Attachment-4 Minutes of Meeting for the Steering Committee (SC) Meeting

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta

Minutes of Meeting for the 1st Steering Committee held on the 8th of June 2011 at GHAPWASCO

Holding Company for Water and Wastewater (HCWW), Sharkiya Potable Water and Sanitation Company (SHAPWASCO), Gharbia Potable Water and Sanitation Company (GHAPWASCO), Minufia Company for Water and Wastewater (MCWW) and JICA expert team (JET) hold the 1st steering committee on the 8th of June 2011. Contents described in the following pages were confirmed in the committee.

S.Bayoumi

Dr. Salah Bayoumi
Project Manager
Head of Project Sector
Holding Company for Water and Wastewater (HCWW)

For
M.Tsuchiya

Mr. Katsumi Fujii
Chief Advisor
The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area,
Japan International Cooperation Agency (JICA)

Mr. Ahmed Abdeen
Project Co-Manager
Chairman
Sharkiya Potable Water and Sanitation Company (SHAPWASCO)

Mr. Ayman Abd El Kader
Project Co-Manager
Chairman
Gharbia Potable Water and Sanitation Company (GHAPWASCO)

Mr. Mohamed Abu El Khair
Project Co-Manager
Chairman
Minufia Company for Water and Wastewater (MCWW)

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1. Date, Time, Place and Participants of the Committee

Date: June 8, 2011
Time: 10:00 – 13:00
Place: GHAPWASCO
Participants: As shown in Attachment-1

2. Members of the Steering Committee

The participants confirmed a definition of "Representative, HCWW", which is described as a member of the steering committee in the Record of Discussion singed on the 19th of August 2010, as follows:

Person(s) of HCWW, who is (are) assigned by the Project Manager for specific topics of meeting.

3. Communication Chart for common activities and inter-company cooperation

Communication chart for official communication among HCWW, SHAPWASCO, GHAPWASCO, MCWW and JET were agreed as Attachment-2. It should be utilized for official and common activities among the mentioned organizations.

JET should communicate continuously and directly with the leaders for the Project. However, the Project Manager should be involved for communication on large scale activities such as seminars, workshops, meetings of steering committee and joint coordinating committee. For the meetings of steering committee and joint coordinating committee, the Project team should send agenda and discussion papers in advance to the Project Manager and Project Co-Managers. Internal communication passes within each affiliated company (AC) should be independently prepared by each AC with JET.

4. Confirmation of C/P team members

The participants confirmed that the 3 ACs established counterpart (C/P) teams. JET requested the 3 ACs to allocate full time C/P members (to encourage C/P members to stay usually in offices of the Project team). To accelerate full time presence of C/P members, JET will prepare a weekly schedule sheets and dispatch either SOP experts or NRW experts to GHAPWASCO and MCWW as well as possible.

5. Situations of office set-up

The participants confirmed that the 3 ACs allocated office rooms to the Project team. SHAPWASCO, GHAPWASCO and MCWW declared that they will complete office preparations (such as space, furniture, telephone line, etc.) by the 14th of June 2011.

6. Preliminary plans of the ACs on model/pilot facilities/areas

JET requested the 3 ACs to present preliminary intentions of the Chairmen on model/pilot facilities/areas. The participants confirmed that the 3 ACs will submit the intentions to JET soon.

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JET will examine the intentions for appropriateness for model/pilot facilities/areas. The model/pilot area should be finally selected through discussion and according to general criteria mentioned in the Minuets of Meeting for Inception report (Minutes of Meeting dated the 25th of May 2011).

Final selection of model/pilot facilities/areas should be a subject to be informed to the Project Manager for confirmation.

7. List of equipment to be provided by JICA expert team

JET presented an examination result for water pressure recorder. It is a digital data logger. Since it has no monitor to check the pressure at site, JET requested GHAPWASCO and MCWW to provide ordinal analogue pressure gauges to install together with the digital data logger. GHAPWASCO and MCWW agreed on the JET's examination as well as provision of analogue pressure gauges. As approval of JICA is necessary for the modification, JET will convey the result of discussion to JICA.

The Steering Committee raised other modifications on specifications of metal pipe locator and non metallic pipe vibrator as follows:

1) To modify detection depth of the metal pipe locator from 40cm to 1m or more.
2) To modify non metallic pipe locater from vibrator to ground penetrating radar.

JET will additionally examine the mentioned equipment and will inform the result to the Project Manager and Project Co-Managers for confirmation.

8. Trainings such as seminars and workshop to be done by SHAPWASCO

Trainings such as seminars and workshops to be provided by SHAPWASCO were presented as shown in Attachment-3 for phase-1 of the Project. The participants agreed on the plan.

9. Coordination with IWSP

JET presented agreed points with IWSP team at a meeting held in Tanta on the 28th of May 2011. The participants confirmed that JET and IWSP activities are not duplicated. Confirmed points are as follows:

1) IWSP team will not touch data acquisition and analysis in deep for water distribution management for SHAPWASCO.
2) IWSP team will focus on sewerage activities for SOP and conduct SOP activities at two sewage treatment plants in GHAPWASCO.
3) IWSP team will concentrate strategy formulation rather than site skill improvement for NRW reduction. Furthermore, IWSP team will not provide equipment for leak detection. Covering fields of IWSP team and JET will not be principally duplicated for NRW reduction.

The Project Manager announced that USAID project for management improvement of MCWW will be continued in another fiscal year (July 2011 – June 2012). The participants agreed that MCWW,

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USAID team and JET should have a meeting to exchange information and to coordinate activity programs.

10. Initial agreement on cost sharing among the ACs

The participants confirm that costs necessary for trainer dispatch from SHAPWASCO and training in SHAPWASCO will be shared by the 3 ACs. It will be discussed by Chairmen of the 3 ACs for each training.

11. Training in Japan for Top Management

The participants agreed on Tentative Plan-1, which is shown in Attachment-4, for timing of the Training in Japan. However, the Egyptian side strongly requested to increase period of stay in Japan, in order to observe more situations of water supply in Japan. Moreover, the Egyptian side requested to increase number of trainees from four to five, in order to include the Project Manager. JET requested the Egyptian side to submit needs for training (purpose, expected contents, etc.) to verify the necessity. The participant agreed that the Project Manager will submit the needs to JET within a few days and that JET will convey it to JICA headquarters upon the verification.

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Attachiment-1

Attendance List of the Steering Committee, June 8, 2011

Ser. No	Name	Position	Tel
HCWW			
1	Dr. Salah Bauomi	Head of Project Sector, HCWW - Project Manager	0123491306
2	Mr. Sayed Hasanin Abd El Rahman	General Manager of Waste Water, HCWW	0123247162
3	Mr. Gamal El Housaini	HCWW	0107752316
4	Mr. Osama Abd El Rahman	Coordinator of IWSP and WWSS, HCWW	0123943134
5	Mr. Ahmed Mohamed Rabie	Technical Sector, HCWW	0100022404
SHAPWASCO			
6	Mr. Ahmed Abdeen	Chairman, SHAPWASCO - Project Co-Manager	0103448510
7	Mr. Alaa El Deen Mohamed Ali	Head of Information Center and Decision Strength Sector, SHAPWASCO	0182378564
8	Mr. Abd El Shafi Abd El Aziz	Manager of SOP Department, SHAPWASCO	0161512790
GHAPWASCO			
9	Mr. Ayman Abd El Kader	Chairman, GHAPWASCO - Project Co-Manager	0101431314
10	Mr. Abd Alah El Laithey	Vice Chairman, GHAPWASCO	0102223890
MCWW			
11	Mr. Mohamed Abu El Khair	Chairman, MCWW - Project Co-Manager	0122508721
12	Mr. Samir Abd El Monaem	Head of Planning Sector, MCWW	0106262932
13	Mr. Belal Galal	General Manger of Water Loss, MCWW	0113412137
14	Mr. Ayman Basiouni	Operation and Maintenance Sector, MCWW	016123247162
JET			
15	Mr. Katsumi Fujii	Chief Advisor, JICA expert team	01516228816
16	Mr. Mitsuhito Omori	Deputy Chief Advisor, JICA expert team	01518693460
17	Mr. Mohamed Nagi Gaber	Facilitator, JICA expert team	0122181101

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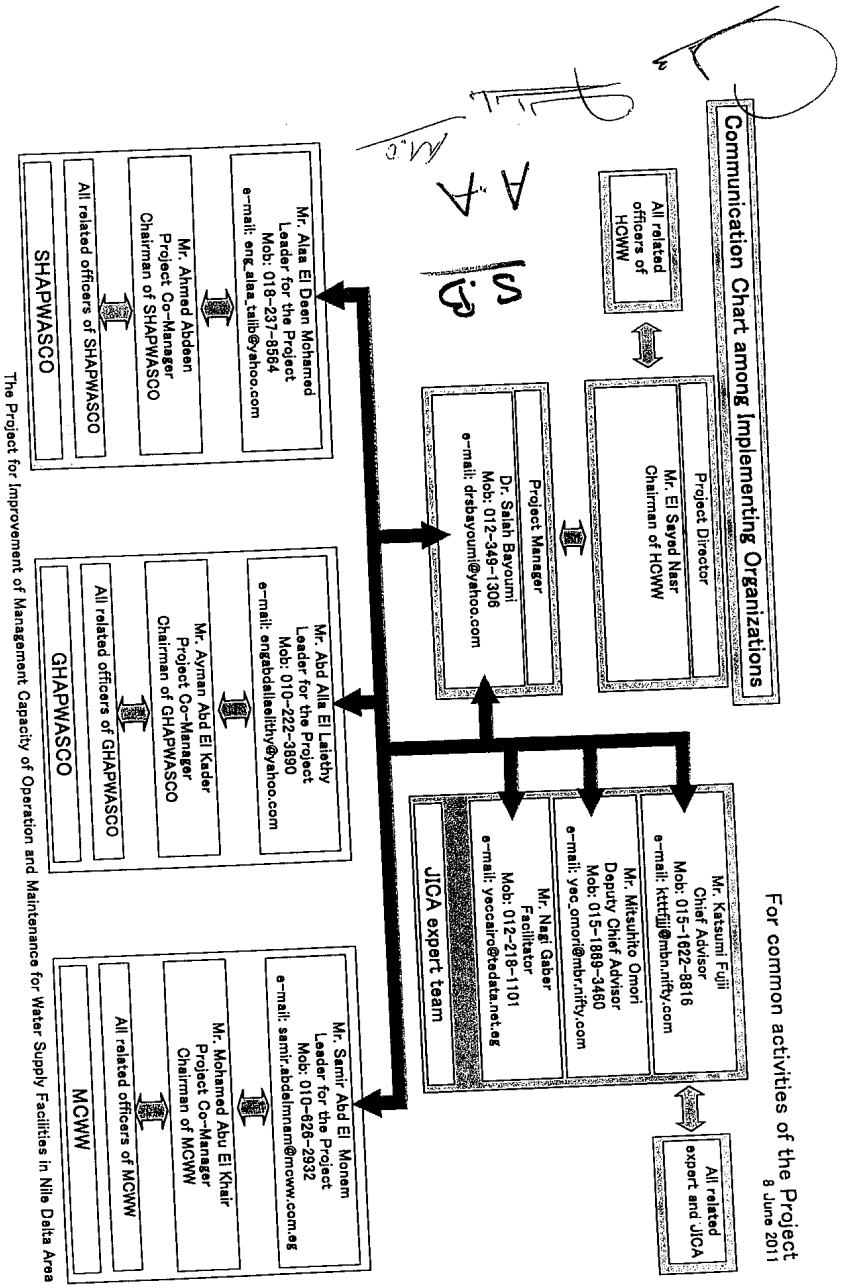
Attachiment-2



Attachment-3

Trainings to be Provided by SHAPWASCO for Phase-1

1. Mini-seminar for SOP

To provide necessary information for understanding SOP activities.

(1) 8 June 2011 for GHAPWASCO

(2) 9 June 2011 for MCWW

2. Mini-seminar for NRW

To present experiences and activities of NRW reduction.

(1) 18 June 2011 for GHAPWASCO

(2) 19 June 2011 for MCWW

3. Mini-workshop for selection of model facilities/areas for SOP and NRW

To present experiences and activities for selection of model facilities/areas.

(1) 2 July 2011 for GHAPWASCO for both SOP and NRW

(2) 3 July 2011 for MCWW for both SOP and NRW

4. Seminar for all ACs in Nile Delta

To present experiences and results of the previous project as well as self-effort after the project. To present plans of GHAPWASCO/MCWW for this Project as well as announcement of activity commencement.

(1) Middle of September 2011 in Tanta (22 September 2011 is proposed by K. FUJII.)

5. Site Observation Tour

To present activities and improved condition at sites of SHAPWASCO.

(1) Middle of October in Sharkiya, one day for both SOP and NRW.

6. Workshop on Meters

To facilitate a workshop in GHAPWASCO/MCWW on meter function and structure.

(1) one day of November for GHAPWASCO

(2) one day of November for MCWW

7. Training on Leakage Detection

To provide training on leakage detection at training yard in SHAPWASCO.

(1) From January to March 2012

(2) Details of training period and capable number of trainee at one training course: to be presented later by SHAPWASCO

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Attachment-4

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta

Program of Training in Japan

Course: Management Training

Participants: Mr. El Sayed Nasr, Chairman of Holding Company for Water and Wastewater (HCWW)
Mr. Ahmed Abdeen, Chairman of Sharkiya Potable Water and Sanitation Company (SHAPWASCO)
Mr. Ayman Abd El Kader, Chairman of Gharbia Potable Water and Sanitation Company (GHAPWASCO)
Mr. Mohamed Abu El Khair, Chairman of Minufia Company for Water and Wastewater (MCWW)

Tentative Plan -1

Date		Time	Activity	Location
1-Oct	Sat		Departure from Cairo.	
2-Oct	Sun		Arrival at Tokyo.	
3-Oct	Mon		Orientation by JICA.	JICA/TIC
4-Oct	Tue		Workshop to be held by IWA-ASPIRE	Tokyo International Forum
5-Oct	Wed	10:30-12:00	Introduction of national policy and governing organization for water supply. Opinion exchange with the Japanese officials.	Ministry of Health, Labor and Welfare
		15:00-17:00	Introduction of Japan Water Works Association and system for information/technology transfer among water supply service providers. Opinion exchange for technology development.	Japan Water Works Association
6-Oct	Thu	10:30-12:00	Opinion exchange for service and human resources development with a water supply service provider.	Yokohama city / Kanagawa province
		15:00-16:30	Site observation of a water treatment plant.	Yokohama city / Kanagawa province
7-Oct	Fri		Closing ceremony and opinion exchanges with JICA.	JICA/TIC
8-Oct	Sat		Departure from Tokyo.	
9-Oct	Sun		Arrival at Cairo.	

Tentative Plan -2

Date		Time	Activity	Location
13-Oct	Sat		Departure from Cairo.	
14-Oct	Sun		Arrival at Tokyo.	
15-Oct	Mon		Orientation by JICA.	JICA/TIC
16-Oct	Tue	10:30-12:00	Introduction of national policy and governing organization for water supply. Opinion exchange with the Japanese officials.	Ministry of Health, Labor and Welfare
		15:00-17:00	Introduction of Japan Water Works Association and system for information/technology transfer among water supply service providers. Opinion exchange for technology development.	Japan Water Works Association
17-Oct	Wed	10:30-12:00	Opinion exchange for service and human resources development with a water supply service provider.	Yokohama city / Kanagawa province
		13:30-15:00	Opinion exchange for promoting efficiency of service and experienced efforts.	Yokohama city / Kanagawa province
18-Oct	Thu	13:00-15:00	Site observation of a water treatment plant.	Yokohama city / Kanagawa province
19-Oct	Fri		Closing ceremony and opinion exchanges with JICA.	JICA/TIC
20-Oct	Sat		Departure from Tokyo.	
21-Oct	Sun		Arrival at Cairo.	

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta

Minutes of Meeting for the 2nd Steering Committee held on the 12th of September 2011 at HCWW

Holding Company for Water and Wastewater (HCWW), Sharkiya Potable Water and Sanitation Company (SHAPWASCO), Gharbia Potable Water and Sanitation Company (GHAPWASCO), Minufia Company for Water and Wastewater (MCWW) and JICA expert team (JET) hold the 2nd steering committee on the 12th of September 2011. Contents described in the following pages were confirmed in the committee.

A4-5

S. Bayoumi

Dr. Salah Bayoumi
Project Manager
Head of Project Sector
Holding Company for Water and Wastewater (HCWW)

Mr. Katsumi Fujii
Chief Advisor
The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area,
Japan International Cooperation Agency (JICA)

Abddeen

Mr. Ahmed Abdein
Project Co-Manager
Chairman
Sharkiya Potable Water and Sanitation Company (SHAPWASCO)

Mr. Ayman Abd El Kader
Project Co-Manager
Chairman
Gharbia Potable Water and Sanitation Company (GHAPWASCO)

Mr. Mohamed Abou El Kheir
Project Co-Manager
Chairman
Minufia Company for Water and Wastewater (MCWW)

1. Date, Time, Place and Participants of the Committee

Date: the 12th of September 2011
Time: 11:00 – 15:00
Place: HCWW
Participants: As shown in Attachment-1

1. Candidate Trainees for Training in Japan for SOP and NRW

(1) Approval of the Candidate Trainees

The Chairmen of the 3 ACs presented their selection results as follows:

Organization	Field	Name of Candidate
SHAPWASCO	SOP	Mr. Ahmed Saeed
	NRW	Mr. Saeed Mohamed Attia
GHAPWASCO	SOP	Mr. Nagi Yousri
	NRW	Mr. Ahmed Elsayed Rabie
MCWW	SOP	Mr. Mohamed Fathy Gaber
	NRW	Mr. Mohamed Mostafa El Shafie

The participants approved the candidate trainees. JET will start interview them for their detail plan for the training. However, JET requested the following:

- The candidate trainee should be a member of the SOP/NRW.
- If not, the candidate trainee should be involved in the SOP/NRW team.

(2) Request to Add One Person from HCWW

The Egyptian side requested JICA expert team (JET) to increase the number of trainee as follows:

- In order to disseminate the technology in whole Nile Delta or Egypt, it is necessary to train staff members of HCWW.
- NRW reduction activities have been commenced nationwide. However, progress of SOP dissemination is not well.
- In order to accelerate the dissemination of SOP, it is requested to add one person to the training from HCWW.

JET answered that it is difficult to increase the number of candidates in this stage. However, JET agreed to deliver the request to JICA headquarters.

2. Delivery of the Equipment and Responsibility for the Equipment

(1) Inspection Sheet and Receipt of the PCs

JICA Egypt Office requested the following on the delivered PCs (1 desk top PC, 2 notebook PCs, 3

Abddeen S.B

sets of Microsoft Office and 3 sets of Norton360) to GHAPWASCO and MCWW:

- GHAPWASCO and MCWW are requested to sign on inspection sheets and"certificate of handover".
- The inspection sheets are possible to be signed by anyone of GHAPWASCO/MCWW. However, the certificate of handover should be signed by Chairman of GHAPWASCO/MCWW.
- Especially, the inspection sheets should be completed promptly.

GHAPWASCO/MCWW received the remained equipment (Microsoft Office; 3 sets for each organization) and answered as follows:

- Inspection should be done on the 13th of September 2011 at each of GHAPWASCO and MCWW by their IT staff member(s).
- Certificate of Handover should be signed by the Chairmen after the inspection.

The participants confirmed that such procedures will be necessary for all the equipment to be delivered by JICA to the Egyptian side, as well as for delivered photocopy machines and pick-up trucks.

A4-6

(2) Display for the Desk Top PCs

The participants discussed displays for the desk top PCs, which have not yet been delivered. The participants agreed on the following:

- JICA Egypt Office should purchase and deliver the display (one for each of GHAPWASCO and MCWW).
- Until the mentioned delivery, GHAPWASCO and MCWW should provide displays for temporary uses to their project teams.

(3) Consignee and Custom Clearance of the Equipment to be delivered from Japan

JET informed that all the equipment procured from Japan will be delivered to the Project Manager. JET also requested the Egyptian side to undertake custom clearance and inland transportation. The Egyptian side agreed to undertake such activities.

(4) Responsibility of the Equipment for O&M

JET reminded that all the equipment (delivered or to be delivered) should be managed properly by SHAPWASCO/GHAPWASCO/MCWW for O&M, which includes procurement of consumables and maintenance/repair. The participants confirmed that each of SHAPWASCO/GHAPWASCO/MCWW should be responsible for the equipment upon the delivery.

3. Schedule of the Project

(1) JET's explanation

JET informed the schedule until December 2011 and the participants agreed on it basically (comments and modifications are mentioned in the next clauses). The informed schedule is as follows:

1) Major Activities

a) SOP

- Selection of model facilities.
- Preparation of system drawings for the model facilities.
- Commencement of trial operation according to draft SOP.
- Clarification of necessary equipment for SOP (flow meter).

b) NRW

- Selection of model areas in Markaz level.
- Organizing NRW team in branch office / network department for the selected model areas.
- Preparation of GIS drawings for the model areas.
- Preparation of chambers for MNF survey.

c) WDM

- Lecture and discussion on method, purpose and necessary equipment for WDM.
- Plan of management activity (items to be managed and purpose of the project).
- Selection of pilot area.
- Outline plan on facilities and equipment for the pilot project

d) TOT

- 3days course of TOT will be done for SHAPWASCO staff members (12 persons basically) at SHAPWASCO's training room.
- It is for general training for speech, presentation, etc.
- It will be conducted in October 2011 by a local instructor (to be arranged by JET).

2) Important Event

a) Steering Committee: 12 September 2011

b) JCC: 26 September 2011

c) Seminar for whole Nile Delta: 26 September 2011

3) Mini Seminars/Workshops to be organized by SHAPWASCO

a) Site Observation tour in SHAPWASCO (tour for SOP & NRW sites, people of GHAPWASCO and MCWW should be invited) in the middle of October 2011.

b) General training for practice of NRW reduction activity in the end of October.

c) Workshop on meters in November.

(2) Comments, Modifications and Agreement

1) JCC and Seminar

a) The participants agreed that JCC and the seminar should be conducted on the same day at Tanta. For the detail such as program and place should be discussed further among HCWW, the 3 ACs and JET prior to the JCC and seminar as well as contents of presentation.

b) As for the date of JCC and the seminar, the participants agreed that it should be modified to be the 27th of September 2011.

C) The participants discussed appropriate number of the invited persons to the seminar. It was concluded that 50 – 80 persons are appropriate, including JICA and JET. The participants confirmed that invited ACs are basically potable water and sanitation companies for Dakahilia, Domiatta, Kafr El Sheikh and Behaira.

d) The participants confirmed that small issues will not be discussed in JCC. JET should prepare draft program of JCC and submit it to the Project Manger for confirmation before JCC.

2) Participants to TOT

The Chairman of SHAPWASCO asked JET whether it is possible to increase the number of trainees up to 20 -25. JET answered that such training should be conducted for the trainer team of SHAPWASCO. However, JET added that it is possible for other persons to attend the TOT as observers.

3) Project Team Meeting and/or Presentation to Top Management

The Egyptian side commented that progress/result of model area/facility should be presented to the Chairman of each AC. JET answered that the presentations have been conducted in the Project team meeting (PTM) and it has been conducted since the beginning of the Project. Due to business of the Chairmen, their attendances have not been realized. The participants reminded themselves that the Project team should continue to organize PTMs monthly/by stage and according to request of the Chairmen.

4. Additional Activities to Promote Public Awareness

JET proposed to add activities for public awareness to the Project. The Egyptian side is willing to add it, however they insist that JICA's budget for SOP/NRW should not be reduced (budget of SOP/NRW should not be shifted to the activities for public awareness). Both sides agreed that the activities to promote the public awareness shall be added if the budget for SOP/NRW is not reduced.

Moreover the participants agreed on the following:

- To add the activities for public awareness, the project design matrix (PDM) should be amended.
- To amend the PDM, target and activities should be determined.

- Current social situation in Egypt should be taken carefully into consideration for means and contents of public awareness program.
- General strategy provided by HCWW should be considered in the activities.
- Necessary activities to be cooperated with JICA should be listed by the 3 ACs within PH-1 (phase until March 2012) and it should be screened by the both parties to list operations to be conducted in the Project. In parallel, JET should discuss capable cooperation of JICA with JICA, as well as for budget.
- It is not necessary to rush to conclude the amendment of PDM in the JCC to be held in September 2011. However, it should be finalized within this PH-1 (phase until March 2012) to determine the activities for PH-2.

5. PDM-1 and PO-1

JET presented draft PDM-1 to the participants as a subject to be approved by the next JCC. In the steering committee meeting, small modification was done. It is shown in attachment-2.

JET proposed amendment of annual plan of operation (APO), considering current progress of activities. It is agreed on by the participants. JET should prepare plan of operation (PO) -1 according to the agreed APO.

JET will prepare final PDM-1 and PO-1 and submit it to the Project Manager and JICA headhunters for confirmation before the next JCC.

6. Other Issues

The participants discussed other issues as follows:

- JET requested the 3 ACs to provide a telephone line as well as communication costs. The 3 ACs promised to provide direct lines (on the names of each of the 3 ACs). The participants agreed on the condition, which may exclude services for mobile and international telephone.
- The Egyptian side requested JET to provide necessary information, within one week, for their trip to Japan. JET answered that JET will investigate it and report it sooner.
- The Egyptian side commented that public awareness should be included in the training in Japan, especially contents of pamphlet/brochure. JET answered that obtainment of pamphlet/brochure is possible in the programmed training.

Attachiment-2

Project Design Matrix (PDM1)

Dated September 27,2011

Project Name : The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area

Duration : FY2011-FY2013

Project Site : Sharkiya Governorate, Gharbia Governorate, Minufia Governorate (Nile Delta Area)

Target Group : Staff of SHAPWASCO, GHAPWASCO, MCWW

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
【Super Goal】 Management capacity of operation and maintenance of water supply facilities is improved in Nile Delta Area	Performance Indicators (PIs) in the fields of management capacity of operation and maintenance are improved in Nile Delta Area	Quarterly Reports of all water supply companies in Nile Delta Area submitted to HCWW	
【Overall Goal】 Management capacity of operation and maintenance of water supply facilities is improved in Sharkiya, Gharbia and Minufia Governorates	PIs in the fields of management capacity of operation and maintenance are improved in Sharkiya, Gharbia, and Minufia Governorates	Quarterly reports of SHAPWASCO, GHAPWASCO, MCWW	Central and local government budget for development of water supply facilities is allocated appropriately
【Project Purpose】 Management capacity of operation and maintenance of water supply facilities is improved at the model areas/facilities in Sharkiya, Gharbia and Minufia Governorates	PIs in the fields of management capacity of operation and maintenance are improved at the model areas/facilities	Quarterly reports of SHAPWASCO, GHAPWASCO, MCWW	Governmental policy on water supply sector does not change significantly
【Output】 1) Human Resource Development through collaboration among water supply companies in Sharkiya, Gharbia and Minufia Governorates in strengthened	a. More than 3 members each of SOP/NRW teams in SHAPWASCO・GHAPWASCO・MCWW are certified as trainers by Steering Committee b. More than 20 times of seminars/workshops are organized under inter-company cooperation by the Project team	a. Certification of Training b. Reports of workshops	Employees who received trainings by the Project will continuously work for SHAPWASCO, GHAPWASCO, MCWW
2) Based on the experiences of SHAPWSCO, SOPs are developed and utilized at the model facilities in Gharbia and Minufia Governorates	a. More than 80% of SOP team members rates understanding of trainings more than 3 on the 5-scale evaluation b. The model facilities are operated and maintained based on SOP c. Improvement of PIs for the model facilities are evaluated based on SOP	a, b, c. Project Progress Reports	Personnel transfer of executive management will not affect the implementation of the Project
3) The institutional skills and experiences of SHAPWASCO for NRW reduction are transferred to NRW teams at the model areas in Gharbia and Minufia Governorates	a. More than 80% of NRW teams members rates understanding of trainings more than 3 on the 5-scale evaluation b. Water balance analysis is conducted properly for the 3 model areas c. 100% of detected leakage is repaired at the model area	a, b, c. Project Progress Reports	
4) The water distribution management capacity is improved in Sharkiya Governorate as an advanced model	a. Water distribution is managed based on SOP at the model areas b. Issues on water distribution capacity are reported to top management of SHAPWASCO	a, b. Project Progress Reports	
~~5) Utilizing experiences of SHAPWASCO, skills to promote public awareness is improved for model~~	~~a. Materials to promote public awareness are prepared~~ ~~b. 2 different types of event are organized in each of GHAPWASCO~~	~~a, b. Project Progress Reports~~	

Attachiment-1

List of Participants

[Egyptian side]		
Mr. El Sayed Nasr	Chairman of HCWW	(only for conclusion stage)
Mr. Mamdouh Raslan	Vice Chairman of HCWW	(only for conclusion stage)
Dr. Salah Bayoumi	Head of Project Sector of HCWW	
Mr. Ahmed Abdein	Chairman of SHAPWASCO	
Mr. Ayman Abd El Kader	Chairman of GHAPWASCO	
Mr. Mohamed Abou El Khair	Chairman of MCWW	
Mr. Samir Abd El Monem	Head of Sector for Planning & Follow-up, MCWW	
(For the beginning stage to confirm candidate trainees)		
Mr. Alaa Abu Talib	Head of Sector for Information & Decision Making Support, SHAPWASCO	
Mr. Ahmed Saeed	SOP trainer team, SHAPWASCO	
Mr. Saeed Mohamed Attia	NRW trainer team, SHAPWASCO	
Mr. Abd Alla El Liethy	Vice Chairman of GHAPWASCO	
Mr. Nagi Yousri	SOP team, GHAPWASCO	
Mr. Ahmed Elsayed Rabie	NRW team, GHAPWASCO	
[Japanese side]		
Mr. Koichi Mizukusa	Representative, JICA	
Mr. Katsumi Fujii	Chief Advisor / Water supply planning	
Mr. Masahiro Takeuchi	Distribution Network (1)	
Mr. Mohamed Nagi Gaber	Facilitator of the Project team	

~~Governorates~~			
0) The project is managed and coordinated properly	a. Agreement on the coordination among SHAPWASCO・GHAPWASCO・MCWW is prepared b. Project activities are regularly monitored based on PO/APO	a. Agreement Document b. Project Progress Reports	

Activities	Inputs	Important Assumption
1-1 Conduct management training for the top management 1-2 Conduct Training of Trainers (TOT) for developing SOP 1-3 Conduct TOT for NRW reduction 1-4 Disseminate the contents, the manners and the results of the collaboration among SHAPWASCO, GHAPWASCO and MCWW to the water supply companies in Nile Delta Area through reports and workshops 2-1 Survey the current conditions of water supply facilities in Gharbia and Minufia Governorates 2-2 Select 3 model facilities in Gharbia and Minufia Governorates each 2-3 Organize SOP teams 2-4 Conduct training for developing and applying SOPs at the facilities of Sharkiya Governorate 2-5 Revise SOPs of Sharkiya Governorate, if necessary 2-6 Develop SOPs for model facilities in Gharbia and Minufia Governorates based on SOPs for SHAPWASCO 2-7 Conduct On-the-Job Training for GHAPWASCO and MCWW to apply SOPs in operation and maintenance 2-8 Monitor the progress of SOP activities 2-9 Draft the policy/plan for disseminating SOP to the other Marakazes 3-1 Analyze the current situation on NRW in Gharbia and Minufia Governorates 3-2 Select 3 model areas for NRW reduction in Gharbia and Minufia Governorates each 3-3 Organize NRW reduction teams 3-4 Formulate an action plan for NRW reduction activities based on the action plan for SHAPWASCO 3-5 Conduct training on general practice of NRW reduction 3-6 Conduct training at the training yard in Sharkiya Governorate 3-7 Conduct training at model areas for water distribution management in Sharkiya Governorate 3-8 Prepare GIS drawing for model areas in Gharbia and Minufia Governorates 3-9 Make water balance analysis at model areas 3-10 Conduct leakage detection survey at model areas 3-11 Make water balance analysis after repair works 3-12 Draft policy/plan for disseminating NRW reduction activities to the other Marakazes 4-1 Discuss methods and conduct survey for water distribution management 4-2 Conduct training for water distribution management 4-3 Formulate a plan for water distribution management 4-4 Install the equipment for water distribution management at the model area 4-5 Operate the system 4-6 Develop SOP for water distribution management 4-7 Evaluate the operation and SOP for water distribution management ~~5-1 Discuss methods and objectives for promotion of public awareness based on experiences in SHAPWASCO~~ ~~5-2 Organize teams to promote public awareness~~	**Japanese side** 1) Japanese Experts ・Chief advisor/water supply planning ・NRW reduction management ・Leakage detection ・Water Treatment ・Water quality ・Electrical equipment ・Mechanical equipment ・Distribution network ・Others (if necessary) 2) Local Expert 3) Equipment 4) Training in Japan 5) Local Cost **Egyptian side** 1) Counterpart Personnel ・Project Director: Chairman, HCWW ・Project Manager: Chairman, SHAPWASCO ・Co-Project Manager: Chairman, GHAPWASCO Chairman, MCWW ・SOP Team ・NRW Team 2) Office space and facilities for the experts 3) Equipment 4) Necessary Information 5) Local Cost	Budget for the Project is allocated as planed by HCWW, SHAPWASCO, GHAPWASCO, and MCWW 【Pre-condition】 Budget for HRD is allocated properly to SHAPWASCO, GHAPWASCO and MCWW by HCWW

~~5-3 Formulate an action plan for activities to promote public awareness~~ ~~5-4 Prepare materials to promote public awareness~~ ~~5-5 Conduct events to promote public awareness~~ ~~5-6 Evaluate the activities to promote public awareness and draft the policy to continue the activities in other area~~ 0-1 Establish Steering Committee, consisting of representative of HCWW, SHAPWASCO, GHAPWASCO and MCWW 0-2 Discuss the contents, the manners for the cooperation among SHAPWASCO, GHAPWASCO and MCWW through the Steering Committee 0-3 Organize JCC at least once a year 0-4 Finalize the Indicators of the Project Design Matrix (PDM) for approval of the first Joint Coordination Committee (JCC) 0-5 Prepare a draft Annual Plan of Operations (APO) based on the Plan of Operations (PO) for approval of the first JCC 0-6 Monitor the progress of PO/APO and achievement of the Indicators of the PDM		

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta

Minutes of Meeting for the 3rd Steering Committee held on the 26th of February 2012 at GHAPWASCO

Holding Company for Water and Wastewater (HCWW), Sharkiya Potable Water and Sanitation Company (SHAPWASCO), Gharbia Potable Water and Sanitation Company (GHAPWASCO), Minufia Company for Water and Wastewater (MCWW) and JICA expert team (JET) hold the 3rd steering committee on the 26th of February 2012. Contents described in the following pages were confirmed in the committee.

S. Bayoumi

Dr. Salah Bayoumi
Project Manager
Head of Project Sector
Holding Company for Water and Wastewater (HCWW)

Mr. Katsumi Fujii
Chief Advisor
The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area,
Japan International Cooperation Agency (JICA)

AHMED ABDEIN

Mr. Ahmed Abdein
Project Co-Manager
Chairman
Sharkiya Potable Water and Sanitation Company
(SHAPWASCO)

Ayman abdel Kader

Mr. Ayman Abd El Kader
Project Co-Manager
Chairman
Gharbia Potable Water and Sanitation Company
(GHAPWASCO)

For confirmation of the results
Mr. Mohamed Abou El Kheir
Project Co-Manager
Chairman
Minufia Company for Water and Wastewater
(MCWW)

1. Date, Time, Place and Participants of the Committee

Date: the 26th of February 2012
Time: 14:00 – 16:00
Place: GHAPWASCO
Participants: As shown in Attachment-1

2. Confirmation of Participants

Due to sudden and important business, MCWW could not send a representative to the committee meeting. The Project Manager and the participants confirmed the following:

- The Project Manager was informed the absence of MCWW.
- Results of the committee meeting will be delivered later to MCWW.
- The committee meeting is effective. It has been agreed by MCWW.

3. Annual Plan of Operation (APO) for Phase-2

JICA expert team (JET) submitted and explained a draft APO (Attachment-2). It was approved by the committee and agreed to be submitted in the next Joint Coordinating Committee (JCC) for final approval. During the discussions, the following is confirmed by the participants.

(1) Mid-term Evaluation and the 2nd Open Seminar

The participants agreed that the mid-term evaluation and the 2nd open seminar are to be held in October 2012. JET will coordinate the schedule with JICA to keep the mentioned schedule.

(2) Training in Japan for WDM

JET proposed to have "the training in Japan for WDM" in September 2012. The participants agreed on the proposal.

(3) Contents of the 2nd Open Seminar

JET requested the 3 Affiliated Companies (ACs) to show some results of improvement for SOP and NRW at an occasion of the 2nd open seminar. Improvements will give encouragement to C/P members. The Project Manager recommended doing the following:

- For NRW, some improvements could be shown in numerical figures such as improved NRW ratio for one or two area(s).
- For SOP, it could be difficult to show the numerical figures for improvement such as improved efficiency of water. However, it is possible to show preparation of system drawings, installation of meters, etc.

The participants agreed on the request of JET and recommendation of the Project Manager.

(4) Schedule for SOP and NRW Activities

The Project Manager requested to finish the planned activities for SOP and NRW as early as possible, so that the Project team can be increase the number of model facilities/areas. JET answered that the Project team has same idea and requested the team members to do so.

(5) Procurement Schedule of Equipment for WDM

JET said that around half year is necessary to procure the equipment for WDM. Even if it is ordered in April 2012, its arrival will be in October / November 2012. The Project Manager responded to the schedule as follows:

- The half year seems too long.
- However it would be suitable if considering necessary preparation works to be undertaken by the Egyptian side, such as chamber construction, arrangement of communication system, etc.

4. The 2nd JCC

The participants confirmed that the 2nd JCC will be held on the 11th of March 2012. Starting time will be fixed soon. (On the 27th of February, it was fixed as 10:30am at HCWW.) Agenda is basically as follows:

- Summary of the progress
- Summary of activity plan for Phase-2
- Comments and discussions on the progress and plan
- Approval of APO for Phase-2

5. Training in Japan for WDM

JET proposed having the training in Japan in September 2012 for WDM. As requested from the beginning of the Project, the Egyptian side asked the increase of trainees from two to four. JET informed that 4 participants would be possible although confirmation of qualification and awareness are required for the candidate trainees. The Egyptian side declared that appropriate persons will be selected for the candidates.

6. Activity to Promote Public Awareness

After the revolution, activities are suspended for public awareness. The Egyptian side is seeking appropriate approaches to the general public for awareness promotion. In order to improve approaches and tools, the Egyptian side would like to include rerated activities in the Project. The Egyptian side considers that some new approaches and tools are required. Water museum would be one of the solutions.

JET informed the following:

- Activities should be linked to performance indicators (PIs), which are managed by HCWW and ACs.

- Sudden additions, without any justification as well as conceptual plan, are difficult in terms of modification of PDM.

Taking the situation into account, the participants confirmed to have the procedures mentioned below:

(1) Study on Necessary Approaches and Tools

The Project conducts collection of information on promotion activities for public awareness, i.e. the approaches and tools in Japan. In parallel, the Project team will make a concept of improvement for activities to promote public awareness.

(2) PDM

No dramatic modifications on the PDM, in the levels of Project Purposes and Outputs, are taken for the time being. One item is added in the Activity level for Output-1 "Human resources development" as follows:

Collect information for public awareness promotion to prepare improvement plans of approaches and tools for publicity.

This addition should be approved in the 2nd JCC. To justify this addition, the Egyptian side provides information on related PIs as well as current conditions before the JCC. JET undertakes the cooperation for this additional study within the currently planned assignment of experts.

(3) Actions for the Study

JET provides information such as examples in May – June 2012. Utilizing the provided information, the Project team prepares a conceptual plan for improvement. The conceptual plans should include the following:

- Approaches by different level of citizens such as adults, students, educated people, less educated people, etc.
- Appropriate Tools for approach

To prepare good plan, the Egyptian side allocate senior persons as C/P members, such as Deputy Chairman of AC.

(4) Actions later than the Study

According to the improvement plan, which is made by the aforementioned study, the Egyptian side may request further cooperation of JICA.

7. Management of Equipment Procured by JICA side

The procurement of equipment has been completed for leak detection. Those are stored in each of GHAPWASCO and MCWW. Since the management rules are too strict to take it out to the sites, it is difficult to conduct site works according to necessity (sometime urgently required). JET requested the Egyptian side to improve the management system. The Egyptian side promises the prompt improvement.

8. Person in Charge of Publicity of the Project

JET requested HCWW to provide a person to be in charge for dissemination of information. It is effective for not only the dissemination of technology to all ACs but also for publicity to the citizens and other donors. Moreover, it will contribute to promotion of sustainability of the Project activities and coordination among ACs. The Project Manager replied that he will consider assigning a person from HCWW.

A4-12

Attachiment-1

List of Participants

[Egyptian side]	
Dr. Salah Bayoumi	Head of Project Sector of HCWW
Mr. Ahmed Abdein	Chairman of SHAPWASCO
Mr. Ayman Abd El Kader	Chairman of GHAPWASCO
Mr. Ahmed Saeed	Project Sector of HCWW
Mr. Abd Alla El Liethy	Vice Chairman of GHAPWASCO
Mr. Bassyouny Eissa	Head of Operation & Maintenance Sector, GHAPWASCO
[Japanese side]	
Mr. Katsumi Fujii	Chief Advisor / Water supply planning
Mr. Hiroki Niimura	Leakage Detection
Mr. Ryoji Nagao	Mechanical Equipment
Mr. Mohamed Nagi Gaber	Facilitator of the Project team
Mr. Mohamed Abdel Kader Abouzekry	Facilitator of the Project team
Mr. Mohammed Abd El-Kader Abd El-Ghany	Facilitator of the Project team

Attachment-2 APO Phase-2 (26 Feb 2012): Annual Plan of Operation (General Activity)

	Items	2012 Phase-2 2	3	4	5	6	7	8	9	10	11	12	2013 1	2	3
Output0:	**The project is managed and coordinated properly**														
0-2.	Coordinate among SHAPWASCO, GHAPWASCO and MCWW through the Steering Committee	■	■	■	■	■	■	■	■	■	■	■	■	■	■
0-3.	Organize the Joint Coordinating Committee (JCC) meeting at least once a year		■												■
0-5.	Draft Annual Plan of Operations (APO) based on the Plan of Operations (PO) for approval of the JCC	■												■	
0-6.	Monitor the progress of PO/APO and achievement of the Indicators of the PDM	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Output1:	**Human Resource Development through coordination among water supply companies in Sharkiya, Gharbia and Minufia Governorates is strengthened**														
1-2.	Conduct Training of Trainers (TOT) for developing SOP	for SHAPWASCO ■	■	■	■	■	■	■	■	■	■	■	■	■	■
1-2-1.	OJT for training	OJT through SOP assessment ■	■	■	■	■	■	■	■	■	■	■	■	■	■
1-3.	Conduct TOT for NRW reduction	for SHAPWASCO ■	■	■	■	■	■	■	■	■	■	■	■	■	■
1-3-1.	OJT for training	OJT through training practice ■	■	■	■	■	■	■	■	■	■	■	■	■	■
1-4.	Disseminate the contents, the manners and the results of the collaboration among SHAPWASCO, GHAPWASCO and MCWW to the water supply companies in Nile Delta Area through reports and workshops	■	■	■	■	■	■	■	■	■	■	■	■	■	■
1-4-1.	Seminars / workshops to be conducted by SHAPWASCO				SOP ■				SOP ■	NRW ■ SOP ■				SOP ■ WDM ■	
1-4-2.	Training on water leakage survey and water leakage detection equipments at the training yard in Sharkiya Governorate	■	■	■	■	■	■	■	■	■	■	■	■	■	■
1-4-3.	Open seminars									■					
	<Equipment Plan>														
	Equipment Procurement (JICA Expert)	Procurement ■	■	■	Transport ■	Delivery ■									
	Equipment Procurement (JICA)	Procurment (Water CAD) ■								Procurment (WDM) ■					
	<Training in Japan>														
	WDM								■						

Attachment-2 APO Phase-2 (26 Feb 2012): Annual Plan of Operation (Development of SOP)

	Items	2012 Phase-2 2	3	4	5	6	7	8	9	10	11	12	2013 1	2	3
Based on the experiences of SHAPWSCO, SOPs are developed and utilized at the model facilities in Gharbia and Minufia Governorates															
Action-1	Survey the current conditions of water supply facilities in Gharbia and Minufia Governorates														
Action-2	Select 3 model facilities in Gharbia and Minufia Governorates each														
Action-3	Organize SOP teams														
Action-4	Conduct training for developing and applying SOPs at the facilities of Sharkiya Governorate								■	■	■	■			
4-1	Assessment of the effectiveness of SOPs in Sharkiya Governorate		■	■	■										
4-2	Extraction of the problematic point					■	■								
Action-5	Revise SOPs of Sharkiya Governorate, if necessary	■	■	■	■	■									
5-1	Revision of SOPs of Sharkiya Governorate								■	■	■	■			
Action-6	Develop SOPs for model facilities in Gharbia and Minufia Governorates based on SOPs for SHAPWASCO	■	■	■	■	■	■	■	■	■	■	■	■	■	■
6-1	Examination for the site condition (C/P organization control, Cooparative framework of trainer etc.)														
6-2	Preparation of basic system drawings (P&ID, Single line diagram)	■	■	■											
6-3	Preparation of draft SOPs for O&M with site training		■	■	■	■									
6-4	Preparation of unified forms of O&M records and reports	■	■	■	■					■	■	■			
6-5	Examination of water quality management				■	■									
6-6	Preparation of draft SOPs for water quality management					■	■	■	■	■	■	■			
Action-7	Conduct On-the-Job Training for GHAPWASCO and MCWW to apply SOPs in operation and maintenance	■	■	■	■	■	■	■	■	■	■	■	■	■	■
7-1	Applying of SOP on On-the-Job Training		■	■	■	■	■	■	■	■	■	■	■	■	■
Action-8	Monitor the progress of SOP activities												■	■	■
8-1	Monitoring of activity condition on On-the-Job Training								■	■			■	■	■

Attachment-2 APO Phase-2 (26 Feb 2012): Annual Plan of Operation (NRW Reduction)

	Items	2012											2013		
		Phase-2													
		2	3	4	5	6	7	8	9	10	11	12	1	2	3
The institutional skills and experiences of SHAPWASCO for NRW reduction are transferred to NRW teams at the model areas in Gharbia and Minufia Governorates															
Action-1	Analyze the current situation on NRW in Gharbia and Minufia Governorates														
Action-2	Select 3 model areas in Gharbia and Minufia Governorate each														
Action-3	Organize NRW reduction teams														
Action-4	Formulate an action plan for NRW reduction activities based on the action plan for SHAPWASCO														
Action-5	Conduct training on general practice of NRW reduction														
5-1	Lecture and site practice in Sharkiya														
Action-6	Conduct training at the training yard in Sharkiya Governorate														
6-1	Training on water leakage survey and water leakage detection equipments at the training yard in Sharkiya Governorate														
Action 7	Conduct training at model areas for water distribution management in Sharkiya Governorate														
Action-8	Prepare GIS drawing for model areas in Gharbia and Minufia Governorates														
8-1	Preparation of GIS drawing on model area-1														
8-2	Preparation of GIS drawing on model area-2														
8-3	Preparation of GIS drawing on model area-3														
Action-9	Make water balance analysis at model areas														
9-1	Conducting Minimum Night Flow (MNF) survey for candidate pilot area														
9-2	Determining pilot project area for each model area (Markaz)														
9-3	Making field survey of distribution network			Model area-1					Model area-2					Model area-3	
9-4	Conducting Water flow measurement				Model area-1					Model area-2					Model area-3
9-5	Measuring metering error for working and waste in the house				Model area-1					Model area-2					Model area-3
9-6	Making Water balance analysis before repair works					Model area-1					Model area-2				Model area-3
Action 10	Conduct leakage detection survey at model areas														
10-1	Conduct leakage detection survey at model areas						Model area-1					Model area-2			
10-2	Repairing leaking parts						Model area-1					Model area-2			
10-3	Improvement of water meter condition						Model area-1								
Action 11	Make water balance analysis after repair works														
11-1	Conducting Water flow measurement							Model area-1					Model area-2		
11-2	Making water balance analysis after repair works and evaluation									Model area-1					Model area-2

Attachment-2 APO Phase-2 (26 Feb 2012): Annual Plan of Operation (Distribution Management for SHAPWASCO)

	Items	2012											2013		
		Phase-2													
		2	3	4	5	6	7	8	9	10	11	12	1	2	3
The water distribution management capacity is improved in Sharkiya Governorate as an advanced model															
Action-3	Formulate a plan for water distribution management														
3-1	Planning of action plan														
3-4	Outline plan for equipment and equipment installation														
3-5	Preparation for equipment installation including isolation work														
3-6	Preparation for equipment specification (one of procurement procedures)														
3-7	Verification of equipment plan														
3-8	Plan of target flow, pressure and quality of water by block														
3-9	Survey on current condition (summer) by block														
3-10	Verification of Plan of target flow, pressure and quality of water by block														
3-11	Training in Japan														
Action-4	Install the equipment for water distribution management at the model area														
	Preparation for space for monitoring room														
	Preparation for communicating system														
	Chamber construction by SHAPWASCO														
	JICA procedures for equipment procurement														
	Installation of the equipment														
Action-5	Operate the system														
	Trial operation of the system														
	Trial modification of distribution mode														
	1st evaluation of the system														

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta

Minutes of Meeting for the 4th Steering Committee held on the 16th of July 2012 at HCWW

Holding Company for Water and Wastewater (HCWW), Sharkiya Potable Water and Sanitation Company (SHAPWASCO), Gharbia Potable Water and Sanitation Company (GHAPWASCO), Minufia Company for Water and Wastewater (MCWW) and JICA expert team (JET) hold the 4th steering committee on the 16th of July 2012. Contents described in the following pages were confirmed in the committee.

S. Bayoumi

Dr. Salah Bayoumi
Project Manager
Head of Project Sector
Holding Company for Water and Wastewater (HCWW)

Mr. Katsumi Fujii
Chief Advisor
The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area,
Japan International Cooperation Agency (JICA)

Ahmed Abdeen

Mr. Ahmed Abdeen
Project Co-Manager
Chairman
Sharkiya Potable Water and Sanitation Company (SHAPWASCO)

Ayman abd el Kader

Mr. Ayman Abd El Kader
Project Co-Manager
Chairman
Gharbia Potable Water and Sanitation Company (GHAPWASCO)

Mr. Mohamed Abou El Kheir
Project Co-Manager
Chairman
Minufia Company for Water and Wastewater (MCWW)

1. Date, Time, Place and Participants of the Committee

Date: the 16th of July 2012
Time: 10:00 – 13:30
Place: HCWW
Participants: As shown in Attachment-1

2. Report of agreement between the Egyptian and the Japanese sides on WDM pilot project for SHAPWASCO

JET reported the following and the participants confirmed the agreed pilot project for WDM for SHAPWASCO:

(1) JICA mission

In a period from 1-July to 5-July, 2012, JICA officials (Mr. Omura and Mr. Hamano) visited the project sites. During the visit, contents and activities are discussed with HCWW and SHAPWASCO for WDM pilot project.

(2) Agreed activities for WDM pilot project

1) Pilot area: Zagazig
2) Pilot DMA: Area-4
3) Telemetering pressure monitoring: 10 locations in Zagazig
4) Telemetering flow monitoring: 7 locations at borders of Area-4
5) Telemetering well production flow monitoring: 7 wells in Area-4
6) Telemetering WTP operation monitoring for in/out-flows, out-flows pressure, water level of reservoir
7) Data based operation (operation according to outlet pressure) for 17 wells in Zagazig
8) Data acquisition and analysis as well as formulation of operation plans for WTP and wells
9) Trials for optimum operation of WTP and wells

3. Progress and issues on NRW and SOP for GHAPWASCO and MCWW

(1) Progress

JET reported the progress of SOP and NRW activities being conducted in GHAPWASCO and MCWW. The participants confirmed the following:

1) JET provided two flow meters in July. One for GHAPWASCO was fixed on the 11th of July. The other for MCWW will be fixed in this July.
2) The project team has commenced the trial records of operation data according to the draft SOP as well as reviewing the draft SOP.
3) For GHAPWASCO-NRW, the minimum night flow survey (MNF) has been completed for nine sites and three pilot project sites were selected in each of the three Markazes. Among

A-A

S.B

E.E

the three pilot project sites, the water balance survey analysis was finished for the two sites. The progress is a little bit ahead of the schedule. It is expected to be possible to proceed to the next step (leak detection) in September.

4) For MCWW-NRW, among the nine sites, eight sites are completed for chamber construction, and MNF has been completed for seven sites. The chamber for the remained one site will be completed by the end of July. Since the C/P team members were trained for MNF method, MNF for the remained two sites are expected to be completed by the C/P team members by the end of August. Utilizing the data obtained until now, the first session for water balance analysis is now being conducted. The project team is making efforts to proceed to the leak detection in September.

(2) Modification of SOP model facility in GHAPWASCO

Chairman of GHAPWASCO stated the intention to replace a model facility (Tanta old WTP) with the Tanta new WTP (El Teraa El Melahia WTP) under the following reasons:

1) El Teraa El Melahia WTP was handed over on the 7th of July. However, manuals and records for O&M are not sufficient. SOP preparation is urgently required.
2) Total eight plants, including El Teraa El Melahia WTP, have been conducted for construction under the similar design (three plants among the eight were handed over). SOP for El Teraa El Melahia WTP will be effective for extension of SOP to other seven plants.
3) In the record of discussions, signed on the 19th of August 2010, the number of the model facility is mentioned at three (basically one WTP, one iron/manganese removal facility and one well). GHAPWASCO intends, therefore, to replace the model facility with El Teraa El Melahia WTP.

The participants agreed on the following process for the mentioned modification:

1) All participants agreed on the proposal. However, the modification should be agreed on by the next JCC meeting.
2) Tanta old WTP will be a subject for the SOP development through GHAPWASCO efforts, utilizing the skills of El Teraa El Melahia WTP.
3) Until the official approval by JCC, the project team conducts the SOP activities for both Tanta old WTP and El Teraa El Melahia WTP.
4) Regardless of approval for the replacement of the model facilities, JET continues the supporting activities for Tanta old WTP.

(3) Ways to solve small Issues

The participants confirmed that small issues, which should be solved in the affiliated company, should be managed as follows:

1) To discuss inside the project team.
2) To undertake the necessary actions by C/P team.

Aymaa S.B E.E

3) To discuss it with the Chairman after one week (within two weeks for maximum), when the necessary actions are not undertaken well.

4. Overall schedule of Phase-2

Since JICA experts were absent from the middle of May to the end of June due to JICA restriction, some activities are behind the schedule. Accordingly, JET proposes the modification of the schedule. After discussion and confirmation, the participants agreed on the modification basically as shown in Attachment-2 and 3.

JET proposed the schedule of the training in Japan for WDM to be held from the 29th of October to the 8th of November (excluding travelling days). The participants agreed on the schedule.

5. Schedule of the mid-term evaluation & open seminar

As the schedule is slightly behind, it is difficult to have a good interim result before October 2012 to be evaluated in the mid-term evaluation (currently planned to be held in October). The participants agreed on the schedule of the mid-term evaluation as well as the open seminar as follows:

1) To hold the mid-term evaluation and the open seminar in the middle - end of November. It should be discussed with JICA through JET.
2) To consider the "Eid El Adha (holidays in the end of October), availability of JICA Officials and period of the training in Japan for WDM for final decision of the schedule.

S.B

(end)

Aymaa E.E

Attachiment-1

List of Participants

[Egyptian side]

Dr. Salah Bayoumi	Head of Project Sector of HCWW
Mr. Ahmed Abdeen	Chairman of SHAPWASCO
Mr. Ayman Abd El Kader	Chairman of GHAPWASCO
Mr. Mohamed Abou El Kheir	Chairman of MCWW
Mr. Alaa El Din Taleb	SHAPWASCO
Mr. Mohamed Atef	SHAPWASCO
Mr. Mostafa Ibrahim	SHAPWASCO
Mr. Abd El Raheem Mohamed	SHAPWASCO
Mr. Adel Attia	GHAPWASCO
Mr. Ahmed Elsayed Rabie	GHAPWASCO
Mr. Ahmed El Maleh	GHAPWASCO
Mr. Ayman Bassyouny Abdeen	MCWW
Mr. Bilal Galal Khalaf	MCWW

[Japanese side]

Mr. Katsumi Fujii	Chief Advisor / Water supply planning
Mr. Mitsuhito Omori	Deputy Chief Advisor / NRW Reduction Management
Mr. Tomohiro Shimizu	Water Treatment System
Dr. Sayed Osman Madbouly	Electrical Equipment
Mr. Mohamed Nagi Gaber	Facilitator of the Project team
Mr. Mohamed Abdel Kader Abouzekry	Facilitator of the Project team
Mr. Mohammed Abd El-Kader Abd El-Ghany	Facilitator of the Project team
Dr. Mostafa Moawed Mostafa	Local expert
Mr. Ahmed Atef	Interpreter
Mr. Ahmed Alaa Rasmy	Interpreter

A-A S.B Ayman E.E

Revision 31-May-2012 **Staffing Schedule for JICA Experts** **Attchment-2**

	Title	Name		Phase-2												2013			Man-days
				2	3	4	5	6	7	8	9	10	11	12	1	2	3		
Experts of the Japanese Side																			
1	Chief Advisor/Water Supply Planning	Katsumi FUJII	Original	(40)			(45)					(45)			(60)				193
			Modified	(40)				(30)			(45)	(45)			(60)				193
2	Deputy Chief Advisor/NRW Reduction Management	Mitsuhito OMORI	Original																195
			Modified			(75)	(75)	(30)			(45)		(75)						195
3	Leakage Detection	Hiroki NIIMURA	Original																220
			Modified	(60)			(55)				(110)	(70)			(60)	(45)			220
4	Water Treatment System	Tomohiro SHIMIZU	Original																155
			Modified		(50)	(30)		(30)			(55)				(60)				155
5	Mechanical Equipment	Ryoji NAGAO	Original																105
			Modified	(45)	(45)		(60)					(59)							105
6	Electrical Equipment	Dr. Sayed Osman Madbouly	Original																90
			Modified	(20)	(20)			(10) (20) (30)			(20)					(20)			90
7	Hydraulic Analysis for Network	Kenji YAMADA	Original																90
			Modified								(60)		(80)			(30)			90
8	Distribution Network(1)	Masahiro TAKEUCHI	Original																38
			Modified			(38)							(38)						38
9	Distribution Network(2)	Kiyoshi KIYAMA	Original																120
			Modified		(30)			(30)			(30)	(30)			(60)	(30)			120
10	Well Monitoring	Nobuyuki IIJIMA	Original																45
			Modified				(45)					(45)	(45)						45
11	Water Quality	Kazuhiro UMEKI	Original				(45)						(30)						75
			Modified		(30)							(40)		(45)					75
12	Coordinator / Assistant for NRW Reduction Management	Atsushi KATO	Original										(40)						70
			Modified									(40)				(30)			70

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Attachment-3 (1) **Phase-2: Annual Plan of Operation (General Activity) Ver.2**

Items		2012											2013		
		Phase-2													
		2	3	4	5	6	7	8	9	10	11	12	1	2	3
Output0:	**The project is managed and coordinated properly**														
0-2.	Coordinate among SHAPWASCO, GHAPWASCO and MCWW through the Steering Committee														
0-3.	Organize the Joint Coordinating Committee (JCC) meeting at least once a year														
0-5.	Draft Annual Plan of Operations (APO) based on the Plan of Operations (PO) for approval of the JCC														
0-6.	Monitor the progress of PO/APO and achievement of the Indicators of the PDM														
Output1:	**Human Resource Development through coordination among water supply companies in Sharkiya, Gharbia and Minufia Governorates is strengthened**														
1-2.	Conduct Training of Trainers (TOT) for developing SOP	for SHAPWASCO													
1-2-1.	OJT for training	OJT through SOP assessment													
1-3.	Conduct TOT for NRW reduction	for SHAPWASCO													
1-3-1.	OJT for training	OJT through training practice													
1-4.	Disseminate the contents, the manners and the results of the collaboration among SHAPWASCO, GHAPWASCO and MCWW to the water supply companies in Nile Delta Area through reports and workshops														
1-4-1.	Seminars / workshops to be conducted by SHAPWASCO	Original			SOP				SOP	NRW SOP				SOP WDM	
		Amendment		SOP					NRW	SOP		SOP		SOP WDM	
1-4-2.	Training on water leakage survey and water leakage detection equipments at the training yard in Sharkiya Governorate	Original													
		Amendment													
1-4-3.	Open seminars	Original													
		Amendment													
1-5.	Collect information for public awareness promotion to prepare improvement plans of approaches and tools for publicity	Original													
		Amendment													
1-5-1.	Workshop to understand current situation deeply and to exchange experiences among SHAPWASCO, GHAPWASCO and MCWW	Original													
		Amendment													
1-5-2.	Presentation of examples on the approaches and tools in Japan	Original													
		Amendment													
1-5-3.	Preparation of improvement plan for activities to promote public awareness	Original													
		Amendment													
	<Equipment Plan>														
	Equipment Procurement (JICA Expert)	Original	Procurement			Transport	Delivery								
		Amendment	Procurement				Transport	Delivery							
	Equipment Procurement (JICA)	Original	Procurement (Water CAD)							Procurement (WDM)					
		Amendment	Procurement (Water CAD)											Procurement (WDM)	
	<Training in Japan>														
	WDM	Original													
		Amendment													

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Attachment-3 (2) **Phase-2: Annual Plan of Operation (Development of SOP) Ver.2**

Items		2012											2013		
		Phase-2													
		2	3	4	5	6	7	8	9	10	11	12	1	2	3
Based on the experiences of SHAPWSCO, SOPs are developed and utilized at the model facilities in Gharbia and Minufia Governorates															
Action-1	Survey the current conditions of water supply facilities in Gharbia and Minufia Governorates														
Action-2	Select 3 model facilities in Gharbia and Minufia Governorates each														
Action-3	Organize SOP teams														
Action-4	Conduct training for developing and applying SOPs at the facilities of Sharkiya Governorate														
4-1	Assessment of the effectiveness of SOPs in Sharkiya Governorate	Original													
		Amendment													
4-2	Extraction of the problematic point	Original													
		Amendment													
Action-5	Revise SOPs of Sharkiya Governorate, if necessary														
5-1	Revision of SOPs of Sharkiya Governorate														
Action-6	Develop SOPs for model facilities in Gharbia and Minufia Governorates based on SOPs for SHAPWASCO														
6-1	Examination for the site condition (C/P organization control, Cooperative framework of trainer etc.)														
6-2	Preparation of basic system drawings (P&ID, Single line diagram)														
6-3	Preparation of draft SOPs for O&M with site training	Original													
		Amendment													
6-4	Preparation of unified forms of O&M records and reports														
6-5	Examination of water quality management	Original													
		Amendment													
6-6	Preparation of draft SOPs for water quality management	Original													
		Amendment													
Action-7	Conduct On-the-Job Training for GHAPWASCO and MCWW to apply SOPs in operation and maintenance														
7-1	Applying of SOP on On-the-Job Training														
Action-8	Monitor the progress of SOP activities														
8-1	Monitoring of activity condition on On-the-Job Training	Original													
		Amendment													

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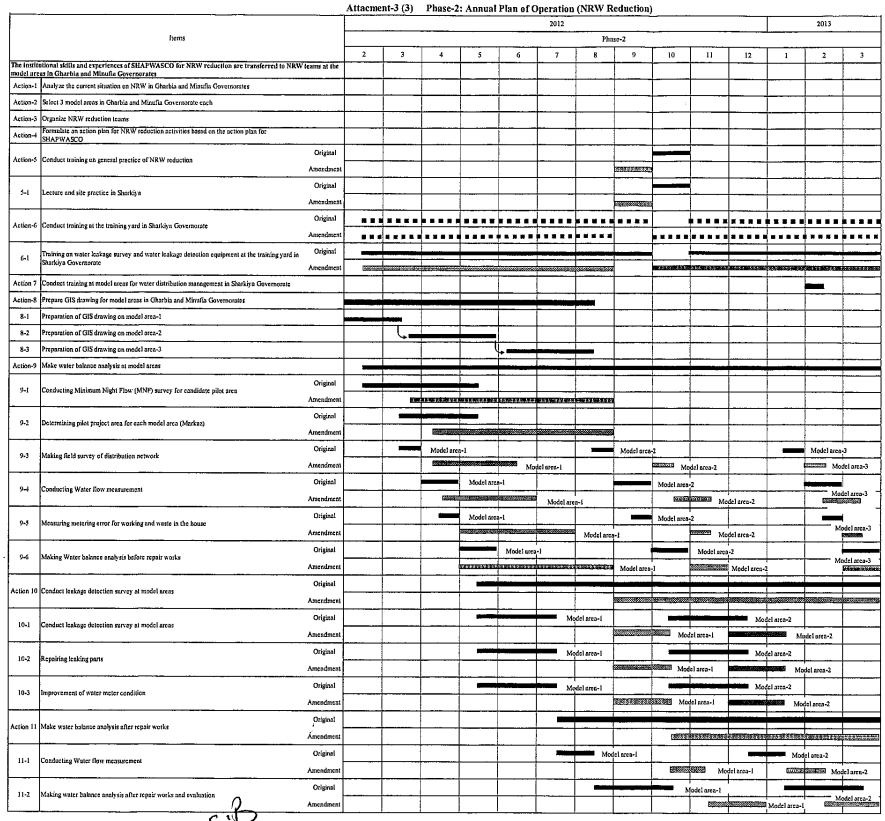
E.E Ayman

A4-8

Attachment-3 (3) Phase-2: Annual Plan of Operation (NRW Reduction)



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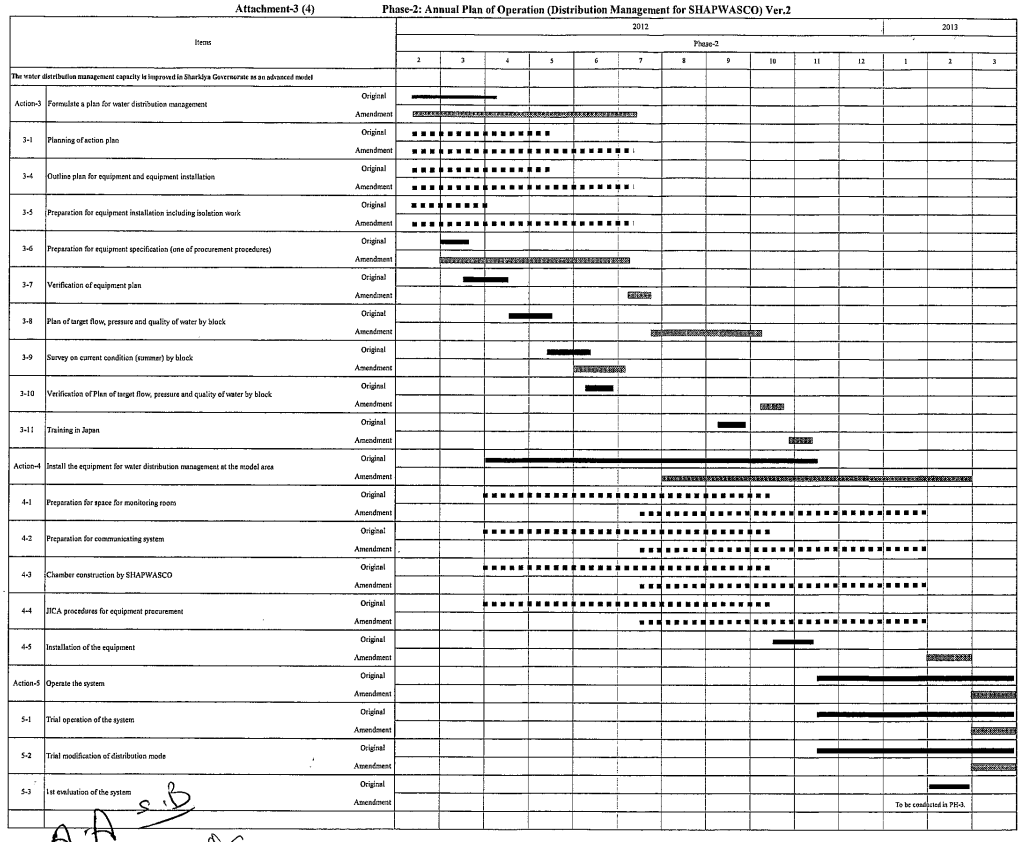
Attachment-3 (4) Phase-2: Annual Plan of Operation (Distribution Management for SHAPWASCO) Ver.2



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The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta

Minutes of Meeting for the 5th Steering Committee held on the 8th of November 2012 at HCWW

Holding Company for Water and Wastewater (HCWW), Sharkiya Potable Water and Sanitation Company (SHAPWASCO), Gharbia Potable Water and Sanitation Company (GHAPWASCO), Minufia Company for Water and Wastewater (MCWW) and JICA expert team (JET) hold the 5th steering committee on the 8th of November 2012. Contents described in the following pages were confirmed in the committee.

S. Bayoumi

Dr. Salah Bayoumi
Project Manager
Head of Project Sector
Holding Company for Water and Wastewater (HCWW)

Mr. Katsumi Fujii
Chief Advisor
The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area,
Japan International Cooperation Agency (JICA)

Ahmed Abdeen

Mr. Ahmed Abdeen
Project Co-Manager
Chairman
Sharkiya Potable Water and Sanitation Company (SHAPWASCO)

Ayman abdel Kader

Mr. Ayman Abd El Kader
Project Co-Manager
Chairman
Gharbia Potable Water and Sanitation Company (GHAPWASCO)

E. E.

Mr. Ezzat El Sayad
Project Co-Manager
Chairman
Minufia Company for Water and Wastewater (MCWW)

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1. Date, Time, Place and Participants of the Committee

Date: the 8th of November 2012
Time: 10:00 – 13:30
Place: HCWW
Participants: As shown in Attachment-1

2. Progress until the end of October 2012

JET reported the following and the participants confirmed the current progress of the Project:

(1) SOP

Draft SOP was prepared to cover principal devices for SWTPs and Fe/Mn facilities. At the facilities, operation data were commenced to be recorded according to the draft SOP. In November, the Project team will start preparation of SOP for wells. On-the-job-training for proper operation are going to start at site. For SHAPWASCO, SOP for emergency generator was formulated as an improvement activity of SOP. In general, the progress is well according to APO revised in July 2012.

MCWW requested to change the model facility for well, because the model well of MCWW is going to be closed. Therefore, MCWW is planning to replace the model well with a substitute. MCWW has three candidates as the substitute. The participants confirmed that MCWW will select the substitute with Mr. Iijima in the middle of November 2012. The substitute should be approved by the next JCC.

(2) NRW

The 1st round of water balance survey (before leak repair, meter calibration, etc.) was conducted for GHAPWASCO and MCWW at sites of the 3 model areas, including MNF. As for meter accuracy tests, GHAPWASCO and MCWW are conducted for 2 and 1 model areas respectively. Although the water balance analysis is under verification, GHAPWASCO has proceeded to leak detection survey as well as survey for illegal connections. Leak detection survey is behind the schedule due to delay of water balance analysis. The Project team has difficulties to complete the water balance analysis because of the inaccuracy of customers' water meters.

(3) WDM

Detail plan formulation will be conducted in November – December 2012. For equipment, SHAPWASCO commenced preparation works (construction of chambers and monitoring room) in September. It is scheduled to be finished in February 2013. In parallel, JICA is undertaking procurement procedures for the equipment. According to JICA, the equipment delivery will be in the end of March or the beginning of April 2013.

(4) PO

Since some activities are behind the schedule, PO should be revised in the next JCC.

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3. Report of trip to Jordan

In the period between 14 and 18 October, 2012, the following key members visited Water Authority of Jordan to have high rank exchange of opinions as well as observation of practices in Jordan.

- ✓ Dr. Salah Bayoumi, Head of Project Sector, HCWW
- ✓ Mr. Shaker Abdelfattah, Head of Project Sector, SHAPWASCO
- ✓ Mr. Adel Attia, Head of O&M Sector
- ✓ Mr. Ayman Bassuni, Head of O&M Sector
- ✓ Mr. Katsumi Fujii, Chief Advisor, JICA expert team
- ✓ Mr. Nagi Gaber, Facilitator, JICA expert team

They observed mainly the followings:

(1) Plumber license system as well as training system.
(2) Pilot project to reduce distribution pressure, aiming at reduction of NRW.
(3) Meter workshops.
(4) Zai treatment plant.

4. Schedule and Discussion Points of Mid-term review

JICA will conduct the mid-term review for the project, aiming at confirming progress, achievement and necessity of project modification. JICA selected Mr. Iwase, a private consultant, for evaluation. Intended key schedule is as shown below.

(1) 10 November: Arrival of Mr. Iwase.
(2) 18 November: Arrival of JICA officials (Mr. Omura and Mr. Hamano).
(3) 25 November: Open seminar and JCC.
(4) 27 November: Departure of the review team.

The participants confirmed the following:

- ✓ Dr. Salah Bayoumi, Head of Project Sector, HCWW, is assigned by JICA to be the Egyptian Evaluator.
- ✓ To secure convenience for participation of Chairman of HCWW, JCC should be held in HCWW on 26 November 2012.
- ✓ For the detail of seminar should be discussed by HCWW and JET as well as place and date. (It was discussed on 11 November 2012. The seminar should be held in Tanta on 22 November 2012.)

5. Difficulties on Water Balance Survey for NRW

JET reported that the inaccuracy of customers' water meters is too large to have accurate NRW ratios. Due to difficulties of the NRW analysis, the Project team is not able to enter into leak detection completely. The participants confirmed the following:

- ✓ The purpose of the Project is to reduce NRW. It is not to have the accurate NRW. However, HCWW

Abdeen 3 E.E. S.B

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and the 3ACs want to have the NRW as accurate as possible.

- ✓ Budget is not enough to replace all meters.
- ✓ GHAPWASCO and MCWW will confirm immediately the accuracy of all meters in the pilot areas. And they will clean / repair the meters.
- ✓ After then, the Project team will re-commence the all activities starting from water balance survey.
- ✓ Since the certain period is necessary to clean / repair the meters, the Project team concentrate on leak detection surveys. It will be conducted before the water balance survey.
- ✓ GHAPWASCO and MCWW should form special team for meters check / clean / repair, separately from leak detection team.

6. PIs for the current condition and target to be improved by the Project

JET proposed PIs to be applied for the Project evaluation as follows:

(1) SOP

- ✓ Energy cost per cubic meter of water produced (LE/m^3)
- ✓ Amount of alum / chlorine / Potassium Permengnate used per one cubic meter of water produced (g/m^3)
- ✓ Ratio of effective utilization of raw water (%): "Production volume of plant" / "Intake volume of plant" (%)

(2) NRW

- ✓ NRW ratio (%): "NRW in m^3" / "System input volume in m^3 (distributed volume)"
- ✓ Reduction rate of NRW (%): "Reduction volume of NRW in m^3" / "NRW in m^3 before improvement"

(3) WDM

- ✓ Number of complaints per 1000 connections on water suspension and low pressure.
- ✓ Ratio of inappropriate pressure of water distribution (%): ("Number of points for inappropriate pressure" x "Number of days for inappropriate pressure") / ("Number of points for continuous monitoring" x 365days)

(4) Discussion and Confirmation

The following are confirmed through discussion:

- ✓ The participants agreed that PIs for SOP and NRW are good for the Project.
- ✓ Number of complaints is not scientific. Further consideration is necessary.
- ✓ Further consideration is necessary for WDM on possibility to apply some economic values.
- ✓ HCWW and JET will have further discussions together with a General Manager for PIs in HCWW.

Abdeen. E.E. S.B (end)

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4

Attachiment-1

List of Participants

[Egyptian side]	
Dr. Salah Bayoumi	Head of Project Sector of HCWW
Mr. Ahmed Abdeen	Chairman of SHAPWASCO
Mr. Ayman Abd El Kader	Chairman of GHAPWASCO
Mr. Ezzat El Sayad	Chairman of MCWW
Mr. Ahmed Saeed	Project Sector of HCWW
Mr. Alaa El Din Taleb	SHAPWASCO
Mr. Abdel Shafee	SHAPWASCO
Mr. Saeed Attia	SHAPWASCO
Mr. Ahmed Elsayed Rabie	GHAPWASCO
Mr. Ahmed El Maleh	GHAPWASCO
Mr. Ayman Bassyouny Abdeen	MCWW
Mr. Bilal Galal Khalaf	MCWW
[Japanese side]	
Mr. Katsumi Fujii	Chief Advisor / Water supply planning
Mr. Hiroki Niimura	Leakage Detection
Mr. Ryoji Nagao	Mechanical Equipment
Mr. Atsushi Kato	Coordinator／Assistant for NRW Reduction Management
Mr. Mohamed Nagi Gaber	Facilitator of the Project team
Mr. Mohamed Abdel Kader Abouzekry	Facilitator of the Project team
Mr. Mohammed Abd El-Kader Abd El-Ghany	Facilitator of the Project team
Mr. Mahmoud Khalf	Local expert

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The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta

Minutes of Meeting for the 6th Steering Committee held on the 20th of June 2013 at HCWW

Holding Company for Water and Wastewater (HCWW), Sharkiya Potable Water and Sanitation Company (SHAPWASCO), Gharbia Potable Water and Sanitation Company (GHAPWASCO), Minufia Company for Water and Wastewater (MCWW) and JICA expert team (JET) hold the 6th steering committee on the 20th of June 2013. Contents described in the following pages were confirmed in the committee.

S. Bayoumi

Dr. Salah Bayoumi
Project Manager
Head of Project Sector
Holding Company for Water and Wastewater (HCWW)

Mr. Katsumi Fujii
Chief Advisor
The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area,
Japan International Cooperation Agency (JICA)

Ahmed Abdeen

Mr. Ahmed Abdeen
Project Co-Manager
Chairman
Sharkiya Potable Water and Sanitation Company (SHAPWASCO)

Ayman abdel Kader

Mr. Ayman Abd El Kader
Project Co-Manager
Chairman
Gharbia Potable Water and Sanitation Company (GHAPWASCO)

Mr. Ezzat El Sayad
Project Co-Manager
Chairman
Minufia Company for Water and Wastewater (MCWW)

1. Date, Time, Place and Participants of the Committee

Date: the 20th of June 2013

Time: 10:00 – 12:00

Place: HCWW

Participants: As shown in Attachment-1

2. Discussion and Confirmation

JET reported the progresses and planes as Attachment-2 and 3. The contents are basically agreed by the participants. The following are special and/or additional discussion results.

(1) SOP

- For the cases of drain recirculation activity (MCWW), HCWW requested MCWW to analyze drain water quality periodically, especially for aluminum. MCWW agreed on the request.
- SOPs for the additional model facilities should be also finished within the Project period. HCWW requested accordingly to prepare more detailed schedule for the expansion activities to finish the SOPs for the additional model facilities. GHAPWASCO and MCWW should manage the activities and progresses according to the detail schedule.

(2) NRW

- For Zefta, HCWW requested GHAPWASCO to try again another cycle of NRW reduction and water balance surveys to re-check the NRW ratio. GHAPWASCO agreed to do so.

(3) Terminal Evaluation and Seminars

- The participants confirmed that the terminal evaluation will be in November 2013.
- For the occasion of the terminal evaluation, JET will organize the open seminar.
- JET propose that HCWW organize another seminar in February 2014 for the ending seminar. It is also proposed to invite other Ministries (irrigation and water resources for example). HCWW agreed on the proposal.

(end)

Attachiment-1

List of Participants

[Egyptian side]

Dr. Salah Bayoumi	Head of Project Sector of HCWW
Mr. Ayman Abd El Kader	Chairman of GHAPWASCO
Mr. Mohamed Badr	Project Sector of HCWW
Mr. Alaa El Din Taleb	SHAPWASCO
Mr. Ahmed Mahel	SHAPWASCO
Mr. Ahmed Elsayed Rabie	GHAPWASCO
Mr. Ahmed El Maleh	GHAPWASCO
Mr. Omar Salah	GHAPWASCO
Mr. Mohamed Masoud	GHAPWASCO
Mr. Ayman Bassyouny Abdeen	MCWW
Mr. Bilal Galal Khalaf	MCWW

[Japanese side]

Mr. Katsumi Fujii	Chief Advisor / Water supply planning
Mr. Mitsuhito Omori	Deputy Chief Advisor / NRW reduction
Mr. Mohamed Nagi Gaber	Facilitator of the Project team
Mr. Mohamed Abdel Kader Abouzekry	Facilitator of the Project team
Mr. Mohammed Abd El-Kader Abd El-Ghany	Facilitator of the Project team

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta

Discussion Papers for the 6th Steering Committee (20 June 2013)

1. Progress and issues until the end of May 2013.

1-1 SOP

The following activities are now undertaken.

(1) GHAPWASCO

a) El Melahia WTP

- Improvement of the settlement efficiency in sedimentation tanks (Improvement of Alum consumption and effective utilization ratio)
- Improvement of filtration efficiency in sand filters (Effective utilization ratio)
- Review of chlorine dosing amount (Improvement of chlorine consumption)

b) Mahalet Marhoom IMRP

- Improvement of Effective Utilization Ratio

(2) MCWW

a) El Sadat WTP

- Activation of Drain Recirculation System

b) Gezy IMRP

- Activation of Drain Recirculation System

(3) Expansion to other facilities

GHAPWASCO

a) Samanod WTP

- Site survey is completed.
- P&ID (under progress).
- Preparation of rehabilitation work.

b) Kasr Baghdad IMRP

- Site survey is completed.
- P&ID (under progress).

MCWW

a) Shebeen El Kom Gadeeda SWTP

- As-Built Drawing is managed as P&ID.
- Rehabilitation work, which includes the calibration of instrumentation devices, is completed.
- Draft SOPs were read through C/Ps.

- Revised daily/monthly reporting formats have been provided.

b) Kafr El Batanon IMRP

- As-Built Drawing is managed as P&ID.
- Rehabilitation work, which includes the calibration of instrumentation devices, is completed.
- Improvement activity of water treatment efficiency will be applied soon, along with the provision of draft SOPs and daily/monthly reporting formats.

c) Other Facility

- Expansion work in Tala SWTP and Toukh Tanbesha IMRP will be started later.

1-2 NRW

(1) Result of reduction rate for the model areas

Following table is a result of NRW reduction rate for the model areas.

	NRW ratio (before)	Target reduction rate	Target NRW ratio	NRW ratio (after)	Actual reduction rate	Number of leakage repair	Notes
GHAPWASCO							
Tanta	40.1%	30.0%	28.0%	24.7%	38.4%	4	
El Mahala El Kobra	27.1%	25.0%	20.3%	22.0%	18.8%	2	
Zefta	21.2%	25.0%	15.9%	21.0%	0.9%	1	Leak was small at valve
MCWW							
Shebeen	19.6%	25.0%	14.7%	16.5%	16.0%	1	
Quesna	29.8%	25.0%	22.3%	22.5%	24.5%	3	
Barket El Sab'a	27.1%	25.0%	20.3%	20.2%	25.6%	4	

(2) Expansion activity to other Markaz

GHAPWASCO

a) The headquarters selected staff-members for leak survey at each branch office and provided acoustic rods to them. Training for branch staffs has been conducted by C/P of the headquarters. Branch staffs have been continuing leak survey and several branches have been activated for leak detection survey by control of the headquarters.

b) JET and C/P team has discussed future plan/expansion plan to other Markaz. The team will make draft plan in July through workshop with all branches.

MCWW

a) C/P and current NRW department has cooperated their activities each other.

b) The headquarters selected staff-members for leak survey at each branch office and provided acoustic rods to them. Training for branch staffs has been conducted by C/P of the headquarters and NRW department.

c) Branch staffs will prepare action plan for leakage survey and discuss it with C/P and NRW department.

d) In parallel, JET and C/P team has discussed future plan/expansion plan to other Markaz. The team will make draft plan in July.

(3) Expansion activity to other Governorates

GHAPWASCO has contacted several governorates and shared information of NRW reduction activities. JET recommends that HCWW support extension activities to other governorates.

1-3 WDM

(1) Equipment Procured by JICA

The planned equipment has been delivered to Zagazig in the end of April 2013. SHAPWASCO started the installation thereafter. However, some defects are found on the equipment as described in Clause-5. The equipment has not yet commenced for service. The equipment is installed at the planned sites except the following:

- 1 telemeter for Well-8, which is defective one.
- 1 data indicator (whose shape is same as telemeter) for WTP pressure.

(2) Equipment / Facilities / Undertakings of SHAPWASCO

Through SHAPWASCO efforts, the works are approaching the completion.

No.	Item	Situation
1	Cable connection for the exiting flow meters and reservoir level meter.	Flow meters for old plant are connected. 2 flow meters and 1 level meter are not connected. It is expected to be finished soon.
2	Monitoring Room	Although under construction, a room for JICA equipment is finished in enough level for equipment installation.
3	Analogue pressure gauges for 17 well stations	Finished.
4	Contract with a telephone company	Finished.
5	Electric power feeders	20 of 24 sites are finished. The remaining is expected to be finished soon.

(3) Data Collecting Activities

Data acquisition has been started for well pressures. JET is now waiting for the 1st report for confirmation. Since outlet pressure and raw/treated water flows are connected to the central monitoring system for old plant of WTP, the 3 data are now automatically acquired.

2. Equipment to be procured by JET

JICA decided to procure 4 additional leak detectors for GHAPWASCO and MCWW. They have been already delivered to Cairo. HCWW is now undertaking the custom clearance. They are expected to be arrived at HCWW on 26-June 2013. Thereafter, 2 sets are allocated to each of GHAPWASCO and MCWW.

3. APO and Major Activities to be conducted for Phase-3

3-1 APO

JET proposes the APO for Phase-3 as attached.

3-2 Terminal Evaluation

JICA is planning to have the terminal evaluation in November 2013. Similar process will be taken as the mid-term review.

3-3 Open seminars

For the occasion of the terminal evaluation, JET proposes an open seminar to be held in November 2013. Additionally, JET requests HCWW to organize another open seminar (ending seminar) by its initiatives. It is expected for the ending seminar to invite wider participants from different organizations such as Ministry of Irrigation and Water Resources.

4. Target of PIs to be authorized

4-1 Data acquired until the end of May 2013

(1) GHAPWASCO

a) El Melahia SWTP

Provisional Target of PIs in El Melahia SWTP

	Effective utilization Ratio of Water (%)	Unit consumption of Chemicals		Energy Consumption (kWh/m^3)
		Gaseous Chlorine (g/m^3)	Liquid Aluminum Sulfate (g/m^3)	
Target Setting	90.0	8.00	35.00	0.35

Improvement in El Melahia SWTP

Month	Effective utilization Ratio of Water (%)	Unit consumption of Chemicals		Energy Consumption (kWh/m^3)
		Gaseous Chlorine (g/m^3)	Liquid Aluminum Sulfate (g/m^3)	
Dec 2012	85.0	8.87	38.45	0.39
Jan 2013	85.3	8.11	39.47	0.38
Feb 2013	84.1	8.19	38.14	0.40

Mar 2013	82.7	9.09	37.00	0.39
Apr 2013	80.6	8.76	42.56	0.37
May 2013	83.2	8.53	39.08	0.38

b) Mahalet Marhoom IMRP

Provisional Target of PIs in Mahalet Marhoom IMRP

	Effective utilization Ratio of Water (%)	Unit consumption of Chemicals		Energy Consumption (kWh/m^3)
		Calcium Hypochlorite (g/m^3)	Potassium Permanganate (g/m^3)	
Target Setting	85.0	6.00	2.00	0.60

Improvement in Mahalet Marhoom IMRP

Month	Effective utilization Ratio of Water (%)	Unit consumption of Chemicals		Energy Consumption (kWh/m^3)
		Calcium Hypochlorite (g/m^3)	Potassium Permanganate (g/m^3)	
Dec 2012	N/A	7.05	3.04	0.76
Jan 2013	N/A	6.59	2.38	0.66
Feb 2013	N/A	7.42	2.12	0.60
Mar 2013	86.7	4.29	2.15	0.68
Apr 2013	89.8	5.63	2.05	0.64
May 2013	94.3	4.92	1.79	0.54

Note) Data for effective utilization ratio is reference value due to the inaccuracy of flow meter reading.

(2) MCWW

a) El Sadat SWTP

Provisional Target of PIs in El Sadat SWTP

	Effective utilization Ratio of Water (%)	Unit consumption of Chemicals		Energy Consumption (kWh/m^3)
		Gaseous Chlorine (g/m^3)	Aluminum Sulfate (g/m^3)	
Target Setting	92.0	6.50	18.0	0.36

Improvement in El Sadat SWTP

Month	Effective utilization Ratio of Water (%)	Unit consumption of Chemicals		Energy Consumption (kWh/m^3)
		Gaseous Chlorine (g/m^3)	Aluminum Sulfate (g/m^3)	
Sep 2012	88.0	9.20	26.0	0.45
Oct 2012	90.0	8.50	24.0	0.42
Nov 2012	90.0	7.50	22.0	042
Dec 2012	88.6	6.56	22.6	0.36
Feb 2013	90.41	6.41	20.0	0.41
Mar 2013	92.46	6.02	16.0	0.41
Apr 2013	91.2	6.00	18.0	0.39
May 2013	91.0	6.20	18.0	0.38

Note) Due to the inaccuracy of flow meter and suspension of water treatment system, it was impossible to obtain the data in January 2013.

b) Gezy IMRP

Provisional Target of PIs in Gezy IMRP

	Effective utilization Ratio of Water (%)	Unit consumption of Chemicals		Energy Consumption (kWh/m^3)
		Gaseous Chlorine (g/m^3)	Potassium Permanganate (g/m^3)	
Target Setting	92.0	6.00	1.0	0.50

Improvement in Gezy IMRP

Month	Effective utilization Ratio of Water (%)	Unit consumption of Chemicals		Energy Consumption (kWh/m^3)
		Gaseous Chlorine (g/m^3)	Potassium Permanganate (g/m^3)	
Sep 2012	84.0	3.50	2.0	0.80
Oct 2012	84.8	4.03	1.61	0.81
Nov 2012	86.3	6.40	1.07	0.80
Dec 2012	88.5	6.00	0.91	0.80
Jan 2013	91.2	6.30	1.09	0.76
Feb 2013	91.5	6.80	1.17	0.797
Mar 2013	91.6	6.80	1.08	0.80
Apr 2013	91.0	7.00	1.10	0.81
May 2013	91.0	6.50	0.96	0.79

4-2 Recommendation for target values of PIs

For Mahalet Marhoom IMRP of GHAPWASCO, the data collection has been undertaken for both inlet and outlet water flows since the beginning of March 2013. According to the data, the target is recommended to be modified.

Recommended Target for Effective Utilization Ratio in Mahalet MArhoom IMRP

Effective Utilization Ratio	
Before examination	After examination
85 %	96 %

In Gezy IMRP of MCWW, it will be hard to achieve a balance between potassium permanganate and chlorine consumption for the provisional target. JET and C/P team recommend the modification of chlorine target from 6.0 to 6.5 g/m^3. Even if modifying the target, annual cost reduction is expected for LE13,400 / year.

Recommended Target for Chlorine Consumption in Gezy IMRP

Unit consumption of Chlorine	
Before examination	After examination
6 g/m^3	6.5 g/m^3

Accordingly, the target PIs are proposed as follows;

Target of PIs in El Melahia SWTP

	Effective utilization Ratio of Water (%)	Unit consumption of Chemicals		Energy Consumption (kWh/m^3)
		Gaseous Chlorine (g/m^3)	Liquid Aluminum Sulfate (g/m^3)	
Target Setting	90.0	8.00	35.00	0.35

Target of PIs in Mahalet Marhoom IMRP

	Effective utilization Ratio of Water (%)	Unit consumption of Chemicals		Energy Consumption (kWh/m^3)
		Calcium Hypochlorite (g/m^3)	Potassium Permanganate (g/m^3)	
Target Setting	**96.0**	6.00	2.00	0.60

Target of PIs in El Sadat SWTP

	Effective utilization Ratio of Water (%)	Unit consumption of Chemicals		Energy Consumption (kWh/m^3)
		Gaseous Chlorine (g/m^3)	Liquid Aluminum Sulfate (g/m^3)	
Target Setting	92.0	6.50	18.0	0.36

Target of PIs in Gezy IMRP

	Effective utilization Ratio of Water (%)	Unit consumption of Chemicals		Energy Consumption (kWh/m^3)
		Gaseous Chlorine (g/m^3)	Potassium Permanganate (g/m^3)	
Target Setting	92.0	**6.50**	1.0	0.50

5. Repairs of Equipment and Modifications of Software settings

5-1 Defects

Following defects are found on the delivered equipment. Details are under discussion among HCWW, SHAPWASCO, JET and equipment provider (Yokogawa).

No.	Equipment	Condition	Yokogawa Plan
1.	Telemeter (In-door type)	Name Plate for W-8 is written as "W-7". Necessary to correct for "W-8".	The new plate was prepared. It will be fixed at site. It will be done with repair of item 2.
2.	Telemeter (In-door type)	One of the 17 units is not good for assembly. Necessary for re-assembling.	Repairing materials are prepared. It is now under preparation for export. It is expected the beginning of July for arrival at Cairo. Repair will be done in Zagazig, expected in the middle of July.
3.	Telemeter (Both type for In-door and Out-door) in general	Even if recovered from black-out, communication between RTU and communication module is not recovered automatically.	Program to be installed in RTU is prepared. It is expected to start the work in the end of June. The work will be in Zagazig.
4.	Central Monitoring System	When the negative direction of flow is detected, "error" is indicated.	Modification on the soft setting will be finished in the beginning of July. Delivery and re-installation will be in the middle of July.
5.	Central Monitoring System	Summary sheet for A4 area on total flows (in-coming, out-going, well production) is not prepared to be indicated / printed-out.	Same as item 4.

Further troubles are found in June 2013, which are suspected to be defects on the software setting (including database connection). Yokogawa Egypt inspected the suspicious points on 19-Jun. Yokogawa is now studying the points for confirmation. Plan of solutions will be presented later.

5-2 Request of SHAPWASCO for further training

WDM team became possible for usual monitoring operation through the initial training provided by Yokogawa (financed by JICA). However, modification of software setting is not easy and not included in the training. According to Yokogawa Egypt, special trainings are necessary for around 2 weeks in Cairo, to modify settings of screen, database, reports, etc. SHAPWASCO requests JET to provide such trainings for future expansions and modifications of monitoring system. JET started discussion with JICA for the matter.

5-3 JET Recommendation

It is common to have a support contact between users and equipment providers for monitoring system. JET recommends strongly SHAPWASCO to have a contract with Yokogawa Egypt for periodical maintenance of system and Q&A for usage.

Attachment-3 Phase-3: Annual Plan of Operation (General Activity)

	Items	2013									2014		
		Phase-3											
		4	5	6	7	8	9	10	11	12	1	2	3
Output0:	**The project is managed and coordinated properly**												
0-2.	Coordinate among SHAPWASCO, GHAPWASCO and MCWW through the Steering Committee												
0-3.	Organize the Joint Coordinating Committee (JCC) meeting at least once a year												
0-5.	Draft Annual Plan of Operations (APO) based on the Plan of Operations (PO) for approval of the JCC												
0-6.	Monitor the progress of PO/APO and achievement of the Indicators of the PDM												
Output1:	**Human Resource Development through coordination among water supply companies in Sharkiya, Gharbia and Minufia Governorates is strengthened**												
1-2.	Conduct Training of Trainers (TOT) for developing SOP	for GHAPWASCO, MCWW											
1-2-1.	OJT for training	OJT through SOP activity											
1-2-2.	Seminar for Presentation Skills												
1-3.	Conduct TOT for NRW reduction	for GHAPWASCO, MCWW											
1-3-1.	OJT for training	OJT through NRW activity											
1-3-2.	Seminar for Presentation Skills												
1-4.	Disseminate the contents, the manners and the results of the collaboration among SHAPWASCO, GHAPWASCO and MCWW to the water supply companies in Nile Delta Area through reports and workshops												
1-4-1.	Seminars / workshops to be conducted by SHAPWASCO			SOP					NRW SOP	WDM		NRW SOP	
1-4-2.	Training on water leakage survey and water leakage detection equipments at the training yard in Sharkiya Governorate												
1-4-3.	Open seminars												
	<Equipment Plan>												
	Equipment Procurement (JICA Expert)		Procurement (NRW)	Transport Delivery									
	Equipment Procurement (JICA)	Delivery (WDM)											
	<Training in Japan>												

Attachment-3 Phase-3: Annual Plan of Operation (Development of SOP)

	Items	2013									2014		
		Phase-3											
		4	5	6	7	8	9	10	11	12	1	2	3
Based on the experiences of SHAPWSCO, SOPs are developed and utilized at the model facilities in Gharbia and Minufia Governorates													
Action-1	Survey the current conditions of water supply facilities in Gharbia and Minufia Governorates												
Action-2	Select 3 model facilities in Gharbia and Minufia Governorates each												
Action-3	Organize SOP teams												
Action-4	Conduct training for developing and applying SOPs at the facilities of Sharkiya Governorate												
Action-5	Revise SOPs of Sharkiya Governorate, if necessary												
Action-6	Develop SOPs for model facilities in Gharbia and Minufia Governorates based on SOPs for SHAPWASCO												
6-1	Examination for the site condition (C/P organization control, Cooperative framework of trainer etc.)												
6-2	Preparation of basic system drawings (P&ID, Single line diagram)												
6-3	Preparation of draft SOPs for O&M with site training												
6-4	Preparation of unified forms of O&M records and reports												
6-5	Examination of water quality management												
6-6	Finalization of SOPs												
Action-7	Conduct On-the-Job Training for GHAPWASCO and MCWW to apply SOPs in operation and maintenance												
7-1	Applying SOP for On-the-Job Training												
Action-8	Monitor the progress of SOP activities												
8-1	Monitoring of activity condition on On-the-Job Training												
Action-9	Draft the policy/plan for disseminating SOP to the other Marakazes												
9-1	SOP Expansion to new model facilities for GHAPWASCO and MCWW												
9-2	Compiling of long-term SOP activity target												
9-3	Preparation of the draft policy/plan of SOP activity for whole governorate												

Attachment-3 Phase-3: Annual Plan of Operation (NRW Reduction)

Items		2013									2014		
		Phase-3											
		4	5	6	7	8	9	10	11	12	1	2	3
The institutional skills and experiences of SHAPWASCO for NRW reduction are transferred to NRW teams at the model areas in Gharbia and Minufia Governorates													
Action-1	Analyze the current situation on NRW in Gharbia and Minufia Governorates												
Action-2	Select 3 model areas in Gharbia and Minufia Governorate each												
Action-3	Organize NRW reduction teams												
Action-4	Formulate an action plan for NRW reduction activities based on the action plan for SHAPWASCO												
Action-5	Conduct training on general practice of NRW reduction												
Action-6	Conduct training at the training yard in Sharkiya Governorate												
6-1	Training on water leakage survey and water leakage detection equipment at the training yard in Sharkiya Governorate												
Action 7	Conduct training at model areas for water distribution management in Sharkiya Governorate												
Action-8	Prepare GIS drawing for model areas in Gharbia and Minufia Governorates												
Action-9	Make water balance analysis at model areas												
9-1	Conducting Minimum Night Flow (MNF) survey for candidate pilot area												
9-2	Determining pilot project area for each model area (Markaz)												
9-3	Making field survey of distribution network												
9-4	Conducting Water flow measurement												
9-5	Measuring metering error for working and waste in the house												
9-6	Making Water balance analysis before repair works												
Action 10	Conduct leakage detection survey at model areas												
10-1	Conduct leakage detection survey at model areas												
10-2	Repairing leaking parts												
10-3	Improvement of water meter condition												
Action 11	Make water balance analysis after repair works												
11-1	Conducting Water flow measurement												
11-2	Making water balance analysis after repair works and evaluation												
Action 12	Draft policy/plan for disseminating NRW reduction activities to the other Marakazes												
12-1	Leak Detection Activity in other Markaz												
12-2	Making draft policy/plan for dissemnating NRW reduction activity to other Markaz												
12-3	NRW reduction activity in other Markaz on draft policy/plan												

Attachment-3 Phase-3: Annual Plan of Operation (Distribution Management for SHAPWASCO)

Items		2013									2014		
		Phase-3											
		4	5	6	7	8	9	10	11	12	1	2	3
The water distribution management capacity is improved in Sharkiya Governorate as an advanced model													
Action-4	Install the equipment for water distribution management at the model area												
4-1	Preparation for space for monitoring room												
4-2	Preparation for communicating system												
4-3	Chamber construction by SHAPWASCO												
4-4	JICA procedures for equipment procurement												
4-5	Installation of the equipment												
Action-5	Operate the system												
5-1	Well operation												
5-1-1	Recording Outlet Pressure at 1hour interval												
5-1-2	Trial Operation according to the Outlet Pressure												
5-1-3	Identification of Appropriate Pressure for Switch On/OFF												
5-2	Flow / Pressure Monitoring through Telemetry												
5-2-1	Baseline Data Collection under usual Operation												
5-2-2	Monitoring Flow/Pressure while Trial Operation of WTP and wells												
5-3	Operation of Distribution Pump in WTP according to data												
5-4	Data Analysis												
5-4-1	Input Operation Data of Wells												
5-4-2	Integration of Data for Production and Distribution												
5-4-3	Demand Fluctuation												
5-4-4	Low Service Pressure												
5-4-5	Number of Complaints												
5-4-6	Proposal for Improvement Plan for Water Supply System												
Action-6	Develop SOP for water distribution management												
Action-7	Evaluate the operation and SOP for water distribution management												
7-1	Efficiency and Effectiveness Evaluation												
7-2	Interview Survey												

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta

Minutes of Meeting for the 7th Steering Committee held on the 31st of August 2014 at HCWW

Holding Company for Water and Wastewater (HCWW), Sharkiya Potable Water and Sanitation Company (SHAPWASCO), Gharbia Potable Water and Sanitation Company (GHAPWASCO), Minufia Company for Water and Wastewater (MCWW) and JICA expert team (JET) hold the 7th steering committee on the 31st of August 2014. Contents described in the following pages were confirmed in the committee.

Dr. Salah Bayoumi Project Manager Vice Chairman Holding Company for Water and Wastewater (HCWW)	Mr. Katsumi Fujii Chief Advisor The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area, Japan International Cooperation Agency (JICA)

Mr. Ayman Abd El Kader Project Co-Manager Chairman Sharkiya Potable Water and Sanitation Company (SHAPWASCO)	Mr. Mahmoud Zaki Project Co-Manager Chairman Gharbia Potable Water and Sanitation Company (GHAPWASCO)	Mr. Mohamed Naguib Project Co-Manager Chairman Minufia Company for Water and Wastewater (MCWW)

1. Date, Time, Place and Participants of the Committee

Date: the 31st of August 2014

Time: 10:00 – 12:00

Place: HCWW

Participants: As shown in Attachment-1

2. Schedule and PO-4

The participants confirmed the following:

(1) The Project's activities for SOP and NRW in GHAPWASCO and MCWW will be finished in this end of August 2014. Both ACs will continue the expansion works of SOP and NRW in their Governorates by self-efforts.

(2) MCWW has started the discussions with Qualubia Company for Water and Wastewater for assistance on SOP development.

(3) Period of WDM activities for SHAPWASCO will be extended until April 2015.

(4) PO is modified and approved as shown in Attachment-2.

3. Trainers for SOP and NRW

The Project team proposed the following persons for trainers of SOP and NRW. The participants approved the proposed persons as trainers in the 3 ACs.

(1) Trainers for SOP in SHAPWASCO

Name	Remark
Abd El Shafi Abd El Aziz Mohamed	Engineer
Gamal Abd El Hameed	Engineer
El Sayed Mostafa	Chemist
Ahmed Saeed Abd El Halim	Engineer

(2) Trainers for NRW in SHAPWASCO

Name	Remark
Alaa El Din Mohamed	Management
Saeed Mohamed Attia	Engineer
Walaa Mohamed Ali	Engineer
Tamer Wael Abd Elhady	Technician

(3) Trainers for SOP in GHAPWASCO

Name	Remark
Gad Abdel Monsef	Engineer
Mohamed Masood	Engineer
Mekawy Mekawy	Chemist
Mahmoud Badr	Engineer (Electrician)
Ahmad El Maleh	Engineer
Rizk El Fiky	Engineer

(4) Trainers for NRW in GHAPWASCO

Name	Remark
Ahmed Rabee	Engineer
Omar Mohamed Salah El Din	Engineer
Salah Mohamed El Sawahly	Technician

(5) Trainers for SOP in MCWW

Name	Remark
Ayman Bassyouni Abdeen	Engineer
Saeed Abdelfattah	Engineer
Mohamed Fathy Gaber	Engineer
Mohamed Fawzy Awad	Engineer
Khaled Kazamel	Engineer
Adel Ibraheem	Chemist

(6) Trainers for NRW in MCWW

Name	Remark
Mohamed Mostafa Shafey	Engineer
Mohamed Fawzy Bader	Engineer
Ahmed Mohamed El Showny	Engineer

4. Ratio of Low Service Pressure (PI for WDM)

The Project team presented the calculated data for ratios of low service pressure as shown in the next table.

Ratio of Low Service Pressure

Item	Mar. 2014	Apr. 2014	May 2014	Jun 2014	July 2014
Whole Zagazig					
Total effective hours for data at 9 points	2,887	3,407	2,749	3,465	4,883
Hours below 1.0bar at 9 points	240	201	253	512	964
Ratio below 1.0bar	8%	6%	9%	15%	20%
A-4					
Total effective hours for data at 2 points	854	848	644	803	1,149
Hours below 1.0bar at 2 points	12	8	1	6	34
Ratio below 1.0bar	1.4%	0.9%	0.2%	0.7%	3.0%

The participants discuss the following:

- The low service pressure ratio would be influenced by the water demand.
- It would be possible to be varied by month.
- It is difficult to say that the ratio of March is the representative of current pressure condition for general.

Since it is not possible to compare the monthly data with ones of next year in the Project, the Project team proposes the target as shown in the next table.

Target Ratio of Low Service Pressure

Area	Initial Ratio in March	Target Ratio in March
Whole Zagazig	8%	7%
A-4	1.4%	1.3%

5. Other Discussion

(1) WDM

HCWW instructed the following for WDM:

- WDM is not a monitoring activity.
- Modifications of operation modes for WTP / wells and capacity improvement such as well constructions are included.
- According to such activities, SHAPWASCO should improve the water distribution conditions.

SHAPWASCO will continue the activities for operation modes modifications and examination for necessity of new wells.

(2) NRW

HCWW is impressed by the following for leak detection results. HCWW encouraged GHAPWASCO and MCWW to continue / expand NRW activities.

Result of Leak Detection in GHAPWASCO

Branch name	Number of surveyor	Surveyed house connections	Leaked numbers							Surveyed days	Leak amount (m^3/day)
			Total	House connection			Main pipe				
				Steel	PVC	Others	Steel	PVC	Others		
Zefta	2	4,100	18	7	8	0	1	2	0	60	103.7
Santa	4	3,581	33	13	13	0	0	7	0	55	522.7
Bassyoun	2	3,100	14	3	9	0	1	1	0	45	355.64
Kotor	2	3,462	16	2	12	0	0	2	0	60	141.1
Kafr El Zayat	2	5,180	53	3	42	0	0	8	0	45	508.32
Samanoud	2	2,900	44	5	12	2	3	4	18	40	550.08
Total	14	22,323	178								2,181.54

Result of Leak Detection in MCWW

Branch name	Number of surveyor	Surveyed house connections	Leaked numbers			Surveyed days	Leak amount (m3/day)
			Total	House connection	Main pipe		
Tala	2	4,000	1	1	0	40	13.7
El Shohada	2	800	14	14	0	8	191.5
Berket El Sab'a	2	3,200	18	18	0	32	326.9
Quesna	2	2,400	11	11	0	24	150.5
Shebeen	2	2,400	18	18	0	24	246.2
Ashmoon	2	1,600	1	1	0	16	13.7
El Bagoor	2	3,200	7	0	0	32	95.8
Menouf	2	1,600	1	0	0	16	13.7
Total	16	19,200	71	71	0		1,051.9

(end)

A4-32

Attachiment-1

List of Participants

[Egyptian side]	
Dr. Salah Bayoumi	Vice Chairman of HCWW
Mr. Ayman Abd El Kader	Chairman of SHAPWASCO
Mr. Mahmoud Zaki	Chairman of GHAPWASCO
Mr. Mohamed Naguib	Chairman of MCWW
Mr. Alaa El Din Taleb	SHAPWASCO
Mr. Mostafa Ibrahim	SHAPWASCO
Mr. Tamer Kamel Hussein	SHAPWASCO
Mr. Adel Attia	GHAPWASCO
Mr. Omar Salah	GHAPWASCO
Mr. Rizk El Fiky	GHAPWASCO
Mr. Mohamed El Shafey	MCWW
Mr. Mohamed Fawzy Awad	MCWW
[Japanese side]	
Mr. Katsumi Fujii	Chief Advisor / Water supply planning
Mr. Atsushi Kato	Coordinator / Assistant for NRW Reduction Management
Mr. Mohamed Nagi Gaber	Facilitator of the Project team
Mr. Mohammed Abd El-Kader Abd El-Ghany	Facilitator of the Project team
Mr. Mahmoud Abdelkader	Local Expert
Mr. Ahmed Atef	Interpreter
Mr. Amr Salah Abd-elaal	Interpreter

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area

Attachment-2

31 August 2014

Plan of Operation (PO-4)

	Items	Year1				Year2				Year3				Year4				Year5				Person in Charge	Major Input		Remarks
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		Japan	Egypt	
1. Human Resource Development through collaboration among water supply companies in Sharkiya, Gharbia and Minufia Governorates in strengthened																									
1-1.	Conduct management training for the top management			☆																		HC, SH, G,M	☆ Training in Japan		
1-2.	Conduct Training of Trainers (TOT) for developing SOP			☆																		SH, G,M	JICA Experts Local Exerts ☆ Training in Japan		Year 1:for SH Year 4:for G, M
1-3.	Conduct TOT for NRW reduction			☆																		SH, G,M	JICA Experts Local Experts ☆ Training in Japan		
1-4.	Disseminate the contents, the manners and the results of the collaboration among SHAPWASCO, GHAPWASCO and MCWW to the water supply companies in Nile Delta Area through reports and workshops																					HC, SH, G,M	JICA Experts		
2. Based on the experiences of SHAPWASCO, SOPs are development and utilized at the model facilities in Gharbia and Minufia Governorates																									
2-1.	Survey the current conditions of water supply facilities in Gharbia and Minufia Governorates																					G,M	JICA Experts	SH	
2-2.	Select 3 model facilities in Gharbia and Minufia Governorates each																					G,M	JICA Experts	SH	
2-3.	Organize SOP teams																					G,M	JICA Experts	SH	
2-4.	Conduct training for developing and applying SOPs at the facilities of Sharkiya Governorate																					G,M	JICA Experts	SH	
2-5.	Revise SOPs of Sharkiya Governorate, if necessary																					G,M	JICA Experts	SH	
2-6.	Develop SOPs for model facilities in Gharbia and Minufia Governorates based on SOPs for SHAPWASCO																					G,M	JICA Experts	SH	
2-7.	Conduct On-the-Job Training for GHAPWASCO and MCWW to apply SOPs in operation and maintenance																					G,M	JICA Experts	SH	
2-8.	Monitor the progress of SOP activities																					G,M	JICA Experts	SH	
2-9.	Draft the policy/plan for disseminating SOP to the other Marakazes																					G,M	JICA Experts	SH	
3. The institutional skills and experiences of SHAPWASCO for NRW reduction are transferred to NRW teams at the model areas in Gharbia and Minufia Governorates																									
3-1.	Analyze the current situation on NRW in Gharbia and Minufia Governorates																					G,M	JICA Experts	SH	
3-2.	Select 3 model areas in Gharbia and Minufia Governorates each																					G,M	JICA Experts	SH	
3-3.	Organize NRW reduction teams																					G,M	JICA Experts	SH	
3-4.	Formulate an action plan for NRW reduction activities based on the action plan for SHAPWASCO																					G,M	JICA Experts	SH	
3-5.	Conduct training on general practice of NRW reduction																					G,M	JICA Experts	SH	
3-6.	Conduct training at the training yard in Sharkiya Governorate																					G,M	JICA Experts ☆ Training in Japan	SH	
3-7.	Conduct training at model areas for water distribution management in Sharkiya Governorate																					G,M	JICA Experts	SH	
3-8.	Prepare GIS drawing for model areas in Gharbia and Minufia Governorates																					G,M	JICA Experts	SH	
3-9.	Make water balance analysis at model areas																					G,M	JICA Experts	SH	
3-10.	Conduct leakage detection survey at model areas																					G,M	JICA Experts	SH	
3-11.	Make water balance analysis after repair works																					G,M	JICA Experts	SH	
3-12.	Draft policy/plan for disseminating NRW reduction activities to the other Marakazes																					G,M	JICA Experts	SH	
4. The water distribution management capacity is improved in Sharkiya governorate as an advanced model																									
4-1.	Discuss methods and conduct survey for water distribution management																					SH	JICA Experts		
4-2.	Conduct training for water distribution management							☆														SH	JICA Experts ☆ Training in Japan		
4-3.	Formulate a plan for water distribution management																					SH	JICA Experts		
4-4.	Install the equipment for water distribution management at the model area																					SH	JICA Experts		
4-5.	Operate the system																					SH	JICA Experts		
4-6.	Develop SOP for water distribution management																					SH	JICA Experts		
4-7.	Evaluate the operation and SOP for water distribution management																					SH	JICA Experts		
0. The project is managed and coordinated properly																									
0-1.	Establish Steering Committee, consisting of representative of HCWW, SHAPWASCO, GHAPWASCO and MCWW																					HC, SH, G, M	JICA Experts		
0-2.	Coordinate among SHAPWASCO, GHAPWASCO and MCWW through the Steering Committee																					HC, SH, G, M	JICA Experts		
0-3.	Organize the Joint Coordination Committee (JCC) meeting at least once a year																					HC, SH, G, M	JICA Experts		
0-4.	Finalize the Indicators of the Project Design Matrix (PDM) for approval of the first JCC																					HC, SH, G, M	JICA Experts		
0-5.	Draft Annual Plan of Operations (APO) based on the Plan of Operations (PO) for approval of the JCC																					HC, SH, G, M	JICA Experts		
0-6.	Monitor the progress of PO/APO and achievement of the Indicators of the PDM																					HC, SH, G, M	JICA Experts		● Mid-Term Review ▲ Terminal Evaluation

Attachment-5 Minutes of Meeting of Project Team Meetings (PTM)

(1) GHAPWASCO

The Project for Improvement of Management Capacity of
Operation and Maintenance for Water Supply Facilities in Nile Delta Area (Phase-1)

Minutes of Meeting for 1st Project Team Meeting in GHAPWASCO for PH-1

Date	26th June (Saturday) 2011	Signature
Time	9:30～11:00	
Place	Tanta expert office	
Attendants	**[GHAPWASCO : C/P]**	
	Mr. Abd Alah El Laithy : Leader of C/P team	
	Mr. Basyouny Essa : Head of SOP team	
	Mr. Ahmed El Sayed Rabie : Head of NRW team	
	Mr. Moataz Hassan : SOP C/P team	
	Mr. Abd El Monaem AboYazeed : SOP C/P team	
	Mr. Ahmed Abd El Maaboud : SOP C/P team	
	Mr. Ahmed Atef : NRW C/P team	
	Mr. Amr Salah : NRW C/P team	
	Mr. Ahmed El Bakary : NRW C/P team	
	[JICA Expert Team]	
	Mr. Mitsuhito Omori : NRW Reduction	
	Mr. Ryoji Nagao : Mechanical Equipment	
	Mr. Nobuyuki Iijima : Well Monitoring	
	Dr. Ahmed El-Baz : SOP Senior Engineer	
	Mr. NAGI Gaber : Facilitator	
	Mr. Mohamed Abouzekry : Facilitator	
	Mr. Ahmed Ragab : Interpreter	
	Mr. Ahmed Atef : Interpreter	

1. General

Expert team reported general topics.

1-1. Purpose of PTM

Project information such as progress, issues, and schedule should be shared among expert team and counterpart team.

1-2. Schedule of Japanese Expert

The team reported the schedule of Japanese experts as follows;

- Mr. Katsumi Fujii : Departure on 23rd June 2011
- Mr. Nobuyuki Iijima : Arrival on 21st June 2011
- Mr. Kiyoshi Kiyama : Arrival on 28th June 2011
- Mr. Mitsuhito Omori : Departure on 1st July 2011

2. SOP activity

C/P team for SOP reported the progress, issue, and next schedule of the Project.

2-1. Progress

(1) Primary selection of candidate facility as 'Long List' for site survey
(2) Mini-seminar on 8 June at GHAPWASCO, 9 June at MCWW
(3) Site survey progress

- The C/P explained that the candidates facilities have been selected and are as follow:
  a- Surface Water Treatment Plants are Eight.
  b- Iron and Manganese Removal Plants are twenty.
- The C/P explained that the progress of survey works is as follow:
  a- Survey for seven water treatment plants was completed.
  b- Survey for two iron and manganese removal facilities was completed.

2-2. Issue for the Project

- JICA expert team and counter part team confirmed the necessity that counter part team has to work full time in the project.

2-3. Schedule for until September

JICA expert team and counter part team confirmed the schedule until September.

- Site survey and report preparation (June & July, 2011)
- Comparison & assessment based on report to prepare "Short List" (July & Sep, 2011)
- Secondary selection of candidate facility as 'Short List' for detail assessment (Sep, 2011)

3. NRW reduction activity

C/P team for NRW reported the progress, issue, and next schedule of the Project.

3-1. Progress

(1) General information for NRW

- The counter part informed that the requested data has been submitted to JICA expert team.
- GIS data will be provided within few days.

(2) Mini-seminar on 18 June at GHAPWASCO, 19 June at MCWW
(3) Discussion about future study

3-2. Issue for the Project

- JICA expert team and counter part team confirmed the necessity that counter part team has to work full time in the project.

3-3. Schedule for until September

JICA expert team and counter part team confirmed the schedule until September.

- Review and Study for SHAPWASCO's Action Plan (June & July, 2011)
- Attending SHAPWASCO's seminar which will explain the selection criteria.(2 July at GHAPWASCO, 3 July at MCWW)
- Select model areas (July & August, 2011)
- Making GHAPWASCO's Action Plan (August, 2011)
- Analysis the general information for NRW by expert team and discussion with C/P team (July, August, September 2011)

(End of MM)

The Project for Improvement of Management Capacity of
Operation and Maintenance for Water Supply Facilities in Nile Delta Area (Phase-1)

Agenda for 2nd Project Team Meeting in GHAPWASCO for PH-1

Date	28th July (Thursday) 2011	Signature
Time	11:00 am	
Place	GHAPWASCO headquarters	
Attendants	**[GHAPWASCO : C/P]**	
	Mr. Abdullah El Laithy : Leader of C/P team	
	Mr. Abd El Monaem AboYazeed : SOP C/P team	
	Mr. Ahmed Abd El Maaboud : SOP C/P team(well monitoring)	
	Mr. Mahmoud Badr : SOP C/P team (electricity)	
	Mr. Amr Salah : NRW C/P team	
	Mr. Ayman Abdel Kader : Chairman of GHAPWASCO	
	[JICA Expert Team]	
	Mr. Nobuyuki Iijima : Well Monitoring	
	Dr. Ahmed El-Baz : SOP Senior Engineer	
	Mr. Mohamed Abouzekry : Facilitator	
	Mr. Ahmed Ragab : Interpreter	
	Mr. Ahmed Atef : Interpreter	
	Dr. Sayed Madbouly :Electrical senior Engineer	

1. General

Expert team reported general topics.

1-1. Purpose of PTM

Project information such as progress, issues, and schedule should be shared among expert team and counterpart team.

1-2. Schedule of Japanese Expert

The team reports the schedule of Japanese experts as follows;

- Mr. Nobuyuki Iijima : Departure on 3rd July 2011

2. SOP activity

Dr. Ahmed El Baz reported the progress, issues, and next schedule of the Project.

2-1. Progress

(1) Short list is prepared for both SWTP and IMRF with the help of JET.
(2) Site survey progress for all C/P teams in SOP to be reported.

- Dr. Ahmed El Baz explained that the candidates facilities have been selected and are as follow:
  a- Surface Water Treatment Plants are Eight.
  b- Iron and Manganese Removal Plants are twenty.
  c- A short list has been prepared containing 3 SWTP and 5 IMRF.
- Dr. Ahmed El Baz explained that the progress of survey works is as follow:
  a- Survey for 8 SWTP was completed; all was done in presence of JET expert.
  b- Survey for 18 IMRF was completed, 7 facilities were done by the C/P only.
- C/P for well monitoring discussed their progress, issues, and future plan.
- C/P team for electricity discussed their progress.

2-2. Issues for the Project

- **C/P issues:**

(1) The facilities that have been excluded made the survey time longer.
(2) The budget for operation and maintenance has to be gathered from economical analysis department.
(3) Some stations don't have a flow meter to measure the total of treated water capacity.
(4) All SWTP flow meters for raw water are not suitable for reading (broken or malfunctioning).
(5) The population number is approximate from the year 2006.
(6) There is no Fe/Mn analysis equipment in the IMRF for on spot analysis.
(7) Most SWTP doesn't have drawings for the facility except layouts.
(8) It is not available to have daily analysis for water quality on daily basis.
(9) The different methods for calculating the capacity in stations, which is solved by using the method informed by the JET.
(10) Some of the managers of IMRF has very weak grasp of their facilities.

- **JET issues:**

(1) The late arrival of SOP C/P team to office, which results in less time for site surveying.
(2) The absence of the C/P team leader, and some of the C/P team members.
(3) Mr. Abdel Monaem wants to leave the SOP team.
(4) The general information is provided very late and is inaccurate.
(5) Some of the facilities visited were not fully under management and operation of GHAPWASCO or has some rehabilitation and expansion, which was not informed to the JET, which resulted in ignoring these facilities.

- The Chairman promised to solve the issue regarding the shortage in SOP C/P team, and will assign more personnel as soon as possible.

2-3. Schedule for until September

JICA expert team and counter part team confirmed the schedule until September, and that is to have a meeting with all facilities managers of the short list, in this meeting the managers were provided data sheets to fill up, and the C/P team will follow up the progress with them.

3. NRW reduction activity

C/P team for NRW reported the progress, issue, and next schedule of the Project.

3-1. Progress

(1) General information for NRW

- The C/P team had meetings with all branches of the company in the 8 markazes starting from 1st of July, 2011.
- The C/P team discussed the criteria for the selection of pilot areas for NRW.
- The NRW C/P teams also stressed on the importance of having each branch gather all information, and also draw free hand maps and compare it to the GIS drawings.
- Some maps are ready and will be delivered to the JET during the PTM

3-2. Issue for the Project

No issues discussed in the C/P team report for the Agenda.

3-3. Schedule for until September

- The NRW team will continue following up and making sure that each branch deliver the information and update to the GIS department in GHAPWASCO, and will choose the pilot areas according to it.
  - The chairman promised to help push the branches in helping the C/P team for NRW, in order to achieve the required goal.

(End of MOM)

The Project for Improvement of Management Capacity of
Operation and Maintenance for Water Supply Facilities in Nile Delta Area (Phase-1)

Minutes of Meeting for 3rd Project Team Meeting in GHAPWASCO for PH-1

Date	4th October (Tuesday) 2011	Signature
Time	11:00～14:00	
Place	Tanta expert office	
Attendants	**[GHAPWASCO : C/P]**	
	Mr. Abd Alah El Laithy : Leader of C/P team	
	Mr. Ahmed Abd El Maaboud : Head of SOP C/P team	
	Mr. Nagi Yousry : SOP C/P team	
	Mr. Samy Megahed : SOP C/team	
	Mr. Rizk El Fiqy : SOP C/P team	
	Mr. Ahmed El Sayed Rabie : Head of NRW team	
	Mr. Amr Salah El Din : NRW C/P team	
	[JICA Expert Team]	
	Mr. Mitsuhito Omori : NRW Reduction Expert	
	Mr. Tomohiro SHIMIZU : SOP Expert	
	Mr. Hiroki NIIMURA : NRW Expert	
	Mr. Kenji YAMADA : Hydraulic analysis Expert	
	Dr. Sayed Madbouly : Electrical Expert	
	Mr. Mohamed Nagi : Facilitator	
	Dr. Mostafa Moawad : NRW senior Engineer	
	Mr. Mohamed Abouzekry : Facilitator	
	Mr. Ahmed Ragab : Interpreter	
	Mr. Ahmed Atef : Interpreter	

1. General

Expert team reported general topics.

1-1. Schedule of Japanese Expert

The JET reported the schedule of Japanese experts as follows;

- Mr. Katsumi Fujii : Departure on 30th September 2011
- Mr. Tomohiro Shimizu : Arrival on 3rd October 2011
- Mr. Kazuhiro Umeki : Arrival on 8th October 2011

1-2. Weekly Meeting for NRW

Weekly meeting for NRW has been started since last week in order to share the progress more periodically.

1-3. Equipment

JET reported the situation of equipment as follows.

- Equipment from Japan will arrive at Cairo airport 4th of October (this noon time).
- HCWW will pass customs for equipment.
- Xerox will install the copy machine as soon as possible by request of JICA Egypt.
- JET has a plan to procure the generator in Egypt by end of October.

The team requested following.

- Store place for leak detection is needed.

1-4. Project office

JET has requested environment improvement for the Project such as office space, desk, cabinet, Monitor, telephone line, and so on. GHAPWSCO has tried to solve this problem and promised to provide by 20th of October.

1-5. Site Tour to SHAPWASCO

The team has a plan of site tour in SHAPWASCO. JET has arranged this activity with SHAPWASCO. Followings are tentative plan.

1) Date : October 10 (Mon)
2) Time: From 10:00
3) Location
   - ✓ Briefing : Headquarter
   - ✓ SOP: Moving to Zagagiz WTP
   - ✓ NRW: Moving to one pilot project site in Zagazig city and Hihiya training yard

2. SOP activity

C/P team for SOP reported the progress, issue, and next schedule of the Project.

2-1. Progress

- The SOP team has been changed and the new team is organized.
- Site survey was done for the candidate model facilities (3 SWTP and 5 IMRF).
- Data is being collected on weekly basis from the candidate model facilities.
- A visit was done to Tanta and Kafr El Zayat SWTPs, and flow readings were taken over a period of 24 hours for each station, also a visit to El Naharia IMRF.
- Studying the chemical and electrical consumptions and capacity of raw and treated water.
- A seminar has been done in Alexandria on the 27th of September, 2011, showing the progress done so far in and the future plan.
- A short list of electricity has been done for the candidate facilities of the SWTPs and IMRFs, all 3 SWTPs are similar to previous evaluation done, and only 3 from the IMRFs; Mahalet Marhoum, El Gaefareya, and Manial El Howaishat. Single line Diagrams for Tanta El Gedeeda and Mahalet Marhoum are already done and being revised now.

2-2. Issues for the Project

- All IMRFs have no flow meters installed in it for raw or treated water.
- SWTPs of Zefta have a raw water flow meter that's not working, and Kafr El Zayat doesn't have one at all for the raw water, but all has a flow meter for treated water.
- All IMRF facilities have no labs or Iron and Manganese measuring equipment, except for Kotour El Kadeema, which makes it hard to take daily readings.
- Some of the weekly reports gathered from the stations are not complete, and they were informed that they have to complete it, such as; Aluminum Sulphite dose, weight of chlorine Cylinders, pump numbers, meter readings, and the total amount of raw water and treated water capacity.
- Not all cables of electricity have known diameters, so in the single line diagram the diameters will be assumed according to calculations.

2-3. Next Schedule

- Continue visits for the candidate facilities
- Specifying the model facilities through study and analysis from the data collected.
- Single line diagrams will be done for Zefta SWTP and another IMRF according to grading of the facilities.

2-5. Discussion:

The Flow meters for the model SWTP will be supplied by the JET if not present or can't be fixed, and the model IMRF will be provided by the company. GHAPWASCO has a plan to install mechanical flow meter at all IMRF and budget is already allocated for half of all IMRF.

3. NRW reduction activity

C/P team for NRW reported the progress, issue, and next schedule of the Project.

3-1. Progress

- A meeting with the JET and C/P team for NRW in the company Headquarters, and mentioned what was accomplished during July and August.
- It was agreed on choosing 3 Markazes from the 8 markazes (Tanta, El Mahala El Kobra, and Zefta).
- GIS drawings for all branches have been prepared.
- Networks managers showed the candidate pilot areas in markazes (Tanta, El Mahala El Kobra, and Zefta).

1) Tanta:

- A meeting was held and maps have been revised for Tanta city.
- Chosen areas are: (Mohamed Farid - El Sayed El Mezayen – Botros).
- Mohamed Farid and Sayed El Mezayen areas have been isolated, and these areas are good

and the NRW reduction activities can be done on it, and Botros area will be isolated during the 2nd week of October.

- The JET and C/P team for NRW went many times to the areas to be isolated, but it wasn't ready, because of the many tasks required by Tanta staff already (Can not be controlled by the staff).

2) El Mahala El Kobra:

- A meeting was held with the JET, C/P team, and the staff of El Mahala El Kobra, in the JET office, and the GIS maps were revised and the areas were (Abdel Moneom Riyad - El Zahraa – El Nasr and El Salam – El Gabreya), and it was shown that some areas has weak pressure in the day time due to population increase.
- A meeting was held in the Japanese SWTP on 9th of October with the managers of facility and networks of El Mahala El Kobra, and it was confirmed that in case the pressure is low it will be hard to make NRW reduction activities. Therefore C/P member will try to solve this problem for carrying out NRW reduction activity.

3) Zefta:

- A meeting was held with Networks staff and GIS maps were revised and the following areas were chosen: (Behind Railway1 and 2 – El Gaish El Qebly and El Masraf – El Masry)
- The areas were isolated by site survey and the El Gaish El Qebly area showed high level of Ground Water will be removed, El Masry area was isolated and it's a good area for NRW reduction activities, Behind Railway 1 area was isolated and also good, and El Gaish El Qebly area will be replaced with Behind Railway 2.

3-2. Issue for the Project

- Adding a young engineer and technician to the NRW team.
- Giving a chance of training for network managers in SHAPWASCO.
- Speed of creating chambers.

3-3. Next Schedule

- Continue of isolation of areas in Tanta and Zefta.
- Trying to find a way to increase pressure in El Mahala El Kobra markaz.
- C/P team visiting SHAPWASCO to see the accomplishment done by them.
- Making a plan for constructing chambers by January
- Making a Seminar for managers of networks and facilities to show the progress done so far and the future plan, also explain what was seen in SHAPWASCO.

(End of MOM)

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area (Phase-1)

Minutes of Meeting for 4th Project Team Meeting in GHAPWASCO for PH-1

Date	29th October (Saturday) 2011	Signature
Time	11:00～14:00	
Place	Tanta expert office	
Attendants	**[GHAPWASCO : C/P]**	
	Mr. Ahmed Abd El Maaboud : Head of SOP C/P team	
	Mr. Nagi Yousry : SOP C/P team	
	Mr. Samy Megahed : SOP C/team	
	Mr. Rizk El Fiky : SOP C/P team	
	Mr. Mahmoud Badr : SOP C/P team (Electrical)	
	Mr. Mekawy Farag Mekawy : SOP C/P team (Water Quality)	
	Mr. Ahmed El Sayed Rabie : Head of NRW team	
	Mr. Omar Salah El Din : NRW C/P team	
	Mr. Ahmed El Bakary :NRW C/P team	
	[JICA Expert Team]	
	Mr. Mitsuhito Omori : NRW Reduction Expert	
	Mr. Tomohiro SHIMIZU : SOP Expert	
	Mr. Nagao : SOP Exoert	
	Mr. Umeki :SOP Expert	
	Mr. Hiroki NIIMURA : NRW Expert	
	Mr. Mohamed Nagi : Facilitator	
	Dr. Mostafa Moawad : NRW senior Engineer	
	Mr. Mohamed Abouzekry : Facilitator	
	Mr. Ahmed Ragab : Interpreter	
	Mr. Ahmed Atef : Interpreter	

1. General

Expert team reported general topics.

1-1. Schedule of Japanese Expert

The JET reported the schedule of Japanese experts as follows;

- Mr. Mitsuhito Omori : Departure on 31th October 2011
- Mr. Hiroki Niimura : Departure on 7th November 2011
- Mr. Tomohiro Shimizu : Departure on 14th November 2011
- Mr. Nobuyuki Iijima : Arrival on 14th November 2011

1-2. Equipment

JET reported the situation of equipment as follows.

- Equipment from Japan arrived and did hand over from HCWW to GHAPWASCO.
- Xerox installed the copy machine; however, settings of scan etc. still are not finished. JET has requested to arrange to JICA Egypt.
- JET had a plan to procure the generator in Egypt by end of October; however it is difficult to find a suitable one in Tanta. JET continues to find it.

The team requested following.

- Store place for leak detection is needed.
- Equipment should be passed to the Project soon.
- JICA pick up shall be used for our Project.

1-3. Project office

JET has requested environment improvement for the Project such as office space, desk, cabinet, Monitor, telephone line, and so on.

1-4. Possibility of changing period of the Project

JET reported that JICA is planning the changing period of the Project as following.

Original period of Phase-1: Until end of March

Modified period of Pase-1: Until end of December

1-5. Discussion with Chairman

JET and C/P discussed with chairman and the chairman promised the following.

- Another project office and store room for equipment will be provided soon by decision of chairman.
- These rooms are temporary rooms and will be shifted within 3 months.
- 12 chambers for NRW reduction activity will be prepared by procedure which is decided by chairman, within 1 month.

2. SOP activity

C/P team for SOP reported the progress, issue, and next schedule of the Project.

2-1. Progress

- The SOP team has conducted detail survey of candidate facilities.
- The teams proposed Tanta El Gadeeda SWTP and Mahalet Marhoom Fe/Mn Removal Plant in Tanta Markaz as model facilities, Leaders of the Project of GHAPWASCO.
- Rehabilitation and/or calibration for existing equipment in model facility will be needed. The team will discuss the minimum requirement for rehabilitation and/or calibration and will propose the result of discussion to Leader of the Project.
- Activity of water quality has been started.

2-2. Next Schedule

- Choosing C/P teams inside the model facilities
- Surveying the stations for maintenance works and equipments requiring rehabilitation.
- Conducting rehabilitation for the stations and finishing it by February.

3. NRW reduction activity

C/P team for NRW reported the progress, issue, and next schedule of the Project.

3-1. Progress

- NRW training in SHAPWASCO was finished. Some C/P staffs from each branch joined this activity and learned about method of installation and practice for flow meter. And also C/P had experience of grand microphone.
- Action Plan for NRW reduction Activity was prepared by cooperation with JET. And work shop for this action plan was held on 26th of October. C/P from all branches and commercial section attended this work shop.

3-2. Issue for the Project

- It will be discussed with Chairman about method of making of chamber.
- 12 Chambers will be made by February.

3-3. Next Schedule

- GIS drawings should be prepared before minimum night flow survey on February.
- Exact location of flow meter chamber will be decided within this week.
- C/P and the chairman will decide the method of making chamber.

(End of MOM)

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area (Phase-1)

Minutes of Meeting for 5th Project Team Meeting in GHAPWASCO for PH-1

Date	6th December (Tuesday) 2011		Signature
Time	03:00 pm – 5:00 pm		
Place	Tanta expert office		
Attendants	**[GHAPWASCO : C/P]**		
	Mr. Ahmed Abd El Maaboud	: Head of SOP C/P team	
	Mr. Samy Megahed	: SOP C/team	
	Mr. Rizk El Fiqy	: SOP C/P team	
	Mr. Omar Salah El Din	: NRW C/P team	
	[JICA Expert Team]		
	Mr. Umeki	:SOP Expert	
	Mr. Iijima	:SOP Expert	
	Mr. Mohamed Nagi	: Facilitator	
	Dr. Ahmed El Baz	:SOP senior Engineer	
	Mr. Mohamed Abouzekry	:Facilitator	
	Mr. Ahmed Ragab	:Interpreter	
	Mr. Ahmed Atef	:Interpreter	

1. General

Expert team reports general topics.

1-1. Schedule of Japanese Expert

The JET reported the schedule of Japanese experts as follows;

- Mr. Mitsuhito Omori : Arrival on 12th December 2011
- Mr. Tomohiro Umeki : Arrival on 6th December 2011

1-2. Equipment

The situation of equipment as follows:

- Equipments are still in GHAPWASCO's warehouse, and will be transferred to JICA team office by 20th of December, 2011.
- JET plan to procure the generator in Egypt during December.

2. SOP activity

C/P team reports the following.

2-1. SOP (Operation and Maintenance)

2-1-1. Progress

- Many visits to Tanta WTP for revising the requirements of rehabilitation for SOP and they were divided according to a time schedule with agreement of Mr. Abdullah El Leity.
- Some progress had been done according to the rehabilitation schedule of Tanta WTP (installing pressure gauges and fixing some flow meters).
- A visit was done with Dr. Ahmed El Baz for some parts of the Tanta WTP, and some specifications of the equipment were set with the C/P team, and requirements of rehabilitation were handed to the company for tendering and procurement of the required items.
- Attended SOP workshop in GHAPWASCO, for the importance of P&ID, and how to select the C/P team in the stations.
- Mr. Abdel Shafi (SOP team leader for SHAPWASCO) joined for visits in Tanta WTP and Mahalet Marhoum IMRF, to be familiar with the model facilities for SOP activities.
- Finished the block flow diagram for both facilities and P&ID of Mahalet Marhoum IMRF.
- Finished choosing the C/P team in the model facilities.

2-1-2. Issues

- Until now there were no decisions made for the filters valves in Tanta WTP.
- The JICA pickup is not enough for the requirements of the project.

2-1-3. Future plan

- Drawing P&ID for Tanta WTP.
- Follow up with the rehabilitation of SOP for both facilities.
- Checking the valves of the filters in Tanta WTP.
- C/P team agreed to discuss the problem of transportation with the chairman.
- The C/P team will contact the company for the valves of the filters to check for the requirements.

2-2. WQM (Water Quality Management)

C/P team reports the following.

2-2-1. Progress

- A meeting was held with Mr. Umeki to explain the purpose of WQM and specified the activities as follows:
  a) SOP will be applied in the laboratory of the chosen model facility (Tanta WTP), and it will start during the second phase of the project.
  b) Exchange of information and experience between the 3 affiliated companies (SHPWASCO, GHAPWASCO, and MCWW) through workshops.
  c) Conducting site survey using the WQM questionnaire for customer complains.
- Attended WQM workshop in GHAPWASCO, presented by Dr. Sayed (manager of Zagazig WTP) and Dr. Hamdy (General manager of Central laboratory of GHAPWASCO)
- A program was done by Mr. Umeki, and handed to C/P team, and data entry is carried out by them.

2-2-2. Issues

- Attendance of public relations personnel.
- The JICA pickup is not enough for the requirements of the project.

2-2-3. Future plan

- Carrying out the site survey according to the schedule.

2-3. Well monitoring

C/P team reports the following.

2-3-1. Progress

- Contour maps of ground water for static water level and water quality are done based on the data collected from the 18 stations.
- 4 well facilities were chosen for SOP activity (Abou Dawoud,Kafr Sebtas, El Montaza, and El Kharasana) and Kafr Sebtas well facility was chosen as the model facility.
- 3 areas were chosen in Gharbia governorate, with 6 facilities in each area to choose the exact location for installing the water level meter.

2-3-2. Issues

There are no issues reported.

2-3-3. Future plan

- Choosing the exact facilities for installing the water level meters of well monitoring.
- Installing 2 flow meters in Kafr Sebtas (1 on the well and 1 on the outlet of the station)

3. NRW activity

C/P team reports the following.

3-1. Progress

- Choosing the areas for NRW activity and exact locations for the chambers.
- Tendering process papers for the construction of the 9 chambers have been prepared
- The NRW equipment have been checked and now in the stores of GHAPWASCO.

- The NRW head Mr. Ahmed Rabie travelled to Japan for the training.
- 2 offices are provided for the project, 1 of them will be store for equipment.

3-2. Issues

There is no issues reported

3-3. Future plan

- Completing the tendering process for the construction of chambers as soon as possible
- Preparing the GIS maps for the chosen areas and correcting the mistakes in the maps.
- Making shelves for the NRW equipment in the office room for storing.
- Making a box in the trunk of the JICA pickup for the equipment.
- Providing 1 Engineer and 1 Technician for the NRW C/P team.

(End of MOM)

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area (Phase-2)

Minutes of Meeting for 6th Project Team Meeting in GHAPWASCO for PH-2

Date	31st March (Saturday) 2012		Signature
Time	11:00～14:00		
Place	Chairman meeting room		
Attendants	**[GHAPWASCO : C/P]**		
	Mr. Ayman Abd El Kader	Chairman of GHAPWASCO	
	Mr. Ahmed El Maleh	SOP C/P team leader	
	Mr. Samy Megahed	SOP C/team	
	Mr. Rizk El Fiqy	SOP C/P team	
	Mr. Nagy Youssry	SOP C/P team	
	Mrs. Hemat	SOP C/P team (CAD operator)	
	Mr. Ahmed Rabie	NRW C/P team leader	
	Mr. Omar Salah El Din	NRW C/P team	
	Mr. Mohamed Massoud	NRW C/P team	
	Mr. Gad Abdel Monsef	NRW C/P team	
	Mr. Abdullah El Hawash	Public awareness manager	
	[JICA Expert Team]		
	Mr. Fujii	JET Leader	
	Mr. Omori	Deputy/ NRW Expert	
	Mr. Shimizu	SOP Expert	
	Mr. Umeki	SOP Expert	
	Mr. Mohamed Nagi	Facilitator	
	Dr. Ahmed El Baz	SOP senior Engineer	
	Mr. Mohamed Abouzekry	Facilitator	
	Mr. Mohamed Abdel Kader	Facilitator	
	Mr. Ahmed Ragab	Interpreter	
	Mr. Ahmed Atef	Interpreter	

1. General

Opening words by Chairman and Mr. Fujii

2. SOP activity

C/P team reports the following.

2-1. Progress

- Rehabilitation work is divided into calibration work of instrumentations and installation work of equipment.
- Calibration Work: Vendor was decided to Zero One Company. The company will start working on 2nd of April 2012, and finish by 1st of May 2012.
- Installation Work: 1st tendering was unsuccessful. At present, tendering has been conducted dividing into several materials, and all works will be completed by 15th of May 2012.
- Preparation of P&ID: Site survey had been completed. P&ID drawing by AutoCAD is in progress, and it takes a month to finalize the drawing. (This activity can be continued in parallel with other activities.)
- Through the discussion with C/P and SOP members in model facility, we are preparing draft monthly and daily operation records for Tanta WTP.
- Customer claim survey for SOP is being carried out on weekly basis.

2-2. Issues

- Elder operators in Tanta WTP don't understand the purpose of the project. Thus, the continuous discussion for their awareness rising is required and the help from upper management is highly recommended too.
- There is lack in number of personnel working in Tanta WTP, and the chairman promised to resolve the problem, especially to complete the number of operators in the 2nd and 3rd shift.
- Some equipment is missing in Tanta WTP laboratory, and chairman agreed to provide us with help to complete the missing equipment.
- Requested nomination of 2 young engineers for the data management and data analyzing, chairman promised to add the 2 engineers as soon as possible.
- At a present, only 1 vehicle is allocated to the NRW and SOP activities for their transportation. Since increasing of site training work is expected from April, we would like to request allocation of additional car to C/P team.
- In order to measure the water capacity in Mahalet Mahoom IMRP, we would like to use portable ultrasonic flow meter owned by GHAPWASCO until the new flow meter procured by JICA is received, and the chairman agreed and said it was ready for use.
- Some problem with the batteries for Well monitoring was discussed, and Mr. Ahmed El Maleh said the problem will be solved as soon as possible.

2-3. Future plan

- Finishing rehabilitation work to start applying SOP in the model facilities.
- Finalizing the P&ID drawings for the model facilities.
- Making draft papers for SOP with reference to SHAPWASCO.

3. NRW activity

C/P team reports the following.

3-1. Progress

- Contractor finished construction of chambers in Zefta branch. Now contractor is working in El Mahala El Kobra and Tanta Markazes simultaneously.
- Received second grant from JICA equipment on 21st of February 2012.
- New members added to NRW C/P team, 2 engineers (Gad Abdel Monsef and Mohamed Massoud) and 1 technician (Salah Mohamed).
- Conducted trainings for installing and measuring of flow meters, once in Tanta WTP with SOP team, and second time in SHAPWASCO with MCWW NRW C/P.
- MNF activities started in 2 areas in Zefta (El Masry and El Masraf) on 19th and 21st respectively.
- Workshop for reading water meters (house meters) on 25th of March 2012.

3-2. Issues

- Establishment of a management within the structure of GHAPWASCO for NRW.
- Additional pickup truck for the project, due to conflict in activities with SOP.
- Incentives to the C/P teams for working after the standard working times of the company.
- Some troubles with chambers in Zahraa-2 and Mohamed Farid areas, something like electric cables, and now working on solving this problem.

3-3. Future plan

- MNF survey at total 9 candidate areas in 3 model areas will be done.
- 1 pilot area in 1 model area will be select.
- Measurement survey for flow and consumption in 1 pilot area will be done.
- Water balance analysis in 1 pilot area will be tried.
- Additional area will be done in Santa Markaz for MNF activities, this area will be done by C/P team on their own to apply what they learned through the project.

(End of MOM)

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area (Phase-2)

Minutes of Meeting for 7th Project Team Meeting in GHAPWASCO for PH-2

Date	6th May (Sunday) 2012		Signature
Time	11:00 ~13:30		
Place	Chairman meeting room		
Attendants	**[GHAPWASCO : C/P]**		
	Mr. Ayman Abd El Kader	Chairman of GHAPWASCO	
	Mr. Abdullah El Leithy	C/P team leader	
	Mr. Ahmed El Maleh	SOP C/P team leader	
	Mr. Samy Megahed	SOP C/team	
	Mr. Rizk El Fiqy	SOP C/P team	
	Mr. Nagy Youssry	SOP C/P team	
	Mr. Ahmed Rabie	NRW C/P team leader	
	Mr. Omar Salah El Din	NRW C/P team	
	Mr. Mohamed Massoud	NRW C/P team	
	Mr. Gad Abdel Monsef	NRW C/P team	
	[JICA Expert Team]		
	Mr. Omori	Deputy/ NRW Expert	
	Mr. Mohamed Nagi	Project Facilitator	
	Dr. Mostafa Moawad	Senior NRW Engineer	
	Mr. Mohamed Abouzekry	Facilitator	
	Mr. Ahmed Atef	Interpreter	

1. General

- Mr. Omori reported the situation about Japanese experts leaving Egypt during the Presidential election period according to JICA instructions.
- Mr. Omori reported about Africa Water Week.

2. SOP activity

C/P team reports the following.

2-1. Progress

- Rehabilitation work is divided into calibration work of instrumentations and installation work of equipment.
  - Calibration Work: The Contractor managed to finish field survey for Tanta WTP, Mahalet Marhoum IMRF, and Seberbay well facility. The contractor calculated the error percentage for all water flow meters in Mahalet Marhoum and Seberbay, and now working on Tanta WTP. The calibration work will start after finishing calculating the error for all the flow meters in all stations.
  - Installation Work: All contractors (5 contractors) were decided for the installation works, and no specific time was given yet to most the tenders. 1 portable flow meter was installed in Mahalet Marhoum IMRF before aeration tank to calculate amount of raw water, this flow meter is temporary until the flow meter provided by JICA is received.
- Preparation of P&ID: Site survey had been completed. Draft P&ID drawings are finished by AutoCAD, and after finishing the installation works the drawings will be modified according to the changes.
- Through the discussion with C/P and SOP members in model facility, draft monthly and daily operation records are finished, and currently operators are using these records to record the data. Situation of recording in Mahalet Marhoum is very good, but as for Tanta WTP, the situation is not good as operators are not writing down the readings in time.
- SOP workshop was done from 22nd to 24th of April for Water Quality Management and operation records for SOP, attended from MCWW and GHAPWASCO plant managers, operators, and chemists. The presenters were Dr. Sayed, manager of Zagazig WTP and Mr. Abdel Shafie manager of SOP department in SHAPWASCO.
- Customer claim survey for SOP is now stopped, and now the preparation for SOP of laboratory is in progress.
- Situation of well monitoring of water level is good now, and as for Seberbay station, Mr. Ahmed El Maleh will make site inspection with manager of Tanta branch stations to check availability and quantity of flow meters to be installed. Also Mr. Ahmed El Maleh promised to collect data required by Mr. Iijima during this week.

2-2. Issues

- Requested nomination of 2 young engineers for the data management and data analyzing, chairman said it is hard to add 2 new members in the current time, but he will try as soon as possible.
- At present, only 1 vehicle is allocated to the NRW and SOP activities for their transportation. Since increasing of site training work is expected, additional car to C/P team is required.

2-3. Future plan

- Finishing rehabilitation work to start applying SOP in the model facilities.
- Studying SOP documents for Operation and Management, Quality Control, and Laboratory.
- Follow up of operation records in model facilities.

3. NRW activity

C/P team reports the following.

3-1. Progress

- Contractor finished construction of total 8 chambers in 3 pilot Markazes (Tanta, Zefta, and El Mahala El Kobra).
- A pilot area in El Mahala El Kobra (El Zahraa 2) was changed due to electric cables with the water pipe (Mansheyet Omar Ibn Abdel Aziz)
- Completing MNF activities in candidate pilot areas as follows:
  1) Zefta branch : Ibrahim Khatab area
  2) Tanta branch : Seberbay area
  3) El Mahala El Kobra: Abou Deraa and El Zahraa areas
- Personnel from El Santa branch joined the training in Zefta for using flow meters and pressure logger, also showed them how to conduct MNF.
- El Masraf area was chosen in Zefta branch as the pilot area for NRW activity.
- Started conducting Water balance analysis in the pilot area of Zefta branch.
- El Masraf area was surveyed for collecting data by installing flow meter for 1 week (from 17 to 23 of April 2012) and reading house meters.

3-2. Issues

- Constructing a chamber in Sayed El Mezayen area in Tanta due to Electric cables.
- JICA pickup is not enough for both activities of SOP and NRW.
- Requesting incentives due to working late.

3-3. Future plan

- Survey El Masraf area to calculate the error in the water meters.
- Finishing the MNF activity in the missing candidate pilot areas.
- Following up with the water meters for candidate areas in Tanta and El Mahala El Kobra branch, and also making water balance analysis.
- Coordinating with the other 5 branches to join the activities in the chosen pilot Markazes.

(End of MOM)

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area (Phase-2)

Minutes of Meeting for 8th Project Team Meeting in GHAPWASCO for PH-2

Date	6th of November (Tuesday) 2012		Signature
Time	10:00 ~12:00		
Place	JET office		
Attendants	**[GHAPWASCO : C/P]**		
	Mr. Ayman Abd El Kader	Chairman of GHAPWASCO	
	Mr. Yasser El Shahawy	Head of training sector GHAPWASCO	
	Mr. Ahmed El Maleh	SOP C/P team leader	
	Mr. Mohamed Masoud	SOP C/team	
	Mr. Rizk El Fiqy	SOP C/P team	
	Mr. Moataz Hassan	Manager of Melahia WTP	
	Mr. Hussein Shahin	Manager of Mahalet Marhoum IMRF	
	Mr. Ahmed Rabie	NRW C/P team leader	
	Mr. Omar Salah El Din	NRW C/P team	
	Mr. Salah El Sawahly	NRW C/P team	
	[JICA Expert Team]		
	Mr. Fujii	Chief Advisor / JET leader	
	Mr. Kato	JET Coordinator	
	Mr. Niimura	Leak Detection Expert	
	Mr. Nagao	SOP Expert	
	Mr. Mahmoud Abo Khalaf	Local SOP Expert	
	Mr. Mohamed Abouzekry	Facilitator	
	Mr. Ahmed Rasmy	Interpreter	
	Mr. Ahmed Atef	Interpreter	

1. General

- Reported the schedule of Midterm Evaluation by Mr. Fujii.
- Reported the progress and importance of filling the Midterm evaluation form.
- Brief explanation of the PDM (Project Design Matrix) as requested by C/P team.

2. SOP activity

C/P team reports the following.

2-1. Progress

- Reported changing the model WTP from Tanta El Gedeeda WTP to El Melahia WTP.
- Reported the progress of rehabilitation in all model facilities so far, remaining only few items that doesn't affect the SOP activity, finished items are:

1. Providing computers to the model facilities for data record inputs.
2. Fixing Chlorine leakage problem in the chlorine dosing facility of Melahia WTP.
3. Backwash flow meter for Melahia WTP is installed, but still need some software modification.
4. Alum level meter for Melahia WTP is installed on the Alum solution tank.
5. Chlorine and Potassium Permanganate levels are installed in Mahalet Marhoum IMRF.
6. Pre and Post Chlorination flow meters for Mahalet Marhoum IMRF are installed.
7. Recording of Mahalet Marhoum IMRF is going well for Daily and Monthly records.
8. Flow meter provided by JICA is installed and working properly in Mahalet Marhoum IMRF.
9. Spare parts list is prepared for

- Drawings for model facility are done by C/P, and revised with Japanese experts.
- OJT started in Melahia WTP, most work is done on 2 Filters so far. Activity target is to reduce the amount of water used in backwash, also includes fixing the weirs on the trough, then modifying the sand levels between the 2 sides of the filter to manage good distribution of water.

2-2. Issues

- Slow progress in finishing all rehabilitation works and installing missing items for all model facilities. Missing items:

1. Chlorine leak detector sensors for Melahia station.
2. Air scouring flow meter for Melahia station.
3. Readjusting software for Backwash flow meter in Melahia station.
4. Installing pressure and compound gauges for raw and treated water pumps in Melahia station.
5. Fixing the Auma control valves for the filter number 13 in Melahia station.
6. 2 Chlorine pumps for pre and post chlorination in Mahalet Marhoum Station.
7. Problem in 3rd shift, since operators are not qualified to operate the facility treatment unit, causing direct pumping to network without treatment in the 3rd shift of Mahalet Marhoum station.

- Reading the electric meter for Melahia station is hard, due to hard access to the transformer room in the facility.

2-3. Future plan

- Finishing remaining rehabilitation work in the model facilities.
- Trying to take the Electric meter out of the transformer room in Melahia Station.
- Reducing amount of water used in the backwash process in Melahia station.
- Decrease the frequency of conducting backwash process on the filters in Melahia station.
- Check the condition of the pre and post Chlorination flow meters after installing the new Chlorine pumps in Mahalet Marhoum station.
- Conducting experiments on the Sand filters in Mahalet Marhoum station, idea is to reduce the amount of Potassium Permanganate used for activation of filters, and substitute with more Chlorine dosing, since the price of Chlorine is much cheaper than Potassium Permanganate.

3. NRW activity

C/P team and Mr. Niimura report the following.

3-1. Progress

- First run of water balance is finished in Zefta and El Mahala El Kobra 2 model areas.
- Leak detection surveys were done in the 2 model areas of El Mahala El Kobra and Zefta
- Conducted Meter accuracy test to check the error in house meters, found many over registrations.
- Connected flow meter and pressure gauge at some well facilities, and at end of network to these facilities, in order to check the actual amount of water produced instead of calculations. The main idea is to verify the PIs on correct bases using actual data rather than using calculations.

3-2. Issues

- It is hard to obtain a correct NRW value because inaccuracy in house meters.

3-3. Future plan

- Discuss the issue of inaccuracy of house meters in the Steering Committee.
- Trying to concentrate to Leak detection survey until middle of December before Mr. Niimura's departure.

(End of MOM)

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area (Phase-2)

Minutes of Meeting for 9th Project Team Meeting in GHAPWASCO for PH-2

Date	12th of December (Wednesday) 2012		Signature
Time	11:00 ～13:00		
Place	Head office of GHAPWASCO		
Attendants	**[GHAPWASCO : C/P]**		
	Mr. Ayman Abd El Kader	Chairman of GHAPWASCO	
	Mr. Adel Attia	Head of training sector GHAPWASCO	
	Mr. Ahmed El Maleh	SOP C/P team leader	
	Mr. Mohamed Masoud	SOP C/team	
	Mr. Rizk El Fiqy	SOP C/P team	
	Mr. Ahmed Rabie	NRW C/P team leader	
	Mr. Omar Salah El Din	NRW C/P team	
	Mr. Salah El Sawahly	NRW C/P team	
	[JICA Expert Team]		
	Mr. Omori	Deputy Chief Advisor / NRW Expert	
	Mr. Kato	JET Coordinator	
	Mr. Niimura	Leak Detection Expert	
	Mr. Iijima	Well Monitoring Expert	
	Mr. Yamada	Hydraulic Analysis Expert	
	Mr. Umeki	Water Quality Management Expert	
	Mr. Mahmoud Abo Khalaf	Local SOP Expert	
	Mr. Nagi Gaber	Facilitator	
	Mr. Mohamed Abouzekry	Facilitator	
	Mr. Ahmed Rasmy	Interpreter	
	Mr. Ahmed Atef	Interpreter	

1. General

Expert team reports general topics.

1-1. Schedule of Japanese Expert

The JET reported the schedule of Japanese experts as follows;

- Mr. Tomohiro Umeki : Arrival on 5th December 2012
- Mr. Hiroki Niimura : Departure on 12th December 2012
- Mr. Atsushi Kato : Ditto
- Mr. Nobuyuki Iijima : Departure on 27th December 2012
- Next Assignment
  (Fujii, Niimura, Shimizu) : From middle of January until end of February
  (Kato) : From beginning of February until end of February

1-2. Hydraulic Analysis Activity

- Mr. Yamada will conduct hydraulic analysis study on Seberbay village.
- Mr. Omar and Mr. Mohamed Masoud will join to his activity to learn Water CAD and how to conduct a hydraulic analysis study.
  - ➢ 1 Person from the network of Seberbay Village will be assigned to support in modifying the GIS maps to the actual situation.

2. SOP activity

C/P team reported the following.

2-1. Progress

- Still working on improving filters in Melahia WTP, now trying to reduce the frequency and amount of water consumed in the backwash process.
  - ➢ Agreed to install a metal plate on the blind area of the filters, as an experiment to avoid accumulation of scum in these areas, and therefore decreasing the back wash time.
- Temporary installment of flow meters on intake and discharge of Melahia WTP. And as checked there is an error of 20% in raw water capacity and 7% in treated water capacity.
  - ➢ Modify the Alum and Chlorine dosing amount during operation according to the accurate results.
- .No current activities are held in Mahalet Marhoum IMRF, due to rehabilitation in the Green Sand Filters.
- Well monitoring activity is concentrating now on the SOP for Seberbay Well Water facility. Operation Records are currently used to monitor the current operation of the facility. And calibration was done for the discharge line flow meters. Also draft P&ID for the facility is done.
- Water Quality Management activity is commencing work, currently checking the operation records and drafts SOPs.

2-2. Issues

- The problems in Mahalet Marhoum facility, since operation of treatment unit stopped many times, making it hard to keep up the OJT for SOP work.
- Some rehabilitation items are still missing in Melahia WTP, such as air scouring flow meter.
- Some problems of operation in Melahia station, such as Chlorinator units for chlorine dosing.
- Seberbay well water facility has some problems, such as 1 mechanical flow meter not working and need to be fixed, the date of installing new horizontal well is not scheduled yet, and no specific operation instructions for chlorine dosing unit. Also the level gauge for the elevated tank is not working and need to be fixed.

2-3. Future plan

- Perform same works done to experiment filters for ideal operation on other filters in Melahia WTP.
- Create some schedule for filters operation and back wash in Melahia WTP.
- Install valves on the Alum pipe line next to the Alum tanks, to avoid in case of breakage or leakage to stop the whole system in Melahia WTP.
- Calibration of flow meters of Melahia WTP in order to obtain accurate results.
  - ➢ Install 1 flow meter at the end of the treatment unit, in order to calculate the amount of treated water, and then be able to obtain real values and calculate PIs for Mahalet Marhoum Facility.
  - ➢ Check the Static and Dynamic level of water in the wells of seberbay well facility.
- Commitment to operation records for analysis and obtaining better result in all model facilities.

3. NRW activity

C/P team reported the following.

3-1. Progress

- Finished the consumption survey and started the second round of water balance in El Masraf area in Zefta Markaz, this is done after calibration and cleaning of water meters.
- Acoustic rod detection survey finished in Mohamed Farid Area and Seberbey in Tanta Markaz.
- No activity in Mahala due to safety problem.
- Selected new area for leak detection activity in Kafr El Zayet and GIS map is ready.
- Finished the reading of flow and pressure in 6 well facilities in different areas of Gharbia governorate, this is to check the actual amount of water discharged in order to be able to get a better NRW ratio for the whole Governorate.
- A visit from Kalyoubeya company to check NRW activity in GHAPWASCO, the NRW team made some presentation to explain the activity from start of project.

3-2. Issues

- The team supposes that meter calibration and cleaning are needed taking long time, and some meters have difficulty for cleaning due to spare parts.
  - ➢ Malfunctioning house meters due to broken spare parts will be fixed, in case there is no

spare parts then the house meters should be changed, and in case it will not be changed, we are forced to work with the same method of calculating the meters error.

- The team recommends that other one or two staffs will support for Mr. Salah to conduct leakage survey at the site near the future. In case of no JET, it is not easy to conduct survey. These additional staffs can attend from the each branch, and it is desirable to keep joining not temporary attendance but rather every attendance for smooth activity.
- Trying to find a method to increase the pressure in El Mahala El Kobra pilot areas in order to continue the activity with leak detection easily.

3-3. Future plan

- First priority is to check the real situation on meter cleaning in Mahala. The team will start to study as soon as possible. And if the team will face some problem, the team will share information.
- Acoustic rod survey will be conducted at third area in Tanta and the team will decide pilot area. After this meter calibration work will be started.
- Leak detection survey will be started in Kafr El Zayet, this is focusing just leak survey.
- The team will decide one or two additional stuffs at branch office to join NRW activity. The team has a plan to invite these staffs to Kafr El Zayet for training after our survey.

(End of MOM)

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area (Phase-2)

Minutes of Meeting for 10th Project Team Meeting in GHAPWASCO for PH-2

Date	23rd of January (Wednesday) 2013		Signature
Time	10:00 ～12:00		
Place	JET office		
Attendants	**[GHAPWASCO : C/P]**		
	Mr. Ayman Abd El Kader	Chairman of GHAPWASCO	
	Mr. Adel Attia	Head of training sector GHAPWASCO	
	Mr. Ahmed El Maleh	SOP C/P team leader	
	Mr. Mohamed Masoud	SOP C/team	
	Mr. Rizk El Fiqy	SOP C/P team	
	Mr. Ahmed Rabie	NRW C/P team leader	
	Mr. Omar Salah El Din	NRW C/P team	
	Mr. Hussein Shahin	Manager of IMRF	
	Mr. Raafat	Manager of Tanta branch	
	Mr. Ibrahim Abdel Malak	Manager of facilities in Tanta branch	
	[JICA Expert Team]		
	Mr. Fujii	JET Chief Advisor	
	Mr. Omori	Deputy Chief Advisor / NRW Expert	
	Mr. Shimizu	SOP Expert	
	Mr. Niimura	Leak Detection Expert	
	Mr. Yamada	Hydraulic Analysis Expert	
	Mr. Mahmoud AboKhalaf	Local SOP Expert	
	Mr. Nagi	Facilitator	
	Mr. Mohamed Abouzekry	Facilitator	
	Mr. Ahmed Rasmy	Interpreter	
	Mr. Ahmed Atef	Interpreter	
	Mr. Amr Salah	Interpreter	

1. General

Requested by JET for GHAPWASCO to start making a schedule for expansion of the SOP and NRW activities to other model facilities and pilot areas, agreed by Chairman and C/P to provide this schedule by the 10th of February with specifications of dates and Chosen models.

2. SOP activity

C/P team reports the following.

2-1. Progress

2-1-1. Melahia WTP

- Modification of Chlorine Cylinders operation, in order to keep the flow less that 7 kg/hr, in order to avoid the freezing of feeding line, this can be done by increasing number of Cylinders. Also the recording for Chlorine consumption by weight balance and alternating between the 2 lines of Chlorine Cylinders is going well.
- Solved some problems in recording missing data by discussing with facility manager and staff of the facility in order to maintain good records for analysis.
- Continue the experiment of measuring turbidity every 2 minutes during backwash of filters to check on the time of backwash is good enough or not.
- Currently modifying the filters media for each Filter, this is done by checking of Sand level and weir and trough level for each. The facility made a schedule to finish all filters modification by the 25th of February.
- Checking the water quality (Turbidity and Residual Chlorine) of filters in operation every 1 hour for 48 hours. This experiment is to give indication on how much can the filter work with regard to both head and water quality in the filter, and thus obtain good water quality.
- The water balance (ratio between raw water and treated water) is now fixed after using 2 flow meters (provided by JICA) to check on the amount of water at inlet and outlet of the facility. The error percentage has been applied to old data from previous month, and gave good indication to the efficiency of the facility with respect to production.

2-1-2. Mahalet Marhoum IMRF

- Solved the problem in Sand filters media, since the nozzles allowed the green sand to pass to the high reservoir and network. The media is now replaced after fixing and replacing some nozzles.
- Fixed the problem of leakage in the output facility from the insertion electromagnetic flow meter sensor, and now operators know how to manage to remove and clean the sensor, which is a good start to make periodical maintenance and cleaning to the sensor to obtain good readings.
- Old Chlorine pumps are now replaced with new pumps, in addition to 2 extra spare pumps.
- 1 new horizontal pump is installed in the shelter under the high tank reservoir.
- Finalizing the papers to purchase of spare parts (such as plastic valves, joints, rolling bearings, etc.) and the flexible connection on the high tank reservoir, and the chamber to be installed on the output of the treatment unit.

2-1-3. Seberbay

- P&ID for the facility is finished, with AutoCAD drawing.
- The mechanical flow meter on the output of line 3 is fixed now.
- Maintenance of Well number 2 is finished, by replacing the pipe of the well due to corrosion and holes present in the pipe from direct dosing of Chlorine in the well on monthly bases.
- Modified the operation records and is now distributed on the operators and utilized by facility.

2-2. Issues

2-2-1. Melahia WTP

- Problem of access to electric power meters in Melahia WTP, which makes it hard to have an idea of daily power consumption, thus hard to apply SOP to reduce the amount of consumption. A solution has been suggested by JET to install 6 power meters before the main 6 electric panels (4 panels in the treated water pumps chamber and 2 panels in the raw water pumps shelter).
- The Chairman and C/P agreed to this solution, and promised to start working on purchasing he required meters with accumulative readings.
- Still missing the required tools for electric maintenance, this is very late (over 6 month delay).
- Chairman promised to accelerate this process, and assigned Mr. El Maleh to take action quickly and prepare the required documents.
- Delay of missing items, like valves for separation of the Alum solution tanks, the air scouring flow meter, and the maintenance of flash mixers and bridge for clarifiers.
- Chairman assigned plant manager to prepare documents to purchase and fix the required items to get the facility to work properly, and promised to accelerate the process.

2-2-2. Mahalet Marhoum IMRF

- Main issue is operation in 3rd shift, since they use direct discharge to Network without treatment, due to lack of experience, and this causes problem for proper operation, and might also cause quality problems for the water produced.
  - Manager of Tanta branch promised to support the facility by adding 1 extra young technician to the facility, this will make it easier to rotate staff of 1st and 2nd shift with the 3rd in order to achieve good water treatment 24 hours per day.

2-2-3. Seberbay

- Fixing the level meter for the elevated reservoir of the facility, this will be done simply by support of Tanta branch.

2-3. Future plan

- Continue applying SOP to all model facilities, and try to achieve satisfactory decrease to PIs.
- Finish the remaining rehabilitation of the missing items.

3. NRW activity

C/P team reports the following.

3-1. Progress

3-1-1. Tanta Branch

- Finished leak detection survey for house connections in Pilot areas of Tanta Markaz (Mohamed Farid, Seberbay, Borek).
- Calibration is done for some house meters in Mahomed Farid areas.
- Started first run of Water Blanace in Mohamed Farid area.

3-1-2. Zefta Branch

- An experiment was conducted in Masraf area to check the amount of leakage in the area, this is done by closing the house connections vavles and measuring the amount of water flowing inside the area.
- Finished the leak detection survey for house connections in Masry area, and a total of 6 leaage points were detected and fixed. Currently we are calculating the amount of water before and after the fixing using water balance calculations.
- Finished the leak detection survey for house connections in Ibrahim Khatab area, 2 leak points were detected and a flow meter was installed to check the amount of water capacity to the area before fixing the leakage points.

3-1-3. General

- Training was conducted for leak detection survey in training yard of Hehia in SHAPWASCO, trainees were technicians from most Markaz of GHAPWASCO.
- A pilot Leak detection area was chosen in Kafr El Zayat Markaz, and training was done to staff of network on how to use the leak detection equipment.

3-3. Future plan

- Finishing the water balance Calculations for all remaining areas.
- Leak detection completion in Pilot areas.
- Distributing 20 Acoustic rods on all Markazes of the Company.
- Making a dissemination plan for leak detection in house connections in all Markazes.

(End of MOM)

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area (Phase-3)

Minutes of Meeting for 11th Project Team Meeting in GHAPWASCO for PH-3

Date	1st of June (Saturday) 2013		Signature
Time	13:00 ～15:00		
Place	Chairman office at GHAPWASCO Headquarters		
Attendants	**[GHAPWASCO : C/P]**		
	Mr. Ayman Abd El Kader	Chairman of GHAPWASCO	
	Mr. Adel Attia	Head of training sector GHAPWASCO	
	Mr. Ahmed El Maleh	SOP C/P team leader	
	Mr. Ahmed Rabie	NRW C/P team leader	
	Mr. Mohamed Masoud	SOP C/P team member	
	[JICA Expert Team]		
	Mr. Fujii	Chief Advisor	
	Mr. Omori	Deputy Chief Advisor / NRW Expert	
	Mr. Shimizu	SOP Expert	
	Mr. Niimura	Leak Detection Expert	
	Mr. Nagi Gaber	Facilitator	
	Mr. Mohamed Abouzekry	Facilitator	
	Mr. Ahmed Atef	Interpreter	

1. General

Expert team reported general topics.

1-1. Events in phase 3:

- The evaluation of the project will be done in November by JICA, an open Seminar will be held to show the progress and activities done so far.
- It is important to show JICA the efforts done for dissemination of the experience to other Markaz and ACs.
- JET will recommend to HCWW that big Seminar will be held in February to show the results of the project to other ACs, other donors, and other organizations related to water.

1-2. Steering Committee and JCC

JET will arrange steering committee and JCC with HCWW near the future in order to discuss annual plan of operation for phase-3 (APO3).

2. SOP activity

SOP team reported the following.

2-1. Progress

- Currently we are trying to reach the target PIs in each facility, most of the PIs are not reached yet, but there is some improvement in some PIs.
- General progress in Mahalet Marhoum is good.
- General progress in Melahia is behind schedule.

2-2. Issues

- Delay in progress of Melahia WTP because of lost time in rehabilitation of Flash mixers and scrappers in the Clarifiers, resulting in high turbidity going to filters, but currently it is fixed and ready for work, so we expect to achieve results eventually.
- The Actuator valves in the filters are still not calibrated yet to work correctly, resulting in exposing the sand to air and not creating the filtering film on top of the sand in filters

2-3. Future plan

- Fix the remaining problems and push the activity to reach targeted PIs.
- Add other model facilities to the SOP activity, Bassyoun WTP and another Sakr model facility in Samanoud (not decided yet).
- A suggestion for expansion activity is to choose a team in each Markaz to carry out SOP activity; a workshop will be done by the C/P to pass the knowledge of SOP activities.
- A general schedule for activity expansion will be done by C/P.

3. NRW activity

NRW team reported the following.

3-1. Progress

- Currently all on site activity in all model areas is finished, only remaining water balance analysis and expected to be finished by end of June.
- 20 Acoustic sticks have been distributed on all Markazes and an NRW team has been chosen.
- Training in all Markazes is finished except for Bassyoun and Samanoud Markazes.

3-2. Issues

- There are no issues.

3-3. Future plan

- Finish training of remaining Markazes for expansion to Gharbia Governorate.
- Workshop for future activity/plan of each Markaz in Gharbia Governorate

(End of MOM)

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area (Phase-3)

Minutes of Meeting for 12th Project Team Meeting in GHAPWASCO for PH-3

Date	25th of November (Monday) 2013		Signature
Time	11:00 ~13:30		
Place	Chairman office at GHAPWASCO Headquarters		
Attendants	**[GHAPWASCO : C/P]**		
	Mr. Ayman Abd El Kader	Chairman of GHAPWASCO	
	Mr. Adel Attia	Head of C/P team	
	Mr. Ahmed Rabie	NRW C/P team leader	
	Mr. Ahmed El Maleh	SOP C/P team leader	
	Mr. Rizk El Feqy	SOP C/P team member	
	Mr. Omar Salah	NRW C/P team member	
	Mr. Gad	SOP C/P team member	
	[JICA Expert Team]		
	Mr. Omori	Deputy Chief Advisor / NRW Expert	
	Mr. Mohamed Abouzekry	Facilitator	
	Mr. Ahmed Atef	Interpreter	

1. General

Expert team reported general topics.

1-1. Arrivals:

Mr. Omori arrived on 16th of November, 2013 and will leave again on 28th of November, 2013.

2. SOP activity

SOP team reported the following.

2-1. Progress

- Currently working on main model facilities in parallel with new extension facilities.
- There are set target values PIs (Performance Indicators) for each facility in order to reach by improving the facility operation. PIs have been set on 3 main items:

a) Water balance **b) Chemical consumptions** **c) Electrical consumption**

- Facilities conditions is as follows:

1) Melahia WTP:

- The PIs targets for Chlorine and Alum have been reached and generally stable, as for the water balance and electric consumption we couldn't reach the target value yet.

2) Zefta WTP:

- Currently finalizing the drawings of facility such as P&ID and block flow diagram.
- Rehabilitation works in the facility has been done so far, and also flow meters are installed and working good.
- Finalizing the SOP records according to facility needs to start receiving data and setting PIs targets according to current condition.

3) Samanoud WTP:

- Basic Drawings for Samanoud WTP are done.
- Records have been passed to Facility staff and we have records for 4 months now.
- Currently we are working on setting the PIs for the facility.

4) Mahalet Marhoum IMRF:

- All targets for PIs in Mahalet Marhoum have been achieved, except the last 2 month there is a drop in the water balance values.

5) El Ramlia IMRF:

- Currently finalizing the SOP drawings for the facility.
- We need to modify the piping from the well to the treatment unit in order to ensure that the facility will work all the time with treatment.

6) Seberbay Well facility:

- Rehabilitation work for facility has been finished and flow meters and manometers were installed.
- Started gathering information and conducted experiment and hydraulic analysis.

7) Shobrabeel Well facility:

- Currently finalizing SOP drawings
- Rehabilitation work has been done in the facility.
- Currently recording is being done in the facility.

2-2. Issues

- There are many Variations between months in the PIs values for the model facilities, which are varying from the target, especially in Melahia WTP.
- Further study of problems in the facilities will be done to check for big variations, in addition some rehabilitation work will be done in Melahia to improve the situation.
- Some rehabilitation work is still needed for the new extension facilities.
- Chairman promised to push the work to finish rehabilitation activities as soon as possible (within 2 weeks' time).
- JET recommended that PIs should be checked carefully every month in order to grasp the condition of facility and analyze the reason of the result of record

2-3. Future plan

- Fix the remaining problems and push the activity to reach targeted PIs.
- Apply SOP activity in extension facilities to improve the situation.

3. NRW activity

NRW team reported the following.

3-1. Progress

- 5 year plan have been formulated for the future activity of the NRW activity.
- Teams have been formulated in all Markazes, and already trained on using Acoustic stick.
- A workshop has been held on the 30th of September, 2013 for all Markazes staffs.and all agreed to the 5 year plan and the strategy of work.
- Until now 3 Markazes started the activity by surveying the house connections with the Acoustic stick, then plot the house connections on the GIS maps and mark suspected leak points to be confirmed by help of C/P of HQ, and the Markazes working now are as follows:

a) Santa **b) Zefta** **c) Bassyoun**

- In addition to the extension to other Markazes the HQ C/P team are now responsible for detecting leaks with cooperation from the hot line department based on Customer claims.

3-2. Issues

- C/P team requested to make NRW department in each branch, in order to make sure that they are free and concentrate only to NRW activity, also ensure the sustainability of the project activity.
- Chairman refused the proposal, since already Markazes are following the plan of NRW according to HQ C/P team and under their supervision; in addition the activity only requires 2 to 3 days of work which doesn't need them to be free all week for just this activity.
- A recommendation by C/P team was to request to IWSP to start making chambers on the new networks they are currently installing or making rehabilitation, since this will help to conduct NRW activity in the future. JET also agrees this recommendation by C/P in order to make DMA.
- Chairman agrees to this proposal and requested to Mr. Adel Attia to follow up with C/P team.
- Upon request of chairman he asked the C/P team to start making a study on the reasons of Leakage such as holes in pipes, in order to avoid the same mistake in the future in new networks.
- Chairman suggested that since NRW team are getting experienced in this activity it is good time to start arranging with HCWW in order to spread the activity to other Governorates in the Nile Delta area, especially since we have time in the project and can get help from the Japanese side.

3-3. Future plan

- Complete remaining 5 Markazes according to the 5 years plan for NRW activity.
- Train key Markazes on other equipment like Ground Microphone.
- Provide Digital Camera to each Markaz for taking pictures and videos of the activity and leaks.

(End of MOM)

(2) MCWW

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area (Phase-1)

Minutes of Meeting for 1st Project Team Meeting in MCWW for PH-1

Date	25th June (Saturday) 2011	Signature
Time	11:00~12:30	
Place	Shebin expert office	
Attendants	**[MCWW : C/P]**	
	Mr. Samir Abdelmenem : Leader of C/P team	
	Mr. Ayman Bassyouni : Head of SOP team	
	Mr. Belal Galal : Head of NRW team	
	Mr. Saeed Abdelfatah : SOP C/P team	
	Mr. Salem Hamdy Fawzy : SOP C/P team	
	Mr. Mohamed Fawzy Awad : SOP C/P team	
	Mr. Mohamed Fathy Gaber : SOP C/P team	
	Mr. Mohamed Mostafa Shaf'e : NRW C/P team	
	Mr. Ahmed Ebraheem : NRW C/P team	
	[JICA Expert Team]	
	Mr. Mitsuhito Omori : NRW Reduction	
	Mr. Ryoji Nagao : Mechanical Equipment	
	Mr. Nobuyuki Iijima : Well Monitoring	
	Dr. Mostafa Moawed : NRW Senior Engineer	
	Mr. NAGI Gaber : Facilitator	
	Mr. Mohammed Abd El-kader : Facilitator	
	Mr. Ahmed Ragab : Interpreter	
	Mr. Ahmed Atef : Interpreter	

1. General

Expert team reported general topics.

1-1. Purpose of PTM

Project information such as progress, issues, and schedule should be shared among expert team and counterpart team.

1-2. Schedule of Japanese Expert

The team reported the schedule of Japanese experts as follows;

- Mr. Katsumi Fujii : Departure on 23rd June 2011
- Mr. Nobuyuki Iijima : Arrival on 21st June 2011
- Mr. Kiyoshi Kiyama : Arrival on 28th June 2011
- Mr. Mitsuhito Omori : Departure on 1st July 2011

2. SOP activity

C/P team for SOP reported the progress, issue, and next schedule of the Project.

2-1. Progress

(1) Primary selection of candidate facility as 'Long List' for site survey

(2) Mini-seminar on 8 June at GHAPWASCO, 9 June at MCWW

(3) Site survey progress

- The C/P explained that 55 candidates facilities have been selected and are as follow:
  - a- Surface Water Treatment Plants are Five.
  - b- Iron and Manganese Removal Plants are Twenty Five.
  - c- Wells are Twenty Five.
- The C/P explained that the progress of survey works is as follow:
  - a- Survey for five water treatment plants was completed.
  - b- Survey for four iron and manganese removal facilities was completed.
- The C/P explained the general information about the following facilities was submitted:
  - Five water treatment plants.
  - Seven iron and manganese removal facilities.

2-2. Issue for the Project

- JICA expert team and counter part team confirmed the necessity that counter part team has to work full time in the project.
- JICA expert team requested the C/P to nominate another staff to work for well ground water monitoring activity.
  - The C/P nominated one person (Mr. Saeed) to work for well monitoring and requested information about wells such as well data, construction year……etc.

2-3. Schedule for until September

JICA expert team and counter part team confirmed the schedule until September.

- Site survey and report preparation (June & July, 2011)
- Comparison & assessment based on report to prepare "Short List" (July & Sep, 2011)
- Secondary selection of candidate facility as 'Short List' for detail assessment (Sep, 2011)

3. NRW reduction activity

C/P team for NRW reported the progress, issue, and next schedule of the Project.

3-1. Progress

(1) General information for NRW

- The C/P informed that requested data has been submitted to JICA expert team.
- The C/P informed that MCWW delivered soft copy of 23 maps of networks for 23 three areas in Munofia Governorate (10 Cities and 13 villages).

(2) Mini-seminar on 18 June at GHAPWASCO, 19 June at MCWW

- The C/P expressed his admire and much information they received from the mini-seminar that held in 19, June at MCWW.

3-2. Issue for the Project

- JICA expert team and counter part team confirmed the necessity that counter part team has to work full time in the project.

3-3. Schedule for until September

JICA expert team and counter part team confirmed the schedule until September.

- Review and Study for SHAPWASCO's Action Plan (June & July, 2011)
- Attending SHAPWASCO's seminar which will explain the selection criteria.(2 July at GHAPWASCO, 3 July at MCWW)
- Select model areas (July & August, 2011)
- Making MCWW's Action Plan (August, 2011)
- Analysis the general information for NRW by expert team and discussion with C/P team (July, August, September 2011)

(End of MM)

Minutes for 2nd Project Team Meeting (PTM) in MCWW in Phase-1 on 27th July 2011

Attendance List:

NAME	POSITION	Signature
Mr. Samir Abdelmenem	Leader of C/P team MCWW	
Mr. Belal Galal	Head of NRW team MCWW	
Mr. Ayman Bassyouni	Head of SOP team MCWW	
Mr. Mohamed Mostafa Shaf'e	NRW C/P team MCWW	
Mr. Ahmed Ebraheem	NRW C/P team MCWW	
Mr. Saeed Abdelfatah	SOP C/P team MCWW	
Mr. Mohamed Fathy Gaber	SOP C/P team MCWW	
Mr. Mohamed Fawzy Awad	SOP C/P team MCWW	
Mrs. Asma'a Reda	MCWW Planning sector	
M.Abdelkader	JICA Expert Team	
A.Ragab	JICA Expert Team	
A.Atef	JICA Expert Team	
Mr.IIJIMA	JICA Expert Team	
Mr.NAGI	JICA Expert Team	

1. General

Expert team reports general topics.

1-1. Purpose of PTM

Project information such as progress, issues, and schedule should be shared among expert team and counterpart team.

1-2. Schedule of Japanese Expert

The team reports the schedule of Japanese experts as follows;

- Mr. Nobuyuki Iijima : Departure on 3rd August 2011.

2. SOP activity

C/P team for SOP reports the progress, issue, and next schedule of the Project.

2-1. Progress

(1) 3rd July work-shop to distribute evaluation sheet, selection criteria list and example sheet .

(2) Finishing survey and being ready to do the Secondary selection of candidate facility as 'Short List' for both (SWTP & IMRF)

(3) Meeting on 10th July at JET-Shebeen office to discuss about how to collect the detailed data for the candidate sites (short list).

(4) On 17st July evaluation and scoring to select 3 SWTP & On 23st July evaluations and scoring to select 5 IMRF

(5) Meeting on 23st July with manger of selected 3 SWTP to explain data collect.

(6) Prepared to make meeting on 27st July with manger of selected 5 IMRF to explain data collect.

(7) Distribute data forms with plant manager

- 3 SWTP managers On 23st July
- 5 IMRF managers On 30st July

(8) C/P for well monitoring will explain their progress, issues, and future plan.

* C/P prepared List of Accomplishments (attached at the end) for both SOP&WELLs

2-2. Issue for the Project

No Issue

2-3. Schedule for until September

- Review the collected data for each SWTP & IMRF (July & August, 2011) Then provide JET with this updated DATA.
- Prepare process flow diagram for facilities.

o JICA expert team and counter part team confirmed the schedule until September.

3. NRW reduction activity

C/P team for NRW reported the progress, issue, and next schedule of the Project.

3-1. Progress

(1) General information for NRW

- Until 26/7/2011 (9) pilot areas from (3) Markaz were studied and evaluated to check with Dr. Mostafa if it is suitable or not, and the remaining (30) pilot area will be selected as soon as .
- (21) map for (8) Markazs are printed to check one by one and there are another (9) maps remaining .
  - The C/P informed that requested data has bee submitted to JICA expert team.

(2) Work shop on 3 July at MCWW

- The C/P will provide the necessary GIS map of networks to improve it.

3-2. Issue for the Project

- o JICA expert team and counter part team confirmed the necessity that counter part team has to work full time in the project.
- o The activities of NRW team are very poor.(they work very slow).

3-3. Schedule for until September

Following studies will be conducted by C/P team with supporting by expert team.

- Reviewing for all the data that were recorded and verified with Dr. Mostafa Mouawad.
- Checking and processing of network maps and areas that have been tested to get the (30) selected area according to the criteria such as (number of the population - the entrance point - the distribution point - the technical status of water instruments ...etc) .
- Select model areas (July & August, 2011)
- Making MCWW's Action Plan (August, 2011)
- Analysis the GIS network maps for NRW by expert team and discussion with C/P team (July, August, September 2011)
- Checking the possibility to isolate the small area inside the pilot area using flow-meters. (according to Network Managers)-(part of the city or villiage)

o JICA expert team and counter part team confirmed the schedule until September.

END of MM

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area (Phase-1)

Minutes of Meeting for 3rd Project Team Meeting in MCWW for PH-1

Date	8th October (Saturday) 2011	Signature
Time	11:00～12:30	
Place	Shebin expert office	
Attendants	**[MCWW : C/P]**	
	Mr. Ayman Bassyouni : Head of SOP team	
	Mr. Belal Galal : Head of NRW team	
	Mr. Saeed Abdelfatah : SOP C/P team	
	Mr. Mohamed Fawzy Awad : SOP C/P team	
	Mr. Mohamed Fathy Gaber : SOP C/P team	
	Mr. Mohamed Mostafa Shaf'e : NRW C/P team	
	Mr. Ahmed Ebraheem : NRW C/P team	
	[JICA Expert Team]	
	Mr. Mitsuhito Omori : NRW Reduction	
	Mr. Tomohiro Shimizu : SOP Expert	
	Mr. Hiroki Niimura : NRW Expert	
	Mr. Kenji Yamada : Hydraulic Analysis	
	Dr. Sayed Madbouly : Electrical Expert	
	Mr. NAGI Gaber : Facilitator	
	DR. Ahmed El-Baz :SOP Senior Engineer	
	Mr. Mohammed Abd El-kader : Facilitator	
	Mr. Ahmed Ragab : Interpreter	
	Mr. Ahmed Atef : Interpreter	

1. General

Expert team reported general topics.

1-1. Schedule of Japanese Expert

The JET reported the schedule of Japanese experts as follows;

- Mr. Katsumi Fujii : Departure on 30th September 2011
- Mr. Tomohiro Shimizu : Arrival on 3rd October 2011
- Mr. Kazuhiro Umeki : Arrival on 8th October 2011

1-2. Weekly Meeting for NRW

Weekly meeting for NRW has been started since last week in order to share the progress more periodically.

1-3. Equipment

JET reported the situation of equipment as follows.

- Equipment from Japan will arrive at Cairo airport 4th of October (this noon time).
- HCWW will pass customs for equipment.
- Xerox will install the copy machine as soon as possible by request of JICA Egypt.
- JET has a plan to procure the generator in Egypt by end of October.

The team requested following.

- Store place for leak detection is needed.
- ADSL line is necessary for the Project office.

C/P promised to provide the first floor of the same building of JICA office (4mX4m). And C/P promised to follow up the (IT) sector and (Contract) department for this issue, and they will solve it soon.

1-4. Site Tour to SHAPWASCO

The team has a plan of site tour in SHAPWASCO. JET has arranged this activity with SHAPWASCO. Followings are tentative plan.

1) Date : October 10 (Mon)
2) Time: From 10:00
3) Location
   - ✓ Briefing : Headquarter
   - ✓ SOP: Moving to Zagagiz WTP
   - ✓ NRW: Moving to one pilot project site in Zagazig city and Hihiya training yard

2. SOP activity

C/P team for SOP reported the progress, issue, and next schedule of the Project.

2-1. Progress

(1) Collecting of data forms with plant manager for the;

- 3 SWTP start from 23st July
- 5 IMRF start from 30st July

(2) Preparing for the comparison sheet between selection candidate facilities.

(3) Attend to first JCC and Alex 27th, Sep, 2011seminar.

(4) 18 well facilities had been completed survey and data collection for water quality. And there are an anther 15 additional well facilities has been chosen to make same previous survey for it 3 had been finished.

(5) Electrical works:

a) general site survey had been done for all IMRF and make their reports and evaluation sheet according to the criteria (Transformer-generator-panels-staff)

b) 5 facilities has been selected according to evaluation result (Shimyatis- Mit Abulkom- Kafr Elarab- Elbatanon) IMRF and (Menouf) SWTP, 2 of them are already selected by SOP team

(Shimyatis- Kafr Elarab).

c) 3 SWTP has been selected (Shebin- Elsadat- Menouf) according to the survey and criteria.

2-1. Issue

- The Well Monitoring Data collection doesn't submitted to JET office yet, because the SOP activity was busy last 2 weeks for preparing the presentation of first JCC and seminar at Alex.
- The SOP members should be attending to all kind of meeting activities as possible to raise the knowledge between the team members and find the joint points. JET informed it to MCWW counterpart team leader.
- The SOP suffering of some problems
  1- In some facilities such as Menouf (some of instrumentation devices doesn't work or need to calibration or even need to be replaced).
  2- There is no flow meter installed on well water distributed pipe
  3- The SOP recommended to JET to choose (Gezi) well facility to be a symbol for the new generation of IMRF.
- The electrical works facing a problem which is (no power consumption meter in Menouf)
- Well monitoring: wells clay sectors are N/A

3 .NRW activity

C/P team for NRW reports the progress, issue, and next schedule of the Project.

3-1. Progress

(1) First JCC and 27th, Sep, 2011. Alex's seminar.
(2) Discussion about Action Plan on 5th, Oct, 2011.
(3) The isolation for the pilot area shall be determined by Oct, 15th 2011. In each of the 3 Markaz's.(Shebin – Elsadat – Quessna)
(4) In Quessna the isolation had been done successfully for 3 pilot area.
(5) In Shebin 3 pilot area has been selected and 2 were isolated (Arafa – Ezbet Elsantawy)
(6) In Elsadat 3 pilot area has been selected and tested isolation but not succeeded (5th-11th)

3-2. Issue

a) Shebin isolated area valves need to be replaced or repaired.
The valve will be repaired on 9-10-2011 then report to JET to continue the isolation test.
b) Choose another 2 Markaz to be ready in case
2 pilot were choose in Berket Elsaba
2 pilot were choose in Ashmoon.
c) Different between network maps, GIS and actual location.
C/P will try to confirm the right selection with network managers.

3-3 Next Schedule

- Conducting isolation for the pilot areas until Oct, 15th, 2011. (NRW)
- Confirming the network maps with network managers on the sites during isolation activity.

(NRW)

- Analyzing the results by expert team and discussion with C/P and head of their team. (NRW)
- Finalizing the first action plan. (NRW)
- Keep Data collection for the 3 SWTP / 5 IMRF and submit it to JET. (SOP)
- Get the report and data forms for WELL's monitoring. (Wells) before Mr. Ijima arrival.

(End of MM)

The Project for Improvement of Management Capacity of
Operation and Maintenance for Water Supply Facilities in Nile Delta Area (Phase-1)

Minutes of Meeting for 4th Project Team Meeting in MCWW for PH-1

Date	30th October (Sunday) 2011	Signature
Time	14:00～15:30	
Place	Shebeen expert office	
Attendants	**[MCWW : C/P]**	
	Mr. Samir Abdelmenem : Leader of C/P team	
	Mr. Ayman Bassyouni : Head of SOP team	
	Mr. Belal Galal : Head of NRW team	
	Mr. Mohamed Fawzy Awad : SOP C/P team	
	Mr. Mohamed Mostafa Shaf'e : NRW C/P team	
	Mr. Khaled Kazamil : SOP C/P team	
	[JICA Expert Team]	
	Mr. Mitsuhito Omori : NRW Reduction	
	Mr. Tomohiro Shimizu : SOP Expert	
	Mr. Nagao : SOP Expert	
	Mr. Hiroki Niimura : NRW Expert	
	Dr. Mostafa Moawad : NRW senior Engineer	
	Mr. Mohammed Abd El-kader : Facilitator	
	Mr. Ahmed Atef : Interpreter	

1. General

Expert team reported general topics.

1-1. Schedule of Japanese Expert

The JET reported the schedule of Japanese experts as follows;

- Mr. Mitsuhito Omori : Departure on 31th October 2011
- Mr. Hiroki Niimura : Departure on 7th November 2011
- Mr. Tomohiro Shimizu : Departure on 14th November 2011
- Mr. Nobuyuki Iijima : Arrival on 14th November 2011

1-2. Equipment

JET reported the situation of equipment as follows.

- Equipment from Japan arrived and did hand over from HCWW to MCWW.
- JET had a plan to procure the generator in Egypt by end of October; however it is difficult to find a suitable one in shebeen. JET continues to find it.

Both side confirmed followings.

- Store place for leak detection is needed and C/P promised other room (4mx4m).
- Equipment will be passed to the Project soon.

1-3. Possibility of changing period of the Project

JET reported about project schedule as follows.

- JICA is planning the changing period of the Project as following.
  Original period of Phase-1: Until end of March
  Modification period of Phase-1: Until end of December

2. SOP activity

C/P team for SOP reported the progress and next schedule of the Project.

2-1. Progress

- Site tour in SHAPWASCO was conducted and C/P discussed about SOP activity at Zagazig Water Treatment Plant in Sharkia.
- Model facility for WTP and IMRF were selected through detail survey as followings.
  - WTP : Sadat
  - IMRF: Shimyatis
- Other IMRF of Barman system will be conducted for SOP activity as additional facility.

2-2. Next Schedule

- Rehabilitation plan will be prepared on November and rehabilitation work will be conducted on December.

3 .NRW activity

C/P team for NRW reported the progress, issue, and next schedule of the Project.

3-1. Progress

(1) Site tour in SHAPWASCO was conducted and learned about flow meter.
(2) NRW training in SHAPWSCO was conducted October 21 and 22.
(3) Action Plan was prepared with JET.
(4) Workshop for Action Plan was conducted October 30, and Action Plan was distributed to C/P of each branches.

3-2. Issue

- Other counterpart of NRW will join for more effective activity.
- One chemist joined SOP counterpart.

3-3 Next Schedule

- To fix the location of flow meter chamber
- To making the chamber by next February
- To modify the GIS drawings

(End of MM)

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area (Phase-1)

Minutes of Meeting for 5th Project Team Meeting in MCWW for PH-1

Date	(Dec18th, 2011) Sunday		Signature
Time	10:00~12:00		
Place	Shebeen Project office		
Attendants	**MCWW (C/P)**		**MCWW**
	Mr. Ayman Bassyouny	: Head of SOP C/P team	
	Mr. Mohamed Fawzy Awad	: SOP C/team	
	Mr. Mohamed Fathy Gaber	: SOP C/P team	
	Mr. Saeed Abdelfattah	: SOP C/P team	
	Mr. Mostafa Lotfy	:SOP C/P team	
	Dr. Eyman Zahran	: SOP C/P team	
	Mr. Belal Galal	: Head of NRW C/P team	
	Mr. Mohame Shafie	:NRW C/P team	
	Mr. Ahmed Radwan	:NRW C/P team	
	Mr. Mohamed Fawzy Bader	:NRW C/P team	
	Mr. Ahmed Elshony	:NRW C/P team	
	Mr. Ahmed Shalaby	:NRW C/P team	
Attendants	**[JICA Expert Team]**		**JET**
	Mr. Omori		
	Mr. Iijima		
	Mr. Mohamed Nagi		
	Dr. Ahmed El Baz		
	Dr. Sayed Madboly		
	Dr. Mostafa Meawad		
	Mr. Mohamed Abdelkader		
	Mr. Ahmed Ragab		
	Mr. Ahmed Atef		

1. General

Expert team reported general topics.

- ✓ About C/P tasks during the stop of JICA project office, C/P shall be continues working on schedule.

1-1. Schedule of Japanese Expert

The JET reported the schedule of Japanese experts as follows;

- Mr. Mitsuhito Omori : Arrival on 12th and Departure on 25th December 2011
- Mr. Nobuyuki Iijima : Departure 25th December 2011

1-2. Equipment

The situation of equipment as follows.

- Equipment's are still in MCWW's main stores and JET need it to be transferred to Shebeen project office store.
  - ✓ Heads of C/P will handle this matter instead of Mr. Samir soon. C/P will consider to establish the shelves in the project office store.
- JET purchased and handed over two generators to MCWW.

1-2. C/P training in Japan

C/P training in Japan was finished last week. JICA expert requested to two C/Ps in Japan to have small meeting or presentation in Egypt for reporting to other C/P Two C/Ps. C/P team shall arrange to have a meeting/presentation after coming back t of two C/P to Egypt.

2. SOP activity

C/P team reported the following.

2-1. Progress

1) SOP for water treatment facility

- C/P activities
  - ✓ 3 survey had been done to Elsadat SWTP and Gezai,Shimyatis IMRF for revising the requirements of rehabilitation for SOP according to the time schedule with agreement of Mr. Abulkhair.
- Activities with JET.
  - ✓ A visit was done with Dr. Ahmed El Baz for some parts of the Elsadat SWTP, and some specifications of the equipment were set with the C/P team, and requirements of rehabilitation will be handed to the company for tendering and procurement of the required items.
- Work shop.
  - ✓ C/P attends SOP workshop in GHAPWASCO, for the importance of P&ID, and how to select the C/P team in the stations.
- Checking model facilities by SHAPWASCO.
  - ✓ Mr. Abdel Shafi (SOP team leader for SHAPWASCO) joined for visits in Elsadat SWTP and Gezaii, Shimyatis IMRF, to be familiar with the model facilities for SOP activities.
- Preparing the block flow diagram and P&ID of all facilities.

  - ✓ A part of Elsadat has been finished, and Gezaii will be (revised), and Shimyatis will be (drawn).
- selecting the C/P
  - ✓ 28 members were selected to be C/P team in the 3 model facilities.

2) Water Quality Management

- A meeting was held with Mr. Umeki to explain the purpose of WQM and specified the activities as follows:
  - ✓ SOP will be applied in the laboratory of the chosen model facility (Elsadat SWTP), and it will start during the second phase of the project.
  - ✓ Sharing the information and experience between the 3 AC's through Work-shops.
  - ✓ Conducting site survey using the WQM questionnaire for customer complains.
- Attended WQM workshop in GHAPWASCO,
  - ✓ presented by Dr. Sayed (manager of Zagazig WTP) and Dr. Hamdy (General manager of Central laboratory of GHAPWASCO)
- Excel sheet was submitted to C/P.
  - ✓ A program was done by Mr. Umeki, and handed to C/P team, and data entry is carried out by them, C/P did the sample survey for 13 area spot and 109 costumer claim survey.
- Additional members for SOP.
  - ✓ 2 new members were added to WQM activity.(Dr. Eman as chemist and Eng. Mostafa Lotfy as GIS)

3) Wells monitoring

- Selecting the facilities where the water level meters will install.
  - ✓ 3 facilities were chosen for installing the water level meter (Kafr Elhama No.1 in Ashumon), (Zaweyat Elnaora No.2 in El Shohada), and (Bgrym No.3 in Quesa).
- Selecting the model facility for SOP.
  - ✓ 5 well facilities were selected for implementing SOP (Shubra bas, El May old, Dekma, Kom Akhbar and Kfr El Batunoun.
  - ✓ After detailed survey 1 facility were chosen for implementing SOP (Dakma in Shebeen).

2-2. Issues

- C/P team is trying to use other pickup for the Project as JICA pickup is not enough for covering the project activities.
- Since the level meter was captured in the borehole. The cause is thought to be that an electric cable of submergible pump was twined around the sensor. Therefore, level meter couldn't be installed. Solution was discussed in the PTM and C/P will try to solve it as soon as possible.

2-3. Future plan

- Drawing P&ID
  - ✓ A part of Elsadat has been finished, and Gezaii will be revised, and Shimyatis will be drawn.

- Follow up with the rehabilitation of SOP for 3 facilities.
  - ✓ Tender for Rehabilitation works will use 2 ways, One is calibration and 2nd is purchasing & installing. Now the tender doc singed by chairman and ready to be contracted by some contractors.
- The remaining level sensors for well monitoring will be installed by using 1.5-3 Inch PVC pipe in the Wells.
- The C/P will install 2 level sensors to F.M in DAKMA on each Well until Aug,2012.
- The C/P will collect general information/manual/regulation etc. regarding operation and management of well station/staff of well station, furthermore a well inventory and information of actual daily operation and maintenance activities of Dekma well station will be prepared until the end of April 2012.

3. NRW activity

C/P team reports the following.

3-1. Progress

- ✓ Choosing the areas for NRW activity and exact locations for the chambers have been done.
- ✓ 2 contractors has been purchased the tender but not yet decided.
- ✓ 2 additional members were added to NRW team (Mr. A.Elshony GIS and Mr. A.Shalaby Hyd).

3-2. Issues

There is no issues reported

3-3. Future plan

- ✓ Completing the champers construction as soon.
- ✓ Continues preparing the GIS maps for the chosen areas and correcting the mistakes in the maps almost finished.
- ✓ Transferring JICA equipment's to Shebeen store before 2nd PH starting.

_____ (End of MOM)

The Project for Improvement of Management Capacity of
Operation and Maintenance for Water Supply Facilities in Nile Delta Area (Phase-2)

Minutes of Meeting for 6th Project Team Meeting in MCWW for PH-2

			Signature
Date	1st April (Sunday) 2012		
Time	10:00～12:00		
Place	Chairman Office		
Attendants	**[MCWW : C/P Leaders]**		
	Mr. M.M.Abulkhair	: MCWW Chairman	
	Mr. Belal Galal Khallaf	: NRW C/P team Leader	
	Mr. Ayman Bassyouni	: SOP C/P team Leader	
	[JICA Expert Team]		
	Mr. Fujii	: JET Leader	
	Mr. Omori	: Deputy/ NRW Expert	
	Mr. Shimizu	: SOP Expert	
	Mr. Umeki	:SOP Expert	
	Mr. Mohamed Nagi	: Facilitator SHAPWASCO	
	Mr. Mohamed Abdel Kader	: Facilitator MCWW	
	Mr. Mohamed Abouzekry	: Facilitator GHAPWASCO	
	Mr. Ahmed Ragab	:Interpreter	
	Mr. Ahmed Atef	:Interpreter	

1. General

Opening words by Chairman and Mr. Fujii

2. SOP activity

C/P team reports the following.

2-1. Progress

- Rehabilitation work is divided into calibration work of instrumentations and installation work of equipment.
- Calibration Work: Vendor was decided to (Alnama'a Technology Company). The company will start working on 3rd of April 2012, and finish within one month.
- Installation Work: Vendor was decided to (Egypt German Company). The company will start working on 8th of April 2012, and finish by 15th May 2012.
- Preparation of P&ID: Site survey had been completed. P&ID drawing by AutoCAD is in progress, and if takes a month to finalize the drawing. (This activity can be continued in parallel

with other activities.)

- Through the discussion with C/P and SOP members in model facility, we are preparing draft monthly and daily operation records for Elsadat SWTP and Gezii IMRF.
- Customer claim survey for WQM activity is continued (250 customers until now).

2-2. Issues

- At a present, only 1 vehicle is allocated to the NRW and SOP activities for their transportation. Since increasing of site training work is expected from April, we would like to request allocation of additional car to C/P team. (Chairman promises to provide a new pick-up truck to cover both activities soon).
- To assure that SOP activity is going on the right way Gezii IMRF's laboratory should have a good chemist. (Chairman promises to assign one chemist soon).
- Due to the large quantity of work for C/P with MCWW, JET needs to free them for the Nile Delta project. (Chairman will discuss with them to work on Saturday).

2-3. Future plan

- Finishing rehabilitation work to start applying SOP in the model facilities.
- Finalizing the P&ID drawings for the model facilities.
- Making draft for SOP with reference to SHAPWASCO.
- On-site training for SOP's will start on 5th April.
- After 15th of April a work-shop for plant managers will be conducted to discuss about SOP's documents.

3. NRW activity

C/P team reports the following.

3-1. Progress

- Contractor finished construction of 1 chamber in Shebeen branch. Now contractor is working in Berket Elsab'a .
- Received second grant from JICA equipment on February 2012.
- Conducted trainings for installing and measuring of flow meters, once in SHAPWASCO with GHAPWASCO NRW C/P and second time in Abu Baker IMRF at Shebeen.
- MNF activities started in 1 area in Shebeen (Mansheyat Essam) on 26th March.
- Workshop for reading water meters (house meters) on 27th of March 2012.

3-2. Issues

- Chamber construction delay for NRW activities.
- Additional pickup truck for the project, due to conflict in activities with SOP.
- Incentives to the C/P teams for working after the standard working times of the company.
- Some troubles with chambers in Abu Agwa (Shebeen), Maglis Elmadina (Berket Elsab'a) and Taymor&Elmahkama (Quesna). Such as electric cables and high traffic location, and now

working on solving this problem.

- Due to the shortage of good technicians who helps the C/P in Nile Delta Project, the Chairman of MCWW ordered to assign the new 8 graduated students of the Water technical school to work with the project team.
- Studding for possibility of establishment for water meter maintenance workshop in each brunch (markaz).

3-3. Future plan

- MNF survey at total 3 candidate areas in Shebeen model areas will be done by the end of April 2012.
- 1 pilot area from Shebeen model areas will be select.

(End of MOM)

The Project for Improvement of Management Capacity of
Operation and Maintenance for Water Supply Facilities in Nile Delta Area (Phase-2)

Minutes of Meeting for 7th Project Team Meeting in MCWW for PH-2

			Signature
Date	17th April (Tuesday) 2012		
Time	11:00～12:00		
Place	Chairman Office		
Attendants	**[MCWW : C/P Leaders]**		
	Mr. M.M.Abulkhair	: MCWW Chairman	
	Mr. Belal Galal Khallaf	: NRW C/P team Leader	
	Mr. M.Shafee	: NRW C/P team Member	
	Mr. M.Fawzy Bader	: NRW C/P team Member	
	Mr. A.Elshony	: NRW C/P team Member	
	Mr. A.Shalaby	: NRW C/P team Member	
	Mr. M.Fathy	: SOP C/P team Member	
	[JICA Expert Team]		
	Mr. Omori	: Deputy/ NRW Expert	
	Mr. Shimizu	: SOP Expert	
	Mr. Umeki	:SOP Expert	
	Mr. Mohamed Nagi	: Facilitator SHAPWASCO	
	Mr. Mohamed Abdel Kader	: Facilitator MCWW	
	Mr. Ahmed Ragab	:Interpreter	
	Mr. Ahmed Atef	:Interpreter	

1. General

Checking the situation by Chairman and C/P

2. SOP activity

C/P team reports the following.

2-1. Progress

- Calibration Work: Vendor was started on 3rd of April 2012, in Elsadat WTP & Gezii IMRF and it shall be finish within one month.
- Installation Work: Vendor will start to work as soon as. The company already issued the working permission but the contractor still not got it yet.
- Preparation of P&ID: P&ID drawing by AutoCAD is in progress, and the semi-final drawing will submitted by end of April 2012.takes a month to finalize the drawing.

2-2. Issues.

- JET needs to free the C/P for the Nile Delta project. (Chairman allows SOP C/P to be free Sun, Tue, Thr).
- Chairman accepts to bay incentives for C/P every month and since project started.

2-3. Future plan

- Finishing rehabilitation work to start applying SOP in the model facilities.
- Finalizing the P&ID drawings for the model facilities.
- Making draft for SOP with reference to SHAPWASCO.
- 18th of April a discussion for chemists shall held at Shebin office for how to manage SOP for laboratories
- Plant managers and network managers will conduct a work-shop about SOP's for WQM and SOP's documents on 22,23,24 of April2012.

3. NRW activity

C/P team reports the following.

3-1. Progress

- 2 chambers in Shebin Markaz have been done (MNF) Mansheyat Essam & Arafa.

3-2. Issues

- Chamber construction delay for NRW activities due to the contractor.
- Chairman decided to bay Incentives to the C/P teams for the extra working with JET.
- The problem of how to secure the equipment's in the chamber were solved by Chairman.
- JET need the C/P to work continually, and the Chairman decided to free most of them.

3-3. Future plan

- MNF survey at total 3 candidate areas in Shebeen model areas will be done by the end of April 2012.
- 1 pilot area from Shebeen model areas will be select.

Main decision of MCWW Chairman:

1- The responsibility of the equipment's will be taken by MCWW and the installation committee will act as a witness.

2- All the JICA equipment's in the store shall be taken its responsibility by MCWW.

3- The C/P will get incentives from the beginning of JICA project and it will be continue every month.

4- New members shall join the C/P when needed.

5- After discussion with the contractor of the chambers, MCWW will receive all Chamber by the end of April 2012.

(End of MOM)

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area (Phase-2)

Minutes of Meeting for 8th Project Team Meeting in MCWW for PH-2

Date	16th May (Wednesday) 2012		Signature
Time	02:00 pm ~ 04:00 pm		
Place	Chairman Office at MCWW		
Attendants	**[MCWW : C/P Leaders]**		
	Mr. M.M.Abulkhair	: MCWW Chairman	
	Mr. Belal Galal Khallaf	: C/P team Head	
	Mr. Ayman Bassyouny	: SOP C/P team Leader	
	Mr. A.Elshony	: NRW C/P team Member	
	[JICA Expert Team]		
	Mr. Omori	: Deputy/ NRW Expert	
	Mr. Mohamed Nagi	: Project Facilitator	
	Mr. Mohamed Abdel Kader	: Facilitator MCWW	
	Mr. Ahmed Ragab	:Interpreter	
	Mr. Ahmed Atef	:Interpreter	

1. General

The team reports the schedule of Japanese experts as follows;

- Mr. Mitsuhito Omori : Departure on 19th May 2012

2. SOP activity

C/P team for SOP reported the progress and issue of the Project.

2-1. Progress

(1) Rehabilitation works at Elsadat WTP and Gezii IMRF.

- ✓ 90% of repairing & maintenance for existing devices (F.M & Level indicators..) were done and ready for calibration, by next week.
- ✓ Supplying with equipment's (new equipment's for rehabilitation works)for Elsadat will start on 17th of May.

(2) Following up the SOP records.

- ✓ C/P are following to provide the facilities with necessary record forms for monitoring the status and check it periodically.

(3) WQM

- ➢ Preparing the report of C.C.S (customer claim survey) and submitted to MCWW to check the situation.
  - Mr. Umeki is going on to prepare report of C.C.S and soon after he finished we can distribute it to MCWW so they can utilizing the data.
- ➢ Reading the laboratory SOP's of SHAPWASCO and make draft by modify necessary items through the chemists discussion.
  - Dr. Adel tasks will be as follow:
    - Reading SOP's of laboratories of SHAPWASCO and modify main points.
    - Modify the high light points according to each laboratory.
    - Send the modification to JET to review.
    - Read the C.C.S prepared by JET and submit it to MCWW after reviewing it.

(4) Well monitoring

- ➢ Collecting for level meter data. (Memory Card). "Periodically".
  - C/P keeps doing their tasks but they have small problem that one of level meter indicator device had stopped because of the battery, soon they will get spare batteries from the store.

2-2. Issue for the Project

- ➢ Rehabilitation at El-sadat.
  - Chairman MCWW decided to buy the necessary F.M for filter drain by direct order.
- ➢ Chemist assignment for Gezii laboratory.
  - Chairman instructs the central laboratory manager to assign one of chemists immediately.
- ➢ Chemist sudden retirement for Elsadat laboratory.
  - Dr. Adel will teach anther chemist of El-Sadat laboratory.
- ➢ P.C for Gezii.
  - C/P will transfer it to Gezii 17th of May.
- ➢ Preparation for Gezii Laboratory.
  - All the necessary equipment's are available at the store yard of MCWW except one device, the Chairman instructs to buy it using his authority.

2-3 Schedule for until end of June 2012.

- ➢ Follow up the collecting of records and supply the facilities with new copies.
- ➢ Read and modify the SOP's for laboratories (By chemists) and submit it to JET.
- ➢ Read and modify the previous project SOP's for each model facilities.
- ➢ Follow up the rehabilitation works.

3. NRW reduction activity

C/P team for NRW reported the progress and issue of the Project.

3-1. Progress

(1) General information for NRW activities

- ➢ Last PTM: Chairman promises to finish all chambers by end of April 2012 in last PTM, however actual situation as follows.
  - The situation of chambers construction and MNF survey in each 3 Markaz as Attachment -1.
- ➢ C/P were learned how to analyze data and how to make graph.
- ➢ C/P has been started to collect the necessary data that will be utilized next step, such as GIS reviewing the boundary, length and diameters of pipes of candidate pilot area…etc.

3-2. Issue for the Project

- ➢ JET explained that there is delay of NRW activities because of the delay of chamber construction.
- ➢ Chairman of decided to implement the remaining works through self-efforts of MCWW.
- ➢ Following up of the progress will be done by JET.
- ➢ Shortage of C/P attending for the activity
  - Chairman decided to increase the attendance of Eng. Shafe'e one more day.

3-3. Schedule for until end of June 2012.

- ➢ Conducting MNF survey in Abuagwa from next week.
- ➢ Selection of pilot area in Shebeen.
- ➢ Construction chamber and MNF survey for 3rd area in Barket El Saba
- ➢ Consumption survey at pilot area in Shebeen or Barket El Saba

End of PTM Minutes of meeting

Attachment-1

The latest situation for chamber construction works as of May 2012.

Markaz name	Chamber Location	Situation	Remaining	Handing	Remarks	M.N.F
Shebin	Mansheyat Essam	Constructed	Finished	26-03-12	Location of chamber is inside the facility.	Done (3/27)
	Arafa	Constructed	Finished	17-04-12	No problems	Done (4/18)
	Abu Agwa	Constructed	water proof isolating		The chamber full of water leakage from walls	
Quesna	El-Agiza	Constructed	Roof under constructio n	20-05-12	Location of chamber is inside the facility as M.Essam.	
	Timor	Not Constructed	All		New location of chamber was selected (No need Isolation confirmation)	
	Elmahkama	Not Constructed	All		New location of chamber was selected (No need Isolation confirmation)	
Berket Elsab'a	Maglis Elmadina	Constructed	Finished	23-04-12	No problems	Done 4/23
	Abdelsalam Arif	Constructed	Finished	23-04-12	No problems	Done 4/29
	Port Saeed	Not Constructed	All		Chamber location was changed and construction will start on 22 of May2012.	

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area (Phase-2)

Minutes of Meeting for 9th Project Team Meeting in MCWW for PH-2

			Signature
Date	22nd July (Sunday) 2012		
Time	11:30 am ~ 12:30 pm		
Place	Chairman Office at MCWW		
Attendants	**[MCWW : C/P Leaders]**		[redacted]
	Mr. M.M.Abulkhair	: MCWW Chairman	
	Mr. M.Najeeb	: Vice chairman	
	Mr. Ayman Bassyouny	: SOP C/P team Leader	
	Mr. A.Elshony	: NRW C/P team Member	
	Mr. M.F. Awad	: SOP C/P team member	
	[JICA Expert Team]		[redacted]
	Mr. Fujii	: Project manager	
	Mr. Omori	: Deputy/ NRW Expert	
	Mr. Shimizu	: SOP Expert	
	Mr. Mohamed Nagi	: Project Facilitator	
	Mr. Mohamed Abdel Kader	: Facilitator MCWW	
	Mr. Ahmed Rasmy	:Interpreter	
	Mr. Ahmed Atef	:Interpreter	

1. General

The team reports the schedule of Japanese experts as follows;

- Mr. Fujii : Departure on 23rd July 2012
- Mr. Omori : Departure on 30th July 2012
- Mr. Shimizu : Departure on 23th July 2012

2. SOP activity

C/P team for SOP reported the progress and issue of the Project.

2-1. Progress

(1) Rehabilitation works at Elsadat WTP and Gezii IMRF.

- Works has been finished for rehabilitation in Elsadat 100%
- The rehabilitation works has been finished in Gezay exept magnetic flow-meter which

(2) Following up the SOP records.

(3) WQM

(4) Well monitoring

2-2. Issue for the Project

- Rehabilitation works
  - Calibration
  - Installation
- Preparation for Gezii Laboratory. (not completed)
- Electrical tools for Elsadat & Gezii
- Car problem

2-3 Schedule for until end of August 2012.

- Follow up the collecting of records and supply the facilities with new copies.
- Read and modify the SOP's for laboratories (By chemists) and submit it to JET.
- Read and modify the previous project SOP's for each model facilities.
- Follow up the remaining rehabilitation works.

3. NRW reduction activity

C/P team for NRW reported the progress and issue of the Project.

3-1. Progress

(1) General information for NRW activities

- The situation of chambers construction and MNF survey in each 3 Markaz see Attachment -1.
- C/P were learned how to analyze data and how to make graph.
- C/P starts to collect the necessary data that will be utilized next step, such as GIS reviewing the boundary, length and diameters of pipes of candidate pilot area…etc.
- Water consumption and meter accuracy were measured at Abu-agwa.

3-2. Issue for the Project

- Shortage of C/P attending for the activity and No. of working days/week.
- JET has a doubt that closing valve in Abu-agwa is not proper working (need to be replaced).
- New members of Technical school
- Car problem.

3-3. Schedule for until end of August 2012.

- Conducting MNF survey in Quessna (retry El-mahkama) & Berket Elsab'a(Mit-Om-Saleh) Markaz's.
- Analys's the data to select the pilot area in both remaining Markaz's.
- Taking decision to keep Abu-agwa or shift to Arafa depend on the valve condition (replaced/closing or not).

The Project for Improvement of Management Capacity of
Operation and Maintenance for Water Supply Facilities in Nile Delta Area (Phase-2)

Agenda for 10th Project Team Meeting in MCWW for PH-2

			Signature
Date	2nd Nov ,2012 (Sunday)		
Time	10:00 am ~ 12:00 pm		
Place	Chairman Office at MCWW		
Attendants	**[MCWW : C/P Leaders]**		
	Mr. Ezzat Elsyad	: MCWW Chairman	
	Mr. Belal Galal Khallaf	: C/P team Head & NRW Leader	
	Mr. Ayman Bassyouny	: SOP C/P team Leader	
	Mr. Saeed Abdelfattah	: SOP C/P team Member	
	Mr. M.Fawzy Awad	: SOP C/P team Member	
	Mr. Khaled Kazamel	: SOP C/P team Member	
	Mr. Adel Abderahman	: SOP C/P team Member	
	[JICA Expert Team]		
	Mr. Fujii	: Project Expert leader	
	Mr. Niimura	: Leak detection Expert	
	Mr. Nagao	: SOP Expert	
	Mr. Mohamed Nagi	: Project Facilitator	
	Mr. Mohamed Abdel Kader	: Facilitator MCWW	
	Mr. Ahmed Rasmy	:Interpreter	
	Mr. Ahmed Atef	:Interpreter	

1. General

The team reports the schedule of Japanese experts as follows;

- Mr. Fujii : Departure on 30th Nov. 2012.
- Mr. Niimura : Departure on 13th Dec. 2012
- Mr. Nagao : Departure on 28th Nov. 2012
- Mr. Ijiima : Arrival on 15th Nov. 2012.
- Mr. Umiki : Arrival on 15th Nov. 2012.
- Mr. Iwase : Arrival on 10th Nov. 2012.
- Mr. Hamano & Omura : Arrival on 18th Nov. 2012.
- Mr. Hamano & Omura : Departure on 27th Nov. 2012.
- Mr. Iwase : Departure on 28th Nov. 2012.
- Mr. Kato : Arrival on 5th Nov. 2012.

The Project for Improvement of Management Capacity of
Operation and Maintenance for Water Supply Facilities in Nile Delta Area (Phase-2)

Minutes of Meeting for 10th Project Team Meeting in MCWW for PH-2

1. SOP activity

C/P team for SOP reported the progress and issue of the Project.

2-1. Progress

(1) What is the progress of Rehabilitation works at Elsadat WTP and Gezii IMRF.(C/P will report situation).
- ❖ F.M was installed

(2) Following up the SOP records (C/P will report the situation).
- ❖ Following up is going on considering the new necessary modification for Elsadat Record forms to adjust cells to be wider for hand writing.

(3) WQM (C/P will report about SOP's documents).
- ❖ SOP's documents modification is going on and it will be handed over to JET by next week.

(4) Well monitoring (Select another facility to implement SOP).instead of closed one.
- ❖ 3 Well facilities had been nominated for SOP's (Kafr Tambidy/Shebeen), (Elkom Elakhdar/Shebeen) and (Kafr Ashama/Elshohada) and then Mr. IJIIMA & C/P will select one of them instead of (Dukama) to be as a model facility for implementing SOP. C/P will support JET by the necessary data for these 3 facilities this week.

2-2. Issue for the Project

- ➢ Rehabilitation works
  - Equipments Installation For Elsadat :(F.M for circulation, Alum-Sulfate pumps and chlorine weight balance).
  - ❖ F.M is installed; one Alum-Sulfate pump will be installed next Tuesday and the Base of chlorine weight balance will be fixed soon.
  - Installation For Gezay : (Inject point & F.M.for potassium permanganate).
  - ❖ Inject pipe will be repaired this week and F.M will be installed.
- ➢ Electrical tools for Elsadat & Gezii.
  - ❖ Chairman requested C/P to make a list with the necessary tools and he will approve it.
- ➢ JICA Car Problem.
  - ❖ Chairman will discuss it with the responsible person.(Mr.M.Soliman).

2-3 Schedule for until end of Dec. 2012.

- ➢ Follow up the collecting of records and supply the facilities with new copies.(confirmed)
- ➢ Read and modify the SOP's for laboratories (By chemists) and submit it to JET. (confirmed)
- ➢ Prepare for SHAPWASCO work-shop on 14th Nov.2012. (confirmed)
- ➢ Prepare for the Steering Committee on 7th or 8th Nov,2012.at (HCWW) (confirmed) on 8th Nov.
- ➢ Prepare for JICA consultant visit for the mid-term re-view for each model facilities.(Attachment – 1).
- ➢ Prepare for JCC & Open seminar on 25th Nov,2012. at TANTA(Panorama Hotel). (confirmed)

2. NRW reduction activity

C/P team for NRW reported the progress and issue of the Project.

3-1. Progress

(1) General information for NRW activities
- ➢ The situation of Water meter reading and meter accuracy test for 3 Markaz.
- ➢ C/P were learned how to analyze data and how to make graph.
- ➢ C/P starts to collect the necessary data that will be utilized next step, such as GIS reviewing the boundary, length and diameters of pipes of candidate pilot area…etc.

3-2. Topics to be discussed in the PTM:

3-2-1. Water Balance Analysis
- ✓ Chairman comment on the meter calibration methodology and he prefer to count all miss counting meters and send to meter work shop at MCWW to check and decide whether repair or replace, but JET find that it will be difficult to do due to time shortage.

3-2-2. NRW reduction activity

2-1. MCWW Water Balance Analysis

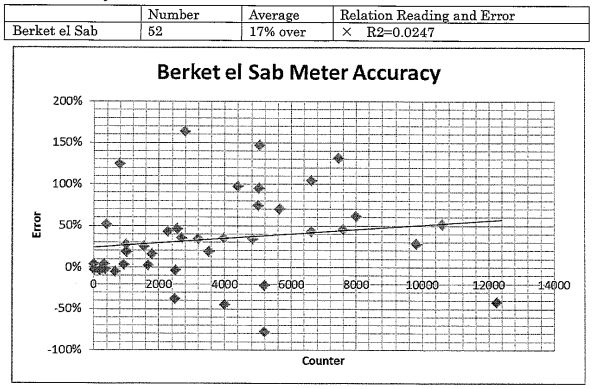
Meter Reading

	SIV(m³/d)	Consumption(m³/d)	NRW ratio
Berket el Sab	657.480	644.162	2.0%
Quesna	719.112		

※Berket el Sab; need to interview to meter readers about 115 meter consumption.

Meter Accuracy Test

	Number	Average	Relation Reading and Error
Berket el Sab	52	17% over	× R2=0.0247



MCWW NRW ratio

	SIV(l/d)	Meter Reading Consumption (m³/d)	NRW ratio	Relation NRW	AVE. NRW	+4% NRW
Berket el Sab	657.480	644.162	2.0%		16.2%	5.7%

3-2-2. NRW reduction activity

Berket el sab'a

- ➢ Customer List with Monthly Income Data is necessary

Total meter no.	883
None working meters	28
not clear meters	7
closed flats	115
meters with one reading only	8
Total no. of customers in the area	2996
Ave customers for each meter	3.392978482
Average consumption (m3/day)	657.48
NRW %	2.0%

The NRW ratio will be minus after adding 100 houses.

Interview "closed flat" to apply AVE. or No usage.

Meter Accuracy

Sample 42 meters AVE. 39% over registration.

Leak Detection Activity.

House connection Survey 3 days.

Ground Mic Survey 3 night (Security) cf. In Ghapwasco they arrange Security for Night work.
- ✓ C/P and Chairman of MCWW were informed with the necessary needs for this working period such as completely free C/P, JICA Car 3 nights, and increasing working days from 2 days to 3 days.

Quessna

Customer List and monthly Income data (Monthly Consumption Data)

3-2. Issue for the Project

- ➢ Car with the project:

Only Monday, and Wednesday is our work day. We like to request one more day for car to proceed our activity faster. (confirmed)
- ➢ Car arrangement to SHAPWASCO. And the attendance on Nov 14th 2012. (Work-shop). (confirmed)

3-3. Schedule for until Dec. 2012.

Check Attachment – 1(draft)

(confirmed)

End of MM

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area (Phase-2)

M.M- for 11th Project Team Meeting in MCWW for PH-2

Date	11th Dec ,2012 (Monday)	Signature
Time	9:00 am ~ 12:00 pm	
Place	Chairman Office at MCWW	
Attendants	**[MCWW : C/P Leaders]**	
	Mr. Ezzat Elsyad : MCWW Chairman	
	Mr. Belal Galal Khallaf : C/P team Head & NRW Leader	
	Mr. Ayman Bassyouny : SOP C/P team Leader	
	Mr. Ahmad Elshony : NRW C/P team Member	
	Mr. M.Fawzy Bader : NRW C/P team Member	
	Mr. Saeed Abdelfattah : SOP C/P team Member	
	[JICA Expert Team]	
	Mr. Omori : Expert leader	
	Mr. Niimura : Leak detection Expert	
	Mr. Iijima : Well Expert	
	Mr. Kato : Expert team	
	Mr. Mohamed Abdel Kader : Facilitator MCWW	
	Mr. Ahmed Rasmy :Interpreter	
	Mr. Ahmed Atef :Interpreter	
	Mr. Amr :Interpreter	
	Mr. Yamada :Hydraulic Expert	
	Dr. Mostafa Meawad : Expert team	
	Mr. Umiki :WQM Expert	

1. General

Expert team reports general topics.

1-1. Schedule of Japanese Expert

The team reports the schedule of Japanese experts as follows;

- Mr. Tomohiro Umeki : Arrival on 5th December 2012
- Mr. Hiroki Niimura : Departure on 12th December 2012
- Mr. Atsushi Kato : Ditto
- Next Assignment
  (Fujii, Niimura, Shimizu) : From middle of January until end of February
  (Kato) : From beginning of February until end of February

2. SOP activity

C/P team for SOP reports the progress and issue of the Project.

2-1. Progress

(1) Gezy
- ➢ Following to Action plan for OJT in Gezy
  - Studying of changing Pre-chlorine dosing point from Aeration tank into Reaction chamber.
  - Increasing Run-time operation of filters from 12 hours to 14 hours and then to 18 hours.
  - Installed hanged chlorine weight balance and started recording consumption.
- ➢ Stopping of aeration process with considering water quality
  - Good results were found after stopping the aeration process.
- ➢ Reducing potassium permanganate gradually and water quality still acceptable
  - Reduction for Potassium Permanganate was gained during trial operation starting from 2mg/l then 1.5mg/l and now it reached 1mg/l and water quality still stable.

(2) Sadat
- ➢ Following to Action plan for OJT in Sadat
  - One new Alum sulphate dosing pump was installed
  - Alum sulphate dosing was adjusted to be 18mg/l and next will be adjusted to be 16mg/l.
  - PI's for each component of the facility will be done soon.
  - Another 3 or 4 facilities were selected to conduct SOP (SHEBIN-MENOUF-TALA) and Mr. Ezzat recommend to add more Compact and direct filtration facility for this selection.
- ➢ Two Chlorine weight balances were installed for both chlorine lines.

(3) WQM
- ➢ Water quality expert start his activity with counterpart.
  - Expert just started
  - Chairman recommended to hold a training program for Well station's Chemists by Mr. Umiki and Dr. Adel to teach them how to deal and manage each Well facility according to the different situation of each Well location, That will be helpful for monitoring Chlorine dosage.

(4) Well monitoring
- ➢ Start of calibration for existing meter by comparison with portable flow meter.
  - One of NRW C/P will attend with Mr.Iijima today to install and compare between F.M reading and existing meters in ASHAMA well station.

(5) Hydraulic analysis
- ➢ Expert has an idea to conduct activity at well model facility. The team will discuss with leader of SOP & NRW, and request to provide counterpart soon.
  - Hydraulic analysis department in MCWW shall support Expert team with all necessary data.

2-2. Issue for the Project

3. NRW reduction activity

C/P team for NRW reports the progress and issue of the Project.

3-1. Progress

(1) Progress for each area

1) Barket El Saba
- ➢ Calibration and cleaning of around 35 meters out of 883 meters were finished in Shebeen workshop without record.
  - Calibration & Cleaning were done for all the meters recommended by the meter reader (57) and the remaining (186) meter will be calibrated by C/P at site (10% only) with normal method (by pucket).
- ➢ We decided to stop leakage survey with making a hole in order to avoid water coming up to surface ground.
  - For the time being C/P will continue leak survey in another area(in Sheben) until all meters cleaned in the pilot area in Berket Elsab'a

2) Quesna
- ➢ Calibration and cleaning of around 470 meters out of 720 meters were finished in their workshop without maintenance and record.
- ➢ 485 meter were calibrated out of 470
- ➢ Now calibration work is stopping due to branches confusing through different instructions from our side.
  - No, it didn't stopped, and some parts were supplied (Rings) to branch's work-shop.

3) Shebeen
- ➢ Activity in Abo Agwa has been stopped since July due to no replacement of existing leakage valve.
  - Chairman instructs the network manager to replace the valve within 3days.

(2) Confirmation of activity for current NRW department

The team discussed with NRW department. The team will consider collaborating with NRW department.
- JET will have a meeting with NRW Department after this PTM to check their availability to attend leak detection survey tomorrow with branch's C/P and see if they can supply this training with extra equipment's.

3-2. Issue for the Project
- ➢ Quesna Branch is facing the problem about spare parts. Damaged parts of many meters can't be changed due to shortage of spare parts.
  - Chairman said in case there were no spare parts so just clean the meter will be done for the time being. (Or until MCWW can get the new meter's supplied by SHAPWASCO).
- ➢ Cleaned meter for Barket Saba were fixed to existing location with damage.
  - New meters rings were supplied and fixed to those damaged meters.
- ➢ In case that all meters will be needed cleaning, the team will face same problems and this action needs so much time. The team proposes that only necessary maintenance meter will be clean and replace. The team will try to reduce error percentage; however it is so difficult to control less than 5%. The team recommends acceptable percentage is more than 10%, for example.
  - These points were discussed and Chairman accepted the percentage up-to 10% and if it will be more he will discuss with JET.
- ➢ Abo Agwa situation is still keeping. In case the valve can be repaired, the team will start calibration work at Abo Agwa. In case the valve can't be repaired, we will change our pilot area. Under this situation, the team proposes three candidate areas shall be checked the supposed leak point by only acoustic rod before starting cleaning.
  - Chairman instructs the branch manager and network manager in Sheben Markaz to replace the valve within 3 days.
- ➢ The situation of C/P attendance has been improved step by step. For example, Mr. Shony has worked every day until five o'clock. On the other hand, the team needs more support of counterpart.
  - The Chairman instructs C/P to not work at site without ID card of their position in MCWW, (To show it if necessary).

End of M.M

Agenda for 12th Project Team Meeting (PTM) in MCWW In Phase-2 On 31st January 2013.

Date	31st January (Thursday) 2013.	Signature
Time	10:00 am ~ 02:00 pm	
Place	Chairman Office at MCWW	
Attendants	**[MCWW : C/P Members]**	
	Mr. Belal Galal Khallaf : C/P team Head	
	Mr. Ayman Bassyouny : SOP C/P team Leader	
	Mr. Mohammed Fatthy : SOP team member	
	Mr. Saeed Abdelfattah : SOP team member	
	Mr. Mohammed Shafee : NRW team member	
	Dr. Adel Ibraheem : SOP team member	
	Mr. Mohammed Fawzy Awad : SOP team member	
	Mr. A.Elshony : NRW C/P team Member	
	[JICA Expert Team]	
	Mr. Fujii : JICA Team Leader	
	Mr. Omori : Deputy/ NRW Expert	
	Mr. Niimura : Leak detection Expert	
	Mr. Shimizu : SOP Expert	
	Mr. Yamada : Hydraulic Analysis Expert	
	Dr. Sayed : Electrical Expert	
	Mr. Mohamed Abdel Kader : Facilitator MCWW	
	Mr. Ahmed Rasmy :Interpreter	
	Mr. Ahmed Atef :Interpreter	
	Mr. Amr :Interpreter	

1. General

Expert team reports general topics.

1-1. Schedule of Japanese Expert

The team reports the schedule of Japanese experts as follows;

- Mr. FUJII : Arrival on 15th January 2013
- Mr. Tomohiro Shimizu : Arrival on 15th January 2013
- Mr. Hiroki Niimura : Arrival on 15th January 2013
- Mr. Omori : Departure on 2nd Feb 2013.
- Mr. Yamada : Departure on 10th Feb 2013.

2. SOP activity

C/P team for SOP reports the progress and issue of the Project.

2-1. Progress

(1) Gezy

- Changing of Filtration valves
- Changing of Cl Inject point from aeration tank with considering water quality
- Results of reducing potassium permanganate.
- The new installation material in the plant.(Adjusting for concrete weir reaction chamber).

Now we are in the OJT and the following are done:

- We succeeded to reduce the Permanganate dosage from 2mg/l to 1ml/l
- We succeeded to reduce back wash times from 3/day to 1/day
- Changing Cl injecting point from Acration tank to
- Re-activate the recycling system for the sludge and back wash water too.

(2) Sadat

- Changing for damaged Alum valves.
- Tow chlorine weight balance was installed on both lines.
- Starting of circulation in the clarifier.
- C/P succeeded to reduce the Alum sulfate amount from 22ml/l to 16ml/l
- C/P activate the Sludge circulation and it needed to clean-up the all 14 drying bed first, then they install the necessary equipmentes such F.M.
  - ✓ The SOP C/P were chose 4 additional stations to implement and extend for the SOP, Kafr Elbatanon & Tokh Tambisha as Gezy (IMRF). Sheben & Tala as Elsadat (SWTP).
  - ✓ Next week C/P promises to submit the PI's for IMRF & SWTP to JET.

(3) WQM

Water quality expert organized the C/P activity during his absence as follow:

- Distribution of criteria of QC for the Lab of SWTP & IMRF & WPS.
- Only WPS was finished and other would be later.
- Break point + Chlorine dosage instruction sheet for lab + record sheet for Operator (Gezy & Ashama).
- For operator at Ashama(WTP) was done but Gezy (IMRF) not yet.
- Conducting break-point test once a month until March2013.then periodically every 6 months.
- Done for January2013. And will conduct on Feb and March too.

- Distribute a hard/soft copy of SOP's for Lab&QC.
- Some necessary modification for Lab' sop should have done to complete it all, but QC' sop is not yet started.
- Monitoring of auditing activity Depend on the previous point
- Report to Chairman about the result of the training (how to adjust Chlorine dosage)
- This training had been done for Ashama Operator and another 2 Well station.

(4) Well monitoring

JET recommended an action plane to be done by C/P from January to May 2013. As follow:

- Confirmation and completion of P&ID of the facility, general layout of Well station and facility inventory such as (Pump, Motor, Manufacture year..).
- Most of these data were done and JET has a copy from P&ID.
- Modification of existing SOP which prepared by SHAPWSCO.
- About 30% of the SOP was modified and remaining part will finished soon.
- Installing some additional equipment which necessary for implementing SOP at the facility such as (Chlorine Weight balance….)
- Soon after the necessary equipment's and facility modification finished, a studding for 3 types of relations shall be made by JET and C/P such as (Relation between Flow & Water quality, Flow & G.Water level, The impacts between each 2 Wells in the facility).
- Submit the data record form sheet to the operators at the facility.
- The record sheet was submitted to the facility operator and he is recording sense this week.

(5) Hydraulic analysis

- A meeting between C/P (Mr. Saeed, Mrs. Nashwa (GIS- water-cad) & Mr. Yamada was held to explain the activity and collect the necessary data of Ashama Well station.
- The submitted data doesn't compatible with JET P.C so after this meeting Mr.Yamada will have a meeting again with GIS try to solve the problem with them.

C/P hold a meeting with Chairman and they get approval to ceriate a new SOP department followed directly and managed by Chairman himself, but nobody knows when will activate this.

2-2. Issue for the Project

- Natural agents caused high turbidity in the intake Canal at Elsadat SWTP.

<u>The following is requested by Mr. Iijima:</u>

Please ask/tell following item to Mr.Saeed at the time of next PTM. Does he carry out the analysis of operation record and extraction volume from the wells and supply volume to the network? Only recording is no meaning. Then If Mr. Saeed carries out analysis of them, please send me an example.

2-3 Schedule for until end of February 2013.

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3. NRW reduction activity

C/P team for NRW reports the progress and issue of the Project.

3-1. Progress

(1) Progress for each area

1) Barket El Saba
   - Pilot area meter reading (consumption) had been done twice.
   - Waiting for data analyzing to get NRW ratio.
   - Re-reading of about 220 meter to (re-confirm) again before analyzing the data.
   - This 220 meter shall be re-reading soon.
   - House connection survey by C/P for area 1&2 had been done, and expecting some leak points.
   - The expected leakage points were 4 at Elteratin using listening stick.
2) Quwesna
   - Pilot area meter reading (consumption) had been done twice.
   - Waiting for data analyzing to get NRW ratio.
   - Re-reading of about 240 meter to (re-confirm) again before analyzing the data.
   - This 240 meter shall be finish re-reading soon this week.
   - Calibrating another 35 meter to increase the percentage of NRW.
   - Done and it is already add to the meter error percentage.
   - House connection survey had been done by C/P at the pilot area.
   - From next week C/P will start leak detection survey by G-Microphone in order to repair it.
3) Shebeen
   - The activity is post ponded.
   - House connection survey only had been done at pilot area 1&2.

3-2. Issue for the Project

- Data collected by Berket Elsaba'a meter readers for 3 times are feck and mismatching with JET demands. (date, time, type, missed fraction, house remarks) all are wrong.
- C/P in Berket Elsaba'a isn't cooperative. (meter readers)
- Collecting meter reading of area 1 at Quwesna had been done by C/P without any help

from branch readers so there is no customers name found, and many subscribers No. are missing too.

- C/P will try to get the subscribers name and street name from branch records.
- All meters in Quwesna pilot area were not cleaned.
- JET reported to C/P but no answer.
- The team has to finish the water balance analyses after repair at least at two areas (Quwesna & Barket elsaba'a) in accordance with PDM.
- At the end of meeting C/P think that they can only finish 1 area which will be Quwesna by the end of Feb,2013.

3-3. Schedule for until end of February 2013.

- On 13th of Feb, 2013 SHAPWASCO will conduct training at Hehya training yard for the nominated NRW C/P, 2 persons from each branch.
- C/P team leader promises that MCWW will send about 16 person to Hehya training yard on 13th of Feb fully equipped and trainers too.

End of M.M

Agenda for 13th Project Team Meeting (PTM) in MCWW In Phase-3 On 2nd June 2013.

Date	2nd June 2013.		Signature
Time	2:30 pm ~ 04:00 pm		
Place	Chairman Office at MCWW		
Attendants	**[MCWW : C/P Members]**		
	Mr. Ezzat Elsayad	: MCWW Chairman	
	Mr. Ayman Bassyouny	: SOP C/P team Leader	
	[JICA Expert Team]		
	Mr. Fujii	: JICA Team Leader	
	Mr. Omori	: Deputy/ NRW Expert	
	Mr. Shimizu	: SOP Expert	
	Mr. M.Nagi	: Project Facilitator	
	Mr. Mohamed Abdel Kader	: Facilitator MCWW	

1. General

Expert team reported general topics.

1-1. Schedule of Japanese Expert

The team reported the schedule of Japanese experts as follows;

- Mr. Tomohiro Shimizu : Departure. on 13th of June 2013.
- Mr. Niimura : Departure on 4th of July 2013.
- Mr. Yamada : Arrival. on 2nd of June 2013.
- Mr. Ijima : Arrival. on 2nd of June 2013.

1-2. Events in phase 3

- The evaluation of the project will be done in November by JICA, an open Seminar will be held to show the progress and activities done so far.
- It is important to show JICA the efforts done for dissemination of the experience to other Markaz and ACs.
- JET will recommend to HCWW that big Seminar by HCWW will be held in February to show the results of the project to other ACs, other donors, and other related organizations.

1-3. Steering Committee and JCC

JET will arrange steering committee and JCC with HCWW in the near future in order to discuss annual plan of operation for phase-3 (APO3).

2. SOP activity

C/P team for SOP reported the progress and issue of the Project. OJT has been conducted as

followings with some results.

2-1. Progress

(1) Gezy

- Changing chlorine injecting point to be after Aeration tank
- Re-leveling the weirs successfully
- Aeration system is stopped for a while
- The flow meters for pre-Chlorine & post Chlorine were calibrated.
- The Permanganate dosage reduced from 2mg/l to 1ml/l.
- The back wash times reduced from 3times/day to 1time/day

(2) Sadat

- Some components to be repair are considered
- Gate valve between filter washing & sludge sumps should be repaired to apply recycling of back wash water.
- Suction pipe of at sludge drain sump should be raised of about four meters of the existing level in order to avoid sludge suction.
- The three manual valves on the header of sludge drainage pumps should be changed to be electrical valves for easy control the drainage water to recycling or sending to desert areas. The existing manual is very difficult to be opened or closed manually as reported by the plant manager.

2-2. Issue for the Project

JET and Chairman held a discussion about following topic.

- What is the plan of MCWW to Extend the SOP activities to other Markaz in Minufia?
- How will MCWW extend SOP activities to other Delta Governorates?

The Chairman commented that MCWW has to cover SOP activities to his governorate first, and it would take long time, after that we can consider about other delta GOV.

3. NRW reduction activity

Chairman and NRW JET expert held a discussion about the latest situation as follow.

- Water balance will be finish within this month
- 20 Acoustic rods have been provided by MCWW will be distributed to 8 branches (C/P)
- C/P will choose pilot areas in 8 branches to conduct house connection survey.
- The MCWW team for Non- revenue water and C/P will collaborate together for the time being and near future both of them shall be merged.
- JET, C/P and the MCWW for Non-Revenue water department will have discussions for extend plan.

END OF M.M

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area (Phase-3)

Minutes of Meeting for 14th Project Team Meeting in MCWW for PH-3

Date	27th Nov. 2013		Signature
Time	09:00 am ~ 11:00 am		
Place	Chairman Office at MCWW		
Attendants	**[MCWW : C/P Leaders]**		
	Mr. Ezzat Elsayad	: MCWW Chairman	
	Mr. Ayman Bassyouny	: SOP C/P team Leader	
	Mr. M.Shafee	: NRW C/P Team	
	Mr. A.Shony	: NRW C/P Team	
	Mr. M.Fawzy	: NRW C/P Team	
	[JICA Expert Team]		
	Mr. Omori	: Vice of JET leader	
	Mr. Mahmoud Abdelkader	: SOP local expert	
	Mr. M. Abdelkader	: Facilitator	
	Mr. A.Atef	: Interpreter	
	Mr. Amr Ezzat	: Interpreter	
	Mr. A.Tahoun	: Interpreter	

1. General

2. SOP activity

C/P team for SOP reported the progress and issue of the Project.

2-1. Progress

- C/P presents a detail progress for the main project facilities (Elsadat SWTP - Gezii IMRF – Ashama WP).
- C/P presents the detail progress and issues for the extension facilities (Shebeen SWTP – Minouf SWTP – Kafer Elbatanon IMRF – El batanon WP – Elkom Elakhdur WP).
- MCWW Chairman asked about the Alum-sulfate problem in Elsadat SWTP, JET explain that target of Alum-sulfate is an activation for the plant stuff to try to decrease the consumption of Alum-sulfate only (while nobody can fix a target for Alum-sulfate due to the raw water Variety from season to anther or raw water condition), and the dose should be located by laboratory Jar test.
- This does not prevent the continuity of the work experiments for reducing the Alum-sulfate

consumption as long as no effect on water quality.

- Chemists from Shebeen SWTP, Minouf SWTP and Sadaat SWTP, meet to discuss the measuring method of Alum Sulfate Dose (Concentration - Calculation Method) in order to unite the method of measurement.
- The PI's for the chemical consumption in the extension facilities proved that Minouf SWTP is 1st (Due to Longitudinal Clarifiers, Elsadat SWTP is 2nd and Shebeen SWTP is 3rd position as too much of Mechanical and technical failures.
- There is modification was done at Shebeen SWTP in the Alum-sulfate mixer tank to keep Alum Sulfate concentration at the same rate in the tank (By Adjusting Mixer's Fan).
- Repairing for 3 sedimentation basin from total 4 in Shebeen SWTP was done.
- C/P collected the data of Elkom Elakhdur WP, which operated for 45 days according to operation schedule made by JET and C/P, and the result was (10000 Kwh reduced "plant manager "said).
- Hydraulic analysis started for Elkom Elakhdur WP served area (including Batnon WP, Mit Mousa Direct Filtration).

2-2. Issue for the Project

- JET recommended changing the Chlorine dosing point in Shebeen SWTP, and C/P welling to follow the recommendation As soon as possible.
- Filters have a problem in M. blocks in Shebeen and Gezii; the C/P said that the rehabilitation work would be start soon by an Outsource Company.
- About Alum-sulfate raw concentration problem, the Chairman recommended to search the raw concentration by MCWW chemists in order to issue an official letter to the ministry of health about it.
- JET requested to operate the proper pump units with proper Wells in order to reduce the power consumption (Ashama WP, Gezy IMRP), JET gives an example for the proper pump unit for each Well diameter. Example: Well with 10-inch use pump unit 40-50 Kw.
  Well with 12-inch use pump unit 60-75 Kw.
- The Chairman orders the Electrical Engineers of MCWW to install the power factor to reduce the power consumption in the facilities.
- The Chairman requests C/P to issue a letter to make the necessary changes in the Well facility to get the proper pump operation.

3. NRW reduction activity

C/P team for NRW reported the progress and issues of the Project.

3-1. Progress

(1) General information for NRW activities

- HQ CP has selected the surveyors to work as C/P in each branch.
- Handing over the acoustic rod (JICA one and New purchased one by MCWW) to all selected branches (2 for each).

- Handing over 3 ground microphone for 3 branches.
- Most of GIS maps were submitted to all Surveyors in the branches
- Train all branches surveyors on how to locate the house connections on the map.
- Make survey schedule by each branch
- Make the C/P follow-up schedule 2 days/month for each branch.
- Chairman decided to pay incentives to the surveyors who make good efforts.

3-2. Issue for the Project

- C/P has been facing a problem of car arrangement with SOP team. The Chairman ordered allotment of one pick-up for NRW reduction activity for 2days continually and the other 2days will be coordinated with SOP team. NRW team can work for 4days/week.
- C/P has been facing a problem of branches surveyors who does not understand how to use the map. The Chairman requested the HQ C/P to concentrate on those branches for a while during their follow-up.
- JET also recommended that C/P and NRW department should support technical matters for leak survey during their follow-up and should follow up 5 years plan for NRW reduction in order to continue NRW reduction activity practically and perpetually.
- The Chairman explained that countermeasure of NRW reduction is divided into Technical part and Commercial part, and both are important. MCWW concentrates on reduction of commercial loss as it is a competition base between companies. Physical loss can be reduced by effort of leak survey on 5 years plan.
- JET advised to hold a 3month meeting between HQ and branches managers and surveyors with the attendance of MCWW Chairman in order to share the progress and issues in each branch, The Chairman recommended to hold this meeting every 1month.

End of PTM Minutes of meeting

Attachment-6 Minutes of Meeting for WDM activity

MINUTES OF MEETINGS
BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY
AND
AUTHORITIES CONCERNED OF THE GOVERNMENT OF THE ARAB REPUBLIC OF EGYPT
FOR
THE PROJECT FOR IMPROVEMENT OF MANAGEMENT CAPACITY OF OPERATION AND MAINTENANCE FOR WATER SUPPLY FACILITIES IN NILE DELTA AREA

A6-1

The Japan International Cooperation Agency (hereinafter referred to as "JICA") has dispatched a mission (hereinafter referred to as "the Mission") headed by Mr. Yoshiki OMURA, Senior Advisor, JICA to Egypt from June 30 to July 6, 2012 for the purpose of consultation on the Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area (hereinafter referred to as "the project").

During its stay in Egypt, the Mission exchanged their views and had a series of discussions to share the issues to be solved, and its solution of the pilot project in Zagazig, Sharkiya Governorate with Holding Company for Water and Wastewater (hereinafter referred to as "HCWW") and Sharkiya Potable Water and Sanitation Company (hereinafter referred to as "SHAPWASCO").

As a result of discussions, JICA and Egyptian authorities concerned came to agreement on the matters referred to in the document attached hereto.

Cairo, July 5, 2012

Mr. Yoshiki OMURA
Leader, JICA Mission,
Senior Advisor,
Japan International
Cooperation Agency,
Japan

Mr. El Sayed Nasr
Project Director,
Chairman,
Holding Company for Water
and Wastewater,
The Arab Republic of Egypt

Mr. Katsumi FUJII
Chief Advisor,
JICA Expert Team,
Japan

Dr. Salah Bayoumi
Project Manager,
Head of Project Sector,
Holding Company for Water
and Wastewater,
The Arab Republic of Egypt

Mr. Ahmed Abdeen
Project Co-Manager,
Chairman,
Sharkiya Potable Water and
Sanitation Company,
The Arab Republic of Egypt

As a result of discussions, JICA side and Egyptian side agreed on the outline of the pilot project for Activity-4 Water Distribution Management as follows;

1. Purpose of the Pilot Project (4th Output described in the Project Design Matrix as of September, 27th, 2011)
The water distribution management capacity is improved in Sharkiya Governorate as an advanced model[1].

2. Pilot project site

2.1 Ten monitoring points of service pressure are to be selected to monitor service pressure at critically low pressure points of Zagazig city and preferably at least one point each for each zone.

2.2 Seven flowmeters will monitor the inflow into and outflow from the Zone No.4 and the other seven will monitor production of well fields therein of the service area of Zagazig city as shown in the chart.

3. Outputs of the pilot project

3.1 Water demand patterns (daily demand curve) indicating peak hour demands are grasped based on real-time flow data of pilot area (Zone No.4) and pressure data.

3.2 The service reservoirs are effectively utilized for balancing WTP output and peak hour demand and monitor the effect with flow meter of pilot area.

3.3 Zagazig WTP, of which production is currently variable to reflect hourly demand fluctuation, is operated at a stable rate with minimizing both fluctuations of water production and supply of groundwater.

3.4 Integrated operation of the distribution system is established among General Department of Zagazig WTP, General Department of small WTP and wells, and General Department of water distribution network and technical support.

3.5 Basic information of water distribution is collected and analyzed such as per capita demand, peak factors and demand pattern (variations).

[1] With this purpose, the pilot project is implemented aiming at improvement of service pressure and future introduction of district metering zones.

4. Main Activities

4.1 Daily Demand

4.1.1 To collect and analyze operational data such as WTP production, distribution pump operation, water level of reservoirs, service pressure, well operation (pressure and running time) and air temperature.

4.1.2 To analyze the water demand pattern with flow data and pressure data.

4.2 Service Reservoir

4.2.1 To try and establish demand-oriented and effective utilization of the service reservoirs with reservation of emergency water.

4.2.2 To monitor the effect of additional discharge from service reservoirs with water flow data and service pressure.

4.2.3 To review the operation pattern of distribution pumps.

4.3 Zagazig WTP

4.3.1 To establish an operation program or a daily production rate of WTP based on day-to-day water demand forecast to minimize fluctuation of production rate.

4.3.2 To implement the stable WTP production.

4.3.3 To monitor the water level of reservoirs with stable WTP production and review the operation.

4.4 Integrated Operation

4.4.1 To hold discussions in each of three general departments relating water distribution of Zagazig, finding obstructions and solutions for streamlining communication and mutual cooperation.

4.4.2 To train well operators for timely switching ON/OFF of well pumps, reading pressure gauges, and recording time and pressure.

4.5 Basic Information

4.5.1 To analyze the per capita demand.

4.5.2 To review the basis of a strategic development plan of SHAPWASCO based on the per capita water demand.

S.B Ahmed Abdeen

5. Input by JICA

5.1 Provision of ten pressure gauges with telemetering utilizing cellar phone network

5.2 Provision of fourteen telemetering flowmeters[2] for pilot area (Zone No.4) with telemetering utilizing cellar phone network

5.3 Central monitoring facilities including display and software

5.4 One digital pressure gauge each for distribution pump station of new and old plants

6. Input by the Egyptian side

6.1 Provision of an analog pressure gauge at each well field

6.2 Construction of seven chambers to accommodate flowmeters provided that an existing chamber is examined for its suitability to the project.

6.3 Construction of the central monitoring room

6.4 Provision of protection measure for flowmeters and be installed in well field

6.5 Wiring work within the Zagazig WTP from the following facilities to the central monitoring facilities:

Existing water level gauge of the service reservoirs;
Existing raw water flowmeter;
Existing clear water (distribution) flowmeters; and
One digital pressure gauge each for the distribution pump stations of new and old plant.

6.6 Maintenance of telemetering system

6.7 Operation and Maintenance cost of telemetering system such as power charge and communication fee

6.8 Replacement of the existing AC pipe with PVC/PE/Steel pipe for flow measurement sections

Appendix Chart of service zones, Zagazig City

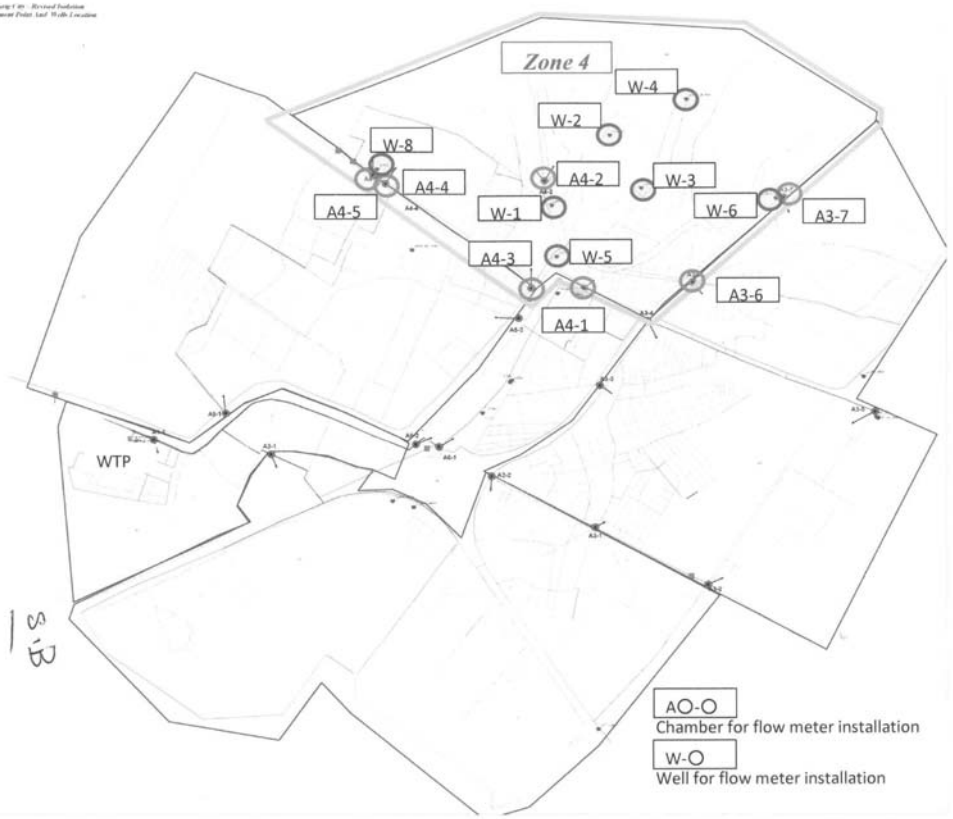
S.B Ahmed Abdeen

[2] Technical specification of flowmeters is of compactness and compatibility to site conditions.

Block	Diameter (mm)	Material
A1-1	400	AC
A2-1	600	GRP
A2-2	250	PVC
A3-1	150	PVC
A3-2	300	PVC
A3-3	200	PVC
A3-4	400	AC
A3-5	400	AC
A3-6	200	AC
A3-7	100	PVC
A4-1	300	AC
A4-2	250	AC
A4-3	250	ST
A4-4	150	PVC
A4-5	150	AC
A5-1	400	AC
A5-2	300	ST
A6-1	450	CI
A6-2	300	PVC

PVC	Poly Vinile Chloride Pipe.
AC	Asbestos Cement Pipe.
GRP	Glass Reinforcement Pipe.
CI	Cast Iron Pipe.

Legend



A8-5

Ahmed Abdeen

A6-3

Attachment-7 Minutes of Meeting for Mid-Term Review

MINUTES OF MEETINGS
BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY
AND
AUTHORITIES CONCERNED OF THE GOVERNMENT OF
THE ARAB REPUBLIC OF EGYPT
FOR
THE PROJECT FOR IMPROVEMENT
OF MANAGEMENT CAPACITY OF OPERATION
AND MAINTENANCE FOR WATER SUPPLY FACILITIES
IN NILE DELTA AREA

The Japanese Mid-term Review Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. Yoshiki OMURA, visited the Arab Republic of Egypt (hereinafter referred to as "Egypt") from 10th to 27th November, 2012. The purposes of the visit were to monitor the activities and review the achievements made so far in the Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area (hereinafter referred to as "the Project").

During its stay, the Team had a series of discussions and exchanged views on the Project with Holding Company for Water and Wastewater (hereinafter referred to as "HCWW"), Sharkiya Potable Water and Sanitation Company (hereinafter referred to as "SHAPWASCO"), Gharbia Potable Water and Sanitation Company (hereinafter reffered to as "GHAPWASCO"), and Minufia Company for Water and Wastewater (hereinafter reffered to as "MCWW"). And the Joint Coordinating Committee (hereinafter referred to as "the JCC") was held on 26th November, 2012.

As a result of the discussions, the Team submitted the mid-term review report as attached hereto and Egyptian side agreed upon the description of the report.

Cairo, 26th November, 2012

Mr. Yoshiki OMURA Leader, The Mid-term Review Team, Japan International Cooperation Agency, Japan	Mr. El Sayed Nasr Project Director, Chairman, Holding Company for Water and Wastewater, The Arab Republic of Egypt	Dr. Salah Bayoumi Project Manager, Head of Project Sector, Holding Company for Water and Wastewater, The Arab Republic of Egypt
Mr. Ahmed Abdeen Project Co-Manager, Chairman, Sharkiya Potable Water and Sanitation Company, The Arab Republic of Egypt	Mr. Ayman Abd El Kader Project Co-Manager, Chairman, Gharbia Potable Water and Sanitation Company, The Arab Republic of Egypt	Mr. Ezzat Ibrahim El Sayad Project Co-Manager, Chairman, Minufia Company for Water and Wastewater, The Arab Republic of Egypt

(Attached Document)

JOINT REPORT ON THE MID-TERM REVIEW

ON

THE PROJECT FOR IMPROVEMENT OF MANAGEMENT CAPACITY OF OPERATION AND MAINTENANCE FOR WATER SUPPLY FACILITIES IN NILE DELTA AREA

LIST OF ABBREVIATION AND ACRONYM

APO	Annual Plan of Operations
C/P	Counterpart Personnel
DMA	District Meter Area
Experts	Japanese experts
GHAPWASCO	Gharbia Potable Water and Sanitation Company
HCWW	Holding Company for Water and Wastewater
IMRP	Iron/Manganese Removal Plants
IWRP	Integrated Water Resources Plan
JCC	Joint Coordinating Committee
JICA	Japan International Cooperation Agency
MCWW	Minufia Company for Water and Wastewater
M/M	Minutes of Meetings/Man Month
MNF	Minimum Night Flow
NRW	Non-Revenue Water
NWRP	National Water Resources Plan
O&M	Operation and Maintenance
ODA	Official Development Assistance
OJT	On-the-Job Training
OVI	Objectively Verifiable Indicators
PDM	Project Design Matrix
P&ID	Piping & Instrumentation Diagram
PO	Plan of Operations
R/D	Record of Discussions
SHAPWASCO	Sharkiya Potable Water and Sanitation Company
SOP	Standard Operation Procedures
Team	Japanese Mid-Term Review Team
TOT	Training of Trainers
WTP	Water Treatment Plant

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ANNEX LIST

1. Outline of the Mid-Term Review

1-1 Purpose

"The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area" (hereinafter referred to as "the Project") was launched in May 2011. The three-year Project has reached the mid-point of its scheduled cooperation period. As agreed in the Record of Discussions (R/D) signed between Egypt and Japan International Cooperation Agency (JICA) on 19 August 2010, the Mid-Term Review was conducted from 10 to 26 November 2012.

The purposes of the Mid-Term Review are as follows:

(1) To review the performance, achievements, and implementation process of the Project.

(2) To conduct a comprehensive evaluation from the viewpoints of five evaluation criteria described in Chapter 1-2 below.

(3) To draw up recommendations for further improvements of the Project during its remaining period and afterward.

1-2 Evaluation Criteria

The following five evaluation criteria are used to evaluate the Project in the Mid-Term Review.

(1) **Relevance:** The Project's relevance is assessed in terms of validity of the Project Purpose and the Overall Goal in relation to the development policy of the Government of Egypt, Japan's ODA policy and the needs of the Project beneficiaries.

(2) **Effectiveness**: Effectiveness is determined based on whether the Project Purpose is being achieved as expected and whether this is due to the Project's Outputs.

(3) **Efficiency**: An assessment of the Project's efficiency verifies whether the Project used its resources effectively. This criterion examines to what extent the Input is converted to the Outputs in consideration of the evaluation of achievement of both Inputs and Outputs.

(4) **Impact:** An assessment of the Project's impact examines the degree or prospect of achievement of Overall Goal. The analysis also extends to the effects which include direct or indirect, positive or negative, and intended or unintended effects in the long run.

(5) **Sustainability**: The project's sustainability is assessed by focusing on the Project's institutional, organizational, financial and technical aspects in an examination of the extent to which the Project's achievements will be maintained or further extended by the Egyptian side after the Project completion.

1-3 Methodology

The Mid-Term Review was jointly conducted by both the Egyptian and the Japanese sides. Firstly, the Mid-Term Review Team collected and analyzed data and information on the objectively verifiable indicators (OVIs) defined on the Project Design Matrix version 1 (PDM_1) (ANNEX 1) as well as other data and information relevant to the Project.

The following sources of information were used in the Mid-Term Review.

(1) Documents agreed by the both sides prior to and/or during the course of the Project implementation including:

- Record of Discussions (R/D)
- Minutes of Meeting (M/M)
- Project Design Matrix (PDM)
- Plan of Operations (PO)

(2) Records of Inputs from the both sides and activities of the Project.

(3) Data and statistics indicating the degree of achievement of the Project Outputs and the Project Purpose.

(4) Interviews and Questionnaire with/from Project's Counterpart Personnel (C/P), Experts from Japan (Experts) and other project related people.

1-4 Members of the Joint Evaluation

<Egyptian Side>

Name	Title	Organization
Dr. Salah Bayoumi	Head of Project Sector	HCWW

<Japanese Side>

Name	Title	Organization
Mr. Yoshiki OMURA	Leader	Senior Advisor, JICA
Mr. Satoshi HAMANO	Evaluation Planning	Global Environment Department, JICA
Mr. Nobuhisa IWASE	Evaluation Analysis	Partner, IMG Inc.

2. Background of the Project

2-1 Background

The Arab Republic of Egypt (hereinafter referred to as "Egypt") has been striving to improve water utilization efficiency and protection of water resources in order to supply clean and safe water to the growing population. Towards achieving this goal, in 2004, the Government established the Holding Company for Water and Wastewater (HCWW) and designated 14 water-supply entities[1] into public corporations under HCWW.

Since the managerial responsibility for operation and maintenance (O&M) of water supply facilities was transferred to public corporations, each company was urged to improve operational efficiency and reduce Non-Revenue Water (NRW), which is potable water that cannot be billed, for example, leakage and illegal taps. Given the request by the Egyptian government, JICA carried out a technical cooperation project, "The Project for Improvement of Management Capacity of Operation and Maintenance for SHAPWASCO (Sharkiya Potable Water and Sanitation Company)" between 2006 and 2009 (hereinafter referred to as "the previous technical cooperation project"), which confirmed the effectiveness of utilizing Standard Operation Procedure (SOP) and implementing NRW reduction activities in the improvement of operational efficiency.

HCWW formulated a plan to transfer successful practices and lessons learned from the previous technical cooperation project to Nile Delta Area for improving management capacity. Given this background, the Egyptian government requested technical cooperation from the Government of Japan for promoting the transfer of technologies produced in the previous technical cooperation project to GHAPWASCO and MCWW as well as further improving the technology of SHAPWASCO.

Accordingly JICA conducted the detailed planning study from January to March 2010 and confirmed the Project contents by Record of Discussions (R/D) in 19 August 2010. The Project aims at building up and strengthening a mechanism to improve management capacity of operation and maintenance of water

[1] From the year 2004 to the time of Mid-Term Review, the number of Water and Wastewater companies under HCWW increased to 24.

supply facilities in Nile Delta Area.

2-2 Summary of the Project

(1) Overall Goal of the Project

Management capacity of operation and maintenance of water supply facilities is improved in Sharkiya, Gharbia and Minufia Governorates.

(2) Project Purpose

Management capacity of operation and maintenance of water supply facilities is improved at the model areas/facilities in Sharkiya, Gharbia and Minufia Governorates.

(3) Project Outputs

1. Human Resource Development through collaboration among water supply companies in Sharkiya, Gharbia and Minufia Governorates is strengthened.
2. Based on the experiences of SHAPWASCO, SOPs are developed and utilized at the model facilities in Gharbia and Minufia Governorates.
3. The institutional skills and experiences of SHAPWASCO for NRW reduction are transferred to NRW teams at the model areas in Gharbia and Minufia Governorates.
4. The water distribution management capacity is improved in Sharkiya Governorate as an advanced model.

0. The project is managed and coordinated properly.

(4) Project Period

April 2011 – March 2014 (3 years)

(5) Implementing Agency

Supervisory organization

Holding Company for Water and Wastewater (HCWW)

Implementing Organizations

Sharkiya Potable Water and Sanitation Company (SHAPWASCO)

Gharbia Potable Water and Sanitation Company (GHAPWASCO)

Minufia Company for Water and Wastewater (MCWW)

3. Achievement of the Project

3-1 Inputs

<Japanese Side>

(1) Experts (ANNEX 2-1)

From the outset of the Project, a total of twelve Experts were assigned to the Project (May-December 2011: 29.96 M/M, January-September 2012: 19.59 M/M) mostly as planned.

(2) Local Experts (ANNEX 2-2)

Two local experts (each on SOP and NRW) and three Facilitators (one facilitator in SHAPWASCO, GHAPWASCO and MCWW each) were assigned to the Project.

(3) Provision of Machinery and Equipment (ANNEX 2-3)

Machinery and equipment including water leak detector, hammer drill, pipe locator, potable ultrasonic flow meter, and pressure data logger, amounting around LE 2.45 million, have been and will be procured. JICA is currently taking the procurement procedures of equipment for Water Distribution Management (WDM) activities.

(4) Counterpart Personnel (C/P) Training in Japan (ANNEX 2-4)

Fifteen (15) C/Ps have received training in Japan (4 C/Ps for management training, 7 C/Ps for SOP and NRW reduction training, and 4 C/Ps for WDM training).

(5) Local Cost (ANNEX 2-5)

The local cost allocated by JICA for the Project is JPN 35,157,000 from the beginning of the Project to the end of July 2012.

<Egyptian Side>

(1) C/Ps (ANNEX 2-6)

A total of 47 staff members were assigned as C/Ps from HCWW, SHAPWASCO, GHAPWASCO, and MCWW. In addition, many staff members of the model facilities/areas have participated in the Project.

	Management	SOP Team	NRW Team	WDM Team	Total*
HCWW	2	-	-	-	2
SHAPWASCO	1	9	7	5	22
GHAPWASCO	1	7	3	-	11
MCWW	2	6	6	-	14

*Some staff members are assigned in more than one field; therefore, the total number of C/Ps differs from the added number of C/Ps from each field.

(2) Provision of office space and facilities for the Experts

Office space and facilities provided and organized by the Egyptian side are as follows: Office space and facilities for the Japanese experts in SHAPWASCO, GHAPWASCO and MCWW; Rooms and facilities necessary for installation and storage of the equipment; Workshop and meeting rooms for the training.

(3) Provision of facilities and equipment (ANNEX 2-7)

The rehabilitation of facilities for SOP activities and the construction of chambers for flow meters in GHAPWASCO and MCWW were completed with the estimated total amount of LE 1.61 million. The construction of chambers for WDM machinery and of the central monitoring room for WDM amounting to the estimated LE 1.22 million, are underway at the time of the Mid-Term Review.

(4) Necessary information

The Egyptian side shared existing data and reference documents with the Project members.

(5) Local Cost (ANNEX 2-7)

The expenses covered by the Egyptian side are the travel and accommodation costs, per diem for C/Ps, payments for lecturers, office expenses, costs associating with installation of flow meters and repairs of water pipes in model areas, and running costs regarding the organization of seminars.

3-2 Achievement of the Outputs

The achievement level of each OVI under five Outputs at the time of the Mid-Term Review is shown below. The detailed information is included in the attached Evaluation Grid (ANNEX 9).

Output 1: Human Resource Development through collaboration among water supply companies in Sharkiya, Gharbia and Minufia Governorates in strengthened

OVIs	Achievement Level
1a. More than 3 members each of SOP/NRW teams in SHAPWASCO, GHAPWASCO and MCWW are approved as trainers by Steering Committee	Prospective trainers were selected from C/Ps and have commenced SOP or NRW training. The number of prospective trainers in each organization is as follows; SHAPWASCO: SOP trainers 5, NRW trainers 4 GHAPWASCO: SOP trainers 5, NRW trainers 3 MCWW: SOP trainers 7, NRW trainers 6 The prospect of the selected trainers to be approved by Steering Committee is very high since they are currently conducting training and capable of effectively facilitating it.
1b. More than 20 times of seminars/workshops are organized under inter-company cooperation by the Project team	The total of 13 seminars/workshops was organized by the time of the Mid-Term Review. The details are as follows; • 1 open seminar (kicking-off seminar) in September 2011 • 3 mini-seminars in June – July 2011 • 4 internal workshops in July – November 2011 • 1 site tour to observe the situation of SHAPWASCO in October 2011 • 1 mini-seminar (3 days) for Piping and Instrumentation Diagram (P&ID) and water quality in April 2012 • 1 special workshop (5 days) for leak detection in September – October 2012 • 1 study tour to visit Water Authority of Jordan (5 days) in October 2012 • 1 workshop (1 day) at SHAPWASCO in November 2012

Overall Assessment:

Prospective trainers have been selected and seminars/workshops have been successfully carried out as mostly as planned. Based on the achievement levels of above-mentioned indicators and progress in activity implementation, Output 1 has a good prospect of being achieved by the end of the Project. According to the Questionnaire/Interview Surveys of the Mid-Term Review, most Experts and C/Ps think that Output 1 will be achieved by the end of the Project period.

Output 2: Based on the experiences of SHAPWSCO, SOPs are developed and utilized at the model facilities in Gharbia and Minufia Governorates

OVIs	Achievement Level
2a. More than 80% of SOP team members rates understanding of trainings more than 3 on the 5-scale evaluation	A site tour of SHAPWASCO and 3 mini-seminar sessions on SOP and monitoring of well stations have been conducted for GHAPWASCO and MCWW members as of December 2011. Since the rating criteria of training comprehension have yet to be defined, it is unclear to what extent the OVI will be achieved.
2b. The model facilities are operated and maintained based on SOP	The model facilities have been selected both in GHAPWASCO[1] and MCWW. Both GHAPWASCO and MCWW have prepared the draft SOP for water treatment plants (WTP) as well as Iron/manganese removal plants (IMRP) and started trial operations at the model facilities based on the draft SOP. OJT on improvement of operation has been carried out as well. C/Ps are collecting basic data from water level observations on well stations and planning to develop SOP on well stations from November 2012. In a meantime, GHAPWASCO and MCWW have been rehabilitating facilities and installing flow meters for SOP activities. In general, SOP activities are evaluated to be carried out as mostly planned.
2c. Improvement of PIs for the model facilities are evaluated based on SOP	C/Ps and Expert are surveying the current situations and collecting the baseline of basic measurement data at the time of the Mid-Term Review. Since PIs for this OVI have not been determined yet, the prospect of achieving the OVI is unclear.

Overall Assessment:

While there are some delays on SOP activities, the Project is gradually generating concrete achievement on the expected Output, including rehabilitating water supply facilities and installing flow meters. In particular, GHAPWASCO and MCWW started trial operations based on the draft SOP, and it is expected that the SOPs will be further modified for the improvement of O&M. Questionnaire/Interview Surveys of the Mid-Term Review revealed that most C/Ps and Experts think that Output 2 will be achieved by the end of the Project period.

When the proper OVIs are determined and monitored, and the technical transfer will continue in the systematic manner to the end of the Project, Output 2 is most likely to be achieved.

Output 3: The institutional skills and experiences of SHAPWASCO for NRW reduction are transferred to NRW teams at the model areas in Gharbia and Minufia Governorates

OVIs	Achievement Level
3a. More than 80% of NRW teams members rates understanding of trainings more than 3 on the 5-scale evaluation	NRW training including leak detection and leakage management was conducted by SHAPWASCO trainers in October 2011. SHAPWASCO's trainers shared their experiences in several mini-seminars and internal workshops for GHAPWASCO and MCWW. Since the rating criteria of training comprehension have yet to be defined, it is unclear to what extent the OVI will be achieved.
3b. Water balance analysis is conducted properly for the 3 model areas	After the preparations of GIS drawing on pipe information of model areas, the Project team has completed the first minimum night flow (MNF) survey of the 3 model areas in GHAPWASCO (9 pilot areas in total) and MCWW (7 pilot areas in total). The Project team is conducting the water balance analysis in 2 model areas of GHAPWASCO and 1 model area of MCWW at the time of the Mid-Term Review. MCWW's survey is delayed due to the unavailability of NRW team members.
3c. 100% of detected leakage is repaired at the model area	At the time of the Mid-Term Review, leak detection training is being carried out at a location in a model area of GHAPWASCO. The leakage detection training was originally intended to be conducted at the training yard of SHAPWASCO; however, the yard cannot be used for the training due to the failure of the training yard, resulting in the delay of training

[1] Although the Project initially selected the original Tanta WTP as the model facility, the Project activities were not carried out as planned due to various reasons. In July 2012 the new Tanta WTP was transferred under the responsibility of GHAPWASCO for its O&M. Since the new Tanta WTP is of similar model to the total of 7 WTPs (of which, 5 are under construction and 2 are in operation) in the Governorate, the technology and management capacity developed at the WTP would be highly replicable in other areas. While the Project has conducted SOP activities at the new Tanta WTP and the original Tanta WTP concurrently with the suggestion and approval by the Steering Committee, it is planned that the new Tanta WTP be approved to be the model facility at the JCC held on November 26, 2012.

	implementation. To what extent (what percentage) detected leakage is repaired at the model areas are unknown at this time.

Overall Assessment:

Despite some delays with leak detection training, the institutional skills and experiences of SHAPWASCO for NRW reduction are steadily being transferred to GHAPWASCO and MCWW. The capacity of GHAPWASCO's and MCWW's NRW team members to conduct water flow survey and water balance analysis has been greatly improved. While NRW members have become able to conduct various surveys which can be utilized for leak detection, they need to further increase their leak detection techniques and skills to take necessary actions and preventative measures.

While the OVI 3a needs to be clarified, if the technical transfer will continue to be implemented to the end of the Project, Output 3 has a good prospect of being achieved. According to the Questionnaire/Interview Surveys, most C/Ps and Experts think that Output 3 will be achieved by the end of the Project period. Water balance analysis and leakage detection survey are scheduled to be conducted in the remaining period, which would contribute to increasing the level of the achievement of Output 3.

Output 4: The water distribution management capacity is improved in Sharkiya Governorate as an advanced model

OVIs	Achievement Level
4a. Water distribution is managed based on SOP at the model areas	The priority areas and pilot areas have been selected by the Project team based on such information as number of customers, number of customers' complaints, and water supply conditions. Establishment of District Meter Area (DMA) has been completed in the priority areas. The specifications of procured equipment, quantities, and locations of installation were finalized in July 2012 between the Project team and JICA. The process of determining the details of procured equipment required a longer time than planned, resulting in the delay of equipment installation. The Project team has been conducting preparation works for the installation of flow-meters including the construction of chambers and a monitoring room. In parallel, JICA is taking procurement procedures of equipment (flow-meters). SOP for WDM has not yet been drafted at the time of the Mid-Term Review.
4b. Issues on water distribution capacity are reported to top management of SHAPWASCO	C/Ps including top management have been trained on the importance of open dialogue among staff. Their awareness on reporting issues concerning water distribution is being developed. At the time of the Mid-Term Review, it is unclear to what extent issues on water distribution capacity are actually reported to top management of SHAPWASCO. However, since the importance of reporting is gradually being known among C/Ps, the OVI has a good prospect of being achieved by the end of the Project. In a meantime, it might be necessary to consider more specific criteria for this OVI such as reporting frequency and structure in order to grasp the actual communication occurrences.

Overall Assessment:

The Project has required a longer time than the original Plan of Operations (PO) for reaching a consensus on appropriate equipment for WDM and WDM methods between the Egyptian and the Japanese sides, which caused 5-6 months delay of overall WDM activities. Despite the delay, the Project has been steadily making progress as seen in the collection of the measurement data on water

quantity, water pressure and quality of water through hydraulic surveys and the development of periodical reports.

At the time of the Mid-Term Review, while the construction of equipment chambers and a monitoring room is underway, the planning of WDM activities and hydraulic survey are being carried out before the installation of equipment. Through the process of preparing WDM activities, the capacity of WDM members to conduct surveys of water pressure, flow and quality has been improved to the level where C/Ps are able to adequately grasp conditions of given areas. According to the Questionnaire/Interview Surveys, most C/Ps and Experts think that Output 4 will be achieved by the end of the Project period.

Output 0: The project is managed and coordinated properly

OVIs	Achievement Level
0a. Agreement on the coordination among SHAPWASCO, GHAPWASCO and MCWW is prepared	SHAPWASCO, GHAPWASCO and MCWW agreed on inter-company cooperation and established the Steering Committee, which regularly monitors the Project implementation and discusses any emerging issues regarding the Project implementation.
0b. Project activities are regularly monitored based on PO/APO	Steering Committee meetings as well as Project Team meetings with C/Ps and Experts have been frequently held to monitor the Project progress. The PO (Annex 5) and APO (ANNEX 6) were modified by the 4th Steering Committee in July 2012.

Overall Assessment:

According to the Questionnaire/Interview Surveys, Experts and C/P show high satisfaction toward the Project's implementation process including the Project management and coordination. In general, project management has been conducted properly with cooperation among HCWW, SHAPWASCO, GHAPWASCO, MCWW and Experts.

3-3 Achievement of the Project Purpose

The achievement level of OVI under the Project Purpose at the time of the Mid-Term Review is shown below. The detailed information is included in the Evaluation Grid (ANNEX 9).

Project Purpose: Management capacity of operation and maintenance of water supply facilities is improved at the model areas/facilities in Sharkiya, Gharbia and Minufia Governorates.

OVI	Achievement Level
(a) PIs in the fields of management capacity of operation and maintenance are improved at the model areas/facilities	At the time of the Mid-Term Review, concrete PIs have not been set as OVIs to measure the degree of achievement of the Project Purpose. C/Ps and Experts now continue discussions about the matter with surveys of the current situations and collection of the measurement data to set a baseline regarding which PIs should be set as OVIs and which figures should be set as a target for the defined PIs. Since PIs for this OVI have not been determined yet, quantifiable data is not available for this OVI.

Overall Assessment:

At the time of the Mid-Term Review, it is difficult to foresee the prospect of the achievement of the Project Purpose from the point of view of the degree of achievement of the defined OVI on the PDM. However, it is evaluated that the overall management capacity to operate and maintain water supply facilities is improving at SHAPWASCO, GHAPWASCO and MCWW, considering the current levels and prospects of achievement on the defined four Outputs described already. According to the Questionnaire/Interview Surveys, most of C/Ps and Experts show strong confidence in the achievement of the Project Purpose by the end of the Project period. It is required that all the Project activities be properly implemented in the rest of the Project period, particularly in Outputs 4 (WDM

capacity development) and OVIs for the achievement of the Project Purpose be properly set as soon as possible.*

: Concrete items of PIs were discussed and agreed upon at the third Joint Coordinating Committee (JCC) meeting organized on November 26, 2012. The defined PIs were included on the revised PDM (PDM2, ANNEX 8) and will be measured and monitored in the remaining period of the Project.

3-4 Implementation Process of the Project

It is evaluated that the Project has been appropriately implemented for the most parts, based on the PO (ANNEX 5) and APO (ANNEX 6) with effective coordination, decision and guidance by the JCC and the Steering Committee .

(1) The Project's administrative structure is well established with a clear definition of the roles and responsibilities of the people who are managing and implementing the Project (ANNEX 3).
(2) C/Ps such as SHAPWASCO's, GHAPWASCO's and MCWW's staff members, have high level of commitment, ownership and enthusiasm in the Project implementation, and understand the Project Purpose and their roles and responsibilities.
(3) Communication between the Egyptian C/Ps and the Japanese Experts has been frequent and appropriate, which lead to a smooth and effective collaboration under "teamwork spirit".
(4) Various meetings such as JCC, Steering Committee and Project Team Meetings were frequently organized, which increases a level of communication, information sharing, mutual understanding and trust among the Project participants including C/Ps and Experts.
(5) Through various capacity development activities (ANNEX 4), most of C/Ps develop their awareness on the issues to be tackled in the Project, skills on problem finding and solving, and the necessity of appropriately recording the situation of O&M and the importance of accuracy of working and teamwork.

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4. Results of Evaluation by Five Criteria

4-1 Relevance

The overall relevance of the Project is very high.

The Project is in accordance with the priority of development policies of Egypt, the development needs of the target groups (i.e. Staff of SHAPWASCO, GHAPWASCO and MCWW) and Japan's Official Development Assistance (ODA) policy.

(1) Relevance with the Egyptian government's policies for development

Egypt sets the improvement of potable water supply system as its priority area in the Sixth Five-Year Plan, the Egyptian Millennium Development Goals, and the National Water Resources Plan for Egypt (NWRP).

- The Sixth Five-Year Plan[2] sets the upgrading of water and sanitation facilities as a focus area under the goal of improving public utilities for human and social development. The strategies of the focus area include minimizing water network loss and implementing cost recovery in water projects.
- The Egyptian Millennium Development Goals target the increase in the access to safe drinking water to 98.5% in urban area and 80.8% in rural area by 2015. Sustaining the access rates poses another challenge to Egypt, considering rapid population growth and worsened service coverage.
- NRWP is a comprehensive document describes approaches to achieve an integrated water management system in water sector through four key pillars: (1) developing additional water resources; (2) increasing water use efficiency; (3) improving water quality management; and (4) ensuring institutional and financial sustainability.

[2] Egypt's Sixth Five-Year Plan (2007/08-2011/12) rests on a group of pillars including the Long-Term Socioeconomic Development Vision (2002/03-2021/22), the Millennium Development Goals (2005-2015) and the New Social Contract (2005-2015).

(2) Relevance with the development needs of the target groups

SHAPWASCO, GHAPWASCO and MCWW are the three public potable water and wastewater companies among 23 that are overseen and monitored by HCWW, and they are responsible for effective operation and maintenance of water supply facilities to provide clean and safe water in each Governorate; Sharkiya, Gharbiya and Minufia, respectively. Taking into account of the current capacity level and their mandates to provide and appropriately manage water and sanitation services, they are appropriate organizations to be selected for the Project's target groups.

The JICA's previous technical cooperation project improved the management capacity of SHAPWASCO through developing capacity on NRW reduction, formulating SOPs, and conducting OJT on operation and maintenance of water supply facilities. In spite of the improvement in SHAPWASCO's operation and distribution of SHAPWASCO's SOPs to other companies, water and sanitation companies in the Nile Delta area have continued to face such issues as operation at a deficit, low fare receipts, and high NRW ratio. Management capacity of GHAPWASCO and MCWW to properly operate and maintain the facilities were insufficient, causing the quantity and quality of treated water to be unreliable. The above-mentioned situations have created a strong need for capacity development at these water supply companies. While SHAPWASCO has made continuous efforts to increase the impact of the previous technical cooperation projects by applying developed capacity to the rest of the Governorate, further capacity development in water distribution management (WDM) has remained as the next, important issue to be improved. These views were confirmed by the Questionnaire/Interview Surveys with C/Ps and Experts at the Mid-Term Review.

(3) Relevance with Japan's ODA policy

The Project is in line with the Japanese Government's assistance policies for Egypt, as described below.

- Japan's Country Assistance Program for Egypt sets "poverty reduction and improvement of living standard" as one of the three assistance program goals, aiming for the transformation of Egypt into a competitive and stable economy and society.
- One of the three priority sector goals is "enhancement and improvement of public services," which includes water supply and sewage development.
- Japan's Country Assistance Program for Egypt discusses the need for extension and development of water supply in the Nile Delta area.

(4) Relevance with Japanese experiences and expertise

JICA has supported the potable water sector in many countries including Egypt. In Egypt JICA undertook two Grant Aid between 2003 and 2009. In 2006–2009, JICA implemented the Project for Improvement of Management Capacity of Operation and Maintenance for Sharkiya Potable Water and Sanitation Company, which entailed the formulation of SOPs for facilities and implementation of a program for addressing NRW. The approach of capacity development in O&M using SOP was proved effective and HCWW developed a plan to transfer the successful practices and lessons learned accumulated in the previous technical cooperation project throughout the Nile Delta area. In addition to diverse experiences of assisting Egypt in the water sector, Japan has technological and empirical advantages in O&M of water supply facilities based on SOP, management of water quality, leakage detection technology and so forth.

4-2 Effectiveness

The overall effectiveness of the Project is evaluated as medium. Despite some delays on the Project's progress, C/Ps' management capacity to operate and maintain water supply facilities is being improved by the Project. The prospect of the achievement of the Project Purpose and the factors that have contributed and hindered the effectiveness are outlined below.

(1) Prospects of achieving the Project Purpose

As stated in "3-3 Achievement of the Project Purpose," it is difficult to foresee the prospect of the achievement of the Project Purpose from the point of view of the degree of achievement of the defined OVI on the PDM. However, it is evaluated that the overall management capacity to operate and maintain water supply facilities has improved at SHAPWASCO, GHAPWASCO and MCWW, considering the current levels and prospects of achievement of the defined four Outputs described already. According to the Questionnaire/Interview Surveys, most of C/Ps and Experts show strong confidence in the achievement of the Project Purpose by the end of the Project period. It is required that all the Project activities be properly implemented in the rest of the Project period, particularly in Outputs 4 (WDM capacity development), and OVIs for the achievement of the Project Purpose be properly monitored and encouraged to be improved. Given these observations, the prospect of achieving the Project Purpose is evaluated to be relatively high.

(2) Contributing factors for achieving the Project Purpose

The followings were revealed as contributing factors for achieving the Project Outputs and the Project Purpose. These are also confirmed by the Interview/Questionnaire Surveys from both C/Ps and Experts.

(1) Capacity development by utilizing various resources and methods

Capacity development of C/Ps in the Project is being effectively implemented by utilizing various resources available to cover diverse technical fields and a number of C/Ps' needs. A variety of capacity development methods were adopted appropriately: mini seminars for SOP and NRW reduction activities, On-the-Job Training (OJT), Training of Trainers (TOT), and training in Japan.

(2) Frequent and effective communication, information sharing and interaction

The Project team maintains a close and friendly communication and interaction among each other through Steering Committee meetings, frequent Project Team meetings and daily collaborative works. High level of mutual understanding among the Project team members as well as of enthusiasm in participating in the Project by C/Ps has been bringing about increasing to share information and discuss any issues regarding the Project implementation.

(3) Existence of the Egyptian facilitators

Expert Team has employed 3 Egyptian facilitators, as an input from JICA, to support information exchange between C/Ps and Experts and to offer advice on issues regarding the Project activities based on local understandings. By including both Japanese and Egyptian members in the Expert Team, the Project is able to ensure effective capacity development.

(4) Successful achievements by the previous technical cooperation project

The achievements and experiences on SOP and NRW activities from the previous technical cooperation project are the good basis and foundation for the success in the Project. SHAPWASCO has continued its own efforts to disseminate successful achievement by the previous project to cover whole area of the Governorate, and according to the Chairman, SHAPWASCO now applies SOP and NRW activities in around 60-70% of its facilities all over the Governorate. Good practices and experiences in SHAPWASCO have been shared among many other water supply companies in Nile Delta Area, which brought about high expectation for the Project in GHAPWASCO and MCWW from the beginning. Capacity on SOP and NRW measures are being transferred to GHAPWASCO and MCWW by SHAPWASCO members, whose skills and knowledge are further strengthened through the Project. Workshops and OJTs facilitated by SHAPWASCO members have been well received by training participants for their practical insights and technical advice on the Project implementation. At the same time, effective communication and information sharing among the three water supply companies has been promoted under the Project, which has brought about a good balance between "collaboration and competition" among the C/Ps. Furthermore, strong sense of ownership and commitment to the Project by top leaders (Project Director and Project Managers) and all the level of C/Ps has contributed to generating the expected Outputs.

(3) Hindering factors to the achievement of the Project Purpose

The following aspects in relation to the water supply facilities, particularly of the selected model facilities/areas, are evaluated to be hindering factors to the achievement of the Project Purpose both in terms of the effectiveness and efficiency of the Project implementation.

(1) Original design of the facilities was often inappropriate, which was difficult to understand for both C/Ps and Experts from the viewpoint of effective facility design. The Project was obliged to spend more time on repair and replacement of inappropriate facilities in order to implement the expected capacity development for SOP formulation and its application.

(2) In most cases there were no facility-related diagrams, manuals and equipment descriptions, which made the Project have to start with preparing necessary diagrams and documents from the scratch.

(3) Even the minimum level of training in facility operation and maintenance was not conducted to the staff of the water supply companies during the period of one year for trial operation under the responsibility of the facility construction company.

4-3 Efficiency

The overall efficiency is relatively high. In general, the Project has efficiently converted the Inputs to generate Outputs with a relatively limited amount of resources to cover a wide area of the three Governorates, particularly in several model facilities/areas. Although there was a delay in WDM activities, appropriate conversion from the planned Inputs to the achievement of the Project Outputs and the Project Purpose are expected with appropriate implementation of Project in the remaining period.

From the outset of the Project, a total of twelve Experts were assigned to the Project, while a total of 47 C/Ps were assigned from HCWW, SHAPWASCO, GHAPWASCO and MCWW to the Project. According to the Questionnaire/Interview Surveys, Experts' expertise and capability were highly appropriate while the durations of their assignment period and timing of dispatch were deemed slightly inappropriate. Both Experts and C/Ps commented that they could not spend enough time with each other to fully teach/learn new technical skills partly due to that Experts' activities were temporarily suspended because of the presidential election and also that the Project covers several different areas and model facilities.

Three Egyptian facilitators and two local experts were assigned to provide support for Experts and C/Ps in communication and translation work as well as to resolve emerging issues caused by intercultural misunderstanding. Egyptian facilitators and experts contributed to increasing the Project's efficiency by offering advice based on local understanding of various situations and acting as a bridge between Experts and C/Ps.

Overall, it is evaluated that appropriate inputs of equipment are being efficiently converted to generate expected Outputs until now. However, there were some delays in actual installations of equipment for WDM activities due to the different views on equipment selection between the Egyptian and Japanese sides. Equipment for WDM activities (e.g., telemetering flow meters, pressure gauges with telemetering, etc.) and chambers that can be utilized for operating a real-time monitoring system are being procured and installed by the Project. Responsibilities regarding inputs by the Egyptian and Japanese sides in WDM activities were clearly defined and confirmed by both sides as agreed in the M/M on 5 July 2012.

4-4 Impact

At the time of the Mid-Term Review, it is difficult to foresee the potentiality and scale of expected impact of the Project. However, it should be said that the Project has a good potential to bring about a relatively large scale of Impact in the future.

(1) Prospect of the achievement of the Overall Goal

Although most C/Ps and Experts express a certain level of confidence, it is difficult to foresee the

potentiality and scale of expected impact of the Project at the Mid-Term Review. Even if the Project succeeds in achieving the Project Purpose by the end of the Project period, the achievement of the Overall Goal is mainly dependent upon how effectively and efficiently the internal capacity development efforts will continuously be implemented within and among the three companies.

The Project has succeeded in developing several core technical staff of SHAPWASCO, GHAPWASCO and MCWW as trainers for other technical staff of WTPs, IMRPs and well stations in each of the three Governorates. An internal training system designed and partially implemented by the Project is expected to become a basis for further preparation and implementation of a sustainable capacity development for many technical staff in other areas (districts) of the three Governorates other than the model areas targeted by the Project. Taking into account of the fact that SHAPWASCO has almost successfully increased the impact of the previous technical cooperation project by disseminating the improved capacity to other areas of Sharkiya Governorate and of the ongoing achievement of the Project's Outputs, the prospect of generating a large scale of Impact by the Project is evaluated to be relatively high.

(2) Organizational Impact

The Project increased effective communication and collaboration among technical staff in different departments in each of the 3 companies. "Team working" on such issues as SOP, NRW and WDM brought a new style of effective working in each company. This may lead to promote a much effective organizational behavior and to increase both impact and sustainability of the Project.

The Project also provided C/Ps with opportunities to interact with technical staff of other water supply companies, which enabled them to understand their conditions and challenges in daily operation and management in different Governorates, and to discuss and share ideas for much effective operation and maintenance of the water supply companies. Through the Project, C/Ps increased communication and mutual understanding and developed professional network with staff of other Governorates, which was never realized before the implementation of the Project.

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The Project has sensitized not only the targeted three companies but also other water supply companies in Nile Delta Area. Open seminars and special workshops provided opportunities for relevant stakeholders in Nile Delta Area to increase awareness and importance on SOP, NRW reduction activities as well as leak detection technique, in which experiences and knowledge on the collaboration among SHAPWASCO, GHAPWASCO and MCWW were disseminated.

With an initiative by C/Ps in GHAPWASCO, Egyptian private company in leakage detection survey business provided financial assistance for "Nile Delta Area Joint NRW Workshop" that was organized in September 2012. It is evaluated that the Project's NRW activities bears good ripple effects in increasing private companies' interests and even can bring about a larger scale of impact in terms of developing the capacity in effective operation and maintenance activities by the private sector.

4-5 Sustainability

The prospect of achieving sustainability is evaluated to be relatively high at this point of time since the Project shows some signs of building a foundation to ensure lasting effects of the Project achievement. However, it largely depends on the progress of the Project activities in the remaining period as well as on the strong commitment and concrete actions by the Egyptian side.

(1) Institutional Aspects

Under the Project, training seminars/workshops and OJT provided technical staff in headquarters and model facilities in three Governorates with opportunities for promoting cooperation and collaboration and for better understanding actual situations and issues to be solved. Thus, an institutional mechanism for promoting communication and cooperation among water supply companies has been established to a certain extent until now and is expected to be further strengthened in the remaining period of the Project.

HCWW has been responsible for making effective information sharing and promoting collaboration among the water supply companies. Given the achievements by the Project, it is expected for HCWW to accelerate its initiative for establishing a concrete institutional mechanism for doing so.

(2) Organizational Aspects

With an assistance of Experts, SHAPWASCO staff members are currently carrying out OJT for GHAPWASCO and MCWW to apply SOPs in O&M of model facilities as well as to take measures on NRW reduction. This begins to provide a good cycle of training implementation by use of internal resources, motivating C/Ps with their higher confidence about their knowledge and experiences, and promoting C/Ps' ownership on the Project implementation. Some C/Ps in GHAPWASCO and MCWW show strong willingness and confidence to become trainers for SOP and NRW issues inside the organization and even for dissemination of capacity to other water supply companies.

After the completion of the previous technical cooperation project, SHAPWASCO established departments specialized in SOP and NRW, and is implementing activities through each specialized department; therefore, the organizational sustainability of the previous technical cooperation project is evaluated to be high. Under the Project, GHAPWASCO and MCWW have already established informal taskforce teams specialized in SOP and NRW inside the company, and they are expected to become official ones that have members fully dedicating their time of those issues in the future.

Most of the C/Ps of the Project are relatively young and recently recruited. Judging from the C/Ps' commitment and enthusiasm to the Project, a good cycle of developing a sufficient number of technical staff who has capacity in effective operation and maintenance can be established as long as all the three companies recruit a certain number of technical staff every year. Although it depends on the policy and the size of the budget, it is evaluated that the prospect of securing a sufficient number of staff to develop their management capacity of operation and maintenance of water supply facilities is relatively high.

Therefore, a prospect of an organizational mechanism being built is evaluated to be relatively high.

(3) Financial Aspects

According to the Questionnaire/Interview Surveys, some C/Ps and Experts express concern over discontinuance of a subsidy from the central government and unpromising prospect of securing budget to cover wide areas of water supply services in each Governorate. For the three water supply companies it is expected to strengthen their financial performances in order to secure budget to take continuous actions on SOP application, NRW reduction and WDM. If the Project Purpose is fully achieved, their annual financial performance are expected to gradually improve as a result of NRW reduction and improved management capacity of water facilities' O&M, which could increase their financial potential to reinvest for capacity development activities by themselves.

(4) Technical Aspects

A total of 13 training seminars/workshops has been held for 41 staff members of SHAPWASCO, GHAPWASCO and MCWW. Workshops and OJTs facilitated by SHAPWASCO members have been well received by training participants for their practical insights and technical advice on the Project implementation. Since prospective trainers have started SOP or NRW training, the technical transfer system and trainers' capacity are likely to be maintained even after the Project.

Formulation of specific action plans for technical transfer to the rest of the water supply facilities in three Governorates will contribute to increasing the level of sustainability since action plans will clarify actions needed to be taken to continue the effects of the Project.

According to the Questionnaire/Interview Surveys, both C/Ps and Experts show a relatively high confidence for C/Ps to maintain and upgrade or replace the equipment installed by the Project.

5. Conclusion and Recommendations

5-1 Conclusion of the Evaluation

The Project has made a steadfast progress in strengthening the capacity in operation and maintenance of water supply facilities despite some delays in implementation of the Project activities.

The relevance of the Project is evaluated as very high since it is in line with the Egyptian Government's development policies and Japanese Government's aid policies while meeting the needs of the target groups. The effectiveness of the Project is evaluated as medium, because the overall capacity to operate and maintain water supply facilities is significantly improving, although some OVIs to measure the degree of the achievement of the Project Outputs and Project Purpose have not yet been defined and monitored. The efficiency of the Project is evaluated as relatively high since overall inputs have been converted to build a basis to generate expected Outputs up to this point despite delays in some of the Project activities. At the time of the Mid-Term Review, it is difficult to foresee the potentiality and scale of expected impact of the Project, although basic foundations for their continuous efforts to enhance effective operation and maintenance of water supply facilities are being established. Lastly, the prospect of achieving sustainability is evaluated to be relatively high, considering the Project progress on organizational and technical aspects at this stage.

Although the Project has been a challenging one, which aims at building up effective O&M procedures in a systematic manner from the situation that almost no standard procedures for O&M was implemented, it is evaluated that the Project has been bringing about reasonable achievements thus far. Ownership, enthusiasm and commitment by the Egyptian C/Ps are very high and they are ready to implement the Project with their high interests in the remaining period. In order to surely achieve the Project Purpose, more activities are needed in the rest of the Project period with continuous collaboration among C/Ps and Experts, which will lead to the increases in the impact and the sustainability of the Project.

5-2 Recommendations

Taking the above analysis into consideration, the followings are recommended in order to ensure the achievement of the Project Purpose by the end of the Project period and to increase the impact and the sustainability of the Project:

(1) Setting Targets of Performance Indicators

Although items of performance indicator were approved as OVI of the Project Purpose on the PDM by the Joint Coordinating Committee on 26th November, 2012, the Project members should set the targets as soon as possible to assess the achievement in terminal evaluation that will be held in October 2013.

(2) Establishment of Full-Time Work Project Units in GHAPWASCO and MCWW

C/Ps for NRW and SOP in GHAPWASCO and MCWW is assigned to implement the Project activities. However, they have other routine tasks and cannot concentrate on the Project activities. In addition, there are not enough vehicles for Project activities and lack of vehicle has prevented from implementing the Project activities smoothly. To implement the Project activities effectively and efficiently, GHAPWASCO and MCWW are strongly requested to establish full-time work project Units officially.

(3) Feedback and Handover system between NOPWASD and Water and Sanitation Companies

As described above, water supply companies have been handed over facilities from contractors of NOPWASD without enough training how to operate and maintenance, and related documents[3]. Moreover, there is no feedback system from operation side to planning/design and construction

[3] such as Operation and Maintenance manuals and as-built drawings.

side. The Team suggests the strengthening of relationship between NOPWASD and Water supply companies, and concretely introduction of Feedback and Handover system between NOPWASD and water supply companies, which would have accelerated SOP activities' efficiency and effectiveness in the Project and will improve the facilities design.

(4) Formulation of Roadmap to disseminate the project effects by HCWW

As described as Super Goal in PDM, both the Egyptian and the Japanese sides have agreed that the Project aims to improve the capacity of operation and maintenance of water supply facilities in Nile Delta Area. To disseminate the knowledge transferred by the Project to whole Nile Delta Area after the Project's completion, HCWW is required to formulate the Roadmap with implementation schedule and following issues:

I. Institutional System for dissemination

Water supply companies have shared their experience each other for dissemination so far, and it has been depended on self-help-effort of each companies and support of development partners. To disseminate steadily and efficiently to whole Nile Delta Area after the Project's completion, it is required to establish an institutional system to disseminate to whole Nile Delta Area.

II. Budget and resource

To disseminate and implement SOP and NRW activities, it is necessary that water supply companies procure equipment and rehabilitate facilities. Therefore, it is required to secure budget and resource to implement dissemination in accordance with implementation schedule.

ANNEX 1. Project Design Matrix (PDM1)

Project Design Matrix (PDM1)

Dated September 27,2011

Project Name : The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area

Duration : FY2011-FY2013

Project Site : Sharkiya Governorate, Gharbia Governorate, Minufia Governorate (Nile Delta Area)

Target Group : Staff of SHAPWASCO, GHAPWASCO, MCWW

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
【Super Goal】 Management capacity of operation and maintenance of water supply facilities is improved in Nile Delta Area	Performance Indicators (PIs) in the fields of management capacity of operation and maintenance are improved in Nile Delta Area	Quarterly Reports of all water supply companies in Nile Delta Area submitted to HCWW	
【Overall Goal】 Management capacity of operation and maintenance of water supply facilities is improved in Sharkiya, Gharbia and Minufia Governorates	PIs in the fields of management capacity of operation and maintenance are improved in Sharkiya, Gharbia, and Minufia Governorates	Quarterly reports of SHAPWASCO, GHAPWASCO, MCWW	Central and local government budget for development of water supply facilities is allocated appropriately
【Project Purpose】 Management capacity of operation and maintenance of water supply facilities is improved at the model areas/facilities in Sharkiya, Gharbia and Minufia Governorates	PIs in the fields of management capacity of operation and maintenance are improved at the model areas/facilities	Quarterly reports of SHAPWASCO, GHAPWASCO, MCWW	Governmental policy on water supply sector does not change significantly
【Output】 1) Human Resource Development through collaboration among water supply companies in Sharkiya, Gharbia and Minufia Governorates in strengthened	a. More than 3 members each of SOP/NRW teams in SHAPWASCO・GHAPWASCO・MCWW are approved as trainers by Steering Committee b. More than 20 times of seminars/workshops are organized under inter-company cooperation by the Project team	a. Certification of Training b. Reports of workshops	Employees who received trainings by the Project will continuously work for SHAPWASCO, GHAPWASCO, MCWW Personnel transfer of executive management will not affect the implementation of the Project
2) Based on the experiences of SHAPWSCO, SOPs are developed and utilized at the model facilities in Gharbia and Minufia Governorates	a. More than 80% of SOP team members rates understanding of trainings more than 3 on the 5-scale evaluation b. The model facilities are operated and maintained based on SOP c. Improvement of PIs for the model facilities are evaluated based on SOP	a, b, c. Project Progress Reports	
3) The institutional skills and experiences of SHAPWASCO for NRW reduction are transferred to NRW teams at the model areas in Gharbia and Minufia Governorates	a. More than 80% of NRW teams members rates understanding of trainings more than 3 on the 5-scale evaluation b. Water balance analysis is conducted properly for the 3 model areas c. 100% of detected leakage is repaired at the model area	a, b, c. Project Progress Reports	
4) The water distribution management capacity is improved in Sharkiya Governorate as an advanced model	a. Water distribution is managed based on SOP at the model areas b. Issues on water distribution capacity are reported to top management of SHAPWASCO	a, b. Project Progress Reports	
0) The project is managed and coordinated properly	a. Agreement on the coordination among SHAPWASCO・GHAPWASCO・MCWW is prepared b. Project activities are regularly monitored based on PO/APO	a. Agreement Document b. Project Progress Reports	

ANNEX 1. Project Design Matrix (PDM1)

Activities	Inputs	Important Assumption
1-1 Conduct management training for the top management 1-2 Conduct Training of Trainers (TOT) for developing SOP 1-3 Conduct TOT for NRW reduction 1-4 Disseminate the contents, the manners and the results of the collaboration among SHAPWASCO, GHAPWASCO and MCWW to the water supply companies in Nile Delta Area through reports and workshops 2-1 Survey the current conditions of water supply facilities in Gharbia and Minufia Governorates 2-2 Select 3 model facilities in Gharbia and Minufia Governorates each 2-3 Organize SOP teams 2-4 Conduct training for developing and applying SOPs at the facilities of Sharkiya Governorate 2-5 Revise SOPs of Sharkiya Governorate, if necessary 2-6 Develop SOPs for model facilities in Gharbia and Minufia Governorates based on SOPs for SHAPWASCO 2-7 Conduct On-the-Job Training for GHAPWASCO and MCWW to apply SOPs in operation and maintenance 2-8 Monitor the progress of SOP activities 2-9 Draft the policy/plan for disseminating SOP to the other Marakazes 3-1 Analyze the current situation on NRW in Gharbia and Minufia Governorates 3-2 Select 3 model areas for NRW reduction in Gharbia and Minufia Governorates each 3-3 Organize NRW reduction teams 3-4 Formulate an action plan for NRW reduction activities based on the action plan for SHAPWASCO 3-5 Conduct training on general practice of NRW reduction 3-6 Conduct training at the training yard in Sharkiya Governorate 3-7 Conduct training at model areas for water distribution management in Sharkiya Governorate 3-8 Prepare GIS drawing for model areas in Gharbia and Minufia Governorates 3-9 Make water balance analysis at model areas 3-10 Conduct leakage detection survey at model areas 3-11 Make water balance analysis after repair works 3-12 Draft policy/plan for disseminating NRW reduction activities to the other Marakazes 4-1 Discuss methods and conduct survey for water distribution management 4-2 Conduct training for water distribution management 4-3 Formulate a plan for water distribution management 4-4 Install the equipment for water distribution management at the model area 4-5 Operate the system 4-6 Develop SOP for water distribution management 4-7 Evaluate the operation and SOP for water distribution management 0-1 Establish Steering Committee, consisting of representative of HCWW, SHAPWASCO, GHAPWASCO and MCWW 0-2 Discuss the contents, the manners for the cooperation among SHAPWASCO, GHAPWASCO and MCWW through the Steering Committee 0-3 Organize JCC at least once a year 0-4 Finalize the Indicators of the Project Design Matrix (PDM) for approval of the first Joint Coordination Committee (JCC) 0-5 Prepare a draft Annual Plan of Operations (APO) based on the Plan of Operations (PO) for approval of the first JCC 0-6 Monitor the progress of PO/APO and achievement of the Indicators of the PDM	Japanese side 1) Japanese Experts ・Chief advisor/water supply planning ・NRW reduction management ・Leakage detection ・Water Treatment ・Water quality ・Electrical equipment ・Mechanical equipment ・Distribution network ・Others (if necessary) 2) Local Expert 3) Equipment 4) Training in Japan 5) Local Cost Egyptian side 1) Counterpart Personnel ・Project Director: Chairman, HCWW ・Project Manager: Chairman, SHAPWASCO ・Co-Project Manager: Chairman, GHAPWASCO Chairman, MCWW ・SOP Team ・NRW Team 2) Office space and facilities for the experts 3) Equipment 4) Necessary Information 5) Local Cost	Budget for the Project is allocated as planed by HCWW, SHAPWASCO, GHAPWASCO, and MCWW 【Pre-condition】 Budget for HRD is allocated properly to SHAPWASCO, GHAPWASCO and MCWW by HCWW

ANNEX 2-1. List of Dispatched Experts

NO.	Field	Name	Assignment Period (No. of days)	M/M
1	Chief Advisor/Water Supply Planning	Katsumi FUJII	2011.05.14-2011.06.23 (41 days)	1.36
			20011.09.03-2011.10.01 (29)	0.97
			2012.02.21-2012.04.03 (43)	1.43
			2012.06.25-2012.07.24 (30)	1.00
			2012.10.08-2012.12.01 (55)	1.84
			Domestic working period	
			2011.05.09-2011.05.13 (5)	0.17
2	Deputy Chief Advisor/NRW Reduction Management	Mitsuhito OMORI	2011.06.03-2011.07.02 (30)	1.00
			2011.09.03-2011.11.01 (60)	2.00
			2011.12.11-2011.12.26 (16)	0. 53
			2012. 03.16-2012. 05.20 (66)	2.20
			2012.07.02-2012. 07.31 (30)	1.00
			2012.08.26-2012.09.24 (30)	1.00
3	Leakage Detection	Hiroki NIIMURA	2011.09.05-2011.11.08 (65)	2.17
			2012.02.10-2012.03.30 (50)	1.66
			2012.08.26-2012.12.13 (110)	3.67
4	Water Treatment System	Tomohiro SHIMIZU	2011.05.14-2011.06.12 (30)	1.00
			2011.10.02-2011.11.15 (45)	1.50
			2012.03.16-2012.05.04 (50)	1.67
			2012.06.25-2012.07.24 (30)	1.00
			2012.09.11-2012.10 01 (30)	1.00
			Domestic working period	
			2011.05.10-2011.05.13 (4)	0.13
5	Mechanical Equipment	Ryoji NAGAO	2011.06.03-2011.07.17 (45)	1.50
			2011.10.23-2011.12.01 (40)	1.33
			2012.02.14-2012.03.30 (46)	1.53
			2012.10.02-2012.11.29 (60)	2.00
6	Electrical Equipment	Sayed Osman Madbouly	2011.07.01-2011.07.30 (30)	1.00
			2011.09.05-2011.09.14 (10)	0.33
			2011.09.16-2011.09.24 (9)	0.30
			2011.09.26-2011.09.29 (4)	0.13
			2011.10.03-2011.10.05 (3)	0.10
			2011.10.08-2011.10.08 (1)	0.04
			2011.10.19-2011.10.19 (1)	0.04
			2011.10.26-2011.10.27 (2)	0.06
			2012. 02.12-2012. 03.02 (20)	0.67
			2012. 06.02-2012. 06.11 (10)	0.33
			2012.06.28-2012.07.17 (20)	0.67
			2012.09.27-2012.10.11 (15)	0.50
7	Hydraulic Analysis for Network	Kenji YAMADA	2011.09.03-2011.11.01 (60)	2.00
			2012.11.14-2013.02.11 (90)	3.00

NO.	Field	Name	Assignment Period (No. of days)	M/M
8	Distribution Network(1)	Masahiro TAKEUCHI	2011.05.14-2011.05.28 (15)	0.50
			2011.09.03-2011.09.24 (22)	0.73
			2011.11.19-2011.12.18 (30)	1.00
			2012.11.05-2012.12.12 (38)	1.27
			Domestic working period	
			2011.05.09-2011.05.13 (5)	0.17
9	Distribution Network(2)	Kiyoshi KIYAMA	2011.06.27-2011.08.04 (39)	1.30
			2011.09.03-2011.11.07 (66)	2.20
			2012.03.16-2012.04.14 (30)	1.00
			2012.09.18-2012.10.17 (30)	1.00
			Domestic working period	
			2011.11.08-2011.11.22 (15)	0.50
			2012.02.10-2012.03.10 (30)	1.00
10	Well Monitoring	Nobuyuki IIJIMA	2011.06.20-2011.08.04 (46)	1.53
			2011.11.13-2011.12.26 (44)	1.47
			2012.11.14-2012.12.28 (45)	1.5
11	Water Quality	Kazuhiro UMEKI	2011.10.07-2011.11.4(29)	0.97
			2011.11.08-2011.11.29(22)	0.73
			2011.12.07-2011.12.12 (6)	0.20
			2012.03.29-2012.04.27 (30)	1.00
12	Coordinator／Assistant for NRW Reduction Management	Atsushi KATO	2011.05.14-2011.06.12 (30)	1.00
			2012.11.04-2012.12.13 (40)	1.33

ANNEX 2-2. List of Local Experts (Input by Japan)

NO.	Field	Name	Assignment Period
1	Facilitator 1 (SHAPWASCO)	Mohamed Nagi Gaber	2011.05.15-2011.12.25
			20012.02.11-up to now
2	Facilitator 2 (GHAPWASCO)	Mohamed Abdel Kader Abouzekry	2011.05.17-2011.12.25
			20012.02.11-up to now
3	Facilitator 3 (MCWW)	Mohammed Abd El-kader Abd El-Ghany	2011.06.05-2011.12.25
			20012.02.11-up to now
4-1	Interpreter1 (SOP)	Ahmed Ragab Hamed	2011.06.05-2011.12.25
			20012.02.11-2012.07.05
4-2	Interpreter1 (SOP)	Ahmed Rasmy	2012.07.01-up to now
5	Interpreter2 (NRW)	Ahmed Atef	2011.06.05-2011.12.25
			20012.02.11-up to now
6	Local Expert (Water distribution facilities)	Mostafa Moawed Mostafa	2011.06.05-2011.12.25
			20012.02.11-up to now
7-1	Local Expert (Water treatment facilities)	Ahmed El-Baz	2011.06.05-2011.12.25
			20012.02.11-2012.10.1
7-2	Local Expert (Water treatment facilities)	Mahmoud Abo Khalaf	2012.10.2- up to now

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ANNEX 2-3. List of Equipment Provided by Japan

Equipment for SOP and NRW Reduction Activities (procured in 2011/04 – 2011/12)

No.	Name of Equipment	Quantity			JET	JICA	Location
		SHAP	GHAP	MCWW			
1	Water leak detector	-	3	3	✓		JPN
2	Digital sound detector	-	2	2	✓		JPN
3	Acoustic rod (1.5m)	-	4	4	✓		JPN
4	Pressure data logger	-	3	3	✓		JPN
5	Pipe and cable locator	-	2	2	✓		JPN
6	Metal pipe locator	-	1	1	✓		JPN
7	Magnetic locator	-	1	1	✓		JPN
8	Non metallic pipe vibrator	-	2	2	✓		JPN
9	Hammer drill	-	2	2	✓		JPN
10	Drill bid	-	8	8	✓		JPN
11	Boring bar (1m)	-	2	2	✓		JPN
12	Generator	-	2	2	✓		EGT
13	Water level indicator	-	3	3	✓		JPN
14	Leak sound detector	-	2	2		✓	JPN
15	Portable ultrasonic flow meter (For large diameters)	-	3	3		✓	JPN
16	Portable ultrasonic flow meter (For normal diameters)	-	2	2		✓	JPN
17	Pickup	-	1	1		✓	EGT
18	Personal computer (Desk top)	-	1	1		✓	EGT
19	Personal computer (Notebook)	-	2	2		✓	EGT
20	Copy and Fax machine	-	1	1		✓	EGT

Note ; SHAP:SHAPWASCO, GHAP: GHAPWASCO, JET: Japanese Experts' Team

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Equipment for SOP and WDM Activities (procured in 2012/01 – 2012/12)

No.	Name of Equipment	Quantity			JET	JICA	Location
		SHAP	GHAP	MCWW			
1	Water CAD (It was procured by budget for 2011/04-2011/12.)	-	1	1		✓	EGT
2	Ultrasonic flow meter	-	1	1	✓		JPN
3	Ultrasonic flow meter (For small dia. Chamber type)	6 (estimate)	-	-		✓	JPN
4	Ultrasonic flow meter (For large dia. Chamber type)	1 (estimate)	-	-		✓	JPN
5	Ultrasonic flow meter (For small dia. indoor type)	7 (estimate)	-	-		✓	JPN
6	Water pressure gauge (For WTP)	2 (estimate)	-	-		✓	JPN
7	Water pressure gauge (For indoor type)	10 (estimate)	-	-		✓	JPN
8	Telemeter (For outdoor type)	17 (estimate)	-	-		✓	JPN
9	Telemeter (For indoor type)	7 (estimate)	-	-		✓	JPN
10	Central monitoring system	1 (estimate)	-	-		✓	JPN

Note ; SHAP:SHAPWASCO, GHAP: GHAPWASCO, JET: Japanese Experts' Team

ANNEX 2-4. List of C/P Training in Japan

1. Management Training in Japan

(1) Purpose

The purpose of the training in Japan is to learn the experience for water supply service management in Japan and utilize it in the water supply service management of GHAPWASCO, MCWW, SHAPWASCO and other water companies in Egypt.

(2) Attendance List

Attendants were as follows:

- Dr. Salah Bayoumi, Head of Project Sector of HCWW
- Mr. Ayman Abd El Kader, Chairman of GHAPWASCO
- Mr. Mohamed Abu El Khair, Chairman of MCWW
- Mr. Ahmed Abdeen, Chairman of SHAPWASCO

(3) Training Schedule in Japan

C/P training has been conducted in Japan from 3rd to 12th October 2011. The project manager (Head of Project Sector, HCWW) and project co-manager (chairman of GHAPWASCO, MCWW and SHAPWASCO) attended following course.

Training Schedule for Management Training in Japan

Date		Activity	Location
1-Oct	Sat	Departure from Cairo.	
2-Oct	Sun	Arrival at Tokyo.	
3-Oct	Mon	Orientation by JICA.	JICA/TIC
		Courtesy call to JICA headquarters	JICA
4-Oct	Tue	Trend and development of water management in the world (Workshop to be held by IWA-ASPIRE).	Tokyo International Forum
5-Oct	Wed	Introduction of national policy and governing organization for water supply. Opinion exchange with the Japanese officials.	Ministry of Health, Labor and Welfare
		Introduction of Japan Water Works Association and system for information/technology transfer among water supply service providers. Opinion exchange for technology development.	Japan Water Works Association
6-Oct	Thu	Opinion exchange for service and human resources development with a water supply service provider.	Yokohama city
		Practice of inter-agency cooperation for technical education and O&M.	Yokohama city
7-Oct	Fri	Policy and practice of NRW reduction.	Yokohama city
		Practice to promote efficiency (power reduction, tariff collection, water distribution management)	Yokohama city
8-Oct	Sat	Holiday	
9-Oct	Sun	Holiday	
10-Oct	Mon	Water Museum in Yokohama (observation of example for publicity)	Yokohama city
		Miyagase dam (observation of example for publicity)	Miyagase dam
11-Oct	Tue	Observation of solar power facility in the water treatment plant (Nishiya WTP)	Yokohama city
		Site observation of a water treatment plant as well as SOP practices (Kawai WTP)	Yokohama city
12-Oct	Wed	Closing ceremony and opinion exchanges with JICA.	JICA/TIC
13-Oct	Thu	Departure from Tokyo.	
14-Oct	Fri	Arrival at Cairo.	

2. SOP and NRW reduction Training in JAPAN

(1) Purpose

The purpose of the training in Japan is to learn the experience for SOP and NRW reduction in Japan and utilize it in the water supply service management of GHAPWASCO, MCWW, SHAPWASCO and other companies in Egypt.

(2) Attendance List

Attendants were as follows:

- Mr. Wesam Abd El-Fattah, Operation and Maintenance Dep. of HCWW
- Mr. Nagi Yousri, Technical Support of GHAPWASCO
- Mr. Ahmed Elsayed Rabi, Water Supply Sector of GHAPWASCO
- Mr. Mohamed Fathy Gaber, Operation and Maintenance Dep. of MCWW
- Mr. Mohamed Mostafa El Shafie, Operation and Maintenance Dep. of MCWW
- Mr. Saeed Mohamed Attia, Non-revenue water (NRW) Dep. of SHAPWASCO
- Mr. Ahmed Saeed, Standard Operation Procedures Dep. of SHAPWASCO

(3) Training Schedule in Japan

C/P training has been conducted in Japan from 5th to 16th December 2011. Total 7 trainees attended following course.

Training Schedule for SOP and NRW Reduction Training in Japan

Date		NRW		SOP	
		Activity	Place	Activity	Place
3-Dec	Sat	Departure from Cairo			
4-Dec	Sun	Arrival at Tokyo			
5-Dec	Mon	JICA Briefing	JICA/TIC	Same as NRW	Same as NRW
		Orientation	JICA/TIC	Same as NRW	Same as NRW
6-Dec	Tue	Outline of Yokohama City Water	Yokohama City	Same as NRW	Same as NRW
		Risk management of Yokohama	Yokohama City	Same as NRW	Same as NRW
		Public relations of Yokohama	Yokohama City	Same as NRW	Same as NRW
7-Dec	Wed	Practical training course for tariff collection	Yokohama City	Outline of Integrated monitoring system	Yokohama City
		Water distribution network management for streets monitoring equipment	Yokohama City	Same as NRW	Same as NRW
		Observation of streets monitoring equipment	Yokohama City	Same as NRW	Same as NRW
8-Dec	Thu	Overview of Non Revenue Water	Yokohama City	Work safety and efficient operation of power-chemical quantity	Yokohama City
		Organization for leakage inspection and pipeline maintenance	Yokohama City	Operation and maintenance of water treatment plant	Yokohama City
9-Dec	Fri	Management of water supply block system, Replacement of aged pipes	Yokohama City	Data management of O&M and manual WTP O&M	Yokohama City
		Outline of pipeline mapping system	Yokohama City	Introduction of standard operation procedures in Japan	Yokohama City
10-Dec	Sat	Holiday		Holiday	
11-Dec	Sun	Holiday		Holiday	

Date		NRW		SOP	
		Activity	Place	Activity	Place
12-Dec	Mon	Outline of leak detection training	FUJI TECOM	Outline of Saitama City Water	Saitama City
		Training of leak detection-1, 2	FUJI TECOM	Replacement of well plan	Saitama City
13-Dec	Tue	Outline of steel pipes detector, metal pipe detector, correlation detector	FUJI TECOM	Replacement of electric facility and water quality monitoring	Saitama City
		Training of leak detection-3, 4	FUJI TECOM	Observation of well facility.	Saitama City
14-Dec	Wed	Method of training leak detection	FUJI TECOM	Operation and maintenance of water treatment plant and well	Saitama City
		Training leak detection facility and equipment, Implement for training leak detection	FUJI TECOM	Observation of East WTP and Groundwater WTP	Saitama City
15-Dec	Thu	Ending Ceremony	JICA/TIC	Same as NRW	Same as NRW
16-Dec	Fri	Departure from Tokyo			
17-Dec	Sat	Arrival at Cairo			

3. WDM Training in JAPAN

(1) Purpose

The purpose of the training in Japan is to learn the experience for WDM in Japan and utilize it in the water supply service management of SHAPWASCO in Egypt.

(2) Attendance List

Attendants were as follows:

- Mr. Elsayed Moustafa Ibrahim Attia, Engineer / Water Distribution Management Department of SHAPWASCO
- Mr. Ali Mohamed Atef Abde Ihamid, Engineer / Water Distribution Management Department of SHAPWASCO
- Mr. Bhnsawy Ahmed Maher Elsayed, Engineer / Water Distribution Management Department of SHAPWASCO
- Mr. Ahmed AbdElRaheem Mohamed AbdElRaheem, Engineer / Water Distribution Management Department of SHAPWASCO

(3) Training Schedule in Japan

C/P training has been conducted in Japan from 28th October 2012 to 9th November 2012. Total 4 trainees attended following course.

Training Schedule for WDM Training in Japan

Date		Activities	Place
27-Oct	Sat	Departure from Cairo	
28-Oct	Sun	Arrival at Yokohama	JICA Yokohama
29-Oct	Mon	Briefing	JICA Yokohama
		Orientation	JICA Yokohama
30-Oct	Tue	Outline of Yokohama water supply system	Yokohama Waterworks Bureau
		Equipment management of water facilities (Outline water supply maintenance)1	Yokohama Waterworks Bureau

Date		Activities	Place
31-Oct	Wed	Equipment management of water facilities (Outline water supply maintenance)1	Yokohama Waterworks Bureau
		Drawing management of water facilities	Yokohama Waterworks Bureau
1-Nov	Thu	Mechanical and electrical equipment maintenance work in the water facility	Yokohama Waterworks Bureau
		Equipment outline water treatment plant which is the main water supply facility	Yokohama Waterworks Bureau
		Site observation on equipment outline water treatment plant which is the main water supply facility	
2-Nov	Fri	Electrical equipment maintenance work in the water facility1	Yokohama Waterworks Bureau
		Electrical equipment maintenance work in the water facility2	
3-Nov	Sat	Holiday	
4-Nov	Sun	Holiday	
5-Nov	Mon	Water operational plan and Water supply operation total management system	Yokohama Waterworks Bureau
		Installation management of measuring equipment on the street, and a maintenance	
		Site observation on measuring equipment on the street, and a maintenance	Yokohama Waterworks Bureau
6-Nov	Tue	Operation of water (water supply management), management, maintenance and operation of the well	Saitama City Waterworks Bureau
		Site observation on tobu distribution facility, groundwater water treatment facilities	Saitama City Waterworks Bureau
7-Nov	Wed	SCADA for water supply 1	Yokogawa Electric Corporation
		SCADA for water supply 2	Yokogawa Electric Corporation
		Leakage management	
		Demonstration room, Global Response Center	
8-Nov	Thu	Results presentation	JICA Yokohama
		Evaluation meeting/closing ceremony	
9-Nov	Fri	Departure from Tokyo / Yokohama	
10-Nov	Sat	Arrival at Cairo	

ANNEX 2-5. Operational Expenses by Japan

As of Nov. 15, 2012

Unit=Yen

	Major Budget Item	JFY2011 (May.2011 - Jan.2012)	JFY2012 (Feb.2012 - Jul.2012)	Total
1	General Cost	9,728,000	8,412,000	**18,140,166**
1.1	Staff Cost	6,888,754	5,846,000	**12,734,754**
1.2	Equipment Maintenace Cost	0	14,000	**14,000**
1.3	Consumable Cost	145,311	10,000	**155,311**
1.4	Travel Expense	0	0	**0**
1.5	Communicatoion Cost	69,640	0	**69,640**
1.6	Document Preparation Cost	275,144	0	**275,144**
1.7	Rental Cost	2,349,317	2,542,000	**4,891,317**
1.8	Light, Fuel and Water Cost	0	0	**0**
1.9	Staff Training Cost	0	0	**0**
1.10	Facility Maintenance Cost	0	0	**0**
1.11	Field Training Cost	0	0	**0**
1.12	Domestic Activity Cost	0	0	**0**
1.13	Domestic Consultant Cost	0	0	**0**
1.14	Miscellaneous Cost	0	0	**0**
2	Equipment Cost (JICA Expert's Equipment)	11,689,000	1,296,000	**12,985,000**
3	Equipment Shipping Cost (JICA Expert's Equipment)	254,000	47,668	**301,668**
4	Equipment Cost (Carry Equipment)	0	0	**0**
5	Equipment Shipping Cost (Carry Equipment)	0	0	**0**
6	Equipment Cost (Other Equipment)	0	0	**0**
7	Equipment Shipping Cost (Other Equipment)	38,000	0	**38,000**
8	Report Prepation Cost (Printing and Binding)	11,000	0	**11,000**
9	Report Prepation Cost (Exclude Printing and Binding)	19,000	0	**19,000**
10	Local Consultant Cost	666,000	0	**666,000**
11	Local NGO Cost	0	0	**0**
12	Construction Cost	0	0	**0**
13	Meeting Cost	0	0	**0**
14	Insurance Cost	0	0	**0**
15	C/P Training in Japan Cost	1,837,000	1,159,905	**2,996,905**
Total in Japanese Yen		**24,242,000**	**10,915,000**	**35,157,000**
FX rate (Avg.)at 1LE.=		12.940000	12.850000	

ANNEX 2-6. List of Egyptian C/Ps

1. List of SHAPWASCO C/Ps

C/P Name	Title	Field	Working Period	Note
Ahmed Abdeen	Chairman	Management	2011.5～up to now	
WDM Team in Headquarters (HQ)				
Alae El Din Mohamed	Head of C/P Team/ Headquarters (HQ)	Management	2011.5～up to now	
Ahmed Maher	Assistant for head of WDM team/HQ	Engineer	2011.5～up to now	
Abd El Rahim Mohamed	Assistant for head of WDM team/HQ	Engineer	2011.5～up to now	
Mohamed Atef	Assistant for head of WDM team/HQ	Engineer	2011.5～up to now	
Mostafa Ibrahim	Assistant for head of WDM team/HQ	Engineer	2011.5～up to now	

2. List of GHAPWASCO C/Ps

C/P Name	Title	Field	Working Period	Note
Ayman Abd El Kader	Chairman/HQ	Management	2006.11～up to now	
Abdullah El Letty	Head of C/P team	Management	2011.6～up to 2012.5	Retired
Adel Attia	Head of C/P team	Head of C/P team	2012.6～up to now	
SOP Team in Headquarters (HQ)				
Ahmed El Maleh	SOP team leader/HQ	Engineer	2011.6～up to now	
Rizk El Fiky	SOP member/HQ	Engineer	2011.9～up to now	
Nagy youssry	SOP member/HQ	Engineer	2011.9～up to 2012.6	Left Company
Mohamed Masood	SOP member/HQ	Engineer	2012.7～up to now	
Mahmoud Badr	Electricity SOP member/HQ	Engineer	2011.7～up to now	
Mekawy Mekawy	WQMSOP member/HQ	Chemist	2011.11～up to now	
SOP Team in Branches				
Moataz Riyad Hassan	Station manager / Melahia	Engineer	2012.7～up to now	
Mahmoud El Sayed Sarhan	Vice manager/ Melahia	Engineer	2012.7～up to now	
Hemat Fathy Hozayfa	Laboratory manager/ Melahia	Chemist	2012.7～up to now	
Goerge Naguib Abdo	Senior technician/ Melahia	Technician	2012.7～up to now	
Saeed Eid Kombar	Senior technician/ Melahia	Technician	2012.7～up to now	
Ramy Mostafa El Feky	Technician/ Melahia	Technician	2012.7～up to now	
Mahrous Mohamed El Zayat	Technician/ Melahia	Technician	2012.7～up to now	

C/P Name	Title	Field	Working Period	Note
Amir El Safty	Technician/ Melahia	Technician	2012.7～up to now	
Mohamed Aly Saber	Technician/ Melahia	Technician	2012.7～up to now	
Mohamed Ahmed Balat	Technician/ Melahia	Technician	2012.7～up to now	
Huessein Youssef Shahin	Station manager / Mahalet Marhoum	Technician	2012.9～up to now	
El Mohamady Mekawy	Senior Technician / Mahalet Marhoum	Technician	2012.9～up to now	
Mahmoud Abou El Anein	Technician / Mahalet Marhoum	Technician	2012.9～up to now	
Ahmed El Maraghy	Technician / Mahalet Marhoum	Technician	2012.9～up to now	
NRW Team in Headquarters (HQ)				
Ahmed Rabee'	NRW team leader/HQ	Engineer	2011.6～up to now	
Omar Salah El Din	NRW member/HQ	Engineer	2011.6～up to now	
Ahmed Ramadan El Bakary	NRW member/HQ	Engineer	2011.6～up to 2012.3	Moved to another department
Mohamed Masood	NRW member/HQ	Engineer	2012.3～up to 2012.6	Moved to SOP
Gad Abdel Monsef Gad	NRW member/HQ	Engineer	2012.3～up to 2012.6	Moved to another department
Salah Mohamed El Sawahly	NRW member/HQ	Technician	2012.3～up to now	
NRW Team in Branches				
Abdel Azim Gouda	Water Manager/Zefta	Engineer	2012.3～up to now	
Abdel Ghafar Mohamed	Network Manager/Zefta	Technician	2012.3～up to now	
Mohamed Hasouna	Meter Reader/Zefta	Technician	2012.3～up to now	
Adel Othman	Meter Reader/Zefta	Technician	2012.3～up to now	
Ibrahim shehata	Worker/Zefta	Worker	2012.3～up to now	
Abdel Azim El Beheiry	Worker/Zefta	Worker	2012.3～up to now	
Ibrahim Abdel Mallak	Branch Manager/Tanta	Engineer	2012.3～up to now	
Mostafa Abdel Aal	Nawag area network manager/Tanta	Technician	2012.3～up to now	
Ahmed Hemeida	Network Technician/Tanta	Technician	2012.3～up to now	
Atef El Borlosy	Network Technician/Tanta	Technician	2012.3～up to now	
Samy Abdel Gawad	Network manager/Tanta	Technician	2012.3～up to now	
Saied Shahin	Follow up/Tanta	Technician	2012.3～up to now	
Hany Sallam	Worker/Tanta	Worker	2012.3～up to now	
El Dessouky Mohamed	Worker/Tanta	Worker	2012.3～up to now	

C/P Name	Title	Field	Working Period	Note
Fahmy Moussa	Water Manager/Mahala	Engineer	2012.3～up to now	
Ahmed Suliman	Network technician/Mahala	Technician	2012.3～up to now	
Mohamed El Sheshtawy	Network head/Mahala	Technician	2012.3～up to now	
Hany Abdel Wahab	Worker/Mahala	Worker	2012.3～up to now	
Sobhy Farahat	Meter Reader/Mahala	Technician	2012.3～up to now	
Mohamed Hegazy	Meter Reader/Mahala	Technician	2012.3～up to now	

3. List of MCWW C/Ps

C/P Name	Title	Field	Working Period	Note
Mohamed Abo El Khier	Chairman/HQ	Management	2006.11～2012.09	Retired
Ezzat Elsayad	Chairman/HQ	Management	2012.09～up to now	
Samir Abdel Moneom Suliman	Head of C/P team	Management	2006.11～2012.01	Retired
SOP Team in Headquarters (HQ)				
Ayman Bassyouni	Head of SOP Team/HQ	Engineer	2006.11～up to now	
Mohamed Fawzy Awad	Assistant for head of SOP team/HQ	Engineer	2010.6～up to now	
Mohamed Fathy	Assistant for head of SOP team/HQ	Engineer	2010.1～up to now	
Khaled Kazamel	Assistant for head of SOP team/HQ	Engineer	2009～up to now	
Saeed Abdelfattah	Assistant for head of SOP team/HQ	Engineer	2006.11～up to now	
Mostafa Lotfy	Assistant for head of SOP team/HQ	Engineer	2012.03～up to now	
Adel Ibraheem	Assistant for head of SOP team/HQ	Chemist	2008～up to now	
SOP Team in Branches				
Ahmed Sameer Elkawas	Mahatet El Sadat El Satheya (SWTP)	Engineer, Plant Manager	2012.03～up to now	
Mohamed Abdallah Abdelrehem	Mahatet El Sadat El Satheya (SWTP)	Engineer, Operation Manager	2012.03～up to now	
Ahmed Fathy Said Ahmed	Mahatet El Sadat El Satheya (SWTP)	Chemist	2012.03～up to now	
Mahmod Abdelzaher Elsaid	Mahatet El Sadat El Satheya (SWTP)	Chemist	2012.03～up to now	
Mansoor Shawky Ibraheem	Mahatet El Sadat El Satheya (SWTP)	Technician (generator)	2012.03～up to now	
Mansoor Shawky Ibraheem	Mahatet El Sadat El Satheya (SWTP)	Technician (mech. maintenance)	2012.03～up to now	

C/P Name	Title	Field	Working Period	Note
Haithem Ahmed omar	Mahatet El Sadat El Satheya (SWTP)	Technician (mech. maintenance)	2012.03～up to now	
Mohamed Foaad Soltan	Mahatet El Sadat El Satheya (SWTP)	Technician (elec. maintenance)	2012.03～up to now	
Mohamed Ashraf Arafa	Mahatet El Sadat El Satheya (SWTP)	Technician (elec. maintenance)	2012.03～up to now	
Haithem Ahmed omar	Mahatet El Sadat El Satheya (SWTP)	Technician (sedimentation facility)	2012.03～up to now	
Ahmed Bahnasy Mohamed	Mahatet El Sadat El Satheya (SWTP)	Technician (filtration facility)	2012.03～up to now	
Mohamed sabry Abdelazeem	Mahatet El Sadat El Satheya (SWTP)	Technician (sludge facility)	2012.03～up to now	
Ahmed Abd Elsalam Belal	Mahatet El Sadat El Satheya (SWTP)	Technician (pump room)	2012.03～up to now	
Ahmed Samy Saleh	Mahatet El Sadat El Satheya (SWTP)	Technician (Cl room)	2012.03～up to now	
Amin Gamal Mahroos	Mahatet El Sadat El Satheya (SWTP)	Technician (Al room)	2012.03～up to now	
Ahmed Ebrahim Gobara	Gezy (IMRP)	Technician, Plant Manager O&M	2012.03～up to now	
Elsaid Reyad	Gezy (IMRP)	Technician (elec. maintenance)	2012.03～up to now	
Abdelhakeem Abdelrasheed	Gezy (IMRP)	Technician (cooling system)	2012.03～up to now	
Mahmood Ali Ateem	Gezy (IMRP)	Technician (operation)	2012.03～up to now	
Ibrahim Maher Abdelglel	Gezy (IMRP)	Technician (operation)	2012.03～up to now	
Shaker Ibrahim Abdelgel	Gezy (IMRP)	Labor	2012.03～up to now	
Dr. M. Nagi	Gezy (Chemist)	Technician (mech. maintenance)	2012.03～up to now	
Wala'a	Gezy (Manager)	Engineer	2012.03～up to now	
NRW Team in Headquarters (HQ)				
Belal Galal Khalaf	Head of NRW Team/HQ	Management	2006.11～2012.01	
	Head of C/P and Leader of NRW Team/HQ	Management	2012.01～up to now	
Mohamed El Shafey	Assistant for head of NRW team/HQ	Engineer	2007.10～up to now	
Mohamed Fawzy Bader	Assistant for head of NRW team/HQ	Engineer	2007.10～up to now	

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C/P Name	Title	Field	Working Period	Note
Ahmed Radwan	Assistant for head of NRW team/HQ	Engineer	2008.4～2009.5	Moved to another department To I.T. May 2009
Ahmed El Showny	Assistant for head of NRW team/HQ	Engineer	2008.4～2008.12	turnover
Ahmed Shalaby	Assistant for head of NRW team/HQ	Engineer	2009.5～up to now	Moved to another department
Gamal Rizk	NRW Team member	Technician	2012.8～up to now	
Mohammed Gaber	NRW Team member	Technician	2012.8～up to now	
NRW Team in Branches				
Monir Mohamed	Engineer/Quesna	Distribution management	2012.03～up to now	
Anwar Ibrahem	Engineer/ Quesna	Distribution management	2012.03～up to now	
Abdelsattar Hossin	Technician/ Quesna	Distribution management	2012.03～up to now	
Nagi Nikola	Technician/ Quesna	Distribution management	2012.03～up to now	
Mohamed Sobhy	Technician/ Quesna	Distribution management	2012.03～up to now	
Mohamed Ibrahem	Plumper/ Quesna	Distribution management	2012.03～up to now	
Abdelmalek Mohamed	Worker/ Quesna	Distribution management	2012.03～up to now	
Mansour Mohamed	Worker/ Quesna	Distribution management	2012.03～up to now	
Ayman Abdrabo	Engineer/Berket El Sab'	Distribution management	2012.03～up to now	
Ahmed Shawky	Technician/Berket El Sab'	Distribution management	2012.03～up to now	
Bakry Mohamed	Plumper/Berket El Sab'	Distribution management	2012.03～up to now	
Hamed Ali	Network Manager/Shebin	Distribution management	2012.03～up to now	
Hassan Ismael	Supervisor/Shebin	Distribution management	2012.03～up to now	
Gamal Eldemerdash	Technician/Shebin	Distribution management	2012.03～up to now	
Abdelmonsif Mohamed	Worker/Shebin	Distribution management	2012.03～up to now	
Hitham Mohamed	Worker/Shebin	Distribution management	2012.03～up to now	

ANNEX 2-7. Facility, Equipment and Operational Expenses Provided by Egypt

Company Activity	Item	No. of units	Price in Egyptian pound
SHAPWASCO			
WDM	Chamber construction for installation of WDM equipment	13	265,100.00
	Construction of SCADA Room	1	950,000.00
Total			**1,215,100.00**
GHAPWASCO			
SOP	Auma Control valves	10	166,500.00
	Adjustments for Auma valves (water level indicator and control panels)	10	140,000.00
	Water flow meters Calibration	11	8,250.00
	Chlorine Cylinder balance	1	13,000.00
	Air Scouring flow meter	2	82,000.00
	Flow meter Chamber in Tanta WTP	1	17,000.00
	Residual Chlorine indicator meter	1	23,000.00
	Chlorine leakage detection system	1	14,000.00
	Chlorine Dosing flow meter for IMRF	2	3,000.00
	Chemical dosage indicator utility bags (Chlorine and Manganese)	2	2,000.00
	Computers for Model facilities	2	11,000.00
	Vacuum pump for back wash in Tanta WTP	1	22,000.00
	Alum dosage totalizer	1	13,000.00
	Ultrasonic flowmeters for Tanta WTP	4	96,000.00
NRW	Chamber construction for installation of NRW equipment	8	136,000.00
Other	Approximate expenses for the Project by company such as office and JICA Car fuel and maintenance, workshops, etc ...	—	10,000.00
Total			**756,750.00**
MCWW			
SOP	Calibration Works		
	1st Gezay IMRF:		
	Elecromagnatic F.M	4	2,800.00
	Ultrasonic level transmitter	6	3,600.00
	(pH) measurment level	2	1,200.00
	(NTU) measurment level	2	1,200.00
	(ITT) portcel for Residual Chlorine	1	700.00
	Electronic pressure switch	2	1,200.00
	2nd Elsadat SWTP:		
	Raw water Ultrasonic F.M	1	700.00
	Treated water Ultrasonic F.M	1	700.00
	Ultrasonic F.M for filterd water	14/16	9,800.00
	Ultrasonic level measurment	15/16	9,000.00
	Ultrasonic level transmitter	6	3,600.00
	Level meter controller	15/16	9,000.00
	Electronice level switch (Intak)	1	600.00
	Raw water F.M (Intak)	1	700.00
	Analyzer for residual Chlorine	1	700.00
	Chlorine dosin controler (touch)	1	900.00
	Purchasing & Installation works		
	Purchasing & Installation Ultrasonic F.M for filter back wash water	1	54,595.00
	purchasing & Installing Air F.M for Elsadat 8"	2	79,780.00
	purchasing & Installing Ultrasonice level controller	3	59,700.00
	purchasing & Installing 1Ton Table balance for Chlorine cylender	3	51,000.00
	purchasing & Installing Air F.M for Gezay 2"	1	41,000.00
	purchasing & Installing Air F.M for Gezay 3"	1	41,500.00
	purchasing & Installing bermenganat potasum glass indicator(Gezay)	1	4,100.00
	purchasing & Installing electromagnetic F.M	1	27,500.00
	Purchasing Only		
	purchasing pressure gauge (-) 0 to -10 mws	4	2,600.00
	purchasing Chlorine sylinder Hok balance	2	26,400.00
	purchasing electromagnetic F.M	1	27,500.00
	purchasing pressure gauges different types	42	23,520.00
	purchasing pressure gauges different types	30	18,300.00
	purchasing submersble pump 25L/s.-60 m head	1	42,500.00
	purchasing injection pump for bermenganat potasum	1	7,500.00
	purchasing injection pump for Alum	3	180,000.00
	purchasing normal 1/2" valves	40	1,800.00
	purchasing router balance for hoked Chlorine cylinder 1Ton.	1	2,550.00
	purchasing Alum line screen net 50mm.	3	6,000.00
NRW	Chamber construction for installation of NRW equipment	9	95,247.00
Other	Approximate expenses for the Project by company such as office and JICA Car fuel and maintenance, workshops, etc ...		15,000.00
Total			**854,492.00**
Grand Total			**2,826,342.00**

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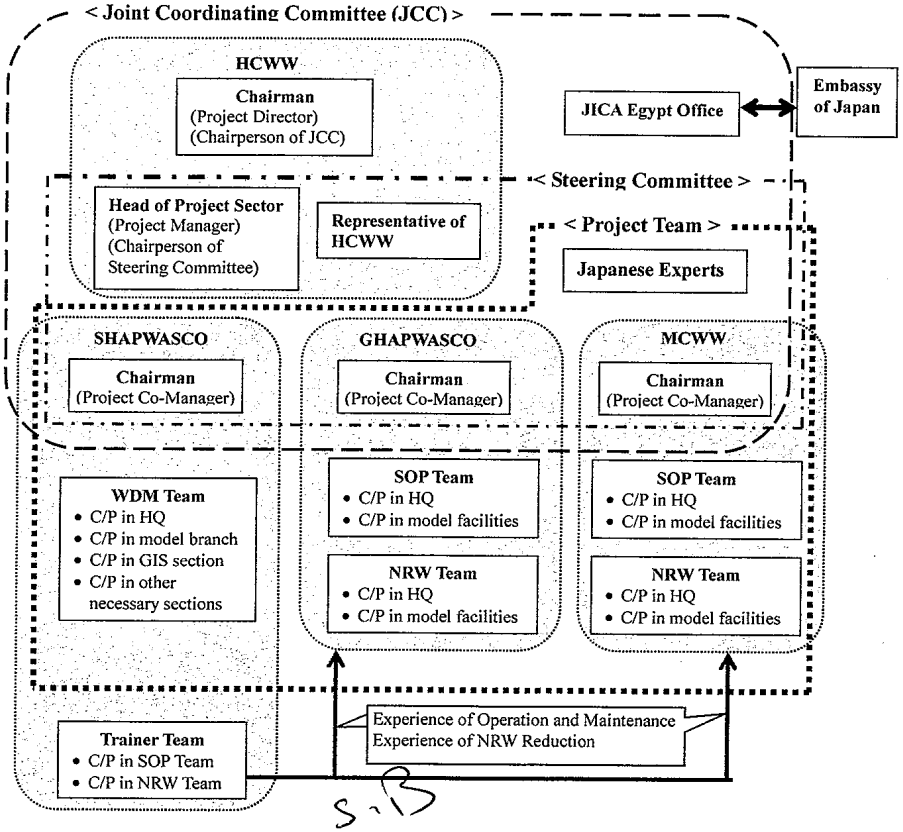
ANNEX 3. Organizational Structure of the Project Implementation



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ANNEX 4. List of Seminars, Workshops and Training (for all of SOP, NRW and WDM activities)

Date	Title	Program	Attendance	Trainer
April 2011 – December 2011				
8-9 June 2011, 10:00-13:00	1st Mini Seminar for SOP Activity	- Introduce the SOP activity of SHAPWASCO Project (Presented by C/P Team of SHAPWASCO) - Discussion	• Project manager, Project co-manager • C/P team of GHAPWASCO • Engineers and operators in GHAPWASCO • C/P team of MCWW • Engineers and operators in MCWW • C/P team of SHAPWASCO • JICA Expert Team	SHAPWASCO
18-19 June 2011, 10:00-13:00	2nd Mini Seminar for NRW reduction Activity	- Introduce the NRW reduction activity of SHAPWASCO Project (Presented by C/P Team of SHAPWASCO) - Discussion	• C/P team of GHAPWASCO • Engineers and operators in GHAPWASCO • C/P team of MCWW • Engineers and operators in MCWW • C/P team of SHAPWASCO • JICA Expert Team	SHAPWASCO
2-3 July 2011, 10:00-14:30	3rd Mini Seminar on Selection Criteria for SOP and NRW	- Discussion of selection criteria for Model Facility and Pilot Area (Presented by C/P Team of SHAPWASCO) - Difference between NRW and UFW (Presented by C/P Team of SHAPWASCO)	• C/P team of GHAPWASCO • Engineers and operators in GHAPWASCO • C/P team of MCWW • Engineers and operators in MCWW • C/P team of SHAPWASCO • JICA Expert Team	SHAPWASCO
13 July 2011, 10:30-12:30	Internal Workshop for Well Monitoring Activity	- Method, contents and importance of the well monitoring and experience of implementation of well monitoring (Presented by C/P Team SHAPWASCO) - Usage of the result of well monitoring (ditto) - Discussion	• C/P team of GHAPWASCO • Engineers and operators in GHAPWASCO • C/P team of MCWW • Engineers and operators in MCWW • C/P team of SHAPWASCO • JICA Expert Team	SHAPWASCO
21 September 2011, 9:30-12:30	Internal Workshop for Water Distribution Management (WDM)	- Explanation of the Project in General (Presented by JICA Expert Team) - General Idea and Policy for WDM Activity in the Project (Presented by JICA Expert Team) - Outline of Action Plan for WDM (Presented by JICA Expert Team)	• C/P team of SHAPWASCO • Engineers and operators in SHAPWASCO • JICA Expert Team	SHAPWASCO

Date	Title	Program	Attendance	Trainer
		- Activities done so far and Selection of Pilot Area for WDM Activity by WDM Team of SHAPWASCO (Presented by C/P Team of SHAPWASCO)		
27 September 2011, 12:00-13:50	Kicking Off Seminar	- Current JICA Project and background of Seminar (Presented by Head of Sector, HCWW) - Experience and Plan of SOP activities (Presented by C/P Team of GHAPWASCO,MCWW and SHAPWASCO) - Experience and Plan of NRW reduction activities (Presented by C/P Team of GHAPWASCO,MCWW and SHAPWASCO) - Plan of Water Distribution Management (WDM) activities (Presented by C/P Team of SHAPWASCO) - Discussion	• Water companies under HCWW • Authorities related to water supply services in Egypt • Foreign aid organizations involved in water sectors in Egypt • Project manager, Project co-manager • C/P team of GHAPWASCO • Engineers and operators in GHAPWASCO • C/P team of MCWW • Engineers and operators in MCWW • C/P team of SHAPWASCO • JICA Expert Team	Representative of SHAPWASCO, GHAPWASCO and MCWW
2-5 October 2011, 10:00-14:30	Training of Trainers (TOT)	- Differentiate between training and facilitations. - Identify theories and techniques of adult learning. - Identify training methods and techniques. - Prepare lectures. - Make speech. - Prepare and conduct presentation. - Use Audiovisual Aids effectively. - Work in Group	**[SHAPWASCO]** Mr. Alaa El Din Talib Mr. Saeed Mohamed Attia Ms. Walaa Mohamed Ms. Walaa Hamdy Mr. Tamer Wael Mr. Salama Mohamed Mr. El Sayed Mostafa Mr. Gamal Abd El Hameed Mr. Abd El Shafee Abd Al Aziz Ms. Heba Mahmoud Mr. Ahmed Saeed Mr. Ahmed Maher Mr. Mostafa Ibrahim Mr. Mohamed Atef Mr. Abd El Raheem Mohamed Mr. Mohamed Salah El Din Ms. Aliaa El Sayed Hameed Ms. Marwa Mahmoud Khater Ms. Nancy Metwaly Taha JICA Expert Team	Local Consultant Integrated Solutions for Consultations Training

Date	Title	Program	Attendance	Trainer
10 October 2011, 10:00-14:30	Site Tour for SOP and NRW Reduction Activity in SHAPWASCO	- Briefing of site tour (Presented by C/P Team of SHAPWASCO) - Site tour in Zagaizig WTP (Arranged by C/P Team of SHAPWASCO) - Site tour for existing chamber for minimum night flow survey (Arranged by C/P Team of SHAPWASCO) - Site tour in Hehya Training Yard (Arranged by C/P Team of SHAPWASCO) - Site tour in Hehya WTP (Arranged by C/P Team of SHAPWASCO)	• C/P team of GHAPWASCO • C/P team of MCWW • C/P team of SHAPWASCO • JICA Expert Team	SHAPWASCO
19-20 & 22-23, October 2011, 10:00-14:30	Conducting of Training for NRW Reduction	- Class room training - Learning principle of flow measurement, method of minimum night flow survey, etc. - Field training - Learning usage of flow meter and water leak detector, acrostic rod. - Class room training - Learning method of data transfer from flow meter to computer. - Field training - Learning usage of flow meter and water leak detector, acrostic rod.	**[GHAPWASCO]** Mr. Ahmed El Said Rabea Mr. Omar Mohamed Salah El Din Mr. Abdel Aal Ali Mr. Hamdy Yasin Reraz Mr. Samy Mohamed Abdel Gawad Mr. Nasr El Din Mohamed Mr. Ahmed Abdel Salam Hemeda Mr. Abdel Azim Goda Abo Khimar Mr. Ali Ibrahim Maary Mr. Mohamed Hamid Abdo Mr. Arafa Mostafa El Bahnasy Mr. Mosaad El Shiekh **[MCWW]** Mr. Mr. Ahmed Radwan Mr. Mohamed Shaf'ey Mr. Mohamed Fawzy Mr. Metwally Elsayed Mr. Ragab Youssif Hegazi Mr. Amin Abdelhakim Mr. Mohamed Sobhi Mr. Sadek Abdelati Mr. Abdelsattar Hossin Mr. Mohamed Eldib Mr. Mohamed Nagib **JICA Expert Team**	**[SHAPWSCO]** Mr. Alae El Din Mohamed Mr. Saaied Mohamed Mohamed Atia Mr. Walaa Mohamed Ali Mr. Walla Hamdy Maahmoud Mr. Tamer Wael Abdel Hady
26-30 October 2011, 10:00-12:30	3ACs Workshop for Action Plan NRW reduction Activity	- Purpose and Output of the Project (Presented by JICA Expert Team) - Project Period (Presented by JICA Expert Team) - Contents of Action Plan (Presented by JICA Expert Team)	• C/P team of GHAPWASCO • Engineers and operators in GHAPWASCO • C/P team of MCWW • Engineers and operators in MCWW	SHAPWASCO

Date	Title	Program	Attendance	Trainer
		- Flow Chart of Each Action (Presented by JICA Expert Team) - Model Markaz and Pilot Area (Presented by C/P Team of GHAPWASCO, MCWW) - Next Step (Explanation of Each Action) (Presented by C/P Team of GHAPWASCO, MCWW) - Schedule of NRW Activity (Presented by C/P Team of GHAPWASCO, MCWW) - NRW reduction Approach (Presented by JICA Expert Team)	• C/P team of SHAPWASCO • JICA Expert Team	
20 November 2011, 10:00-12:00	3ACs Workshop for Water Quality Management Activity	- What is Water Quality Management (Presented by C/P Team SHAPWASCO) - Case Study of Water Quality Management in SHAPWASCO (Presented by C/P Team SHAPWASCO) - Relationship between SOP and ISO (Presented by C/P Team GHAPWASCO) - Discussion	• C/P team of GHAPWASCO • Engineers and operators in GHAPWASCO • C/P team of MCWW • Engineers and operators in MCWW • C/P team of SHAPWASCO • JICA Expert Team	SHAPWASCO
January 2012 – December 2012				
7 March 2012, 12:00-15:00	3ACs Workshop for NRW reduction Activity in SHAPWASCO	**Minimum Night Flow (MNF) Determining** - Data logging and collect by Pressure logger - Data logging and collect by Flow meter logger **Leak Detection Survey** - Valve Acoustic Survey - Ground Surface Acoustic Survey - Leak Noise Correlation Survey	• C/P team of GHAPWASCO • C/P team of MCWW • JICA Expert Team	JICA Expert Team and each other of participants
25 March 2012, 12:00-15:00	Internal Workshop for NRW reduction Activity in GHAPWASCO	- Presentation on Meter Reading Survey (JICA Expert Team) - Site tour in Tanta - Discussion	• C/P team of GHAPWASCO • JICA Expert Team	JICA Expert Team
27 March 2012, 12:00-15:00	Internal Workshop for NRW reduction Activity in MCWW	- Presentation on Meter Reading Survey (JICA Expert Team) - Site tour in Shebin - Discussion	• C/P team of MCWW • JICA Expert Team	JICA Expert Team
22-24 April 2012, 10:00-14:30	3ACs Workshop for SOP Activity	- Presentation on Operation Records (Presented by C/P Team of GHAPWASCO, MCWW) - Presentation on Utilization & Management Methods of Operation Records (Presented by C/P Team of SHAPWASCO) - Presentation on Water Quality Management Method	• C/P team of GHAPWASCO • Engineers and operators in GHAPWASCO • C/P team of MCWW • Engineers and operators in MCWW • C/P team of SHAPWASCO	SHAPWASCO

Date	Title	Program	Attendance	Trainer
		(Presented by C/P Team of GHAPWASCO, MCWW and SHAPWASCO) - Discussion - Comments by SHAPWASCO	• JICA Expert Team	
2 September 2012, 10:00-12:30	Internal Workshop for NRW reduction Activity in GHAPWASCO	- Presentation on Progress MNF Survey (Presented by C/P Team of GHAPWASCO, MCWW) - Discussion	• Authorities related to water supply services in Gharbia • C/P team of GHAPWASCO • Engineers and operators in GHAPWASCO • JICA Expert Team	JICA Expert Team
27 September 2012, 10:00-14:30	Site Tour for SOP Activity in MCWW	- Briefing of site tour (Presented by C/P Team of MCWW) - Site tour in Sadat WTP (Presented by C/P Team of MCWW) - Discussion	• C/P team of GHAPWASCO • Engineers and operators in GHAPWASCO • C/P team of MCWW • Engineers and operators in MCWW • JICA Expert Team	Each other by participants
30 September 2012, 0 10:00-12:30	Special Workshop for NRW Reduction Activity in GHAPWASCO	- Introduce the NRW reduction Activity (Presented by C/P Team of GHAPWASCO) - Discussion	• Authorities related to water supply services in Egypt • C/P team of GHAPWASCO • Engineers and operators in GHAPWASCO • JICA Expert Team • Utility & Positioning Systems Ltd. (Private Company)	GHAPWASCO
14-18 October 2012	Special Workshop (High rank exchange of opinion with Water Authority of Jordan)	- Presentation of NRW reduction activities in Jordan as well as achievement of JICA technical assistance - Presentation of SOP and NRW reduction activates in Egypt as well as achievement of JICA technical assistance - Site observation in Jordan - Opinion exchange	• Dr. Salah Bayoumi, Head of Project Sector, HCWW • Mr. Shaker Abdelfattah, Head of Project Sector, SHAPWASCO • Mr. Adel Attia, Head of O&M Sector • Mr. Ayman Bassuni, Head of O&M Sector	Training each other by the participants, including the Jordanian side
14 November 2012, 11:00-14:00	3ACs Workshop in SHAPWASCO for SOP and NRW Reduction Activity	- Progress of NRW reduction Activity (Presented by C/P Team of GHAPWASCO, MCWW) - Progress of SOP Activity (Presented by C/P Team of GHAPWASCO, MCWW) - Discussion - Comments by SHAPWASCO	• C/P team of GHAPWASCO • Engineers and operators in GHAPWASCO • C/P team of MCWW • Engineers and operators in MCWW • C/P team of SHAPWASCO • JICA Expert Team	SHAPWASCO

ANNEX 5. Plan of Operation (PO-1)

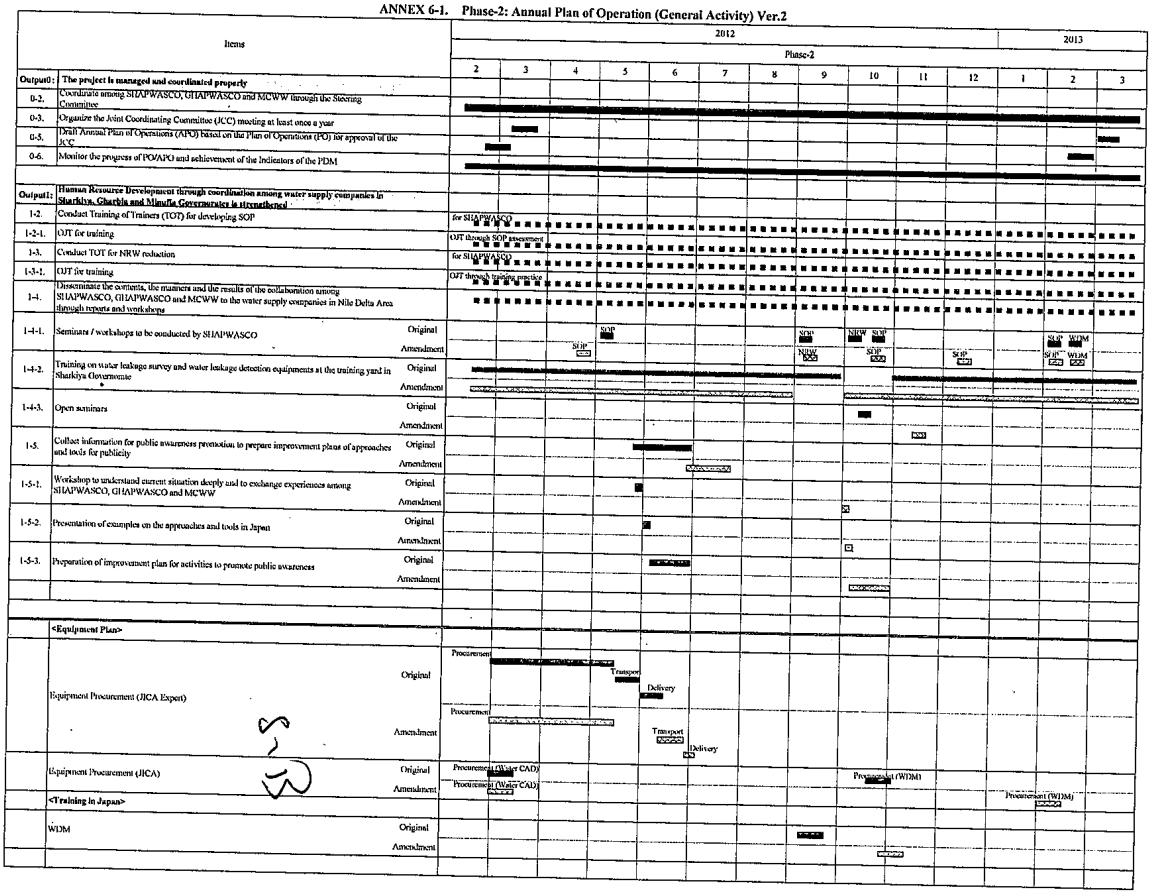
The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area

Plan of Operation (PO-1)

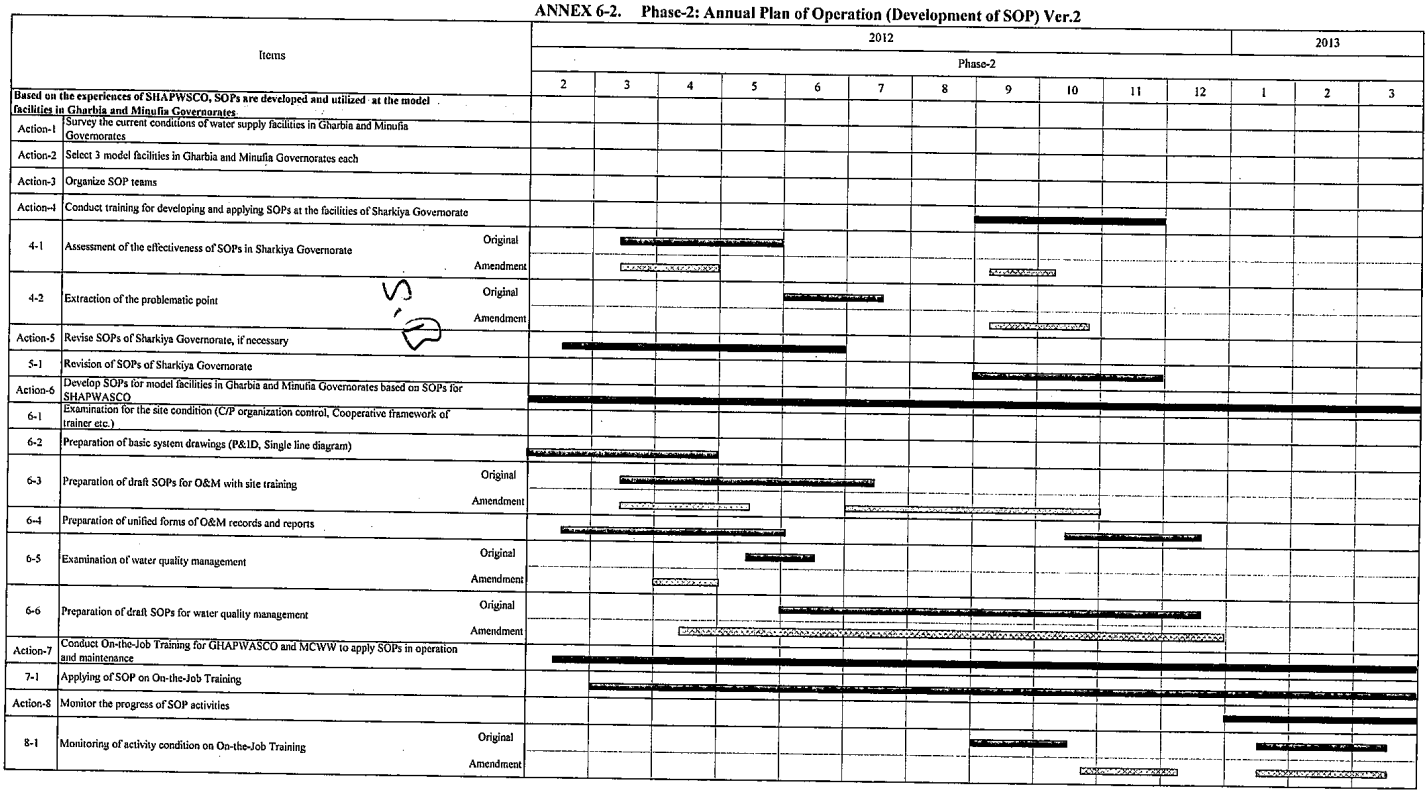
27 September 2011

Items	Year1	Year2	Year3	Person in Charge	Major Input		Remarks
	1 2 3 4	1 2 3 4	1 2 3 4		Japan	Egypt	
1. Human Resource Development through collaboration among water supply companies in Sharkiya, Gharbia and Minufia Governorates is strengthened							
1-1. Conduct management training for the top management	★			HC, SH, G,M	☆ Training in Japan		
1-2. Conduct Training of Trainers (TOT) for developing SOP	★			SH, G,M	JICA Experts (Local Hire) ☆ Training in Japan		Year 1: Mainly for SH Year 2: Mainly for G, M
1-3. Conduct TOT for NRW reduction	★			SH, G,M	JICA Experts (Local Hire) ☆ Training in Japan		
1-4. Disseminate the contents, the manners and the results of the collaboration among SHAPWASCO, GHAPWASCO and MUPWASCO to the water supply companies in Nile Delta Area through reports and workshops				HC, SH, G,M	JICA Experts		
2. Based on the experiences of SHAPWASCO, SOPs are development and utilized at the model facilities in Gharbia and Minufia Governorates							
2-1. Survey the current conditions of water supply facilities in Gharbia and Minufia Governorates				G,M	JICA Experts	SH	
2-2. Select 3 model facilities in Gharbia and Minufia Governorates each				G,M	JICA Experts	SH	
2-3. Organize SOP teams				G,M	JICA Experts	SH	
2-4. Conduct training for developing and applying SOPs at the facilities of Sharkiya Governorate				G,M	JICA Experts	SH	
2-5. Revise SOPs of Sharkiya Governorate, if necessary				G,M	JICA Experts	SH	
2-6. Finalize SOPs for model facilities in Gharbia and Minufia Governorates based on SOPs for SHAPWASCO				G,M	JICA Experts	SH	
2-7. Conduct technical training for GAPWASCO and MUPWASCO to apply SOPs in operation and maintenance				G,M	JICA Experts	SH	
2-8. Monitor the progress of SOP activities				G,M	JICA Experts	SH	
2-9. Draft the policy/plan for disseminating SOP to the other Governorates				G,M	JICA Experts	SH	
3. The institutional skills and experiences of SHAPWASCO for NRW reduction are transferred to NRW teams at the model areas in Gharbia and Minufia Governorates							
3-1. Analyze the current situation on NRW in Gharbia and Minufia Governorates				G,M	JICA Experts	SH	
3-2. Select 3 model areas in Gharbia and Minufia Governorates each				G,M	JICA Experts	SH	
3-3. Organize NRW reduction teams				G,M	JICA Experts	SH	
3-4. Formulate an action plan for NRW reduction activities based on the action plan for SHAPWASCO				G,M	JICA Experts	SH	
3-5. Conduct training on general practice of NRW reduction				G,M	JICA Experts	Mostred Training Center	
3-6. Conduct training at the training yard in Sharkiya Governorate				G,M	JICA Experts ☆ Training in Japan	SH	
3-7. Conduct training at model areas for water distribution management in Sharkiya Governorate				G,M	JICA Experts	SH	
3-8. Prepare GIS drawing for model areas in Gharbia and Minufia Governorates				G,M	JICA Experts	SH	
3-9. Make water balance analysis at model areas				G,M	JICA Experts	SH	
3-10. Conduct leakage detection survey at model areas				G,M	JICA Experts	SH	
3-11. Make water balance analysis after repair works				G,M	JICA Experts	SH	
3-12. Draft policy/plan for disseminating NRW reduction activities to the other Governorates				G,M	JICA Experts	SH	
4. The water distribution management capacity is improved in Sharkiya governorate as an advanced model							
4-1. Discuss methods and conduct survey for water distribution management				SH	JICA Experts		
4-2. Conduct training for water distribution management				SH	JICA Experts ☆ Training in Japan		
4-3. Formulate plan for water distribution management				SH	JICA Experts		
4-4. Install the equipment for water distribution management at the model area				SH	JICA Experts		
4-5. Operate the system				SH	JICA Experts		
4-6. Develop SOP for water distribution management				SH	JICA Experts		
4-7. Evaluate the operation and SOP for water distribution management				SH	JICA Experts		
5. The project is managed and coordinated properly							
5-1. Establish Steering Committee, consisting of representative of HCWW, SHAPWASCO, GAPWASCO and MUPWASCO				HC, SH, G, M	JICA Experts		
5-2. Coordinate among SHAPWASCO, GAPWASCO and MUPWASCO through the Steering Committee				HC, SH, G, M	JICA Experts		
5-3. Organize the Joint Coordination Committee (JCC) meeting at least once a year				HC, SH, G, M	JICA Experts		
5-4. Finalize the finalization of the Project Design Matrix (PDM) for approval at the final JCC				HC, SH, G, M	JICA Experts		
5-5. Draft Annual Plan of Operations (APO) based on the Plan of Operations (PO) for approval at the JCC				HC, SH, G, M	JICA Experts		
5-6. Monitor the progress of PO/APO and achievement of the indicators of the PDM				HC, SH, G, M	JICA Experts		● Mid-Term Review ▲ Final Evaluation

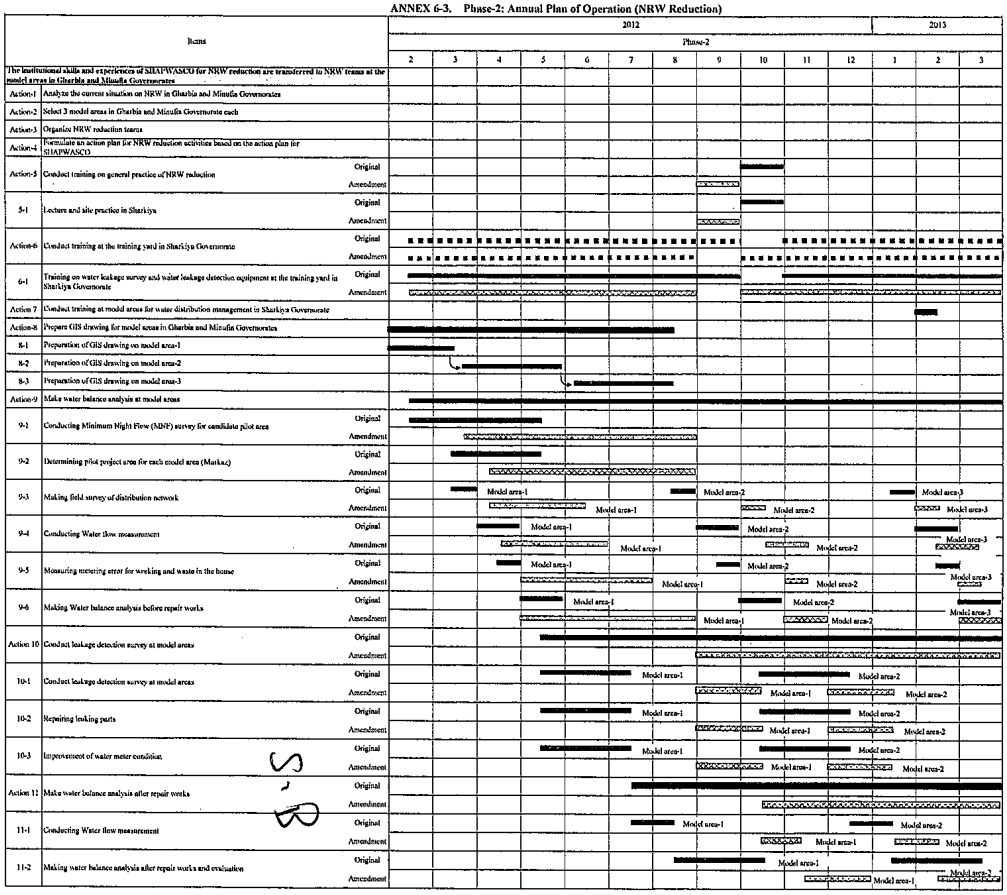
ANNEX 6-1. Phase-2: Annual Plan of Operation (General Activity) Ver.2



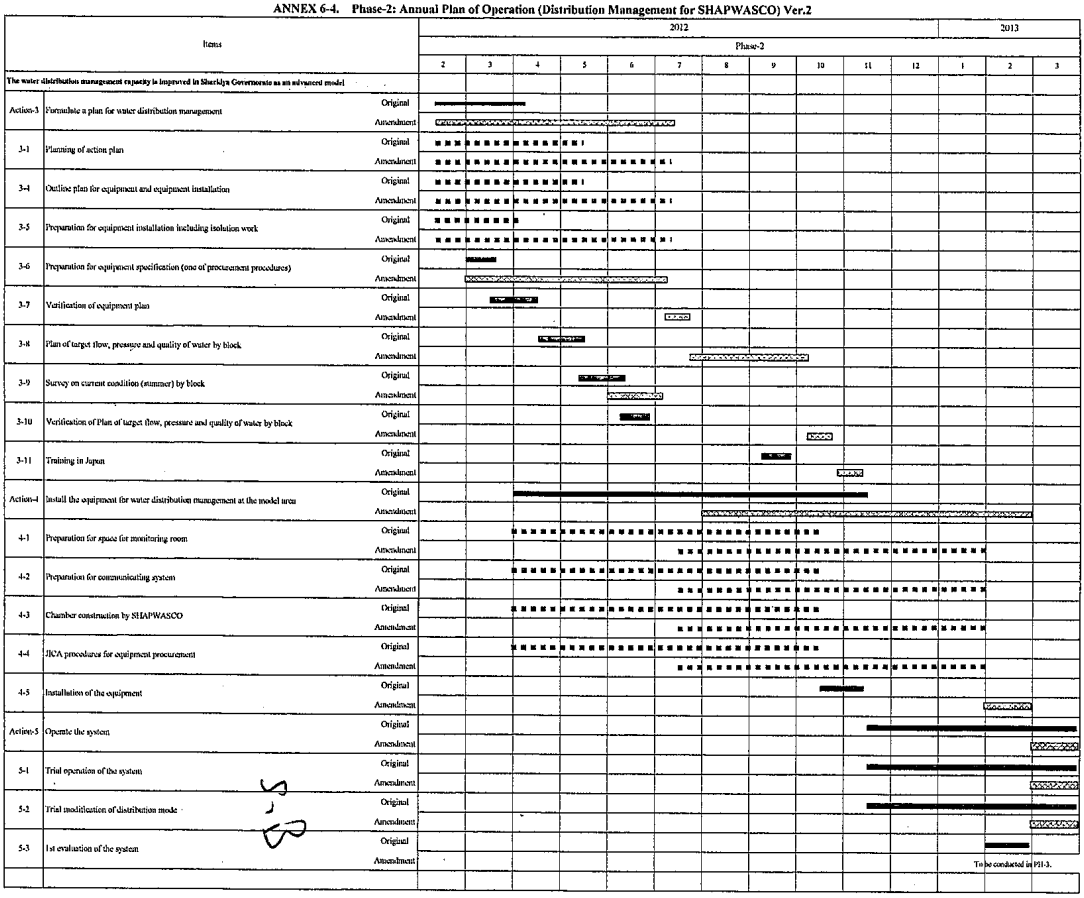
ANNEX 6-2. Phase-2: Annual Plan of Operation (Development of SOP) Ver.2



ANNEX 6-3. Phase-2: Annual Plan of Operation (NRW Reduction)



ANNEX 6-4. Phase-2: Annual Plan of Operation (Distribution Management for SHAPWASCO) Ver.2



ANNEX 7. Project Design Matrix (PDM2)

Project Design Matrix (PDM2)

Dated November 26, 2012

Project Name : The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area

Duration : FY2011-FY2013

Project Site : Sharkiya Governorate, Gharbia Governorate, Minufia Governorate (Nile Delta Area)

Target Group : Staff of SHAPWASCO, GHAPWASCO, MCWW

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
【Super Goal】 Management capacity of operation and maintenance of water supply facilities is improved in Nile Delta Area	Performance Indicators (PIs) in the fields of management capacity of operation and maintenance are improved in Nile Delta Area	Quarterly Reports of all water supply companies in Nile Delta Area submitted to HCWW	
【Overall Goal】 Management capacity of operation and maintenance of water supply facilities is improved in Sharkiya, Gharbia and Minufia Governorates	PIs in the fields of management capacity of operation and maintenance are improved in Sharkiya, Gharbia, and Minufia Governorates	Quarterly reports of SHAPWASCO, GHAPWASCO, MCWW	Central and local government budget for development of water supply facilities is allocated appropriately
【Project Purpose】 Management capacity of operation and maintenance of water supply facilities is improved at the model areas/facilities in Sharkiya, Gharbia and Minufia Governorates	PIs (*1) in the fields of management capacity of operation and maintenance are improved at the model areas/facilities	Quarterly reports of SHAPWASCO, GHAPWASCO, MCWW	~~Governmental policy on water supply sector does not change significantly~~
【Output】 1) Human Resource Development through collaboration among water supply companies in Sharkiya, Gharbia and Minufia Governorates in strengthened	a. More than 3 members each of SOP/NRW teams in SHAPWASCO・GHAPWASCO・MCWW are approved as trainers by Steering Committee b. More than 20 times of seminars/workshops are organized under inter-company cooperation by the Project team	a. Certification of Training b. Reports of workshops	Employees who received trainings by the Project will continuously work for SHAPWASCO, GHAPWASCO, MCWW Personnel transfer of executive management will not affect the implementation of the Project
2) Based on the experiences of SHAPWSCO, SOPs are developed and utilized at the model facilities in Gharbia and Minufia Governorates	a. More than 80% of SOP team members rates understanding of trainings more than 3 on the 5-scale evaluation b. The model facilities are operated and maintained based on SOP c. Improvement of PIs(*1) for the model facilities are evaluated based on SOP	a, b, c. Project Progress Reports	
3) The institutional skills and experiences of SHAPWASCO for NRW reduction are transferred to NRW teams at the model areas in Gharbia and Minufia Governorates	a. More than 80% of NRW teams members rates understanding of trainings more than 3 on the 5-scale evaluation b. Water balance analysis is conducted properly for the 3 model areas c. 100% of detected leakage is repaired at the model area	a, b, c. Project Progress Reports	
4) The water distribution management capacity is improved in Sharkiya Governorate as an advanced model	a. Water distribution is managed based on SOP at the model areas b. Issues on water distribution capacity are reported to top management of SHAPWASCO	a, b. Project Progress Reports	
0) The project is managed and coordinated properly	a. Agreement on the coordination among SHAPWASCO・GHAPWASCO・MCWW is prepared b. Project activities are regularly monitored based on PO/APO	a. Agreement Document b. Project Progress Reports	

*1 PIs

SOP: a. Energy consumption per m^3 of water production (kWh/m^3) b. Unit consumption of alum sulfate/ chlorine / potassium permanganate used per m^3 of water production (g/m^3)
c. Ratio of effective utilization of raw water (%)

NRW: a. NRW ratio (%) b. Reduction ratio of NRW (%)

WDM: a. Number of complaints per 1000 connections on water suspension and low pressure b. Ratio of low service pressure (%)

ANNEX 7. Project Design Matrix (PDM2)

Activities		Inputs	Important Assumption
1-1	Conduct management training for the top management	**Japanese side** 1) Japanese Experts ・Chief advisor/water supply planning ・NRW reduction management ・Leakage detection ・Water Treatment ・Water quality ・Electrical equipment ・Mechanical equipment ・Distribution network ・Others (if necessary) 2) Local Expert 3) Equipment 4) Training in Japan 5) Local Cost **Egyptian side** 1) Counterpart Personnel ・Project Director: Chairman, HCWW ・Project Manager: Chairman, SHAPWASCO ・Co-Project Manager: Chairman, GHAPWASCO Chairman, MCWW ・SOP Team ・NRW Team 2) Office space and facilities for the experts 3) Equipment 4) Necessary Information 5) Local Cost	Budget for the Project is allocated as planed by HCWW, SHAPWASCO, GHAPWASCO, and MCWW 【Pre-condition】 Budget for HRD is allocated properly to SHAPWASCO, GHAPWASCO and MCWW by HCWW
1-2	Conduct Training of Trainers (TOT) for developing SOP		
1-3	Conduct TOT for NRW reduction		
1-4	Disseminate the contents, the manners and the results of the collaboration among SHAPWASCO, GHAPWASCO and MCWW to the water supply companies in Nile Delta Area through reports and workshops		
2-1	Survey the current conditions of water supply facilities in Gharbia and Minufia Governorates		
2-2	Select 3 model facilities in Gharbia and Minufia Governorates each		
2-3	Organize SOP teams		
2-4	Conduct training for developing and applying SOPs at the facilities of Sharkiya Governorate		
2-5	Revise SOPs of Sharkiya Governorate, if necessary		
2-6	Develop SOPs for model facilities in Gharbia and Minufia Governorates based on SOPs for SHAPWASCO		
2-7	Conduct On-the-Job Training for GHAPWASCO and MCWW to apply SOPs in operation and maintenance		
2-8	Monitor the progress of SOP activities		
2-9	Draft the policy/plan for disseminating SOP to the other Marakazes		
3-1	Analyze the current situation on NRW in Gharbia and Minufia Governorates		
3-2	Select 3 model areas for NRW reduction in Gharbia and Minufia Governorates each		
3-3	Organize NRW reduction teams		
3-4	Formulate an action plan for NRW reduction activities based on the action plan for SHAPWASCO		
3-5	Conduct training on general practice of NRW reduction		
3-6	Conduct training at the training yard in Sharkiya Governorate		
3-7	Conduct training at model areas for water distribution management in Sharkiya Governorate		
3-8	Prepare GIS drawing for model areas in Gharbia and Minufia Governorates		
3-9	Make water balance analysis at model areas		
3-10	Conduct leakage detection survey at model areas		
3-11	Make water balance analysis after repair works		
3-12	Draft policy/plan for disseminating NRW reduction activities to the other Marakazes		
4-1	Discuss methods and conduct survey for water distribution management		
4-2	Conduct training for water distribution management		
4-3	Formulate a plan for water distribution management		
4-4	Install the equipment for water distribution management at the model area		
4-5	Operate the system		
4-6	Develop SOP for water distribution management		
4-7	Evaluate the operation and SOP for water distribution management		
0-1	Establish Steering Committee, consisting of representative of HCWW, SHAPWASCO, GHAPWASCO and MCWW		
0-2	Discuss the contents, the manners for the cooperation among SHAPWASCO, GHAPWASCO and MCWW through the Steering Committee		
0-3	Organize JCC at least once a year		
0-4	Finalize the Indicators of the Project Design Matrix (PDM) for approval of the first Joint Coordination Committee (JCC)		
0-5	Prepare a draft Annual Plan of Operations (APO) based on the Plan of Operations (PO) for approval of the first JCC		
0-6	Monitor the progress of PO/APO and achievement of the Indicators of the PDM		

ANNEX 8. Plan of Operation (PO-2)

The Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area

Plan of Operation (PO-2)

26 November 2012

Items		Year1				Year2				Year3				Person in Charge	Major Input		Remarks
		1	2	3	4	1	2	3	4	1	2	3	4		Japan	Egypt	
1. Human Resource Development through collaboration among water supply companies in Sharkiya, Gharbia and Minufia Governorates in strengthened																	
1-1.	Conduct management training for the top management			☆										HC, SH, G,M	☆ Training in Japan		
1-2.	Conduct Training of Trainers (TOT) for developing SOP			☆										SH, G,M	JICA Experts Local Exerts ☆ Training in Japan		Year 1: Mainly for SH Year 3: Mainly for G, M
1-3.	Conduct TOT for NRW reduction			☆										SH, G,M	JICA Experts Local Experts ☆ Training in Japan		
1-4.	Disseminate the contents, the manners and the results of the collaboration among SHAPWASCO, GHAPWASCO and MCWW to the water supply companies in Nile Delta Area through reports and workshops													HC, SH, G,M	JICA Experts		
2. Based on the experiences of SHAPWASCO, SOPs are development and utilized at the model facilities in Gharbia and Minufia Governorates																	
2-1.	Survey the current conditions of water supply facilities in Gharbia and Minufia Governorates													G,M	JICA Experts	SH	
2-2.	Select 3 model facilities in Gharbia and Minufia Governorates each													G,M	JICA Experts	SH	
2-3.	Organize SOP teams													G,M	JICA Experts	SH	
2-4.	Conduct training for developing and applying SOPs at the facilities of Sharkiya Governorate													G,M	JICA Experts	SH	
2-5.	Revise SOPs of Sharkiya Governorate, if necessary													G,M	JICA Experts	SH	
2-6.	Develop SOPs for model facilities in Gharbia and Minufia Governorates based on SOPs for SHAPWASCO													G,M	JICA Experts	SH	
2-7.	Conduct On-the-Job Training for GHAPWASCO and MCWW to apply SOPs in operation and maintenance													G,M	JICA Experts	SH	
2-8.	Monitor the progress of SOP activities													G,M	JICA Experts	SH	
2-9.	Draft the policy/plan for disseminating SOP to the other Marakazes													G,M	JICA Experts	SH	
3. The institutional skills and experiences of SHAPWASCO for NRW reduction are transferred to NRW teams at the model areas in Gharbia and Minufia Governorates																	
3-1.	Analyze the current situation on NRW in Gharbia and Minufia Governorates													G,M	JICA Experts	SH	
3-2.	Select 3 model areas in Gharbia and Minufia Governorates each													G,M	JICA Experts	SH	
3-3.	Organize NRW reduction teams													G,M	JICA Experts	SH	
3-4.	Formulate an action plan for NRW reduction activities based on the action plan for SHAPWASCO													G,M	JICA Experts	SH	
3-5.	Conduct training on general practice of NRW reduction													G,M	JICA Experts	SH	
3-6.	Conduct training at the training yard in Sharkiya Governorate													G,M	JICA Experts ☆ Training in Japan	SH	
3-7.	Conduct training at model areas for water distribution management in Sharkiya Governorate													G,M	JICA Experts	SH	
3-8.	Prepare GIS drawing for model areas in Gharbia and Minufia Governorates													G,M	JICA Experts	SH	
3-9.	Make water balance analysis at model areas													G,M	JICA Experts	SH	
3-10.	Conduct leakage detection survey at model areas													G,M	JICA Experts	SH	
3-11.	Make water balance analysis after repair works													G,M	JICA Experts	SH	
3-12.	Draft policy/plan for disseminating NRW reduction activities to the other Marakazes													G,M	JICA Experts	SH	
4. The water distribution management capacity is improved in Sharkiya governorate as an advanced model																	
4-1.	Discuss methods and conduct survey for water distribution management													SH	JICA Experts		
4-2.	Conduct training for water distribution management							☆						SH	JICA Experts ☆ Training in Japan		
4-3.	Formulate a plan for water distribution management													SH	JICA Experts		
4-4.	Install the equipment for water distribution management at the model area													SH	JICA Experts		
4-5.	Operate the system													SH	JICA Experts		
4-6.	Develop SOP for water distribution management													SH	JICA Experts		
4-7.	Evaluate the operation and SOP for water distribution management													SH	JICA Experts		
0. The project is managed and coordinated properly																	
0-1.	Establish Steering Committee, consisting of representative of HCWW, SHAPWASCO, GHAPWASCO and MCWW													HC, SH, G, M	JICA Experts		
0-2.	Coordinate among SHAPWASCO, GHAPWASCO and MCWW through the Steering Committee													HC, SH, G, M	JICA Experts		
0-3.	Organize the Joint Coordination Committee (JCC) meeting at least once a year													HC, SH, G, M	JICA Experts		
0-4.	Finalize the Indicators of the Project Design Matrix (PDM) for approval of the first JCC													HC, SH, G, M	JICA Experts		
0-5.	Draft Annual Plan of Operations (APO) based on the Plan of Operations (PO) for approval of the JCC													HC, SH, G, M	JICA Experts		
0-6.	Monitor the progress of PO/APO and achievement of the Indicators of the PDM													HC, SH, G, M	JICA Experts		● Mid-Term Review ▲ Final Evaluation

Annex 9. Evaluation Grid (Results of the Evaluation)

Mid-term Review of the "Project for Improvement of Management Capacity of Operation and Maintenance for Water Supply Facilities in Nile Delta Area"

November 26, 2012

Evaluation Criteria	Evaluation Questions		Results
	Main Questions	Sub Questions	
Relevance	1. Relevance with the Government policy of Egypt	1-1. Is the Project in line with the priority of development policies of the Government of Egypt? Overall Goal: Management capacity of operation and maintenance of water supply facilities is improved in Sharkiya, Gharbia and Minufia Governorates.	Egypt sets the improvement of potable water supply system as its priority area in the Sixth Five-Year Plan (2007/08-2011/12), the Egyptian Millennium Development Goals (MDG, 2005-2015), the National Water Resources Plan for Egypt (NWRP) (2003-2017), and the Integrated Water Resources Plan (IWRP) (2005-2020). • The Sixth Five-Year Plan sets the upgrading of water and sanitation facilities as a focus area under the goal of improving public utilities for human and social development. The strategies under the focus area include minimizing water network loss and implementing cost recovery in water projects. • The Egyptian MDG aims at increasing the access to safe drinking water to 98.5% in urban area and 80.8% in rural area by 2015. Sustaining the access rates poses a continuous challenge to Egypt, considering rapid population growth and insufficient service coverage. • NRWP sets comprehensive strategies by describing approaches to achieve an integrated water management system in water sector through four key pillars: (1) developing additional water resources; (2) increasing water use efficiency; (3) improving water quality management; and (4) ensuring institutional and financial sustainability.
	2. Relevance with the needs of beneficiaries	2-1. Is the target groups appropriately selected? Target Groups Staff of SHAPWASCO, GHAPWASCO, MCWW	SHAPWASCO, GHAPWASCO and MCWW are the tree public potable water and wastewater companies among 24 that are overseen and monitored by HCWW, and they are responsible for effective operation and maintenance of water supply facilities to provide clean and safe water in each Governorate; Sharkiya, Gharbiya and Minufia, respectively. Taking into account of the current capacity level and their mandates to provide and appropriately manage water and sanitation services, they are appropriate organizations to be selected for the Project's target groups.
		2-2. Is the Project Purpose in line with the needs of the target group? Are the needs of the target groups high? Project Purpose: Management capacity of operation and maintenance of water supply facilities is improved at the model areas/facilities in Sharkiya, Gharbia and Minufia Governorates.	SHAPWASCO, GHAPWASCO and MCWW were established as public corporations of water supply services in 2004 aiming to achieve higher level of efficiency and better service delivery. The JICA's previous technical cooperation project improved the management capacity of SHAPWASCO through developing capacity on NRW reduction, formulating SOPs, and conducting OJT on operation and maintenance of water supply facilities. In spite of the improvement in SHAPWASCO's operation and distribution of SHAPWASCO's SOPs to other companies, water and sanitation companies in the Nile Delta area have continued to face such issues as operation at a deficit, low fare receipts, and high NRW ratio. Management capacity of GHAPWASCO and MCWW to properly operate and maintain the facilities were insufficient, causing the quantity and quality of treated water to be unreliable. The above-mentioned situations have created a strong need for capacity development at these water supply companies. While SHAPWASCO has made continuous efforts to increase the impact of the previous technical cooperation projects by applying developed capacity to the rest of the Governorate, further capacity development in water distribution management (WDM) has remained as the next, important issue to be improved. These views were confirmed by the Questionnaire/Interview Surveys with C/Ps and Experts at the Mid-Term Review.

Evaluation Criteria	Evaluation Questions		Results
	Main Questions	Sub Questions	
Relevance	2. Relevance with the needs of beneficiaries	2-3. Is the Project in line with the needs of the end beneficiaries, i.e. Egyptian people living in the model areas of Sharkiya, Gharbia and Minufia Governorates?	While potable water is supplied for 24 hours, water supply quantity is often insufficient in the Gharbia and Minufia Governorates. All three companies receive many complaints, including water leakage, water outage and pipe breakage, from customers. In SHAPWASCO, GHAPWASC and MCWW, properly conducting water distribution management including the confirmation of supply water quantity, water pressure and quality is in line with the needs of the end beneficiaries. This view was verified by the Questionnaire/Interview Surveys with C/Ps and Experts.
	3. Relevance with the Japan's ODA** Policy	3-1. Is the Project in line with the Japanese Government's assistance policies for Egypt?	The Project is in line with the Japanese Government's assistance policies for Egypt because, as described below. - Japan's Country Assistance Program for Egypt sets "poverty reduction and improvement of living standard" as one of the three assistance program goals, aiming for the transformation of Egypt into a competitive and stable economy and society. - One of the three priority sector goals is "enhancement and improvement of public services," which includes water supply and sewage development. - Japan's Country Assistance Program for Egypt discusses the need for extension and development of water supply in the Nile Delta area.
	4. Comparative empirical and technological advantage of Japan's cooperation	4-1. Does Japan have technological and empirical advantages in operation and maintenance of water supply facilities?	JICA has supported the potable water sector in many countries including Egypt. In Egypt, JICA undertook the Project for Water Supply Development in Northwestern Part of Sharkiya Governorate (2003-2007, Grant Aid) and the Project for Upgrading of El Mahala El Kobra Water Treatment Plant (2006-2009, Grant Aid). In 2006–2009, JICA implemented the Project for Improvement of Management Capacity of Operation and Maintenance for Sharkiya Potable Water and Sanitation Company (Technical Cooperation Project), which entailed the formulation of SOPs for facilities and implementation of a program for addressing NRW. The approach of capacity development in O&M using SOP was proved effective and HCWW developed a plan to transfer the successful practices and lessons learned accumulated in the previous technical cooperation project throughout the Nile Delta area. In addition to diverse experiences of assisting Egypt in the water sector, Japan has technological and empirical advantages in O&M of water supply facilities based on SOP, management of water quality, leakage detection technology and so forth. This view was also endorsed by the Questionnaire/Interview Surveys with C/Ps and Experts at the Mid-Term Review.
Effectiveness	1. Achievement of the Project Purpose Project Purpose: Management capacity of operation and maintenance of water supply facilities is improved at the model areas/facilities in Sharkiya, Gharbia and Minufia Governorates.	1-1. To what degree, is the Project Purpose's Objectively Verifiable Indicator (OVI) being achieved? OVI: (a) PIs in the fields of management capacity of operation and maintenance are improved at the model areas/facilities.	At the time of the Mid-Term Review, concrete PIs have not been set as OVIs to measure the degree of achievement of the Project Purpose. C/Ps and Experts now continue discussions about the matter with surveys of the current situations and collection of the measurement data to set a baseline regarding which PIs should be set as OVIs and which figures should be set as target for the defined PIs. Since PIs for this OVI have not been determined yet, quantitative data is not available for this OVI.* *: Concrete items of PIs were discussed and agreed upon at the third Joint Coordinating Committee (JCC) meeting organized on November 26, 2012. The defined PIs were included on the revised PDM (PDM$_2$, ANNEX 8) and will be measured and monitored in the remaining period of the Project.

Evaluation Criteria	Evaluation Questions		Results
	Main Questions	Sub Questions	
Effectiveness	1. Achievement of the Project Purpose	1-2. What is the prospect of achieving the Project Purpose?	From the viewpoint of the degree of achievement of the defined OVI on the PDM, it is difficult to foresee the prospect of the achievement of the Project Purpose, as described above. However, it is evaluated that the overall management capacity to operate and maintain water supply facilities has improved at SHAPWASCO, GHAPWASCO and MCWW, considering the current levels and prospects of achievement of the defined four Outputs described below. According to the Questionnaire/Interview Surveys, most of C/Ps and Experts show strong confidence in the achievement of the Project Purpose by the end of the Project period. It is required that all the Project activities be properly implemented in the rest of the Project period, particularly in Outputs 4 (WDM capacity development), and OVIs for the achievement of the Project Purpose be properly monitored and encouraged to be improved.
		1-3. To what degree, is the achievement of the Project Purpose attributable to the successful achievement of the Outputs?	The four Outputs cover all the focused areas for the capacity development of SHAPWASCO, GHAPWASCO and MCWW for O&M of water supply facilities. It is evaluated that the achievements of the Outputs are strongly linked to the achievements of the Project Purpose, since the OVIs for the Project Purpose (improvement of PIs in the model areas/facilities) cannot be achieved without achieving all the 4 Outputs.
		1-4. Has (Will) the Important Assumption for achieving the Project Purpose been fulfilled? Important Assumption: • Governmental policy on water supply sector does not change significantly.	No critical information to indicate the significant change of government policy on water supply sector has been reported until the time of the Mid-Term Review. In September 2012, the new Egyptian Government established the Ministry of Water Resources and Wastewater Utilities, which indicates a continuous commitment of the central government to solve and improve the issues in the potable water sector.
	2. Factors that contributed to the achievement of the Project Purpose (Achievement Levels of the Outputs)	2-1. To what degree, is Human Resource Development strengthened through collaboration among water supply companies in Sharkiya, Gharbia and Minufia Governorates? (Achievement level of Output 1) OVIs 1a. More than 3 members of each SOP/NRW team in SHAPWASCO, GHAPWASCO, MCWW are approved as trainers by Steering Committee. 1b. More than 20 times of seminars/workshops are organized under inter-company cooperation by the Project team.	The achievement levels of the Output 1's OVIs confirmed by the Mid-Term Review are as follows: 1a. Prospective trainers were selected from C/Ps and have commenced SOP or NRW training. The number of prospective trainers in each organization is as follows; SHAPWASCO: SOP trainers 5, NRW trainers 4 GHAPWASCO: SOP trainers 5, NRW trainers 3 MCWW: SOP trainers 7, NRW trainers 6 The prospect of the selected trainers to be approved by Steering Committee is high since they have become capable of effectively facilitating training. 1b. The total of 13 seminars/workshops was organized by the time of the Mid-Term Review. Seminars and workshops have been successfully carried out mostly as planned. TOT trained 18 SHAPWASCO staff members in conducting lecture and/or OJT on SOP, NRW, and WDM activities. Based on the achievement levels of the above-mentioned indicators and progress in activity implementation, Output 1 has a good prospect of being achieved by the end of the Project. According to the Questionnaire/Interview Surveys, most of C/Ps and Experts are confident that Output 1 will be achieved by the end of the Project period.

Evaluation Criteria	Evaluation Questions		Results
	Main Questions	Sub Questions	
Effectiveness	2. Factors that contributed to the achievement of the Project Purpose (Achievement Levels of the Outputs)	2-2. To what degree, are Standard Operational Procedures (SOPs) being developed and utilized based on the experiences of SHAPWASCO at the model facilities in Gharbia and Minufia Governorates? (Achievement level of Output 2) OVIs 2a. More than 80% of SOP team members rates understanding of trainings more than 3 on the 5-scale evaluation. 2b. The model facilities are operated and maintained based on SOP. 2c. Improvement of PIs for the model facilities are evaluated based on SOP.	The achievement levels of the Output 2's OVIs confirmed by the Mid-Term Review are as follows: 2a. A site tour of SHAPWASCO and 3 mini-seminar sessions on SOP and monitoring of well stations were conducted for GHAPWASCO and MCWW members as of December 2011. Since the rating criteria of training comprehension have yet to be defined, it is unclear to what extent the OVI will be achieved. 2b. The model facilities have been selected both in GHAPWASCO and MCWW. Both GHAPWASCO and MCWW have prepared the draft SOP for water treatment plants (WTP) as well as Iron/manganese removal plants (IMRP) and started trial operations at the model facilities based on the draft SOP. OJT on improvement of operation has been carried out as well. C/Ps have been collecting basic data from water level observations on well stations and planning to develop SOP on well stations since November 2012. In a meantime, GHAPWASCO and MCWW have been rehabilitating facilities and installing flow meters for SOP activities. In general, SOP activities are evaluated to be carried out as mostly planned. 2c. C/Ps and Expert are surveying the current situations and collecting measurement data to set a baseline at the time of the Mid-Term Review. Since PIs for this OVI have not been determined yet, the prospect of achieving the OVI is unclear. While there are some delays, the overall SOP activities including rehabilitating water supply facilities and installing flow meters have made a significant progress by the Project. In particular, GHAPWASCO and MCWW started trial operations based on the drafted SOP, and it is expected that the SOPs will be further modified for the improvement of O&M. Questionnaire/Interview Surveys show that most C/Ps and Experts think that Output 2 will be achieved by the end of the Project period.
		2-3. To what degree, are the institutional skills and experiences of SHAPWASCO for Non-Revenue Water (NRW) reduction being transferred to NRW teams at the model areas in Gharbia and Minufia Governorates? (Achievement level of Output 3) OVIs: 3a. More than 80% of NRW team members rates understanding of trainings more than 3 on the 5-scale evaluation. 3b. Water balance analysis is conducted properly for the 3 model areas. 3c. 100% of detected leakage is repaired at the model area.	The achievement levels of the Output 3's OVIs confirmed by the Mid-Term Review are as follows: 3a. NRW training including issues of leak detection and leakage management was conducted by SHAPWASCO trainers in October 2011. SHAPWASCO's trainers shared their experiences in several mini-seminars and internal workshops for GHAPWASCO and MCWW. Since the rating criteria of training comprehension have yet to be defined, it is unclear to what extent the OVI will be achieved. 3b. After the preparations of GIS drawing on pipe information of model areas, the Project team completed the first minimum night flow (MNF) survey of the 3 model areas in GHAPWASCO (9 pilot areas in total) and MCWW (7 pilot areas in total). The Project team conducted the water balance analysis in 2 model areas of GHAPWASCO and 1 model area of MCWW in October 2012. MCWW's survey is delayed due to the unavailability of NRW team members. 3c. At the time of the Mid-Term Review, leak detection training is being carried out at a location in a model area of GHAPWASCO. The leakage detection training was originally intended to be conducted at the training yard of SHAPWASCO; however, the yard could not be used for the training due to the failure of the training yard, resulting in the delay of training implementation. To what extent (what percentage) detected leakage is repaired at the model areas are unknown at this time.

Evaluation Criteria	Evaluation Questions		Results
	Main Questions	Sub Questions	
Effectiveness	2. Factors that contributed to the achievement of the Project Purpose (Achievement Levels of the Outputs)	2-4. To what degree, are the institutional skills and experiences of SHAPWASCO for Non-Revenue Water (NRW) reduction being transferred to NRW teams at the model areas in Gharbia and Minufia Governorates? (Achievement level of Output 3)	Despite some delays with leak detection training, the institutional skills and experiences of SHAPWASCO for NRW reduction are steadily being transferred to GHAPWASCO and MCWW. The capacity of GHAPWASCO's and MCWW's NRW team members to conduct water flow survey and water balance analysis has been greatly improved. While NRW members have become able to conduct various surveys which can be utilized for leak detection, they need to further increase their leak detection techniques and skills to take necessary actions and preventative measures. While the OVI 3a needs to be clarified, if the technical transfer will continue to be implemented in the rest of the Project period, Output 3 has a good prospect of being achieved. According to the Questionnaire/Interview Surveys, most C/Ps and Experts think that Output 3 will be achieved by the end of the Project period. Water balance analysis and leakage detection survey are scheduled to be conducted in the remaining period, which would contribute to increasing the level of the achievement of Output 3.
		2-5. To what degree, is the water distribution management capacity being improved in Sharkiya Governorate as an advanced model? (Achievement level of Output 4) OVIs: 4a. Water distribution is managed based on SOP at the model areas. 4b. Issues on water distribution capacity are reported to top management of SHAPWASCO.	The achievement levels of the Output 4's OVIs confirmed by the Mid-Term Review are as follows: 4a. The priority areas and pilot areas were selected by the Project team based on such information as number of customers, number of customers' complaints, and water supply conditions. Establishment of District Meter Area (DMA) was completed in the priority areas. The specifications of procured equipment, quantities, and locations of installation were finalized in July 2012 between the Project team and JICA. The process of determining the details of procured equipment required a longer time than planned, resulting in the delay of equipment installation. The Project team has been conducting preparation works for the installation of flow-meters including the construction of chambers and monitoring room. In parallel, JICA is taking procurement procedures of equipment (flow-meters). SOP for WDM has not yet been drafted as at the time of the Mid-Term Review. 4b. C/Ps including top management have been trained on the importance of open dialogue among staff. Their awareness on reporting issues concerning water distribution have been developed. At the time of the Mid-Term Review, it is unclear to what extent issues on water distribution capacity are actually reported to top management of SHAPWASCO. Since the importance of reporting is gradually being known among C/Ps, the OVI has a good prospect of being achieved by the end of the Project. In a meantime, it might be necessary to consider more specific criteria of this OVI such as reporting frequency and structure. The Project has required a longer time for reviewing a variety of WDM methods including the consideration of appropriate equipment than that defined on the original Plan of Operations (PO), which caused 5-6 months delay of overall WDM activities. Despite the delay, the Project has been conducting hydraulic survey entailing the collection of the measurement data on water quantity, water pressure and quality of water as well as recording them in periodical reports. According to the Questionnaire/Interview Surveys, most C/Ps and Experts are confident that Output 4 will be achieved by the end of the Project period.

Evaluation Criteria	Evaluation Questions		Results
	Main Questions	Sub Questions	
Effectiveness	2. Factors that contributed to the achievement of the Project Purpose (Achievement Levels of the Outputs)	2-6. To what degree, is the project being managed and coordinated properly? (Achievement level of Output 0) OVIs: 0a. Agreement on the coordination among SHAPWASCO, GHAPWASCO, MCWW is prepared. 0b. Project activities are regularly monitored based on PO/APO***.	The achievement levels of the Output 0's OVIs confirmed by the Mid-Term Review are as follows: 0a. SHAPWASCO, GHAPWASCO and MCWW agreed on inter-company cooperation and established the Steering Committee, which regularly monitors the Project implementation and discusses any emerging issues regarding the Project implementation. 0b. Steering Committee meetings as well as Project Team meetings with C/Ps and the Experts have been frequently held to monitor the Project progress. The PO (Annex 5) and APO (ANNEX 6) were modified by the 4th Steering Committee in July 2012. According to the Questionnaire/Interview Surveys, C/Ps and Experts show high satisfaction toward the Project's implementation process including the Project management and coordination. In general, project management has been conducted properly with cooperation among HCWW, SHAPWASCO, GHAPWASCO, MCWW and Experts.
		2-7. Are there any other factors that contributed to the achievement of the Project Purpose?	The following conditions developed during the Project seem to be contributing to the achievement of the Project Purpose, which were confirmed by the Questionnaire/Interviews at the Mid-Term Review: • Capacity development of C/Ps in the Project is being effectively implemented by utilizing various resources available to cover diverse technical fields and a number of C/Ps' needs. A variety of capacity development methods were adopted appropriately: mini seminars for SOP and NRW reduction activities, On-the-Job Training (OJT), TOT, and training in Japan. • The Project team maintains a close and friendly communication and interaction among each other through Steering Committee meetings, frequent Project Team meetings and daily collaborative works. High level of mutual understanding among the Project team members as well as of enthusiasm in participating in the Project by C/Ps has been bringing about increasing to share information and discuss any issues regarding the Project implementation. • Expert Team has employed 3 Egyptian facilitators, as an input from JICA, to support information exchange between C/Ps and Experts and to offer advice on issues regarding the Project activities based on local understandings. By including both Japanese and Egyptian members in the Expert Team, the Project is able to ensure effective capacity development. • The achievements and experiences on SOP and NRW activities from the previous technical cooperation project are the good basis and foundation for the success in the Project. SHAPWASCO has continued its own efforts to disseminate successful achievement by the previous project to cover whole area of the Governorate, and according to the Chairman, SHAPWASCO now applies SOP and NRW activities in around 60-70% of its facilities all over the Governorate. Good practices and experiences in SHAPWASCO have been shared among many other water supply companies in Nile Delta Area, which brought about high expectation for the Project in GHAPWASCO and MCWW from the beginning. Capacity on SOP and NRW measures are being transferred to GHAPWASCO and MCWW by SHAPWASCO members, whose skills and knowledge are further strengthened through the Project. Workshops and OJTs facilitated by SHAPWASCO members have been well received by training participants for their practical insights and technical advice on the Project implementation. At the same time, effective communication and information sharing among the three water supply companies has been promoted under the Project, which has brought about a good balance between "collaboration and competition" among the C/Ps. Furthermore, strong sense of ownership and commitment to the Project by top leaders (Project Director and Project Managers) and all the level of C/Ps has contributed to generating the expected Outputs.

Evaluation Criteria	Evaluation Questions		Results
	Main Questions	Sub Questions	
Effectiveness	3. Factors that impeded the achievement of the Project Purpose	3-1. Are there any other factors that impeded the achievement of the Project Purpose (e.g., insufficient budgets, demonstration, etc.)?	The following aspects in relation to the water supply facilities, particularly of the selected model facilities/areas, are evaluated to be hindering factors to the achievement of the Project Purpose. (1) Original design of the facilities was often inappropriate, which was difficult to understand for both C/Ps and Experts from the viewpoint of effective facility design. The Project was obliged to spend more time on repair and replacement of inappropriate facilities in order to implement the expected capacity development for SOP formulation and its application. (2) In most cases there were no facility-related diagrams, manuals and equipment descriptions, which made the Project have to start with preparing necessary diagrams and documents from the scratch. (3) Even the minimum level of training in facility operation and maintenance was not conducted to the staff of the water supply companies during the period of one year for trial operation under the responsibility of the facility construction company.
Efficiency	1. Appropriateness of Inputs by Japan	1-1. How appropriate is the assignment of Experts in terms of the number of experts, their expertise and capabilities, and the dispatched periods and timings?	From the outset of the Project, a total of twelve Experts were assigned to the Project (May–December 2011: 29.96 M/M, January-September 2012: 19.95 M/M). According to the Questionnaire/Interview Surveys, Experts' expertise and capability were highly appropriate while the durations of their assignment period and timing of dispatch were deemed slightly inappropriate. Both C/Ps and Experts commented that they could not spend enough time with each other to fully teach/learn new technical skills, partly because the Experts' activities were temporarily suspended due to the presidential election. (ANNEX 2-1)
		1-2. How appropriate is C/P training in Japan in terms of the number of participants, training contents, and the dispatched period and its timing?	Fifteen (15) C/Ps have received training in Japan (4 C/Ps for management training, 7 C/Ps for SOP and NRW reduction training, and 4 C/Ps for WDM training) (ANNEX 2-4). Most of C/Ps trained in Japan have actively participated in the Project activities and functioned as core members for leading the Project.
		1-3. How appropriate is the provision of equipment by the Japanese side in terms of its quality, quantity and timing?	Overall, it is evaluated that appropriate inputs of equipment are being efficiently converted to generate expected Outputs. However, there were some delays in installations of equipment for WDM activities due to the different views on equipment selection between the Egyptian and Japanese sides. Equipment for WDM activities (e.g., telemetering flow meters, pressure gauges with telemetering, etc.) and chambers that can be utilized for operating a real-time monitoring system are to be soon procured and installed by the Project. Responsibilities regarding inputs by the Egyptian and Japanese sides in WDM activities were clearly defined and confirmed by the both sides as agreed in the M/M dated on 5 July 2012. (ANNEX 2-3)
	2. Appropriateness of Inputs by Egypt	2-1. How appropriate is the assignment of C/Ps in terms of the number, placement (i.e., balance between their regular tasks and Project activities) ownership and level of participation?	A total of 47 staff members were assigned as C/Ps from HCWW, SHAPWASCO, GHAPWASCO and MCWW. (ANNEX 2-6)

	Management	SOP Team	NRW Team	WDM Team	Total*
HCWW	2	-	-	-	2
SHAPWASCO	1	9	7	5	22
GHAPWASCO	1	7	3	-	11
MCWW	2	6	6	-	14

*Some staff members are assigned in more than one field; therefore, the total number of C/Ps differs from the added number of C/Ps from each field.

Evaluation Criteria	Evaluation Questions		Results
	Main Questions	Sub Questions	
Efficiency	2. Appropriateness of Inputs by Egypt	2-2. How appropriate is the provision of facilities and equipment by the Egyptian side?	The rehabilitation of facilities for SOP activities and the construction of chambers for flow meters in GHAPWASCO and MCWW were completed with the estimated total amount of LE 1.61 million. The construction of chambers for WDM machinery and of the central monitoring room for WDM, amounting to the estimated LE 1.22 million, are underway at the time of the Mid-Term Review. Since facilities and equipment provided by the Egyptian side were selected based on discussions with and consultations by Experts, facilities and equipment are evaluated to be appropriate. (ANNEX 2-7)
		2-3. Is the Egyptian budget for the Project appropriate in scale?	The Egyptian budget allocated for the Project is evaluated to be appropriate. (ANNEX 2-7)
	3. Appropriateness of project management and implementation	3-1. Are the Joint Coordination Committee (JCC) and the Steering Committee functioning appropriately?	At the time of the Mid-Term Review, 3 JCCs (including the one on November 26, 2012) and 5 Steering Committee meetings were held to develop a mutual understanding of the Project's progress between the Egyptian and Japanese sides.
		3-2. Is an internal mechanism to communicate and share information between C/Ps and Experts, including Project Team Meeting, functioning appropriately?	Project Team Meetings have been held on a monthly basis to share the progress on SOP and NRW activities. Overall, an internal mechanism of communication and information sharing between C/Ps and Experts is functioning appropriately.
	4. Cooperation with other organizations/ projects	4-1. Is there any effective cooperation with other organizations or projects that increased the efficiency of the Project?	The Improved Water and Wastewater Services Program (IWSP) Phase 1 (2009-2012) is being funded and implemented jointly by German Development Bank (KfW), EU's Neighbourhood Investment Facility (NIF), French Development Agency (AFD), and European Investment Bank (EIB). Targeting four Governorates including Sharkiya and Gharbia, IWSP focuses on increasing organizational management of HCWW and target water supply companies, introducing a performance indicator system, and improving wastewater management. The Project and IWSP have been coordinating activities and focus of assistance to avoid overlaps of project activities and to efficiently provide inputs. Under the Project, Egyptian C/Ps carried out exchanges of information with the Water Authority of Jordan that implemented a JICA technical cooperation project on NRW reduction. C/Ps visited water supply companies in Jordan in October 2012 to learn Jordan's approaches to NRW reduction activities, especially training and licensing system for local contractors of service connection installation.
	5. Factors that increased or decreased the efficiency of the Project	5-1. Are there any other factors that increased or decreased the efficiency of the Project?	The Project has ensured smooth communication between the Egyptian and Japanese sides by employing three Egyptian facilitators, who offer advice and resolve emerging issues based on local understanding of various situations. The role of facilitators has been contributing to establish a close communication and information sharing mechanism. Difficulties in political situation and transition period to the new government between 2011 to June 2012 forced the Project to suspend some activities scheduled on the original PO and APO. However, the negative impact is evaluated to be minimal, while the Project is trying to accelerate Project activities that were forced to have some delays in the rest of the Project period.

Evaluation Criteria	Evaluation Questions		Results
	Main Questions	Sub Questions	
Impact	1. Prospects of achieving the Overall Goal Overall Goal: Management capacity of operation and maintenance of water supply facilities is improved in Sharkiya, Gharbia and Minufia Governorates.	1-1. Will the Overall Goal be achieved in 3 to 5 years after the completion of the Project? OVI: 1. PIs in the fields of management capacity of operation and maintenance are improved in Sharkiya, Gharbia, and Minufia Governorates.	Although most C/Ps and Experts express a certain level of confidence, it is difficult to foresee the potentiality and scale of expected impact of the Project at the Mid-Term Review. Even if the Project succeeds in achieving the Project Purpose by the end of the Project period, the achievement of the Overall Goal is mainly dependent upon how effectively and efficiently the internal capacity development efforts will continuously be implemented within and among the 3 companies. The Project has succeeded in developing several core technical staff of SHAPWASCO, GHAPWASCO and MCWW as trainers for other technical staff of WTPs, IMRPs and well stations in each of the three Governorates. An internal training system designed and partially implemented by the Project is expected to become a basis for further preparation and implementation of a sustainable capacity development for many technical staff in other areas (districts) of the 3 Governorates other than the model areas targeted by the Project. Taking into account of the fact that SHAPWASCO has almost successfully increased the impact of the previous technical cooperation project by disseminating the improved capacity to other areas of Sharkiya Governorate and of the ongoing achievement of the Project's Outputs, the prospect of generating a large scale of Impact by the Project is evaluated to be relatively high.
		1-2. Will the Important Assumption for achieving the Overall Goal be fulfilled? Important Assumption: • Central and local government budget for development of water supply facilities is allocated appropriately.	Although it is reported that there has been an overall reduction of government spending to all the sectors due to a recent transition of political and administrative system, there is no critical information to indicate the significant reduction in central and local government budget for development of water supply sector at the time of the Mid-Term Review. In September 2012, the new Egyptian Government established the Ministry of Water Resources and Wastewater Utilities, which indicates a continuous commitment of the central government to solve and improve the issues in the potable water sector.
	2. Other aspects	2-1. Are there any unexpected positive and negative impacts (e.g., impacts to Egypt's human resources development policies, to potable water management policies, and to the private sector)?	• The Project increased effective communication and collaboration among technical staff in different departments in each of the 3 companies. "Team working" on such issues as SOP, NRW and WDM brought a new style of effective working in each company. This may lead to promote a much effective organizational behavior and to increase both impact and sustainability of the Project. • The Project also provided C/Ps with opportunities to interact with technical staff of other water utility companies, which enabled them to understand their conditions and challenges in daily operation and management in different Governorates, and to discuss and share ideas for much effective operation and maintenance of the water utility companies. Through the Project, C/Ps increased communication and mutual understanding and developed professional network with staff of other Governorates, which was never realized before the implementation of the Project. • The Project has sensitized not only the targeted 3 companies but also other water supply companies in Nile Delta Area. Open seminars and special workshops provided opportunities for relevant stakeholders in Nile Delta Area to increase awareness and importance on SOP, NRW reduction activities as well as leak detection technique, in which experiences and knowledge on the collaboration among SHAPWASCO, GHAPWASCO and MCWW were disseminated. • With an initiative by C/Ps in GHAPWASCO, Egyptian private company in leakage detection survey business provided financial assistance for "Nile Delta Area Joint NRW Workshop" that was organized in September 2012. It is evaluated that the Project's NRW activities bears good ripple effects in increasing private companies' interests and even can bring about a larger scale of impact in terms of developing the capacity in effective operation and maintenance activities by the private sector.

Evaluation Criteria	Evaluation Questions		Results
	Main Questions	Sub Questions	
Sustainability	1. Institutional aspect	Is an institutional mechanism for promoting cooperation and collaboration among water supply companies established? (Is it going to be established?)	• Under the Project, training seminars/workshops and OJT provided technical staff in headquarters and model facilities in 3 Governorates with opportunities for promoting cooperation and collaboration and for better understanding actual situations and issues to be solved. Thus, an institutional mechanism for promoting communication and cooperation among water supply companies has been established to a certain extent until now and is expected to be further strengthened in the remaining period of the Project. • HCWW has been responsible for making effective information sharing and promoting collaboration among the water supply companies. Given the achievements by the Project, it is expected for HCWW to accelerate its initiative for establishing a concrete institutional mechanism for doing so.
	2. Organizational aspect	Is an organizational mechanism for continuous strengthening of its operational and managerial capacity being built in SHAPWASCO, GHAPWASCO and MCWW? (Will be built?)	• With an assistance of Experts, SHAPWASCO staff members are currently carrying out OJT for GHAPWASCO and MCWW to apply SOPs in O&M of model facilities as well as to take measures on NRW reduction. This begins to provide a good cycle of training implementation by use of internal resources, motivating C/Ps with their higher confidence about their knowledge and experiences, and promoting C/Ps' ownership on the Project implementation. Some C/Ps in GHAPWASCO and MCWW show strong willingness and confidence to become trainers for SOP and NRW issues inside the organization and even for dissemination of capacity to other water supply companies. • After the completion of the previous technical cooperation project, SHAPWASCO established departments specialized in SOP and NRW, and is implementing activities through each specialized department; therefore, the organizational sustainability of the previous technical cooperation project is evaluated to be high. Under the Project, GHAPWASCO and MCWW have already established informal taskforce teams specialized in SOP and NRW inside the company, and they are expected to become official ones that have members fully dedicating their time on those issues in the future. Therefore, a prospect of an organizational mechanism being built is evaluated to be relatively high.
		Will SHAPWASCO, GHAPWASCO and MCWW be able to secure a sufficient number of staff to develop their management capacity of operation and maintenance of water supply facilities after the completion of the Project? (Is there a prospect?)	Most of the C/Ps of the Project are relatively young and recently recruited. Judging from the C/Ps' commitment and enthusiasm to the Project, a good cycle of developing a sufficient number of technical staff who has capacity in effective operation and maintenance can be established as long as all the three companies recruit a certain number of technical staff every year. Although it depends on the policy and the size of the budget, it is evaluated that the prospect of securing a sufficient number of staff to develop their management capacity of operation and maintenance of water supply facilities is relatively high.
	3. Financial aspect	Will SHAPWASCO, GHAPWASCO and MCWW be able to secure sufficient budgets to develop their management capacity of operation and maintenance of water supply facilities after the completion of the Project? (Is there a prospect?)	According to the Questionnaire/Interview Surveys, some C/Ps and Experts express concern over discontinuance of a subsidy from the central government and unpromising prospect of securing budget to cover wide areas of water supply services in each Governorate. For the three water supply companies it is expected to strengthen their financial performances in order to secure budget to take continuous actions on SOP application, NRW reduction and WDM. If the Project Purpose is fully achieved, their annual financial performance are expected to gradually improve as a result of NRW reduction and improved management capacity of water facilities' O&M, which could increase their financial potential to reinvest for capacity development activities by themselves.

Evaluation Criteria	Evaluation Questions		Results
	Main Questions	Sub Questions	
Sustainability	4. Technical aspect	Are core staffs being trained sufficiently in quantity and quality for SHAPWASCO, GHAPWASCO and MCWW to effectively manage operation and maintenance of water supply facilities? Will they be able to maintain their capacity and to transfer the knowledge to others? (Will they?)	A total of 13 training seminars/workshops has been held for 41 staff members of SHAPWASCO, GHAPWASCO and MCWW. Workshops and OJTs facilitated by SHAPWASCO members have been well received by training participants for their practical insights and technical advice on the Project implementation. Since prospective trainers have started SOP or NRW training, the technical transfer system and trainers' capacity are likely to be maintained even after the Project. Formulation of specific action plans for technical transfer to the rest of the water supply facilities in three Governorates will contribute to increasing the level of sustainability since action plans will clarify actions needed to be taken to continue the effects of the Project.
		Are core staffs of SHAPWASCO, GHAPWASCO and MCWW able to maintain and upgrade or replace the equipment installed by the Project when necessary? (Will they?)	According to the Questionnaire/Interview Surveys, both C/Ps and Experts show a relatively high confidence for C/Ps to maintain and upgrade or replace the equipment installed by the Project.

Note: C/Ps include the members of the Project's working groups of Holding Company for Water and Wastewater (HCWW), Sharkiya Potable Water and Sanitary Company (SHAPWASCO), Gharbia Potable Water and Sanitary Company (GHAPWASCO), and Minufia Company for Water and Wastewater (MCWW).
**ODA: Official Development Assistance
***PO/APO: Plan of Operation/Annual Plan of Operation