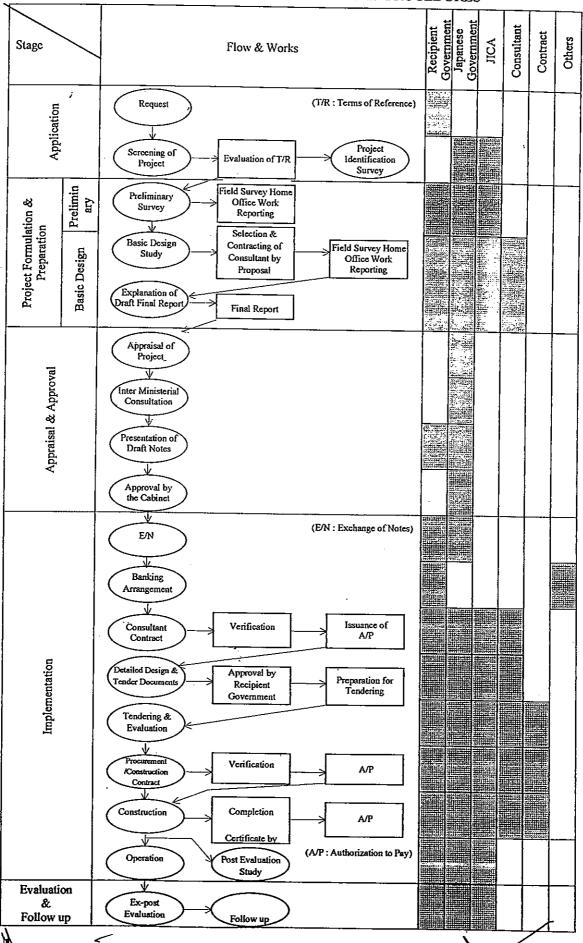
- (1) Flowchart of Japan's Grant Aid Procedures Refer to Attachment 1.
- (2) Major Undertaking to be taken by Each Government Refer to Attachment 2.



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FLOW CHART OF JAPAN'S GRANT AID PROCEDURES



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Major Undertakings to be taken by Each Government

No.	Items	To be covered by Grant Aid	To be covered by Government of Egypt
1	To secure land if necessary		•
2	To construct facilities at each proposed site		•
3	To supply equipment and materials for the regional environmental monitoring network		
	Supply and installation of monitoring equipment for the new RBO's laboratories	•	
	Supply and installation of additional monitoring equipment for CCC and existing RBO's laboratories, if necessary	•	
4	To bear the following commissions to the Japanese foreign exchange bank for the banking services based upon the B/A		
	1) Advising commission of A/P		•
	2) Payment commission		•
5	To ensure unloading and customs clearance at port of disembarkation in recipient country		
	Marine(Air) transportation of the products from Japan to the recipient country	•	
	Tax exemption and customs clearance of the products at the port of disembarkation		•
	Internal transportation from the port of disembarkation to the project site	•	
6	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.		•
7	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.		•
8	To maintain and use properly and effectively the equipment provided under the Grant Aid.		•
9	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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Necessary measures to be taken by the Egyptian side

- 1. To provide data and information necessary for the Project.
- 2. To complete the relocation and/or removal of existing equipment, facilities and civil works required prior to the installation and settings of equipment
- 3. To provide facilities for distribution of electricity, water supply, telephone, drainage, sewage and other incidental items required for the Project.
- 4. To allocate enough budget for operation and maintenance timely and sufficiently.
- 5. To allocate enough staff for operation and maintenance of equipment
- 6. To procure required parts for maintenance timely and sufficiently.

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Staffing Plan for New RBOs Laboratories (Aswan, Assuit and Hurghada)

- 1. Aswan and Assuit
- (1) Title and number of the staff for each RBO's laboratory
 - --- Laboratory Manager: I
 - --- Air quality senior chemist: 1
 - --- Air quality chemist: 2
 - --- Air quality technician: 2
 - --- Water quality senior chemist: 1
 - --- Water quality chemist: 2
 - --- Water quality technician: 2
- (2) Qualification
 - a. Laboratory Manager
 - --- preferably master degree of science
 - --- more than 10-15 years experience in environmental analysis and monitoring activities at laboratory
 - b. Senior Chemist
 - --- Bachelor's degree of science, preferably the field of chemistry
 - --- at least 5-6 years experience in environmental analysis and monitoring activities at laboratory
- c. Chemist
 - --- bachelor's degree of science
- d. Technician
 - --- 2 year in technical institute after high school
- 2. Hurghada
- (1) Title and number of the staff for RBO's laboratory
 - --- Laboratory Manager: 1
 - --- Air quality senior chemist: 1
 - --- Air quality chemist: 1
 - --- Air quality technician: 1
 - --- Water quality senior chemist: 2
 - --- Water quality chemist: 3
 - --- Water quality technician: 3
- (2) Qualification
 - a. Laboratory Manager
 - --- preferably master degree of science
 - --- more than 10-15 years experience in environmental analysis and monitoring activities at laboratory
- b. Senior Chemist
 - --- Bachelor's degree of science, preferably the field of chemistry or marine biology
 - --- at least 5-6 years experience in environmental analysis and monitoring activities at laboratory
- c. Chemist
 - --- bachelor's degree of science, preferably the field of marine biology
- d. Technician
 - --- 2 year in technical institute after high school

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Construction Schedule of the New RBOs

No.	New RBO	,	, 2002												
110.	New 100	April	May	June	July	August									
1.	Assiut														
2.	Aswan														
3.	Hurghada					-									

Note; Construction Schedule for RBO Hurghada is subject to the agreement, which will be concluded in the middle of April 2002 between EEAA and Tourism Development Authority (TDA).

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MINUTES OF DISCUSSIONS ON THE BASIC DESIGN STUDY ON THE PROJECT FOR SUPPLY OF EQUIPMENT FOR REGIONAL ENVIRONMENTAL MONITORING NETWORK (Phase II) IN THE ARAB REPUBLIC OF EGYPT (EXPLANATION OF DRAFT REPORT)

In April through May 2002, the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Basic Design Study Team on THE PROJECT FOR SUPPLY OF EQUIPMENT FOR REGIONAL ENVIRONMENTAL MONITORING NETWORK (Phase II) (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 of the results in Japan, JICA prepared a draft report of the study.

In order to explain to the Egyptian side the components of the draft report, JICA sent to Egypt the Draft Report Explanation Team (hereinafter referred to as "the Team"), which is headed by Mr. Daimin Hanadate, JICA Egypt office, from July 29 to August 6, 2002.

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

Mr. Daimin Hanadate

Leader

Basic Design Study Team

Japan International Cooperation Agency

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Japan

Cairo, August 4, 2002

Prof. Dr. Ayman F. Abou Hadid

Chief Executive Officer

Egyptian Environmental Affairs Agency

The Arab Republic of Egypt

Witnessed by: Mrs. Sanaa Hegazi

Under Secretary

Asia & Australia, International Cooperation Department

Ministry of Foreign Affairs

The Arab Republic of Egypt

ATTACHMENT

1. Components of the Draft Report

The Egyptian side agreed and accepted in principle the components of the draft report explained by the Team.

2. Japan's Grant Aid Scheme

The Egyptian side understands Japan's Grant Aid Scheme and will take the necessary measures, as described in **Annex-5** and **Annex-6** of the Minutes of Discussions signed by both parties on April 16, 2002.

3. Schedule of the Study

JICA will complete the final report in accordance with the confirmed items and submit it to the Egyptian side around October 2002.

4. Other Relevant Issues

The following issues were discussed and confirmed by both sides.

(1) Construction of the buildings for the new RBOs

- 1) The Egyptian side promised to complete 40% of the construction works for the Hurghada RBO by the end of September 2002, and the entire construction works by the end of February 2003, based on the contract signed by EEAA and the contractor (Annex-A). EEAA will report the progress of the construction works to JICA Egypt Office on monthly basis, as agreed in the Minutes of Discussions signed on April 16, 2002.
- 2) The Egyptian side explained that the construction of the RBOs of Assuit and Aswan has been completed.

(2) Procurement of equipment

After discussions with the Team, the Egyptian side accepted the items of the equipment described in Annex-B.

(3) Procurement of consumables

- 1) The Egyptian side ensured that sufficient budget will be allocated for procurement of consumables such as spare parts, glassware and chemical reagents in order to secure proper operation and maintenance of the equipment procured under the Project.
- 2) Both sides understood and confirmed the necessity of improving the procurement system of EEAA for consumables. The Egyptian side accepted to expedite EEAA's procurement procedures to allow timely replacement/replenishment of consumables.

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3) The Egyptian side requested for special procurement arrangements for hazardous and/or nitrogen-contained chemical reagents, such as procuring them locally or shipping them separately and earlier than other chemical reagents, in order to secure timely customs clearance.

(4) Recruitment and training of the laboratory staff of the new RBOs

- 1) The Egyptian side assured the Team that all necessary staff for the new RBOs' laboratories will be assigned within two (2) months immediately after signing the contract with a Japanese trading firm. Number and qualification of staff for each laboratory are shown in Annex-7 of the Minutes of Discussions signed on April 16, 2002.
- 2) Based on the agreement stipulated in the Minutes of Discussions of April 16, 2002, EEAA will provide necessary training program for the new RBO laboratory staff through CCC, as shown in Annex-C, from within three (3) months immediately after signing the contract with a Japanese trading firm till the commencement of the technical guidance service provided by the Japanese side.
- 3) The Egyptian side agreed to continue providing necessary training to the new RBOs' staff by securing sufficient budget and trainers, in an effort to enhance skills to use and maintain the equipment procured under the Project properly and effectively.
- 4) In relation to staff training, the Egyptian side strongly requested the Japanese side to consider technical assistance for all RBOs. The Team will report this request to the Japanese authorities concerned.

(5) Technical guidance service ("Soft Component")

- 1) The Egyptian side understood and agreed to the technical guidance service ("Soft Component") planned by the Japanese dependent of the technical guidance service ("Soft Discussions of April 16, 2002.
- 2) The Egyptian side agreed to take the following measures in implementing the technical guidance service:
 - to assign four (4) CCC staff members to participate in the technical training provided by the Japanese side, with a view to developing their capabilities as instructors for the RBOs' laboratories. Among the four (4) CCC staff members, two (2) will be assigned for water quality analysis and the other two (2) for air monitoring.
 - to organize the seminar at each new RBO and prepare the seminar materials under the guidance of the Japanese side.

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بشأن انشاء مبنى الفرع الاقليمي لجهاز شنون البينة بالغردقة

أنه في يوم لب الموافق، ٧/ ٢٠٠٢

حرر هذا العقد بين كل من :-

- جهاز شنون البيئة برناسة مجلس الوزراء ومقره ٣٠ طريق مصر حلوان الزراعي ويمثله في التوقيع على هذا العقد السيد الأستاذ الدكتور / أيمن فريد أبو حديد بصفته الرئيس التنفيذي لجهاز شنون البيئة

(طرف أول)

-الشركة الوطنية للمقاولات والتوريدات - جهاز الخدمة الوطنية بوزارة الدفاع ومقرها ١٤ شارع محمود طلعت مدينة نصر بالقاهرة وعثله في التوقيع على هذا العقد السيد العميد/ عبد الجليل العوضى محمد بصفته المفوض العام على الشركة (طرف ثان)

تمهيد

اعمالا لأحكام قانون المناقصات والمزايدات رقم ٨٩ لسنة ١٩٩٨ ولاتحته التنفيذية ونظرا لرغبة الطرف الأول في استكمال أعمال فرع جهاز شنون البيئة بالغردقة وبناء على موافقة السيد الأستاذ الدكتور وزير الدولية لشيون البيئة والمؤرخة بتاريخ ٢٠٠١ لا ٢٠٠٢ فقد رغب الطرف الأول في التعاقد مع جهاز الخدمة الوطنية بوزارة الدفاع لاستكمال أعمال فرع جياز شنون البيئة بالغردقة بقيمة اجمالية قدرها ٧٩٤٢٧٥ جنيها مصريا (سبعمائة واربعد وتسعون ألفا ومائتان وخس وسبعون المناه على المناه والمناه وال

وقد اتفق الطرفان بكامل أهليتهما القانونية والفعلية على مايلي

- يعتسبر التمهيد السابق وعرض الطرف الثاني كالمشم المستحد المستحد الاستاد والرسومات التنفيذية و. نسزل الزمني للأحسال را فرفقة برات جزء لايتجزأ من أحكام هذا العقد ومكملا له

البند الثابي

أيل تزم الطرف الثاني باستكمال إقامة مبنى الفرع الاقليمي لجهاز شنون البيئة بالغردقة موضوع هذا العقد طبقا المساد ال

البند النالث

طريقة السداد:-

- يلتزم الطرف الأول بسداد قيمة الأعمال موضوع هذا العقد وقدرها ٧٩٤٢٧٥ جنيها مصريا (سبعمائة وأربعة وتسعون ألفا ومائتان وخمس وسبعون جنيها) في صورة مستخلصات دورية معتمدة من المهندس الاستشارى .

سرارد د مصمحت

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البند الرابع

يلتزم الطرف الثاني بتنفيذ الأعمال موضوع هذا العقد حلال أربعة أشهر تبدأ من استلام الموقع خالى من العوانق البند الخامس

برالطرف الثابى باحترام جميع القوانين واللوائح الحكومية والمحلية ذات الصلة بتنفيذ العملية بما فى ذلك يستخت كالم المشروط الواردة بالعطاء كما يكون مسئول عن حفظ النظام بموقع العمل وتنفيذ أوامر الطرف الأول يَالُهُ كُلُ مِن يَهْمُلُ أَو يَرْفُضُ التَّعْلَيْمَاتُ أَو يَحَاوِلُ الغَشِّ أَو يَخَالُفُ الشَّرُوطُ المتَّفَقُ عَلَيْهَا يَلْتَزُمُ الطُّرفُ الثَّاني أيضًا ويُبْلُغُاذُ كُلُّ مَا يَلْزُمُ لَمْنِعُ الاصاباتُ أو حوادثُ الوفاة أو الاضرار بممتلكات الحكومة أو الافراد وتعتبر مستوليته في هذه الحالة مباشزة دون تدخل من الطوف الأول.

البند السادس

يكون الطرف الثاني مسئولاً مسئولية جنائية ومدنية عن الأعمال موضوع العقد طبقا لأحكام القانون المدني المصرى . البند السابع

تطبق أحكام القانون رقم ٨٩ لسنة ١٩٩٨ بتنظيم المناقصات والمزايدات وتسرى لائحته التنفيذية فيما لم يرد بشأنه نص خاص فیه

البند الثامن

هيع المواد المشونة من الطرف الأول والقطع والأدوات والآلات التي تكون قد استحضرت بمعرفة الطرف الثابي أو على الأرض التي يشغلها بقصد استعمالها في تنفيذ العمل يكون مسئولا عنها وكذلك جميع الأعمال والمشآت الوقية الأخرى تظل كما هي ولا يجوز نقلها أو التصرف فيها الا بأذن من الطرف الأول الى أيتم التسليم الابتدائي على أن تبقى في عهدة الطرف الثاني وتحت حراسته ومسئوليته وحده ولا يتحمل الطرف الأول في شأها أية أعباء مالية أو مستولية بسبب الضياع أو التلف أو السرقة أو غير ذلك.

البند التاسع

إذا أخل الطرف الثاني بأي التزام من الالتزامات الواردة موضوع هذا العقد تطبق عليه غرامة التأخير المنصوص عليها في القـــانون ٨٩ لسنة ١٩٩٨ والصادرة بقرار وزير المالية رقم ١٣٦٧ لسنة ١٩٩٨ مع عدم الإخلال بحق الطرف الأول في المطالبة بالتعويض إن كان له مقتضى

البند العاشر

يلتزم طرفي العقد بأي تعديلات يدخلها مجلس الدولة عند مراجعته لهذا العقد

البند الحادى عشر

تختص محاكم مجلس الدولة بالفصل في كافة المنازعات التي قد تنشأ عن تنفيذ هذا العقد

حسلا براهم

البند الثابي عشر

يلتزم الطرف الثانى بمجرد أتمام العمل بأن يخلى الموقع من جميع المواد والأتربة ومخلفات البناء والاكان للطرف الأول الحق بعد اخطار الطرف الثانى .

رِ البند الثالث عشر

يقــر الطرفان باتخاذهما العنوان الموضح بصدر هذا العقد محلا مختارا لكل منهما توجه إليه جميع المكاتبات والإنذارات وفى حالــة تغيير أحد الطرفين لهذا العنوان يلتزم بإخطار الطرف الأخر بالموطن الجديد خلال أسبوع بكتاب موصى عليه بعلم الوصول ، وإلا اعتبرت جميع المكاتبات المرسلة على الموطن القديم صحيحة قانونا

البند الرابع عشر

حرر هذا العقد من التخ المُعَنِّحُ الْمُعَلِّيَةِ تسلم الطرف الثاني إحداها واحتفظ الطرف الأول بالباقي للعمل بمقتضاها

أو الطرف الثان المرف الثان المرف العوضى محمد)

المفوض العام للشركة الوطنية للمقاولات العامة The state of the s

الرئيس التنفيذي لجهاز شنون البيئة

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Additional Equipment for Existing RBOs Equipment for New Code RBOs* Equipment Name Appropriateness for each Item No. ALX TNT MSR SEZ GC AST ASW HGD CCC C. Common Analytical Equipment C-3 A.A.S.Flame type 1 C-4 A.A.S.Flameless type 1 1 1 1 1 1 Necessary for expanding usage frequency of the atomic C-4A Flame Component for A.A.S 1 1 1 1 1 absorption spectrophotometer.. A.A.S.Flameless type with Flame indispensable for analyzing heavy metals designated at the C-4B 1 1 1 Compartment nvironmental standard.. UV/VIS Spectrophotometer (Single C-5 1 1 1 J 1 1 Beam' UV/VIS Spectrophotometer (Double Indispensable for calorimetric analysis widely used as the C-6 1 1 1 1 1 fundamental equipment Beam) Gas Chromatograph Mass C-7 1 Spectrometer C-8 FID/FPD Gas Chromatograph 1 C-9A FID Gas Chromatograph 1 1 1 Necessary for monitoring the oil spill incident of the Red Sea. C-10 ECD/FID Gas Chromatograph 1 1 High Performance Liquid C-11 1 1 Chromatograph essary as a convenient equipment for analyzing extensive C-12 Ion Chromatograph 1 1 1 1 1 1 1 1 1 inorganic ions. C-13 Stereoscopic Microscope 1 1 1 1 ĵ 1 1 1 Necessary for biological observation. C-14 Microscope 1 1 1 1 1 1 Necessary for identification of plankton It can be measured, while the most fundamental pH within the C-15 Handy Type pH Meter 1 1 1 1 1 1 1 1 vater quality is moved, and it is the indispensable equipment. C-16 Laboratory pH Meter 1 1 2 1 1 1 1 1 Indispensable for measuring of pH at the good accuracy. C-18 Mercury Analyzer 1 Î 1 1 1 1 1 Necessary for analyzing of mercury. C-19 Glass Wares Set 1 1 1 1 1 1 1 1 Important item as a basic equipment for laboratory. C-20 1 1 1 : 1 1 Important item as a basic equipment for laboratory. G. General Laboratory Equipment G-1 Semi-Micro Analysis Balance-1 ì 1 1 1 1 3 Indispensable in order to measure weighing of the reagent and G-1B Semi-Micro Analysis Balance-2 1 1 1 1 1 1 1 1 1 the suspended materials, and upper limit of the weighing should be necessary at about 200g. ndispensable in order to conveniently and quickly measure G-2 Macro Analysis Balance 1 1 1 1 1 1 1 1 veighing of the reagent and samples. G-4 Tabletop Type Centrifuge I 1 1 í 1 1 1 1 Important item as a basic equipment for laboratory. G-6 Muffle Furnace (for Organic) 1 1 ı 1 1 1 τ 1 Important item as a basic equipment for laboratory. G-8 Constant Temperature Oven 1 1 1 1 1 1 1 1 1 Important item as a basic equipment for laboratory. G-9Middle Temperature Oven 1 1 1 1 1 Important item as a basic equipment for laboratory. G-11 Oven for Glass Wares (Dryer) 1 1 1 ì 1 2 1 1 1 Important item as a basic equipment for laboratory. Indispensable for measuring of coliform number described in G-12 Autoclave (Vertical Type) 1 1 1 1 1 2 1 1 1 water quality standard. Indispensable for measuring of coliform number described in G-13 ì 1 1 1 1 1 1 1 1 water quality standard. Indispensable for measuring of coliform number described in G-14 Low Temperature Incubator 1 1 1 1 1 1



water quality standard.

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							Bold	Type N	umber	:Plannin	g equipment number of this B/D.
Code		Additi	onal E			xisting	RBOs	Equipment for New RBOs*			
No.	Equipment Name	ALX	TNT	MSR	SF7	GC	ccc	TZA	ASW		Appropriateness for each Item
G-15	Rotary Evaporator	1	1	1	1	1	1	YO1	7511	1100	Main purpose is to use for the concentration of the organic solvent, however, gaschromatograph is not requested, so it is
G-18	Fraction Collector	1	1		1	J	1				unnecessary at this time. Unnecessary due to the reason of low usage frequency at the existing RBOs.
G-20	Shaker (Middle)	2	2	2	2	2	3	1	1	1	Important item as a basic equipment for laboratory.
G-22	Shaker (Reciprocal)	2	2	2	- 2	2	1				Unnecessary due to the reason of low usage frequency at the existing RBOs.
G-23	Mixer	1	1	I	1	Ī	1	2	2	2	Important item as a basic equipment of laboratory.
G-24	High Speed Homogenizer	ì	1	1	1	ì	1				Unnecessary due to the reason of low usage frequency at the existing RBOs.
G-25	Hot Plate (Small)	2	2	2	2	2.	3	·3.	3	3	Indispensable for decomposition procedures of samples for heavy metal, etc
G-26	Magnetic Stirrer (w/Hot Plate)	2	2	2	2	2	2	2	2	2	Necessary for mixing of the sample, and an important item as a basic equipment.
G-27	Multi Magnetic Stirrer w/Magnetic sets	1	1	1	1	1	2	1	1.	1	Necessary for mixing of the sample, and an important item as a basic equipment.
G-28	Constant Temperature Water Bath	1	ı	1	1	1	1	1	1	1	Necessary for temperature control of the sample, and an important item as a basic equipment.
G-32	Water Bath	2	2	2	2	2	1	2	2	2	Necessary for temperature control of the sample, and an important item as a basic equipment
G-33	Cooling Unit	i	1	1	1	1	2				Unnecessary due to the low usage frequency in existing RBO,
G-34	Ultrasonic Cleaner	I	1	1	1	1	2	1	1	1	Important item as a basic equipment of laboratory.
G-37	Ultrasonic Pipette Cleaner	ı]	1	1	1	2	1	1	1	Important item as a basic equipment of laboratory.
G-38	Ion Exchanger	1	1	1	1	1		2	2	2	Important item as a basic equipment of laboratory.
G-39	Water Distillation Unit	1	1	1	1	1	2	1	1	1.	Important item as a basic equipment of laboratory.
G-40	Clean Bench	1	1	1	j		1	1	1	1	Indispensable for the experiment on the microorganism.
G-41	Draft Chamber w/Gas Cleaning Device	1	1	1	1	1	J	1	1	- 1	Fundamental item necessary for the treatment of the noxious gas.
G=42	Draft Chamber	1	1	1	1		1	1	1	1	Fundamental item necessary for the treatment of the noxious gas.
G-43	AC Stabilizer	3	2	2	1		3	1	1	1	h dispensable for precise instruments such as atomic absorption
G-44	Cold Storage (Prefabricated-type)	1 .	1	1	1	1	1			·	Unnecessary equipment because of low uasage condition in existing laboratories.
G-46	Refrigerator	1	1 1	1	1	. 1	1	3	3	3	Three (3) refrigerators are needed instead of the cold storage (prefabricated type) that was not requested.
G-47	Freezer .	1	j	1	1	1	1	1	1	1.	Indispensable for saving of unstable reagents and samples.
G-48	Ice Maker (Cube Ice)	1	1	ì	j	1	1	1	1	1	Necessary for providing ice used for keeping of water quality samples collected in the field.
G-49	Copy Machine	1	1	1	1	.1	1	1	1	1	Useful equipment for the management of laboratories.
G-50	Monitoring Car	1	1	1	1	1		1	1	1	Indispensable for field sampling and observation of water/air quality for the transportation of collected samples.
G-51	Tool Set	1	1	1	1	1	l	1	1	1	Necessary for repair and adjustment of the equipment.
G-53	Locker for Reagents	1	1	1	1	1	2	3	3	3	Indispensable for stock of reagents.
G-55	Balance (6kg)	1	, 1	1	1	1	1	1	1	1	Indispensable for conveniently and quick use of measuring samples/reagents in order to grasp summary weight of them.
G-56	Infrared Heater-(Lamp)	1	1	1	1	1	j				Unnecessary equipment because of low usage condition in existing laboratories.
G-57	Colony Counter	1				1	1	2 ·	2	2	Indispensable for the measurement of number of coliforms described in water quality standard.



Additional Equipment for Existing RBOs Equipment for New Code and CCC* RBOs* Equipment Name Appropriateness for each Item No TNT MSR SEZ GC CCC AST ASW HGD Useful equipment for the management of laboratories such as the G-58 Personal Computer (Arabic/English) 1 1 ı 1 1 2 2 2 1 Useful equipment for making a photograph of pollution source G-59 Video Camera w/Video Monitor Unit 1 1 ŀ 1 1 1 1 1 and situation related to samples. Useful equipment for making a photograph of pollution source G-60 Camera 1 1 1 1 1 1 ļ 1 1 and situation related to samples. G-61A Over Head Projector w/Screen 1 1 1 1 1 1 1 Necessary in training and in the announcement of the result. G-61B LC Projector 1 1 1 t 1 1 1 1 1 Necessary in training and in the amouncement of the result. W. Water Quality Monitoring Equipment The aqueous organic earbon can be conveniently measured, and W-1 Total Organic Carbon Analyzer 1 1 1 1 1 1 it is useful for the estimation of the dilution degree of COD. DO as the most fundamental parameter within the water quality. W-2 Handy Type DO Meter 2 1 1 1 1 1 1 1 1 can be measured on the field, and it is the indispensable equipment. DO can be measured at the good accuracy, and it is the W-3 Laboratory Type DO Meter 1 1 ì J 1 1 1 1 indispensable equipment. Though it is useful for analyzing the large number of samples at once, it seems to be unnecessary at present. Because the sample number can not be so large and existing laboratories have not Total Nitrogen/Intal Phosphate W-4&5 1 1 1 sufficiently utilized this item up to now. Hence, it is Analyzer recommendable to use the flow cell added at C-6 as the attachment instead of this item in order to raise the efficiency of calorimetric analysis.

Color and turbidity within the water quality as the most W-6&7 Tint Meter/Turbidity Meter 1 1 1 1 1 fundamental parameters can be measured, and it is the indispensable equipment. Handy Type Conductivity/Temp. Electro conductivity as the fundamental parameter can be W-8 Į 1 1 ŀ 1 1 1 1 Meter measured in the field, and it is the indispensable equipment. Elactro conductivity can be measured at the good accuracy, and W-9 Conductivity Meter ì 1 ŀ 1 i 1 1 it is the indispensable equipment. Salinity can be measured at the good accuracy, and it is the W-10 Salt Meter (Na Ion Meter) 1 1 1 1 1 1 1 1 1 indispensable equipment. W-11A Water Sampler(Hyroht Type) 1 1 1 1 2 2 1 1 Indispensable for sampling of water quality. Because sampling size of water quality is very small, and it is W-11B Water Sampler (Pettenkohrfer Type) 1 1 1 1 unnecessary. W-11C Water Sampler (Bandon Type) 1 1 1 Indispensable for sampling of water quality. W-13 Ekman Barge Grab Sampler 1 1 1 1 1 2 í 1. 1 indispensable for taking samples of sediment. W-14 Plankton Net 1 1 1 1 Indispensable for taking sample of the plankton of the seawater Distillation Apparatus(for Necessary equipment for analysis of cyanogen, ammonia, W-15 1 1 1 1 1 1 CN,NH4,F) fluorine described in water quality criterion. Unnecessary because oil content is not regulated in Low No.4 W-16 Oil Content Meter 1 1 1 1 1 1 and existing oil content meter has not been utilized well. BOD Analyzing Indispensable for the measurement of the BOD which is an W-13 ì 1 1 1 1 1 1 1 Apparatus(Incubator) important index described at the water quality criterion. Indispensable for the measurement of the COD which is an W-19 COD Analyzing Apparatus(Cr) 1 1 1 1 1 1 1 important index described in the water quality criterion. Indispensable equipment for the wastewater treatment which W-22 Waste Water Treatment Equipment 1 1 1 1 1 1 ŀ 1 1 comes out of the laboratory by the end of the analysis. Though it is the indispensable equipment, when it deals with it by the container which stocks the waste water after it finished W-23 Portable Waste Water Chest (180L) 1 3 the analysis, the capacity is changed, since the capacity is excessive. It is the indispensable equipment, when it deals with it by the W-23B Portable Waste Water Chest (90L) 2 2 container which stocks the waste water after it finished the malysis W-24 Portable Waste Water Chest (50L) 2 3 1 3 2 2 Indispensable for the stock of wastewater before the treatment.

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											g equipment number of this B/D.
Code	Equipment Name	Additi	onai Ec	uipmen and C		xisting	, RBOs		ment fo RBOs ^a		Appropriateness for each Item
No.		ALX	TNT	MSR	SEZ	GC	ссс	AST	ASW	HGD	
W-26	Water Quality Analysis (Temp.pH,Conductivity,Turbidity and DO)	1	1	1	1	1	1	1	1	7	It can conveniently and quickly measure the water quality in the field, and it is the useful equipment.
W-29	Water Proof Camera	1	1	1	1	1	1			1	Indispensable for the observation of aquatic lives in the coral reef which inhabit seawater.
W-30	Automatic Titrator	1	. 1	1	1	1	1				Though it is useful for analyzing a large number of samples, it is unnecessary because number of sample is not so large and exisying laboratories have not utilized enough.
W-31	Ion Analyzer w/ Electrode Set	1	1	1	1	.)	1	1,	1	1	useful for measurement of the ion of water such as ammonia, cyanogen, chlorine ion and fluorine.
W-32	Portable Water Quality Test Kit	i	1	1	1	1	1	2	2	2	Necessary for steasurement of the water quality in the field.
W-33	Vacuum Filter w/ Manifold	i	1	1	i	i	i	1	1	1	indispensable for the measurement of SS.
A. Air	Quality Monitoring Equipment										
A-1	Mobile Unit										Useful for the air monitoring of around sources such as the factory, it often utilizes even in existing RBO, and indispensable for new RBOs except for HGD.
A-1A	SO2 Monitor (UV Fluorescence Method)	1	1	1	1	1	1	1	1		Necessary item equipped at A-1 for the continuous measurement of sulfur dioxide.
A-1B	NOx Monitor (Chemiluminescence Method)	1	1	- 1	J	1	1	ſ	1		Necessary item equipped at A-1 for the continuous measurement of carbon dioxide/monooxide.
A-IC	CO Monitor (Non-dispersive IR Method)]	1	1	1	1	1	1	1		Necessary item equipped at A-1 for the continuous measurement of carbon monooxide.
A-1D	Ozone Monitor (UV Absorption Method)	i	1	1	1	1	1	1	1		Necessary item equipped at A-1 for the continuous measurement of ozone.
A-IE	Hydrocarbon Monitor (FID-GC Method)	1	1	1	1	. 1	1	1	1		Necessary item equipped at A-1 for the continuous measurement of hydrocarbon.
A-1F	Dust Monitor (Beta-ray Absorption)	1	1	1	1	1	1	1	1		Necessary item equipped at A-1 for the continuous measurement of SPM.
A-1G	Combined Wind Vane and Anemomeer	1	1	1	1	1	1	1	1		Necessary item equipped at A-1 for the continuous measurement of wind velocity/direction.
A-1H	Thermo-hygrometer	1	1	1	1	1	1	1	1		Necessary item equipped at A-1 for the continuous measurement of atomospheric temperature/humidity.
A-1J	Solar Radiation Meter	! 		-	1	1			· •		Necessary item equipped at A-1 for the continuous measurement of solar radiation.
A-IK	Data Logger	1	1	, 1	1	1	1	1	1		Necessary item equipped at A-1 for the data processing.
A-1L	Standard Voltage Regulator	ì	1	1	1	1]	1	1		Necessary item equipped at A-1 for the power supply.
A-1M	Chasis Cabin	1	1	1	1	1	1	1	1		Necessary item equipped at A-1 for the installation of all the meters related to the mobile unit.
A-IN	Tractor	1	1	1	1	1	1	1	1		Necessary item equipped at A-1for the traction of the mobile unit.
Λ-7 (A-1o)	Zero Gas Generator	1	1	1	1	1	1	1	1		Necessary item for the calibration of the zero point.
A-8 (A-1P)	Span Gas Dilutor	ì	1	i	1	1	1	1	1		Necessary item for the calibration of the maximum point.
A-25 (A-1Q)	Standard Gas Cylinder w/ Regulator	. 1	1	1 .	1	1	I	1	1		Necessary item for the calibration of the gas analyzer.
Λ-3	Portable Black Fume Monitor]	1	1	1	1	1 .	1	1	1	Necessary for the measurement in the practical use relate to the color of the smoke discharged from the chimney in the visual observation.
A-4	Orsat Analyzer]	1	1	1	1	1				Though the concentration of carbon dioxide and oxygen in exhaust gas can be measured by this item, the effectiveness is not so large, because continuous measurement is possible by A- 19 NOx analytical instrument.

Additional Equipment for Existing RI3Os Equipment for New Code and CCC* RBOs* Equipment Name Appropriateness for each Item No. MSR SEZ ALX TNT GC CCC AST ASW HGD Wet Type Gas Collector (for SOx, Fundamental instrument for the sampling of sulfur oxide (SOx) A-5 1 1 ŀ ì 1 1 1 1 in the exhaust gas. Necessary instrument set related to the measurement of the dust **A-**6 Gas Sampler (Detector Tube) 1 1 l 1 1 1 1 1 in exhaust gas, it is collected on the filter paper. Necessay for the measurement of exhaust gas and gas ۸-9 Stack Gas Sampler (for Dust) 1 1 1 1 1 1 1 1 oncentration in work environment. Though it is the fundamental instrument related to the sampling Portable Stack Gas Sampler (for A-10 1 1 of nitrogen oxide (NOx) in exhaust gas, it is unnecessary 1 1 1 1 because the continuous measurement can be done by A-19. Necessary for the measurement of the sampling gas quantity in A-11 Gas Meter 1 1 1 exhaust gas and environmental air, it is used at A-5, A-9 and A-1 1 1 1 1 1 lecessary for the measurement of the flow rate in the sampling A-12 Rotor Meter 3 1 1 1 1 í. J 1 1 of exhaust gas and environmental air. it is also used at A-5, A-9 and A-10. Necessary for the measurement of the flow rate in the sampling A-13 Mass Flow Meter 1 1 1 1 1 1 1 of exchaust gas and environmental air, it is also used at A-5, A-9 and A-10. The necessity as filter paper or water SS sample for collector A-15 Auto-Dry Desicator 1 1 1 1 2 2 2 ingredient (A-9, A-20, A-21) of the dust dry. Portable HC/CO Analyzer for Stack It is essential for the continuous measurement of carbon A-17 1 1 1 1 1 1 1 1 1 nonoxide and hydrocarbon in exhaust gas. Portable Auto. SOx Analyzer for It is essential for the continuous measurement of sulfur dioxide A-18 1 1 1 1 1 ì 1 1 1 Stack Gas în exhaust gas. Portable Auto. NOx Analyzer for It is essential for the continuous measurement of nitroge oxide A-19 1 1 1 1 3 1 1 1 1 in exhaust gas. Stack Gas Basic instrument for sampling of dust in the ambient air, and it A-20 High-volume Air Sampler 4 1+2 1+2 1+2 4 2 3 3 2 indispensable for the investigation. Basic instrument for sampling of dust in the ambient air, and it A-21 Low-volume Air Sampler 4 1+2 1+2 1+2 4 2 3 3 2 indispensable for the investigation. Though it is for the sampling of rain and fall dust, it is A-22 Deposit Gauge Ī 1 1 3 1 1 unnecessary because there is no standard in Egypt By the instrument for the respective grain diameter collection of the particle in the environmental air, though the origin can be A-23 Andersen Air Sampler 1 3 1 1 1 1 estimated by analyzing the sample, the use frequency is yet low even in existine RBO. Unnecessary for the inspection of sulfur content in fuel because A-24 Sulfur Content Meter 1 1 1 ì 1 1 necessity of this item is low, It is unnecessary since it has not been utilized well in existing A-26 Air Bacteria Sampler (2-stage) 1 ì 1 Necessary for the quick measurement of VOCs (volatile organic A-28 Ambient Air Analyzer 1 1 1 1 1 1 1 1 1 compounds) in roadside and made comp Indispensable for the measurement of dust concentration in work A-29 Total Dust Meter (Light-scattering) 1 1 1 place, and expected to be high use frequency. Indispensable for the measurement of small pariculate less than A-30 PM 10 Meter (Portable) 1 1 10 micron contained in dust. In the Cairo metropolitan area, there is a complaint of much A-32 Noise Meter 1 noise, therefore, it is necessary to measure noise by this item. M. Marine Survey Equipment Unnecessary since the analysis of the sample is carried out in the M-1 Mobile Laboratory laboratory after the transportation to RBO. M-2 Boat for Monitoring/Sampling Indispensable for marine survey/sampling/transportation. Ocean Observation Buoy, Land Unnecessary since it is the equipment for the marine research Based Station for Data Collection M-3 and it deviates from the purpose and concept related to the and Analysis nonitoring plan of RBO. Unnecessary since it is the equipment for the marine research M-4 Remotely Operated Vessel (ROV) and it deviates from the purpose and concept related to the monitoring plan of RBO. Unnecessary since it is the equipment for the marine research M-5 Tide Gauge and it deviates from the purpose and concept related to the monitoring plan of RBO. ecessary since it is the equipment for the marine research M-6 Echo-sounder and it deviates from the purpose and concept related to the monitoring plan of RBO. Indispensable for the observation of the situation related to the M-7 Under Water Video Digital Camera pollution/ecology/marine lives.

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		ditional Equipment for Existing RBOs Equipment for I						ment fo	r New		
Code	Equipment Name	İ		and (CCC*				RBOs*	:	A
No.	rsquipment Name										Appropriateness for each Item
		ALX	TNT	MSR	SEZ	GC	ccc	AST	ASW	HGD	
M-8	Under Water Light Meter						***************************************			1	Necessary for obtaining the important information on depth distribution of under water light in seawater.
M-9	Gerographical Position System with Handled Unit & USP/PDA Adapter & Different GPS Receiver and									1	Necessary for understanding of actual sampling position on the sea.
M-10	Binoculars					,				1	Basic equipment for navigation.
M-11	Fish Finder										Unnecessary since it is the equipment for the marine research and it deviates from the purpose and concept related to the monitoring plan of RBO.
M-12	Marine Radio w/built in Hailer										Sampling and survey area is limited in 2 km apart from the coast, hence, the marine radio is unnecessary.
M-13	Handled VIIF Radio									1	Necessary for the communication between base and survey boat while the investigation.
M-14	Zoo Plankton Counting Tray									1	Indispensable for the measurement of the Zooplankton.

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Proposal Of Training Plan Required for new RBOs (Ast, Asw.& hur.)

Introduction:

- ** This training is required to train both chemists and technicians on several analysis and laboratory works (Environmental monitoring).
- ** The plan training will be conducted in several stages addressing all the related topics.

Proposal:

The training will include two section (Air and Water)

- **The background information should be covered firstly in classroom presentations.
- **It is recommended that some of these presentation and practical training should be conducted by "CCC" staff under supervision of Japanese experts based on the Egyptian site request.
- ** This training Should be divided into two parts (theoretical and practical):
- * First part (Theoretical):
- **These presentation should cover the (Water / Air) Quality Monitoring:
 - * Introduction of (air and water) pollutants.
 - Sampling and preservation of samples (Air & Water).
 - Colorimetric method (CN⁻, F⁻).
 - * Titration Method (DO, Cl⁻, SO⁻₄).

Atomic absorption method. (Cd, pb, Fe,...).

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- Microbiology Examination (coliform group, Total bacterial count).
- · Quality assurance Quality control.
- Second part (Practical for Water):
- Environmental water and wastewater analysis Training covering the environmental Egyptian law (COD, BOD, Chloride, hardness,.....etc).
- · Sampling preservation and custody.
- · Detection of the sampling point.
- Digestion of samples, Atomic absorption. (Cd, pb, Fe,...).
- Microbiology Examination (Total coliform, Fecal Coliform), Total bacterial count).
- Quality assurance Quality control.

Third part (Practical for Air):

- Ambient Air with mobile laboratory (CO,SOX, NOX,HC, O3).
- Stack Emission (SO_X, NO_X,CO,O₂......etc).
- Determination of Noise BY 'Sound level meter'.
- PM10.
- TSP (high volume& low volume).
- € Lead Emission.

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Training Schedule for New RBOs(Ast., Asw., Hur.)

Theoretical Training Items	period	participant
Introduction.	2 Days	(air & water)
Sampling and preservation	2Days	(air & water)
Colorimetric methods	2 Days	(air & water)
Titration methods	2 Days	(air & water)
Atomic Absorption methods	2days	(air & water)
Microbiology Examinations.	3 Days	(Water)
Quality Assurance& Quality Control	4 Days	(Air & water)

Practical Training Item	Period	Participant
*Detection of the sampling Point *Sampling and preservation	2 Days	(water)
PH, TSS,TDS,BOD, COD, Hardness,Chloride, Sulfate, Nitrate, Florid	Two Weeks	(water)
Oil & Grease	1 Day	(water)
Digestion Samples for 'Atomic Absorption'	2 Days	(water)
* Total Coliform & Fecal Coliform * Total bacterial Count.	One Week	(water)

Practical Training Item	Period	Participant
Ambient Air Monitoring with Mobile	5 Days	Air
Lab.		_
Stack mission	4 Days	Air
Detection of Noise with "Sound level	1 Day	Air
meter'	İ	
PM10 Measurement	1Days	Air
TSP (High Volume& Low Volume)	4 Days	Air
Lead Emission	1 Days	Air

^{**} The training will be start in June 2003.

** The practical part will be in the field in each RBOs (Asw, Ast, Hur)

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^{**} There are 34 participants from different RBOs (Ast., Asw., Hur.).

^{**} The theoretical part attendance will be in Class Room in CCC, or training room at each RBOs.

English Translation of Annex A

Contract

Of establishing the Regional Branch building of the Egyptian Environmental Affairs Agency in Hurghada.

On Saturday, July 27th 2002, this contract was enacted between both of: -

- Egyptian Environmental Affairs Agency affiliated to the Cabinet of Ministers located at 30 Misr-Helwan Agricultural Road, represented by Prof. Dr. Ayman Farid ABOU HADID; Chief Executive Officer of the Egyptian Environmental Affairs Agency, in signing on this contract.

(first Party)

The National Company for Construction and supplies - Civil Services Organization of Ministry of Defence located at 14 Mahmoud Talaat St, Nasr City, Cairo, represented in signing this contract by Mr. Brigadier. Abdel Gelil Al Awadi MOHAMED in the capacity of being the general deputised person of the company

(Second Party)

Prelude (Preface)

Considering the provisions of Tender Law No. 89/1998 and its executive regulations and the intention of the first party in completing the construction works of the branch of the Egyptian Environmental Agency in Hurghada and based on the approval of H.E Minister of state for Environmental Affairs dated July 20th, 2002, the first party intended to contract with the Civil Services Organization of Ministry of Defence to complete the construction works of the branch of the Egyptian Environmental Agency in Hurghada at a total cost of 794,275 Egyptian Pound (Only Seven Hundred Ninety Four Thousand and Two Hundred Seventy Five Egyptian Pound)

Trovision.

The above preface, the second party's offer, the entrustment order, the executive drawings and the attached schedule of implementation are considered inseparable of the provisions of this contract and complement to them.

2nd Provision.

- The 2nd party is committed to complete the construction of the branch of the Egyptian Environmental Agency in Hurghada which is the subject of this contract, according to the executive drawings, the offer submitted by the company, the entrustment order, schedule of implementation and according to the directives of the operation's consultant.

3rd Provision.

Payment Method:-

The 1st party is committed to pay the cost of the works subject in this contract valued at 794,275 Egyptian Pounds (Only Seven Hundred Ninety Four Thousand and Two Hundred Seventy Five Egyptian Pound) in forms regular payment slips endorsed by the consultant engineer.

4th Provision

The 2nd party is committed to execute the works subject in this contract in four months starting from receiving the site free from obstacles.

5th Provision

The 2nd party complies with all the local and governmental laws and regulations related to the execution of the operation according to the articles listed in the tender. Also, the 2nd party is responsible for keeping discipline in the site and executing the orders of the 1st party, rejecting who misses or disobeys the instructions or tries to cheat or violate the agreed upon conditions. The 2nd party abides by taking all the necessary measures to prevent injuries, death accidents or damaging the properties of the Government or ordinary persons. In such cases, the 2nd party's responsibility is direct with no intervention from the 1st party.

6th Provision

The 2nd party is responsible civilly and criminally for the works subject in this contract according to the Egyptian civil Law.

7th Provision

The articles of Law No. 89/1998 organizing tenders and its executive regulations are to be applied where no special statement was arranged for.

8th Provision.

All the stored materials by the 1st party or the tools and equipment and pieces which may have been brought to the site by the 2nd party in order to use in the execution of works on the ground, will be the responsibility of the 2nd party as well as the temporary works and constructions should remain as it is without disposing or removal unless the 1st party permits that or till the preliminary hand over. The said items should remain in the care, custody and responsibility of the 2nd party only, while the 1st party can't be claimed for any financial burdens or responsibility due to loss, damage, theft or else.

9th Provision.

If the 2nd party infringes any of the mentioned obligations subject in this contract, he shall be fined according to the delay fine articles stated in the law No. 89/1998 issued by the decree of the Minister of Finance No. 1367/1998 without disturbing the right of the 1st party in claiming compensation, if it is eligibly demanded.

10th Provision.

- Both parties of this contract abide by any amendments inserted by State Council when reviewing this contract.

11th Provision.

- State council's courts have the jurisdiction authority in all conflicts arising at the time of executing this contract.

12th Provision.

- The 2nd party is committed to evacuate the site from all materials, dust and construction left over immediately after completion of woks, otherwise the 1st party shall obtain the right of removing these things at the cost of the 2nd party after notifying him with a registered letter.

13th Provision.

- The two parties acknowledge the illustrated addresses in the preface of this contract as the selected addresses for both of them, where the correspondences and advices are to be sent. In case if any of the two parties change its address, that party should inform the other with the new address within a week by means of registered letter, otherwise all the correspondences sent to the old address would be considered legally correct.

14th Provision.

- This contract was issued of four originals, the 2nd party received one while the 1st party keeps the rest for own due purposes.

First Party

Second Party

(Dr. Ayman Farid ABOU HADID)
Chief Executive Officer of EEAA

(Brig. Abdel Gelil Al Awadi Mohamed National Company for General Construction