9 Minutes of Meeting of Project Team Meetings in Phase-3

Minutes of Meeting for 1st Project Team Meeting for PH-3 MM-PTM3-1 [08.5.29]

Date	29th May (Thursday) 2008		
Time	10:00~11:30		Signature
Place	SHAPWASCO chairman's ro	om	
Attendants	[SHAPWASCO : C/P]		- 0
	Dr. Salah Bayoumi	: Chairman/Project Manager	8. Daysum
	Eng. Alac El Din Mohamed	: Head of UFW/HQ Team	
	[JICA Expert Team : The te	am]	
	Mr. Masahiro Takeuchi	: Team Leader	M
	Mr. Masatoshi Seno	: UFW Reduction	
	Mr. Noboru Saeki	: SOP Activity	
	Mr. Mitsuhito Omori	: Coordinator	
	Mr. Mohamed Nagi	: Facilitator	

The team and C/P confirmed the activities in Phase-3 for the Project as follows:

1. Dispatch of experts

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The team explained to C/P that the following experts will be dispatched in Phase-3 for the Project according to the attached schedule (refer to Attachment-1):

Mr. Masahiro Takeuchi: Water Supply Planning/Chief Advisor Mr. Masatoshi Seno: Unaccountable-for Water Reduction

Mr. Akihiko Okazaki: Leakage Detection Mr. Noboru Saeki: SOP Activity Mr. Keizo Kimura: SOP Activity Mr. Ashraf Ahmed: Electrical Equipment Mr. Mitsuhito Omori: Coordinator/Hydraulic Analysis Mr. Mohamed Nagi:

Facilitator Dr. Mohamed Sobhy:

Senior Engineer (UFW Activity) Mr. Mahmood Khalaf: Senior Engineer (SOP Activity)

2. Activities in Phase-3

The team and C/P confirmed UFW reduction activities and SOP activities in Phase-3 as shown in Attachment-2 and Attachment-3 respectively.

The team proposed to apply the following methodology for C/P staff to conduct their activities more independently.

For UFW reduction activity

The team will support C/P:

MM-PTM3-1(3/3)

6. 4th JCC Meeting

The team requested C/P to have 4th JCC meeting to get approval of PDM3 and PO3 in which the following points are incorporated:

- > Three (3) additional pilot project sites for UFW reduction activities
- Revision of the average UFW and leakage ratios specified as an objectively verifiable indicator in PDM2 after completion of the fourth pilot project which is now under implementation in Zagazig Markaz
- Others, if any

C/P proposed to discuss the indicator for UFW reduction activity in the next PTM and the team agreed it.

7. Training Yard for Leakage Survey

C/P stated that SHAPWASCO is planning to construct its own training yard for leakage survey by the end of June 2008 and requested the team to support it. The team agreed it.

8. Next PTM

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The team proposed to have the next PTM on 5th June 2008.

Attachment:

- 1. Dispatching schedule of Japanese and Egyptian experts
- 2. Plan of operation for UFW reduction activity
- 3. Plan of operation for SOP activity
- 4 Letter from JICA Egypt Office

(End of Agenda)

- > To hold internal workshops every two months for each team member to make presentation of the outcomes in each pilot project site. It is expected that this enable the whole UFW team members to enhance an awareness of the importance of UFW reduction activity.
- To make an implementation plan for other UFW teams than those in the pilot project sites to participate in the activity for pilot projects.
- To establish a section specializing in UFW reduction activity in SHAPWASCO.

For SOP activity

The team will support C/P:

- > To clarify outcomes from activities for improvement and work hard by competing with each other between SOP teams.
- To develop visualization (putting a system flow sheet on the wall of pump house, etc.) for improving O&M works which has already been applied in Phase-2.

3. Workshops

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The team and C/P agreed to have following workshops in Phase-3.

Internal workshop: When required

2nd open workshop: November 2008 in Zagazig 3rd open workshop: February 2009 in Cairo

The team proposed that a representative from Water Authority of Jordan (WAJ) who has a ilar experience with JICA's UFW reduction project in Jordan make a presentation in 3rd open workshop to be held in February 2009 to exchange views between Egyptian UFW team and the Jordanian counterpart.

C/P agreed to the team's proposal.

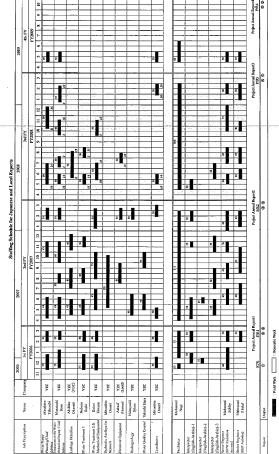
4. Approval of additional three (3) pilot project sites

The team informed C/P that JICA headquarters has agreed on adding three (3) pilot project sites for UFW reduction activities and one set of leakage survey equipment for these additional sites will be procured during Phase-3. The team handed over a letter from JICA Egypt Office for this matter (Attachment-4).

5. Training of UFW teams for additional pilot project sites

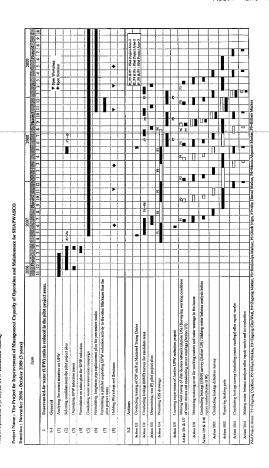
The team requested C/P to do training of nominated staff (engineers and technicians) for UFW teams of the additional three (3) pilot project areas, that is, Abu Hamad, Menia Alqamah and Bilbais Markazes. C/P stated that UFW/HQ team will do the training of the staff and prepare training program and materials by themselves and the training will be done at the middle of June.

Attachment - 1



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Attachment - 4



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JAPAN INTERNATIONAL COOPERATION AGENCY

World Trade Center - 10 th. Floor, 1191 Corniche El Nil st., Boulak., Cairo Tel.: 5748240 /41/42/44 - Fax : 5748243 P.O. Box 475 Dokki

May 15, 2008

Dr. Salah Bayoumi Chairman Sharkia Potable Water and Sanitation Company (SHAPWASCO) Ministry of Housing, Utilities, and Urban Development

Re: Approval from JICA HQs on adding 3 pilot sites as requested at JCC

Dear Sir,

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In reference to the technical cooperation "The Project for Improvement of Management Capacity of Operation and Maintenance for SHAPWASCO", I am pleased to inform you that JICA HOs has agreed on adding three (3) UFW pilot project sites in total, one each in Menia Alqamah Markaz, Bilbais Markaz, and Abu Hamad Markaz.

Then please make necessary arrangements for implementing the additional activities. Japanese experts will arrive in Zagazig on 19 May, 2008.

Sincerely Yours.

Katsuhiko OZAWA 「新編作置 Resident Representative JICA EGYPT OFFICE

هيئة التعاون الدولي اليابانية (جايكا) مركز القجارة العالمي -- الدور العاشر -- ١٩٦١ كورنيش النيل -- يولاق -- القاهرة. تليضون: ٤٤ / ٤٢ / ٢٥ / ٧٤ / ٢٤ / ٥٤ (٢٠٣) طاكس: ٩٤٣ / ٧٤ / ١٠٣) - ص.ب ٧٤٥ الدقي

Capacity of Operation and Maintenance for SHAPWASCO Name; The Project for Improvement of Ma m : Navember 2006 - October 2009 (3 years) Item

MM-PTM3-2 (1/6)

Minutes of Meeting for 2nd Project Team Meeting for PH-3 MM-PTM3-2 [08.6.12]

Date	12th June (Thursday) 2008		
Time	11:00~12:30		Signature
Place	SHAPWASCO chairman's roo	om	1
Attendants	[SHAPWASCO : C/P]		0 1-11/0
	Dr. Salah Bayoumi	: Chairman/Project Manager	s. Bayum
	Eng. Alae El Din Mohamed	: Head of UFW/HQ Team	
	Eng. Abdel Shafi Abdel Aziz	: Head of SOP/HQ Team	
	[JICA Expert Team : The te	am]	
	Mr. Masahiro Takeuchi	: Team Leader	MT.
	Mr. Masatoshi Seno	: UFW Reduction	
	Mr. Akihiko Okazaki	: Leakage Detection	
	Mr. Noboru Saeki	: SOP Activity	
	Mr. Keizo Kimura	: SOP Activity	
	Mr. Mitsuhito Omori	: Coordinator	
	Mr. Mohamed Nagi	: Facilitator	
	Dr. Mohamed Sobhy	: Senior Engineer for UFW	
	Mr. Mahmoud Khalaf	: Senior Engineer for SOP	

(1) Japanese Expert schedule

The team reported that the following Japanese expert arrived in Egypt on 31st May and 7th June 2008 respectively:

- Mr. Keizo Kimura: SOP expert
- Mr. Akihiko Okazaki: Leakage Detection
- (2) Water conservation campaign

The team reported that they started to support C/P to make analysis of collected data in the campaign which have been done from October 2007 to March 2008.

2. UFW Reduction Activity (progress of the last week and schedule for the next week from 14th to 19th June 2008)

Actions U4, U6, U7, U8, U9, U10, U11 and U12 have been conducted by the last week. The progress and the issues are summarized as follows:

Common Activity

- (1) Action U4 Preparing GIS drawings (for network)
 - > Preparation of the following GIS network drawings have been completed by the end of

May 2008.

- Zagazig East: 5 candidate sites
 Zagazig West: 5 candidate sites
- Hihya Markaz: 5 candidate sites
 Zagazig Markaz: Kafr El Hamam (Site-1) as pilot project site
- 5) Ibrahimiya Markaz: Ibrahimiya City (Site-1) as pilot project site
 6) Diarb Nigm Markaz: Diarb Nigm City (Site-1) as pilot project site
- The draft of GIS network drawing for candidate site (Site-1: Menia Alqamah City) in Menia Alqamah Markaz as one of the additional pilot project sites has been started last

Pilot Project -1: Zagazig City-East (Area-1)

> All activities have been finished by the end of February 2008.

Pilot Project -2: Hihya Markaz (Area-2)

All field activities have been finished by the end of February 2008. Water balance analysis is now under examination.

Pilot Project -3: Zagazig West (Area-3)

> All field activities have been finished by the end of February 2008. Water balance analysis is now under examination.

Pilot Project -4: Zagazig Markaz (Area-1)

- (1) Action U6 Making field survey of distribution network
 - > The detailed field survey of the conditions of pipelines and valves have been conducted according to GIS drawings.
- (2) Action U7 Surveying installation & Status conditions of water meters and conducting meter readings
 - > The survey of the installation conditions of water meters has been completed and current condition of meters is as follow.
 - 1) Total number of meters is 2103.
 - 2) Number of working meters is 1633 (78%).
 - 3) Number of replaced meters up to last week is 220 (10%).
 - 4) Number of meters inaccessible and/or to be repaired is 250 (12%).
- (3) Action U8 Measuring metering error of water meter
 - > Measuring metering error of 6 water meters has been conducted.
- (4) Action U9 Conducting leakage (MNF) survey (before repair works)
 - > MNF survey before repair has been done this week.
- (5) Action U10 Making water balance analysis before repair works

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MM-PTM3-2 (4/6)

- (1) Action S1 Preparing Basic System Drawings
 - > Activity for model well pump station at EL Aslougi has been started and preparation of basic drawings has been started.
- (2) Action S3 Measuring intake /production water volume at 7 WTPs
 - Flow meter installation works are continued. Current status is shown on Attachment-S1.
- (3) Action S4 Development of SOPs for Model Facilities
 - Major part of SOP documents for FMRP has been completed and first draft SOPs have been distributed to Kafr Farag FMRP for comment on May 28, 2008.
 - Activity for model well pump station at EL Aslougi has been started and a field survey by SOP/HQ team and expert team was conducted and discussion between teams and plant O&M team was held on Jun 1, 2008. It was confirmed that "Headlines" and "Overview" would be prepared and discussed for the next step.
- (4) Action S6 Applying the SOP in O&M
 - > Applying SOP in O&M was continued in Zagazig WTP and in Abbasa WTP.
 - First discussion on O&M was held at Kafr Farag FMRP on June 4, 2008. It was confirmed that water quality data for the various process points would be collected and analyzed and basic functions of the plant's facilities should be confirmed before entering into the detailed SOP application.
- (5) Action S10 Well Monitoring
 - Continuous measurements of groundwater level were continued at four well stations where the recorders were installed. Data entry for the record is also continued.
- 3-2. Schedule for next week

Above activities will be continued to the next week.

4. New Egyptian Potable Water Standards

The expert team kindly requested SHAPWASCO to clarify the basic policy to tackle the new Egyptian Potable Water Standards issued in October 2007 because water treatment plant, especially iron/manganese removal plants of the company generally can not fulfill the standards in the current operation conditions and it may affect to the SOP activity.

■ SHAPWASCO explained that one fiscal year (from July 2008 to June 2009) transition period has been decided to find out a new suitable technology to adjust the current situation of exceeding Fe/Mg concentration of well water stipulated in the new standards. As a first step, the construction works of six facilities (direct filtration WTP) will be completed by June 2008 as urgent priority projects.

> Continuous MNF survey and water meter reading have been finished.

- (6) Action U11 Conducting leakage detection survey
 - Leakage detection survey has been finished and total 8 places of leakage have been found at the invisible underground places.
- (7) Action U12 Repairing leakage parts
 - > Leakage parts have been repaired by SHAPWASCO.

Pilot Project -5: Ibrahimiya Markaz

- (1) Action U6 Making field survey of distribution network
 - > The detailed field survey of the conditions of pipelines and valves will conduct according to GIS drawings next week.
- (2) Action U7 Surveying installation & Status conditions of water meters and conducting meter readings
 - > The survey of the installation conditions of water meters will start next week

Pilot Project -6: Diarb Nigm Markaz

> Actions for this pilot project will be started on September, 2008.

Pilot Project -7: Abu Hamad Markaz

Pilot Project -8: Menia Alqamah Markaz

Pilot Project -9: Bilbais Markaz

Pipeline sketches for five (5) candidate sites at additional each Pilot Project Site have been provided last week and construction of chambers for flow meter will be started next week.

2-2. Schedule for next week

Actions of U4, U6, U7, U8, U9, U10, U11 and U12 will be conducted this week.

SOP Activity (progress of the last week and schedule for the next week from 14th to 19th June 2008)

3-1. Progress

Mr. Omori/Mr. Saeki, on May 17th, and Mr. Kimura, on May 31st, arrived in Zagazig and then SOP activity for Phase 3 activities have been resumed while SOP/HQ team and SOP/Facility teams of SHPWASCO conducted their activities continuously during the transition period from Phase 2.

Actions \$1, \$4, \$5 and \$10 have been conducted by the last week. The progress and the issues are summarized as follows:

MM-PTM3-2 (5/6)

5. Training Yard for Leakage Surveying

The team stated that they are now collecting necessary data for designing training yard for leakage survey. C/P stated that they will make a field survey for selecting a yard as soon as possible.

6. Terminology for UFW Reduction Activity

The team proposed that the word "UFW" should be used as it is and not replaced by the word "NRW" in this project because UFW has already been applied in many documents prepared during the project and it will cause confusion when it is changed.

C/P agreed to the team's proposal.

7. Verifiable Indicator for Output-1 in PDM2

The team proposed that some of the objectively verifiable indicators for Output-1 (UFW is reduced in the pilot project sites) in PDM2 should be modified in PDM3 as follows:

	PDM2	PDM3	Remarks
1-2	An average UFW ratio (initial) is reduced from 35% to 20% in the pilot project sites.	An average UFW ratio (initial) is reduced by xx% in the pilot project sites.	Output-1 is "UFW ratio is reduced in the pilot project sites". Therefore, it is enough to set only UFW ratio as an indicator.
1-3	An average leakage (real loss) ratio (initial) is reduced from 30% to 15% in the pilot project sites.	To be deleted.	Leakage reduction is included in the reduction of UFW ratio.

C/P agreed to the team's proposal and stated that this matter should be discussed and finalized before the coming JCC.

8. OJT of C/P Staff in South Giza Water Treatment Plant (WTP)

The team proposed that some of C/P staff in charge of operation & maintenance for WTP, booster pump station, etc. should participate in OJT to be done in South Giza WTP where some of the equipment will be replaced under JICA Follow-up Project. The OJT is expected to be done for three (3) days $(19^{th}, 22^{nd} \text{ and } 23^{rd} \text{ June})$.

 $\ensuremath{\mathsf{C/P}}$ agreed to the team's proposal and will take a necessary action for facilitating this OJT.

9. Encouragement System

- > The team proposed to SHAPWASCO to introduce and encouragement system for the C/P staff for better achievements of the project.
- SHAPWASCO agreed in principle and confirmed that they have the intention to apply the suitable encouragement system.

10. Next PTM

The team proposed to have next PTM on 21st June 2008

(End of agenda)

MM-PTM3-3 (2/6)

Common Activity

- (1) Action U4 Preparing GIS drawings (for network)
 - > Preparation of the following GIS network drawings have been completed by the end of May 2008.

1) Zagazig East:

5 candidate sites

2) Zagazig West:

5 candidate sites

3) Hihya Markaz:

5 candidate sites

4) Zagazig Markaz:

Kafr El Hamam (Site-1) as pilot project site

5) Ibrahimiya Markaz:

Ibrahimiya City (Site-1) as pilot project site

6) Diarb Nigm Markaz: Diarb Nigm City (Site-1) as pilot project site

> The draft of GIS network drawing for candidate site (Site-1: Menia Alqamah City) in Menia Alqamah Markaz as one of the additional pilot project sites has been completed.

Pilot Project -1: Zagazig City-East (Site-1)

> All activities have been finished by the end of February 2008.

Pilot Project -2: Hihya Markaz (Site-2)

> All field activities have been finished by the end of February 2008. Water balance analysis is now under examination.

Pilot Project -3: Zagazig West (Site-3)

> All field activities have been finished by the end of February 2008. Water balance analysis is now under examination.

Pilot Project -4: Zagazig Markaz (Site-1)

- (1) Action U6 Making field survey of distribution network
 - > The detailed field survey of the conditions of pipelines and valves based on GIS drawings have been completed.
- (2) Action U7 Surveying installation & Status conditions of water meters and conducting meter readings
 - > The survey of the installation conditions of water meters has been completed and current condition of meters is as follow.
 - 1) Total number of meters is 2,103.
 - 2) Number of working meters is 1.633.
 - 3) Number of replaced meters up to last week is 240.
 - 4) Number of meters inaccessible and/or to be repaired is 230.
- (3) Action U8 Measuring metering error of water meter
 - > Measuring metering error of 11 water meters has been conducted

Minutes of Meeting for 3rd Project Team Meeting for PH-3 MM-PTM3-3 [08.6.28]

Date	28th June (Sat) 2008		
Time	11:00~13:30		S:gnature
Place	SHAPWASCO chairman's	room	
Attendants	Eng. Abdel Shafi Abdel Az Eng. Gamal Abd El Hames	: Chairman/Project Manager d : Head of UPWHQ Team tz: -: Head of SOP/HQ Team dd Morsi : SOP/HQ Team (Well Monitoring) ted : SOP/HQ Team (Water Quality Control)	s.Bayoum
	[JICA Expert Team: The Mr. Masahiro Takeuchi Mr. Akihiko Okazaki Mr. Keizo Kimura Mr. Mohamed Nagi Dr. Mohamed Sobhy Mr. Mahmoud Khalaf	: team] : Team Leader : Leakage Detection : SOP Activity : Facilitator : Senior Engineer for UFW : Senior Engineer for SOP	M

1. General

(1) Japanese Expert schedule

The team reported that the following Japanese experts left Egypt on 13th June 2008:

- Mr. Masatoshi Seno: UFW Reduction Expert

- Mr. Noboru Saeki: SOP expert

- Mr. Mitsuhito Omori: Coordinator

(2) Water conservation campaign

C/P has been proceeding data entry in excel format for analyzing the results of pre-questionnaire and post-questionnaire which have been done in five (5) schools from October 2007 to March 2008.

C/P stated that they will make a presentation for this campaign at 4^{th} JCC to be held on 9^{th} July 2008.

2. UFW Reduction Activity (progress to the last week and schedule for the next week from 28th to 3rd July 2008)

2-1. Progress

Actions U4, U6, U7, U8, U9, U10, U11 and U12 have been conducted by the last week The progress and the issues are summarized as follows:

MM-PTM3-3 (3/6)

- (4) Action U9 Conducting leakage (MNF) survey (before repair works)
 - > MNF survey before repair has been finished.
- (5) Action U10 Making water balance analysis before repair works
- > Continuous MNF survey and water meter reading have been finished.
- (6) Action U11 Conducting leakage detection survey
 - > Leakage detection survey has been finished and total 8 spots of invisible leakage have been found.
- (7) Action U12 Repairing leakage parts
 - Leakage parts have been already repaired by SHAPWASCO.

Pilot Project -5: Ibrahimiya Markaz

- (1) Action U6 Making field survey of distribution network
 - > The detailed field survey of the conditions of pipelines and valves will be conducted according to GIS drawings next week.
- (2) Action U7 Surveying installation & Status conditions of water meters and conducting meter readings
 - > The survey of the installation conditions of water meters was conducted last week. The results are as follows:

1) Total number of meters:

1.120

2) Number of working meters: 3) Number of non-working meters: 919 88

4) Number of meters inaccessible:

90

5) Number of meters which can not be read because water is attached to the inside the meter glass:

Pilot Project -6: Diarb Nigm Markaz > Actions for this pilot project will be started on September, 2008.

Pilot Project -7: Abu Hamad Markaz

Pilot Project -8: Menia Alqamah Markaz

Pilot Project -9: Bilbais Markaz

- > Pipeline sketches for five (5) candidate sites at additional each Pilot Project Site have been provided by each Markaz's branch office.
- C/P stated that they have already allocated the budget for the yard so that the construction works can be started.

2-2. Schedule for next week

Actions of U4, U6, U7, U8, U9, U10, U11 and U12 will be conducted this week.

3. SOP Activity (progress of the last week and schedule for the next week from 28^{th} to 3^{rd} July 2008)

Actions S1, S4, S5 and S10 have been conducted by the last week. The progress and the issues are summarized as follows:

- (1) Action S1 Preparing Basic System Drawings
 - > Activity for model well pump station at El Aslougi has been completed.

(2) Action S3 Measuring intake /production water volume at 7 WTPs

- Flow meter installation works are continued. Current status is shown on Attachment-1.
- The team requested C/P to finalize the installation works for the remaining flow meters by end of June 2008. Also, the team requested the C/P to keep continuous recording of the installed flow meters.
- C/P proposed to shift the flow meter at New Zagazig WTP (Branch 1) to Kafr Farag Fe/Mn Removal Plant because of the difficulty of constructing flow meter chamber in front of Zagazig WTP to avoid the existing main electric cables from Zagazig Power Station.
- The team requested the C/P to examine the situation of the selected site before taking decision to shift the flow meter to Kafr Farag Fe/Mn.

(3) Action S4 Development of SOPs for Model Facilities

[Preparation of New SOP]

- Major part of SOP documents for FMRP has been completed and first draft SOPs have been distributed to Kafr Farag FMRP.
- Activity for model well pump station at El Aslougi has been started and a field survey by SOP/HQ team and expert team was conducted. Discussion between teams and plant O&M team was held on 1st June 2008. It was confirmed that "Headlines" and "Overview" has been prepared and discussed.
- The team hold workshop regarding SOP activity at El Aslougi well station on 11th June 2008 in the attendance of the C/P and it has been agreed to make continuous monitoring for the distributed water in the networks for one month to confirm the concentration of Fe/Mn in the network.
- Preparation of SOP documents for booster pump station (Bilbais Booster Pump Station) has been started and is under progress.

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MM-PTM3-3 (6/6)

C/P agreed to hold 4th JCC in the following time and place.

- > Time: At 10:00a.m. on 9th July 2008
- Place: Conference Room in HCWW Headquarters at Rod El Farag WTP

6. OJT of C/P Staff in South Giza Water Treatment Plant (WTP)

OJT regarding rehabilitation of chlorination system was conducted in South Giza Water Treatment Plant on 19th June. Ten (10) C/P staff in charge of operation & maintenance for WTP participated in the OJT. OJT for alum dosing system were done at the same plant on 23rd June. These OJTs were conducted in cooperation with JICA Follow-up Project for South Giza Water Treatment Plant which has been done from 16th to 25th June 2008.

7. Next PTM

The team proposed to have next PTM on 6^{th} July 2008.

(End of Minutes)

(4) Action S6 Applying the SOP in O&M

[OJT using SOP]

- > Applying SOP in O&M was continued in Zagazig WTP and in Abbasa WTP.
- OJT was held in Abbasa WTP on 14th and 18th June 2008 regarding control of raw water quantity.
- OIT regarding filter washing including evaluation of washing process and refreshment of muddy filters has been held in Zagazig WTP on 22nd, 24th and 26th June 2008. Detail SOP for filter washing has been issued.
- The team requested C/P to take necessary actions for conducting intensified SOP activity at Kafr Farag Fe/Mn removal plant as shown in the attached letter (Attachment-2).
- SHAPWASCO agreed to take necessary actions to facilitate this activity as soon as possible and requested the expert and C/P teams to clarify necessary items for the activity through the field survey of the current situation of the plant.
- SHAPWASCO proposed to extend the same OJT for filter refresh washing to North Helwan WTP (Greater Cairo Water Company) in order that C/P can apply the obtained experience by themselves.

(5) Action S10 Well Monitoring

Continuous measurements of groundwater level were continued at four (4) well stations where the recorders were installed. Data entry for the record is also continued

3-2. Schedule for next week

Above activities will be continued to the next week.

4. Training Yard for Leakage Surveying

C/P and the team made field survey for determining the place for the training yard and selected Hihya Central Well Station as the place for the yard.

C/P prepared drawings and specifications for construction of the training yard (refer to Attachment-3 to 5).

C/P stated that the budget has already been approved allocated for the construction.

5. JCC for PDM3

The team proposed to have 4th JCC for getting approval of PDM3 and PO3 on 9th July 2008.

	1		,	:					Current Situation	Records		Start
9	race	Koute	Drimeter	Mintersal	Data Logger	Number	Note	Civil Work	Flow Meter Instalation	8	Remarks	Instalatio
Old Zagazág WTP Inside	Raw water		- 007	SP		1 GE	Plant under Rehabilisation	Waiting for complet	Walting for completion of reliabilisation works			
	Treated water		400	SP		2 GE	Plant under Rehabiliation	Will be canceled and to be shired to Rehabilitation work of Zagazig WTP	Will be conceded and to be shired to Böbis BPS. Included in Rehabilitation work of Zegazie WTP		-	
New Zagazig WTP Outside	c Berneh-1		900	ås	-	305		Location subject to	coation subject to change due to existing of main electric			
Abben Inside	Raw water-I		900	ds	2	GE-P.M.35TLE See 1077085	Existing Chamber	Repair works Completed	oombieted	19 April 2008		
	Raw water-2		800	SP	3	GB-FAI 356J E. Sers 10070631	Existing Chamber	Repair works Completed	patelduco	19 April 2008		
	Treated water-1	Zagazig	006	SP	4	6 FUII		completed	completed	15 December 2007	_	
	Treated water-2	Faqus	009	as	\$	7 FUII		completed	completed	15 December 2007	<u> </u>	
	Treated water-3	Abu Humad-1	300	å		8 GE	Location shifted to out side nard	completed	completed	26 March 2008	1	
	Treated unter-4	Abu Humad-2	009	SP		3 DE		completed	completed	26 March 2008	_	
	Treated water-5	Bilbeis	009	ACP		2 FUII		completed	completed	26 March 2008	_	
Outside	c Branch-1	Usserved villege	300	ds		OE-PM 3568 II Sessor	Existing Chamber	Completed (no	completed	19 April 2008		
	Branch-2	Zapazig	200	GP.	٠	12 GE	Aqua deot	Completed	Not Fixed		<u> </u>	
	Branch-3	Aba Kabier-1		GIB	7	GE 3579 P(sew) Sense 1093243/1091042	Aqua dect	Completed	Not Fixed	Waiting for Electric Meter- Installation	-	24-May
	Branch-4	Abu Kabier-2		B,		GE 3550 E(new) Smoot (080282) (08028)	Agas dect	Completed	Not Fixed	Waiting for Electric Meter Installation	_	24-May
New Faque Outside	c Branch-1	Abu Kabier	400	ACP	6	IS FUII		Completed	Not Fixed			
Old Fagus baside	Raw water		400	es.		16 GE	Plant under Debriditation	Waiting for complex	Waiting for completion of rehabilistion works			
	Treated water		400	PVC			Plant under Rehabitation	Will be canceled and Rehabilitation work	Will be canceled and to be shated to Bellis BPS. Included in Rehabilitation work of Old Fagous WTP		-	
lusainia baide	Raw water		800	ås			Existing Chember	Completed (no rood for repair)	Institled on April 19	20 May 2008		
	Treated water		800	ds		GE-PM 3565 E Sensor IONESSE		completed	installed on April 19	20 May 2008		
Kafr Sagr Outside	e Branch-I		1000	as.	01	GE-FM 3533 E Sensor 19070677	Aqua dect	Completed	assisted on April 30	Will start on June 22		
	Branch-2	Abs Kabier	800	SP	=	Semior	Aqua deci	Completed	installed on April 30	Will start on June 22		
Outside	e Branch-I		300	DCIP	12	I GE	Existing Clember	Completed (no	Not Fixed			
	Brands-2		400	PE	13	2 GE	Number 2 Chamber	Location subject to Telephone cable. Th Al Salamon village. start by SHAFWASI	Location subject to change due to custing of main Telephone subject to change due to custing of main Telephone subject to may bocation will be at supply pipo to Asilamen willage. Procedures to construct the chambe will start by SHAPWAGOO en Auril 20, 005.			
	Branch-3		909	GRP	11	3 GE	Number 3 Chamber	Completed	Not Fixed			
	Branch-4		900	34	15	4 CE	Number 4 Chamber	Completed	Not Fixed			
			,	,				Completed and shifted to a				
_	Branch-3		3	2	2	300	Number 5 Chamber	distance of about 2	Not Pixed			

S. The recomment of the commendation where the second the comment of the comment

Attachment - 2 (1/2)

: 28th June 2008 Ref. No. : IMC-YS-006

Dr. Salah Bayoumi Chairman SHAPWASCO

Project: The Project for Improvement of Management Capacity of Operation and

Maintenance for SHAPWASCO

Request for Instructions related to Intensified SOP Activity in Kafr Farag Fe/Mn Removal Plant (KFR-FMRP)

With regard to the captioned project, we, SOP/HQ and expert teams, have issued the first draft SOPs for KFR-FMRP and are now ready to apply them for the field O&M. For the commencement of the field application, we would like to propose an intensified activity committed by the Chairman at this plant.

Background

The Egyptian Potable Water Standards were revised and issued in October 2007 as Decree 458. However, current operation of the plant can not fulfill the new requirements as shown in the table below and it is urgently required for SHAPWASCO to clarify whether the plant may fulfill the standards with the strict operation by mobilizing its 100% potential or not.

Item	Decree 458	Operation Result	Raw Well Water
Iron	0.3mg/L	0.15mg/L	0.40mg/L
Manganese	0.4mg/L	0.70mg/L	0.90mg/L

At the same time, SOP/HQ and expert teams are expecting in the course of SOPs preparation that there should be some operation points to be improved with a possibility of complying with standards.

Plant operation according to the SOPs will be conducted and performance of the plant will be examined. SOPs prepared are describing general procedures but also featuring the following points:

- Inspection of the plant equipment conditions including filter media
- Determining the required chlorine dosing rate by raw well water quality analysis and tests
- Chlorine dosing according to the results of the test
- Monitoring water qualities in specific process points
- Examining the performance of the Plant

JICA Expert Team Office in SHAPWASCO, Zagazig, Sharkia, Egypt TEL +055-2351998 / FAX +055-2351998



The Project for Improvement of Management Capacity of Operation and Maintenance for SHAPWASCO



Schedule

Attachment-2 ($\frac{2}{2}$) Final judgment on effective reness of the Plant as well as the Plant SOPs prepared shall be done in November 2008

In connection with the above, we would like to ask you to take necessary actions mentioned below:

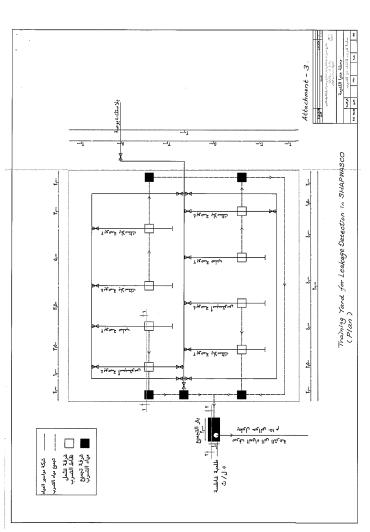
- 1. To instruct for implementing this activity to the head of Menia Al Qamah, branch chemist in charge and the plant manager
- 2. To provide necessary chemicals for the operation and water quality analysis
- 3. To provide filter media and other equipment, if required

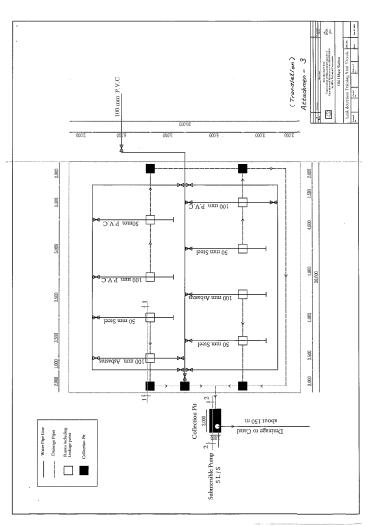
Your prompt action to the above would be highly appreciated.

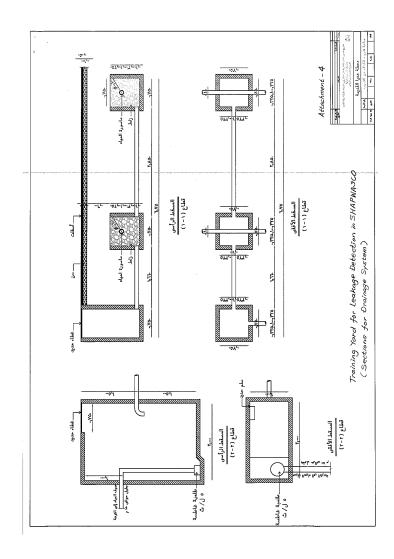
Yours faithfully

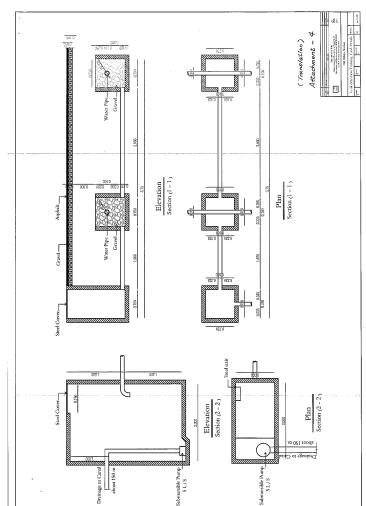
ЛСА Expert Team

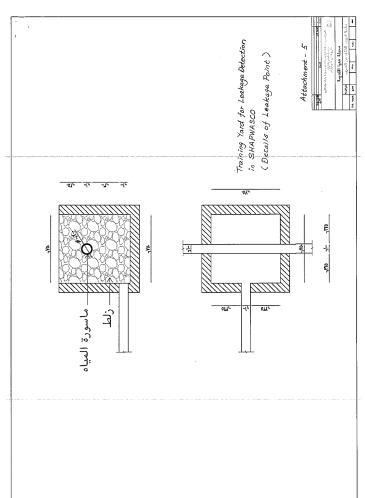
JICA Expert Team Office in SHAPWASCO, Zagazig, Sharkia, Egypt TEL +055-2351998 / FAX +055-2351998

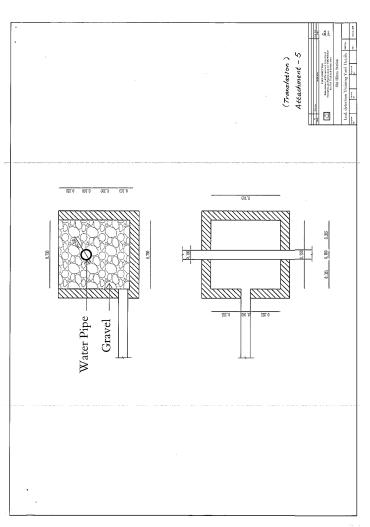












Minutes of Meeting for 4th Project Team Meeting for PH-3 MM-PTM3-4 [08.7.7]

Date	7 th July (Mon) 2008	-	
Time	11:00~15:30		Signature
Place	SHAPWASCO chairman's roo	om	1
Attendants	[SHAPWASCO : C/P]		-0 .
	Dr. Salah Bayoumi	: Chairman/Project Manager	S.Bapumi
	Eng. Alae El Din Mohamed	: Head of UFW/HQ Team	
	Eng. Abdel Shafi Abdel Aziz	: Head of SOP/HQ Team	
	Eng. Gamal Abd El Hameed N	Morsi : SOP/HQ Team (Well Monitoring)	
	Mr. Mohamed Osama Ahmed	: SOP/HQ Team (Water Quality Control)	
	Eng. Ibrahim Shahin	: SOP/HQ Team (Electrical)	
	Mr. Ahmed El Feky	: Public Awareness	
	Ms. Heba Mohmoud	: SOP Team (Hydraulic Analysis)	
	[JICA Expert Team : The te	,	
	Mr. Masahiro Takeuchi	: Team Leader	199
	Mr. Masatoshi Seno	: UFW reduction	T
	Mr. Akihiko Okazaki	: Leakage Detection	
	Mr. Keizo Kimura	: SOP Activity	
	Mr. Mohamed Nagi	: Facilitator	
	Dr. Mohamed Sobhy	: Senior Engineer for UFW	1
	Mr. Mahmoud Khalaf	: Senior Engineer for SOP	

1. General

(1) Japanese Expert schedule

The team reported that the following Japanese expert arrived in Egypt on 5th July 2008:

- Mr. Masatoshi Seno: UFW Reduction Expert

(2) Water conservation campaign

C/P has been completed the data entry for analyzing the results of pre-questionnaire and post-questionnaire which have been done in five (5) schools from October 2007 to March 2008

Public awareness team from public relation section of SHAPWASCO made a presentation by PowerPoint for the progress of the water conservation campaign showing the analyzed results.

MM-PTM3-4 (3/6

(6) Action U11 Conducting leakage detection survey

Leakage detection survey has been finished and total 8 places of leakage have been found at the invisible underground places.

(7) Action U12 Repairing leakage parts

Leakage parts have been already repaired by SHAPWASCO.

Pilot Project -5: Ibrahimiya Markaz

(1) Action U6 Making field survey of distribution network

The detailed field survey of the conditions of pipelines and valves started according to GIS drawings.

(2) Action U7 Surveying installation & Status conditions of water meters and conducting meter readings

> The survey of the installation conditions of water meters has been completed.

 \succ Meter reading for house water meters started on 5th July 2008.

Pilot Project -6: Diarb Nigm Markaz

> Actions for this pilot project will be started on September, 2008.

Pilot Project -7: Abu Hamad Markaz

Pilot Project -8: Menia Alqamah Markaz

Pilot Project -9: Bilbais Markaz

- Pipeline sketches for five (5) candidate sites at additional each Pilot Project Site have been provided by each Markaz.
- For construction of chambers for flow meter, the contracting department of SHAPWASCO is doing bidding procedures.

2-2. Schedule for next week

Actions of U4, U6, U7, U8, U9, U10, U11 and U12 will be conducted this week.

3. SOP Activity (progress of the last week and schedule for the next week from $7^{\rm th}$ to $12^{\rm th}$ July 2008)

Actions S1, S4, S5 and S10 have been conducted by the last week. The progress and the

(1) Action S1 Preparing Basic System Drawings

issues are summarized as follows:

Activity for model well pump station at EL Aslougi has been completed.

2. UFW Reduction Activity (progress to the last week and schedule for the next week from $7^{\rm th}$ to $12^{\rm th}$ July 2008)

2-1. Progress

Actions U4, U6, U7, U8, U9, U10, U11 and U12 have been conducted by the last week. Mr. Alae, head of UFW/HQ team, made a presentation of the progress by PowerPoint.

The progress and the issues are summarized as follows:

Common Activity

- (1) Action U4 Preparing GIS drawings (for network)
 - The draft of GIS network drawing for candidate site (Site-1: Menia Alqamah City) in Menia Alqamah Markaz as one of the additional pilot project sites has been completed.

Pilot Project -1: Zagazig City-East (Site-1)

> All activities have been finished by the end of February 2008.

Pilot Project -2: Hihya Markaz (Site-2)

All field activities have been finished by the end of February 2008. Water balance analysis is now under examination.

Pilot Project -3: Zagazig West (Site-3)

All field activities have been finished by the end of February 2008. Water balance analysis is now under examination.

Pilot Project -4: Zagazig Markaz (Site-1)

- (1) Action U6 Making field survey of distribution network
 - The detailed field survey of the conditions of pipelines and valves based on GIS drawings have been completed.
- (2) Action U7 Surveying installation & Status conditions of water meters and conducting meter readings
 - > The survey of the installation conditions of water meters has been completed.
- (3) Action U8 Measuring metering error of water meter
 - > Measuring metering error of 11 water meters has been conducted.
- (4) Action U9 Conducting leakage (MNF) survey (before repair works)MNF survey before repair has been finished.
- (5) Action U10 Making water balance analysis before repair works
 - > Continuous MNF survey and water meter reading have been finished.

MM-PTM3-4 (4/6)

- (2) Action S3 Measuring intake /production water volume at 7 WTPs
 - The team reported to the C/P that there is no progress has been occurred since the last PTM and requested SHAPWASCO to take action regarding this issue as soon as possible. Also, the team requested the C/P to keep continuous recording of the installed flow meters.
 - C/P requested to shift the flow meter at New Zagazig WTP (Branch 1) to Kafr Farag Fe/Mn Removal Plant because of the difficulty of constructing flow meter chamber in front of Zagazig WTP to avoid the existing main electric cables from Zagazig Power Station.
 - The team repeated his request to the C/P to examine the situation of the selected site before taking decision to shift the flow meter to Kafr Farag Fe/Mn.

(3) Action S4 Development of SOPs for Model Facilities

[Preparation of New SOP]

- Major part of SOP documents for FMRP has been completed and first draft SOPs have been distributed to Kafr Farag FMRP. Trial applying for SOP is under progress.
- Preparation of SOP documents for booster pump station (Bilbais Booster Pump Station) has been started and is under progress.

(4) Action S6 Applying the SOP in O&M

[OJT using SOP]

- Applying SOP in O&M was continued in Zagazig WTP and in Abbasa WTP.
- OJT regarding filter washing has been conducted in Zagazig on July 3rd, 2008 and started in Abbasa on July 4th, 2008.
- The team requested C/P to take necessary actions for conducting intensified SOP activity at Kafr Farag Fe/Mn removal plant.

(5) Action S10 Well Monitoring

Continuous measurements of groundwater level were continued at four well stations where the recorders were installed. Data entry for the record is also continued.

3-2. Schedule for next week

Above activities will be continued to the next week.

4. Training Yard for Leakage Surveying

C/P explained that the contracting department of SHAPWASCO is doing bidding procedures for construction of the yard.

Attachment-1

5. New equipment for UFW reduction activity in Phase-3

The team and C/P confirmed that new equipments for UFW reduction activity in Phase-3 were delivered to SHAPWASCO on 30th June 2008. The equipments arrived are listed in Attachment-1.

6. Review of Verifiable Indicators for UFW and Leakage Ratios

The team and C/P confirmed the objectively verifiable indicators for UFW and leakage ratios in PDM3 will come to the following figures taking into account the results of two pilot projects (Zagazig City-East and Hihya Markaz).

- An average UFW ratio (initial) is reduced by 13 points in the pilot project sites.
- An average leakage ratio (initial) is reduced by 13 points in the pilot project sites.

The team informed C/P that these indicators are now under examination by JICA headquarters.

7. Next PTM

The team proposed to have next PTM on 12th July 2008.

(End of Minutes)

Attachment

1. List of Equipment procured in Phase-3

MM-PTM3-4 (1/5)

$\frac{Minutes\ of\ Meeting\ for\ 5^{th}\ Project\ Team\ Meeting\ for\ PH-3}{MM-PTM3-4\ [08.8.12]}$

Date	7th July (Mon) 2008		
Time	11:00~15:30		Signature
Place	SHAPWASCO chairman's roo	om	
Attendants	[SHAPWASCO : C/P]		
	Dr. Salah Bayoumi	: Chairman/Project Manager	3.Baypum
	Eng. Alae El Din Mohamed	: Head of UFW/HQ Team	
	Eng. Abdel Shafi Abdel Aziz	: Head of SOP/HQ Team	
	Eng. Gamal Abd El Hameed N	Morsi: SOP/HQ Team (Well Monitoring)	1
	Mr. Mohamed Osama Ahmed	: SOP/HQ Team (Water Quality Control)	
	Eng. Ibrahim Shahin	: SOP/HQ Team (Electrical)	
	Ms. Heba Mohmoud	: SOP Team (Hydraulic Analysis)	
	[JICA Expert Team : The te	am]	
	Mr. Noboru Saeki	: SOP activity	1. 12
	Mr. Akihiko Okazaki	: Leakage Detection	15-510 Z
	Mr. Mohamed Nagi	: Facilitator	1

1. General

(1) Japanese Expert schedule

The team reported that the following Japanese expert arrived in Egypt on 3rd August 2008:

- Mr. Noboru Saeki: UFW Reduction Expert

(2) Water conservation campaign

C/P has been completed the data entry for analyzing the results of pre-questionnaire and post-questionnaire which have been done in five (5) schools from October 2007 to March 2008

The activity of water conservation has been suspended due to school's summer holidays.

- > The team proposed to SHAPWASCO to extend the activities to women and youth associations
- SHAPWASCO explained that this activity will be continued after Ramadan.
- 2. UFW Reduction Activity (progress to the last week and schedule for the next week from $9^{\rm th}$ to $14^{\rm th}$ July 2008)

2-1. Progress

Actions U4, U6, U7, U9, U10, U11. U12, U13 and U14 have been conducted by the last

List of Equipment procured in Phase-3

No.	Name of Equipment	Quantity
1	Water leak detector	2
2	Digital sound detector	1
3	Hammer drill	1
4	Drill bid	5
5	Boring bar (1m)	1
6	Acoustic rod (1.5m)	2
7	Portable ultrasonic flow meter (φ200-φ6000)	2
8	Portable ultrasonic flow meter (φ50-φ400)	2
9	Water pressure recorder	2
10	Pipe and cable locator	I
11	Metal locator	1
12	Leak sound detector	1
13	Non metallic pipe vibrator	1
14	Generator	1

MM-PTM3-4 (2/5)

week. Mr. Alae, head of UFW/HQ team, made a presentation of the progress by PowerPoint.

The progress and the issues are summarized as follows:

Common Activity

- (1) Action U4 Preparing GIS drawings (for network)
 - > Preparation of the following GIS network drawings have been prepared as follows.
 - 1) Abuhamad Markaz: 5 candidate sites

Pipelines have been drawn on the GIS base maps.

Pilot Project -5: Ibrahimiya Markaz (Area-1)

- (1) Action U6 Making field survey of distribution network
 - 1) The detailed field survey of the conditions of pipelines and valves has been finished.
- (2) Action U7 Surveying installation & Status conditions of water meters and conducting meter readings.

The survey of the installation conditions of water meters has been finished end of June. The results were follows:

1.	Total number of meters:	1,120
2.	Number of working meters:	919
3.	Number of non-working meters:	88
4.	Number of meters inaccessible:	90
5.	Number of meters which can not be read because water is attached to	
	the inside the meter glass:	23

Mater readings survey has been conducted from 3 July to 18 July.

(3) Action U9 Conducting leakage survey (MNF) action

The leakage survey (MNF) has been finished during the meter reading survey.

(4) Action U10 Making water balance analysis before repair works.

Water balance analysis before repair works will be finished.

(5) Action U11 Conducting leakage detection survey

Leakage detection survey has been finished on 26 July, and detected eight leakage points.

(6) Action U12 Repairing leakage parts

Leakage points have been fixed by 29 July. All leakage points were at the joint part of house connection.

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(7) Action U13 Conducting leakage survey (MNF)

Leakage survey (MNF) after repair has been finished end of July.

(8) Action U14 Conducting meter readings after repair works for the making water halance

Meter reading after repair works will be start from 9 August.

Pilot Project -7: Abu Hamad Markaz

(1) Action U6 Making field survey of distribution network

The detailed field survey of the conditions of pipelines and valves has been finished and waiting for construction for chamber works.

Pilot Project -3: Zagazig West (Area-1)

(1) Action U10 Making water balance analysis before repair works

MNF survey and water meter reading have been finished by last week.

(2) Action U11 Conducting leakage detection survey Leakage detection survey will be started from this week.

Pilot Project -4: Zagazig Markaz (Area-1)

)

(1) Action U10 Making water balance analysis before repair works

MNF survey and water meter reading will be finished by this week.

3. SOP Activity (progress of the last week and schedule for the next week from 9^{th} to 14^{th} August 2008)

Actions S3, S4, S6 and S10 have been conducted by the last week.
The progress and the issues are summarized as follows:

(1) Action S3 Measuring intake /production water volume at 7 WTPs

- The team reported the C/P that latest situation of flow meter installation works is as shown in attached summery sheet (Attachment -1) where the progress is very slow since the last PTM and requested SHAPWASCO to take action regarding this issue as soon as possible. There are some cases found that manholes were constructed and flow meters were installed but they are not used for long time due to electricity supply.
- SHAPWASCO explained that the reasons of delay is due to contracting with electric company and will finish these processes by end of August.

3

MM-PTM3-4 (5/5)

water demand from network

- > Further activity will be discussed after above trial operations.
- SHAPWASCO Chairman requested the C/P to replace the existing media with a new
 filter media through direct order to save time as the situation became clear from these
 trial operations done that present media condition is bad. This ordering procedure and
 replacement work will be completed within one month.

[Asulougi WPS]

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- For the first trial application to this WPS, "Activation of existing chlorine facility" was selected because the facility was newly constructed but not used fully.
- It became clear in the workshop organizing operation members of the station. Zagazig Markaz Branch chemists and SOP/HQ that existence of iron in the raw well water may cause color problem to the customer.
- > Water quality survey was conducted by Zagazig Markaz Branch chemists.
- > Survey results will be analyized and solution will be proposed.
- SHAPWASCO Chairman requested the C/P and JICA team to propose how to deal the present chlorination facility.

(4) Action S10 Well Monitoring

- Continuous measurements of groundwater level were continued at four well stations where the recorders were installed. Data entry for the record is also continued.
- SHAPWASCO Chairman requested the C/P to consider utilization method of gathered observation data.

3-2. Schedule for next week

Above activities will be continued to the next week.

4. Training Yard for Leakage Surveying

Tender opening has been completed and it is expected to select the awarded contactor within one week.

5. Next PTM

The team proposed to have next PTM on 20th August 2008.

(2) Action S4 Development of SOPs for Model Facilities

[Preparation of New SOP]

- SOP documents for the model facilities of Abbasa WTP, Kafr Frag FMRP, and Asulougi WPS has been completed and first draft SOPs have been distributed to each facility and trial applications have been started.
- Preparations of SOP documents for booster pump station (Bilbais BPS) are now under preparation and will be finalized by the end of August.

(3) Action S6 Applying the SOP in O&M

[Abbasa WTP]

- Operation records by unified recording forms such as process water flow rates, chemical consumption and electricity consumption have been started.
- "Refreshment Filter Washing", specially selected trial application theme, has been started and its progress is as attached summery sheet.
- The expert team and SOP/HQ team are not satisfied with the activities at the plant site and request more effort of the SOP/facility team to overcome the obstacles, such as required manpower and repair work
- The way to strengthen the activity shall be discussed with Mr. Sacki and Eng. Shafi because the new unified forms for records are still under printing while the current records are done by using the old forms for records.
- Financial evaluation of the tender for purchasing the required equipment for measurements (Pressure gauge and alum level recorder) is proceeding and it is expected to be completed within one week while the tender for chlorine cylinder weigh will be re-tendered.

[Zagazig WTP]

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"Refreshment Filter Washing", specially selected trial application theme, has been started and its progress is quite acceptable as attached summery sheet.

[Kafr Farag FMRP]

- Verification of the plant capability to satisfy the new Egyptian Potable Standard by applying SOPs has been started as "Intensified SOP Activity".
- > Current operation data were prepared by SOP/KFR-FMRP team.
- Three trial operation modes were agreed between SOP/facility team., SOP/HQ team and Expert team and they are:
- Operation-1 Increasing residual free chlorine (target 1.0 ppm) at filter inlet and analyzing process water qualities at various points
- · Operation-2 Activating filter media by chlorine and repeat operation-1
- · Operation-3 Decreasing the surface load of filter with high residual free chlorine
- > Trial operations will be done by limited time duration and at the time of minimum

10 Minutes of Meeting of Project Team Meetings in Phase-4

Minutes of Meeting for 1st Project Team Meeting for PH-4 MM-PTM4-1 [09.5.30]

Date	30th May (Sat) 2009		
Time	10:20~11:00		Signature
Place	SHAPWASCO chairman's ro	om	
Attendants	[SHAPWASCO : C/P]		
	Dr. Salah Bayoumi	: Chairman/Project Manager	S-Bayoum
	Eng. Alae El Din Mohamed	: Head of UFW/HQ Team	
	Eng. Gamal Abd El Hameed	Morsi : SOP/HQ Team (Well Monitoring)	
	Ms. Heba Mohmoud	: SOP Team (Hydraulic Analysis)	
	Ms. Walaa Hamdi	: UFW Team	
	Ms. Walaa Mohamed	: UFW Team	
	[JICA Expert Team : The Te	eam]	
	Mr. Masahiro Takeuchi	: Team Leader	11
	Mr. Mohamed Nagi	: Project Facilitator	1
	Mr. Mahmoud Abu El Naga	: Senior Engineer for SOP Activity	

1. General

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1-1 Main Activities in Phase-4

The Team explained to C/P that Phase-4 has started in April 2009 and will be completed in the end of October 2009. Main activities of Phase-4 are described as follows:

[UFW Reduction Activity]

For the UFW reduction activities mentioned below for Phase-4, items 1) to 4) are the continuation from Phase-3.

- 1) Formulating long-term pipe replacement plan for preventive works
- Formulating a plan for expanding UFW reduction activity to the other Markaz than the pilot project areas (including proposed organization and staff assignment for new UFW department)
- Second trial for the pilot project in Ibrahimiya Markaz to clarify the results of water balance analysis obtained in Phase-3
- 4) Expansion of UFW reduction activity to other areas than the pilot project areas
- Setting performance indicator related to UFW for the management improvement of SHAPWASCO
- 6) Cost-benefit analysis for all the UFW reduction activities conducted during the Project
 - ¹The Team requested SHAPWASCO to start establishment of UFW department and
- 1 ■: Request by the Team, ●: Action or confirmation by C/P

MM-PTM4-1 (3/10)

- 2nd assignment: 6^{th} October to 2^{nd} November 2009
- Mr. Mitsuhito Omori (Coordinator):
 - 1st assignment: 30th April to 27th May 2009
 - 2nd assignment: 6th October to 2nd November 2009
- Mr. Mohamed Nagi (Project Facilitator)
- Assignment: 1st May to 15th October 2009

1-3 Water conservation campaign

C/P has completed the data entry for analyzing the results of pre-questionnaire and post-questionnaire which have been done in seven (7) schools from March to April 2009.

 Because of year end examinations and the following school summer holiday, SHAPWASCO is planning to start water conservation campaign for SHAPWASCO staff children and daughters. The schedule will be prepared after the completion of the examinations.

1-4 Recommendations by PEMA

The Team and C/P confirmed that they should follow the recommendations of Project Evaluation Report No.31 made by PEMA (Centre for Project Evaluation & Macroeconomic Analysis) in the Ministry of International Cooperation in March 2009.

- SHAPWASCO nominated Mr. Alae El Din Mohamed (Head of UFW/HQ team) and Mr. Abdel Shafi (Head of SOP/HQ team) to follow the recommendation of PEMA report.
- 2. UFW Reduction Activity (progress to date and schedule up to the end of October 2009

2-1. Progress

Pilot projects for additional 3 areas of Abu Hamad, Menia Alqamah and Bilbais Markaz are under implementation. The progress and the issues are summarized below and compiled as in Annex-1:

Common Activity

- (1) Action U4: Preparing GIS drawings (for network)
 - > Preparation of GIS network drawings is remained for the following areas:
 - 1) Zagazig Markaz Area 2,3,4 and 5
 - 2) Bilbais Markaz Area 1 and 2

strengthen the current staff (2 engineers and one head of the team) with other young engineers and also requested to provide necessary leakage survey and detection equipment to all the UFW teams of SHAPWASCO.

SHAPWASCO Chairman confirmed that establishment of UFW department will be done soon. He nominated and requested Mr. Alae El Din Mohamed to be fully responsible about formulating this department. The Chairman requested Mr. Alae to prepare the numbers and qualifications of the required new staff, comprehensive plan for UFW activities in SHAPWASCO, training programs for the new staff and required equipment in order to start hire the new staff and buy the required new leak detection equipment to cover the whole areas of SHAPWASCO. It is expected to start hire the new staff within one month. SHAPWASCO requested the Team to assist in preparing the plan for establishment of UFW department. The Team stated that they will support C/P to prepare the plan in the next month.

[SOP Activity]

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For SOP activities mentioned below for Phase-4, all items are the continuation from Phase-3.

- 1) Applying SOPs to other water supply facilities than Model Facilities
- Setting a performance indicator (PI) related to filter refreshment and monitoring the activity to achieve the targeted value
- Setting performance indicators related to power consumption, chemical consumption and standard working hours corresponding to SHAPWASCO's PIs.

[Other Activities]

- 1) Water conservation campaign
- 3rd open seminar (expected to be held at the end of October 2009)

1-2 Work Assignment of the Japanese Experts in Egypt

The Team explained to C/P the work schedule of the Japanese experts in Egypt as follows:

- Mr. Masahiro Takeuchi (Team Leader):
 - 1st assignment: 19th May to 15th June 2009
 - 2nd assignment: 21st October to 2nd November 2009
- Mr. Masatoshi Seno (UFW Reduction):
- 1st assignment: 26th April to 23rd May 2009 - 2nd assignment: 2nd September to 19th September 2009
- Mr. Keizo Kimura (SOP Activity):
 - 1st assignment: 26th April to 23rd June 2009

MM-PTM4-1 (4/10)

Pilot Project -5: Ibrahimiya Markaz (Area-1)

All the actions from U6 to U14 for the pilot project have been finished in Phase-3. However, Action U13 and U14 will be repeated because of error in the meter readings as there is no replacement of non-working meter in the previous activity.

Additional Pilot Project -7: Abu Hamad Markaz

- (1) Action U6: Making field survey of distribution network
 - > The detailed field survey of the conditions of pipelines and valves has been finished.
- (2) Action U7: Surveying installation & status conditions of water meters and conducting meter readings
 - > This action has been finished.

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- (3) Action U9: Conducting leakage survey (MNF)
 - \succ The leakage survey (MNF) has been finished during the meter reading survey.
- (4) Action U10: Making water balance analysis before repair works
 - > Water balance analysis before repair works will be done by the end of June 2009.
- (5) Action U11: Conducting leakage detection survey
 Leakage detection survey has been finished and detected two leakage points.
 - beautige detection survey has been imission and detected two leakings points
- (6) Action U12: Repairing leakage parts
 - Leakage points have been fixed. All leakage points were at the joint part of house connection.
- (7) Action U13: Conducting leakage survey (MNF)
 - > Leakage survey (MNF) after repair has been finished.
- (8) Action U14: Conducting meter readings after repair works for making water balance
 - > This action is not finished and it will be done by the end of June 2009.

Additional Pilot Project -8: Menia Alqamah Markaz (Area-2)

- (1) Action U6: Making field survey of distribution network
 - \succ The detailed field survey of the conditions of pipelines and valves has been finished.
- (2) Action U7: Surveying installation & status conditions of water meters and conducting meter readings
 - > This action has been finished
- (3) Action U9: Conducting leakage survey (MNF)

- The leakage survey (MNF) has been finished during the meter reading survey.
- (4) Action U11: Conducting leakage detection survey
 - Leakage detection survey has been finished and no leakage point was found due to

Therefore, further actions (Actions U12 to U14) have been cancelled and Area-3 (Malames) has been selected as a new pilot project area.

Additional Pilot Project -9: Bilbais Markaz (Area-5)

- (1) Action U6: Making field survey of distribution network
 - > The detailed field survey of the conditions of pipelines and valves has been finished.
- (2) Action U7: Surveying installation & status conditions of water meters and conducting meter readings
 - This action has been finished.
- (3) Action U9: Conducting leakage survey (MNF)
 - > The leakage survey (MNF) has been finished during the meter reading survey.
- (4) Action U10: Making water balance analysis before repair works
 - Water balance analysis before repair works will be done by the middle of June 2009.
- (5) Action U11: Conducting leakage detection survey
 - > Leakage detection survey has been finished and three (3) leakage points were detected
- (6) Action U12: Repairing leakage parts

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- Leakage points have been fixed. All leakage points were at the joint part of house
- (7) Action U13: Conducting leakage survey (MNF)
 - Leakage survey (MNF) after repair has been finished.
- (8) Action U14: Conducting meter readings after repair works for making water balance
 - This action will be done by the middle of June 2009.

Pilot Project (Expansion)-10: Zagazig Markaz (Area-5)

- (1) Action U6: Making field survey of distribution network
 - The detailed field survey of the conditions of pipelines and valves has been finished.
- (2) Action U7: Surveying installation & Status conditions of water meters and conducting

MM-PTM4-1 (7/10)

- (8) Action U14: Conducting meter readings after repair works for making water balance > This action will be done by the middle of June 2009.
- 3. SOP Activity (progress to the last week and schedule for the next week)

Actions S1, S2, S3, S4, S5, S6, and S10 have been conducted by the C/P team during the period of March and April 2009. JICA Expert Team and C/P teams have been conducting these activities from 26th April, 2009. The progress and the issues are summarized as

- (1) Action S1: Preparing basic system drawings for remaining facilities
 - > As an extension of Action S1 for other remaining facilities The C/P team prepared P& ID, general layout and piping route (Auto CAD drawings) for Abu Metana (FMRP) at Diarb Nigm Markaz. The drawings have been distributed to the facility
 - > The drawings have been revised by Abu Metana FMRP staff and amendments have been completed and revised drawings distributed to the plant on 26th May 2009.
 - Revised version of P& ID, general layout and pipe route for Oenavat FMRP have completed and distributed to the facility on 26th April 2009.
- (2) Action S2: Operation Records for O& M for other remaining facilities
 - The C/P issued, distributed and explained to the staff the operation records for Qenayat (FMRP) on 13th April, 2009. Recording have been started.
 - The Team issued, distributed and explained to the staff the operation records for Abu Metana (FMRP) on 10th May 2009. Recording have been started.
- (3) Action S3: Measuring intake /production water volume at 7 WTPs
 - > The Team reported the C/P that latest situation of flow meter installation works is as shown in the attached summery sheet Annex-2.
 - The Team explained to SHAPWASCO that the installation works of flow meters at three locations (Old Faqus-raw water, Kafr Farag and Hihya Branch-2 -Alsalamon line) are behind the schedule and the Team requested SHAPWASCO to complete installation of the three flow meters by June 2009.
 - SHAPWASCO Chairman nominated Mr. Gamal Abd El Hameed to follow the completion of flow meters installation.
- (4) Action S4: Development of SOPs for Model Facilities [Preparation of New SOP]

meter readings

- > This action has been finished.
- (3) Action U9: Conducting leakage survey (MNF) action
 - > The leakage survey (MNF) has been finished during the meter reading survey.
- (4) Action U10: Making water balance analysis before repair works
 - Water balance analysis before repair works will be done by the end of June 2009.
- (5) Action U11: Conducting leakage detection survey
 - > Leakage detection survey has been finished and two (2) leakage points were detected.
- (6) Action U12: Repairing leakage parts

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- > Leakage points have been fixed. All leakage points were at the joint part of house
- (7) Action U13: Conducting leakage survey (MNF)
- Leakage survey (MNF) after repair will be started by the end of May 2009.

Pilot Project (Expansion)-11: Ibrahimiya Markaz (Area-2)

- (1) Action U6: Making field survey of distribution network
 - > The detail field survey of the conditions of pipelines and valves has been finished.
- (2) Action U7: Surveying installation & status conditions of water meters and conducting meter readings
 - > This action has been finished.
- (3) Action U9: Conducting leakage survey (MNF)
 - The leakage survey (MNF) has been finished during the meter reading survey.
- (4) Action U10: Making water balance analysis before repair works
 - Water balance analysis before repair works will be done by the middle of June 2009.
- (5) Action U11: Conducting leakage detection survey
 - Leakage detection survey has been finished and three (3) leakage points were
- (6) Action U12: Repairing leakage parts
 - > Leakage points have been fixed. All leakage points were at the joint part of house connection.
- (7) Action U13: Conducting leakage survey (MNF)
 - Leakage survey (MNF) after repair has been finished.

- MM-PTM4-1 (8/10)
- Preparation of first version of SOP documents for model facilities have been completed and distributed to the model facilities.
- > For SOP documents for remaining facility (Qenayat FMRP), the first version has been completed and distributed to the facility.
- (5) Action S5: Examining water distribution control in the network
 - > Data of flow meters at Hihva Markaz were collected and flow meter data were analyzed.
- > Based on the above analysis the water supply per capita per day (LCD) has been calculated for pilot project area (Hihya Markaz) and found as follows:

a. Average for the whole Markaz:

145 LCD

b. Average of the Hihya City Center:

193 LCD

c. Average of Western area of the Markaz: d. Average of the Eastern Area of the Markaz: 145 LCD

135 LCD

- (6) Action S6: Applying SOPs in O&M
 - > Operation records by unified recording forms such as process water flow rates, chemical consumption and electricity consumption have been proceeding in Zagazig and Abbasa WTPs.
 - Operation records by unified recording forms have been extended to Faqus, Kafr Saqr, Huseinia.
 - "Refreshment Filter Washing", has been applied in Faqus WTP.
 - Chlorine consumption control at Qenayat (FMRP) has been applied considering the chlorine dosing point to be mainly at the reservoir and keeping frequent dosing to the aeration tower in order to avoid algae gross. The following are the results through applying SOP at Qenayat:

Activity	Item	Before applying SOP	After applying SOP
Chlorine Dosing	Chlorine Dosing Quantity	500 g/hr	400 g/hr
Control	Free Residual Chlorine at outlet of the plant	0.18 mg/L	0.5 mg/L
	% of Iron Removal	73%	73%
	% of Manganese Removal	13%	29%

> Also, filter washing regime at Oenavat has been revised in order to save loss of the water production and the following table shows the comparison between the previous and new filter washing regimes.

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Item	Before applying SOP	After Applying SOP
Back washing time	8 minutes	6 minutes
Stabilization time	3 minutes	3 minutes
Rinsing (Rewash) time	5 minutes	3 minutes

- As an extension of applying SOP for other facilities, the Team and SOP H/Q team started applying SOP at Abu Metana (FMRP).
- Applying SOP at Aslougi WPS is proceeding and additional OJT for the staff has been started on 13th May 2009.
- SHAPWASCO installed alarm system for overflow of the elevated tank and repaired
 in the level meter of the reservoir to activate using the elevated tank.
- Applying SOP at Bilbais BPS is proceeding through control of pump operation based on network demand.
- \triangleright Additional OJT for the staff has been started on 16th May 2009.

(7) Action S7: Development of SOP's for the Remaining Facilities

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- In the course of Action S6 and although development of SOPs for the remaining facilities has been started in remaining facilities such as Qenayat and Abu Metana (FMRP) as explained above in Action S7, the Team and SOP H/Q team has surveyed other facilities such as Huseinia, Kafr Saqr and Faqus WTPs and other FMRPs such as Al Seds, Mashtoul Al Sooq, etc. The result of the current condition and number of staff are shown in the attached Annex-3.
- The Team requested SHAPWASCO to allocate the required staff in order to proceed to further application of SOPs to the remaining facilities.
- Also, the Team requested SHAPWASCO to start establishment of SOP section and strengthen the current staff (2 engineers and one head of the team) with other young engineers, staff for collecting data such as data logger information, data from facilities, etc. in addition to secretary because the current staff is overloaded by many tasks.
- SHAPWASCO confirmed that they are preparing to hire new staff and already they completed the procedures to hire technicians and skilled workers. SHAPWASCO Chairman nominated Mr. Shafi (Head of SOP team) to decide the required numbers of the staff in order to strengthen and establishment of SOP team at SHAPWASCO. SHAPWASCO explained that based on the new regulations issued by Ministry of Housing it may take about one month until hiring the new staff.

(8) Action S8: Preparation of O&M Plan

- ${\,>\,}$ First draft of O& M Plan for Abassa was prepared by SOP/TF.
- $\succ \quad \hbox{Equipment card for Zagazig started and will be continued.}$

(9) Action S10: Well Monitoring

- Continuous measurements of groundwater level have been continued at four well stations where the recorders were installed. Data entry for the record has also been continued.
- > Well monitoring and the updating data will be continued.

3-2. Schedule for next week

Above activities will be continued to the next week.

3-3. Next PTM:

Next PTM will be held on 6th June 2009.

Annexes

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Annex-1: Schedule of UFW Reduction Activity from May to June 2009

Annex-2: Current Situation of Flow Meter's Installation (As of May 25, 2009)

Annex-3: Current Situation and Conclusion Regarding Applying SOP

			Additional	Additional 3 Markaz		Tibe Preject Exp	Pilot Project Expansion: 2 Areas	Brahiniya-Second Trial	General Activity	thits	
		Pl. Abs Based Market	PSt Meets Al-	Ph Medis Algeria's Market	Pr Eilbais Market	FOC. Zagadi Markaz (Expension)	Ptl: Brahinips Madaz (Expansion)	Ph Berkindy Narkas			
Aosa	Authing	Jen-J. Manthi II Abban	Armon In Gotdalia (read-two reconstructions of high NAY has (WA) 1994, he no leading NAY has (WA) 1994, he no leading points, over shorted is Armon 2 (8) Gotdalia data to are narrouta. Therefore, a scalare on all con- density of the second of the second Carabata, will be solvened as a new Plast Preject seco.	Avea,) Melanos Second unit has blue project will be doos in Jane as an absentive of Avea-3)	Arra-e, Al Swefre	Jones Cracket Decision from the framework (cracket 9)1)	Aces, 2. 10 Teahwar, (Original are was ful To Teah and clouds to 10 Teahwar are det to both method at the same signer, 50 who fielded some;) (comber of meter), 200;	Asse-I Buskinije Civ	Formaldring lang-town right replacement plan for powershive workin	Permelating a pits for expressing USW refaction artifity to the other Markess that the pixt project areas	CES Authory
	Schedule			Then are	"here activities shall be finished by the ead of June 2009	June 2009	F	This activity shall be facilised by the red of Inch 2005	This nethrity shall be flaighted by the send of July 1009		This activity shall be finished by the ced of June 2009
II Mellan II	Conducting training of OP staff at Mesocod Troing Center		OF suffs in Alsa Harnsk, Abstein Algareck and Billinis have been trained in the new 1835ss. Training Center of SHAPWASCO in Plants?	nised in the new Bibya Training Center	r of SHAPWASCO in Plans 3.				1.Zagarig East Area-1: 1) Pipe explosion most has already been input in GIS	Don't of this plan will be completed in Jane.	Remarking nets: UPWHQ seam has asked GIS Circles to make copy of GIS DWG
Acdan LI	0.0	Action US Grisbad	Active UZ finished.	Action U2 finished.	Action U2 faithced.	Philips .		replacement of non-verlong meters in the activity of Hune-3.	desvings. 2) Dydraelic wadysts is not done. 2.Zagazie East Area-4:		for the following meas: 1) Zagazig Markar: Arm-2,3,4,5 2) Eitheis markar:
Action US	Determining place project this for each place. Action US finished project ones	Action US finished.	Action US finished.	Arden US finished.	Action US finished.			and drawn as	Stoce bydraulic analysis has abredy been done in Arm-4, Arm-4 was sleeped for this		bres-1,2
Action U4		Active C4 finished.	Action U4 fraithed.	Action Un Brighed.	Auton U4 Saided.	Action Ut finished.	Action U4 flatibled.	valouig metals was sed quite.	J Pipe bunt records are input by GES Cooler, UPWATQ team. will follow.		V.
Action US	Learning experiences of forths UFW reducion preject							de Sers.	2) Hydraulis Analyzis has already been door by McHehs and McBadawy. 3) This acrosty has to be		
e to	Moding Dield survey of distribution convoir. Audion 10/2, Surveying baselinds in conditions of where melecs and conducting motor readings (Action 7).	Action U.G. 4.17 Stations. Total searcher of entercibils No. of working meteors 535 No. of mon-working meteors 545 No. of mon-working meteors 545 No. of explored meteors 100	Anties U6 & U7 finished. Total number of meteor(3)3 No. of working respect(3)1 No. of con-working motion(2)7 No. of copieced mateur()		Action 158 & 177 Enished. Total number of meteor541 No. of verticing matern575 No. of real-worlding present550 No. of replaced meteo.250	Anker US & UT finished. Tool number of meeting? No. of newbody meeting? No. of new-onlying meeting? No. of reas-woolding meeting.	Author US & UT finished. Test random of memors 1,276 Test random of memors 1,301 No. of new-working restors 33 No. of replaced restor 75	servey after repair works) and Action U.I.4 should be conducted again in Arra-1.	conditional with the local consultant in charge of MP of Starkin Corresponds.		
Action US	Meanwhip melothip orns for working material and wastage in the house	Action US Printed	Action UK Enkilbed.	Aution US will be started in the residite of form	Action US Stated	Action US flashood.	Action US flaidhed.				
en sin s	Combacing Icaloge (MNF) zervey (Action US) / Matice water balance analysis before repair works (Action U10)	Action UP Backhol and Action UIO Action UP Baldock, will be does during May.	Acrisa UP Stales G.	Action UP & U10 will be gareed in the middle of June.	Action US finished and Action U10 . firstleed. Experting data was finished on 23	Action UP Studies and Action USO Action UP Studies UP Studies UP Studies Outing Nay. Will be done during Nay.	Acts of US finished and Acts of USP will be done during May.				
Aetles U11	Comboning leshings detection survey	2 Inskage poleta were desocted.	No leakago paints were detected due to new notwark. Therefore, fuether actions have been enacelled.	Arrian U11 will be done in fune.	3 inhige points were described.	2 leakage paints were elected.	3 leakage points were described.				
Acties 013	Repairing lesiding parts	I point find is freet of JUCA Find Debases Tean and no lebge was freed at another I point.		Action U12 will be done in June.	9 feaking points were repaired	2 leaking polatis wave cepaland.	3 leaking poletts were repaired.				
Action U13	Conducing leakage survey (including meter multings) after repair works	Action U.D. distince.		Anthon U13 will be done in fune.	Assion U(3 will be date in Jane.	Attion U13 will be done in June.	Action U13 will be deer to feas.				
Addisor U14	Making water tolinos arabalt after repair works and its evaluation	Action UPA will be done during fram after obtaining data from Mr.Tweer.	36	Antism U14 will be done in June.	Aution U14 will be dane in June.	Attion U14 will be done in June.	Action USA will be does in June.			·	
L Dan for Condition	designer. Charles verse bishoos and yell ass at fellows: Conditions of water meter. Facility of water meter ending. Facility of few amort reading.										

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			0	0	0		0	0	0	0	0	0	0	0	0	
				SOP has been continued on May 10,2009	Difficult to apply SOP before making required repairs and	maintenance.					SOP can be applied and SHAPWASCO havs to provide chemist					
0				(1) Two automatic backwash devices noed repair, but filter backwash can be operated manually						Opertaed by the Contractor (Military Factory)						
	tion	tion	plant condition is good	continued	of two wells has been ump problem, wo filters s valve need repair,	ver whole maitenanice maintenance,	will be completed after	will be completed after	will be completed after							

SOP applying can be Plant condition is bad (One well out out of three are not working, filter eservoir and aeration Old Zagazig WTP lashtool El Sooq El Adilia (Belbais) Old Faqus WTP Qenayat FMRP 9

MM-PTM4-2 (1/3)

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Annex -- 3

made on

e visit has been mad 4, 2009. (2) Plant ... ahout 90%. (

extension (six filters). (5) It is required to calibrate Alum

ent.(4) Filter

ed by the Arab Contractor (Plant Operation Company ing, it is required to install the newly delivered

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Minutes of Meeting for 2nd Project Team Meeting for PH-4 MM-PTM4-2 [09.6.14]

Preliminary
Conclusion: SOP
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ned the situation of the plant a

Saqr WTP

applying is proceeding and plant condition is god

applying is proceeding and plant

WTP Zagazig WTP

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Plant

Facility Type

Conclusion SOP

Site Visit

Regarding Applying

Current Situation and Conclusion

14th June (Sun) 2009		
10:20~11:20	-	Signature
SHAPWASCO chairman's ro	oom	
[SHAPWASCO : C/P]		
Dr. Salah Bayoumi	: Chairman/Project Manager	3 Bayou
Eng. Alae El Din Mohamed	: Head of UFW/HQ Team	
Mr. Abd El Shafee Abd El Az	ziz :Head of SOP/HQ Team	
Eng. Gamal Abd El Hameed	Morsi : SOP/HQ Team (Well Monitoring)	
Ms. Heba Mohmoud	: SOP Team (Hydraulic Analysis)	
Mr. Abd Alah Abd El Ghani	: SOP Team	
Ms. Walaa Hamdi	: UFW Team	
Ms. Walaa Mohamed	: UFW Team	
[JICA Expert Team : The T	eam]	
Mr. Masahiro Takeuchi	: Team Leader	1
Mr. Mohamed Nagi	: Project Facilitator	,
	10:20~11:20 SHAPWASCO chairman's re [SHAPWASCO: C/P] Dr. Salah Bayoumi Eng. Alae El Din Mohamed Mr. Abd El Shafee Abd El A: Eng. Gamal Abd El Harneed Ms. Heba Mohmoud Mr. Abd Alah Abd El Ghani Ms. Walaa Hamdi Ms. Walaa Hamdi Ms. Walaa Mohamed [JICA Expert Team: The T Mr. Msasahiro Takeuchi	10:20~11:20 SHAPWASCO chairman's room [SHAPWASCO: C/P] Dr. Salah Bayoumi : Chairman/Project Manager Eng. Alae El Dim Mohamed : Head of UFW/HQ Team Mr. Abd El Shafee Abd El Aziz :Head of SOP/HQ Team Eng. Gamal Abd El Hameed Morsi : SOP/HQ Team (Well Monitoring) Ms. Heba Mohmoud : SOP Team (Hydraulic Analysis) Mr. Abd Alah Abd El Ghani : SOP Team (Hydraulic Analysis) Ms. Walaa Hamdi : UFW Team Ms. Walaa Mohamed : UFW Team [JICA Expert Team : The Team] Mr. Masahiro Takeuchi : Team Leader

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(1) JICA Expert Schedule

Mr. Takeuchi (Team Leader) will leave Egypt on 15th June 2009. Among JICA expert team, Mr. Mohamed Nagi will continue to follow-up the Project during absence of the Japanese Experts until the end of August 2009.

(2) Water conservation campaign

C/P will start water saving campaign for SHAPWASCO's staff (H/Q) children on 16th June 2009. SHAPWASCO is planning to extend this campaign to the members of Suzan Mubark Library and to other staff children.

SHAPWASCO will submit tentative schedule to the Team as soon as completed.

2. UFW Reduction Activity (progress to date and schedule up to the end of the Project)

2-1. Progress

Pilot projects for additional 3 areas (Abu Hamad, Menia Alqamah and Bilbais Markaz) and expansion projects for 2 pilot project sites in Zagazig Markaz and Ibrahimiya Markaz are under implementation. The progress and the issues are summarized as shown in Attachment-1.

MM-PTM4-2 (2/3)

2-2. Plan for Expanding UFW Reduction Activity to the Governorate Level

The Team and C/P team submitted the draft (Revision-0) of the "Plan for Expanding UFW Reduction Activity to the Governorate Level" to SHAPWASCO Chairman as Attachment-2.

 SHAPWASCO Chairman explained that internal discussion with UFW H/Q team will be held next week to revise the plan, if necessary. It is expected to reach to the final conclusion of the Plan by the end of July 2009 with the consultation with the Team. It is expected to start applying this Plan by October 2009.

3. SOP Activity (progress to the last week and schedule for the next week)

3-1. Progress

Actions S1, S2, S3, S4, S6, and S10 have been conducted by the C/P team during the period of March and April 2009. JICA Expert Team and C/P team have been conducting these activities from 26th April, 2009. The progress and the issues are summarized as follows:

- (1) Action S1: Preparing basic system drawings for remaining facilities
 - > P& ID and layout drawings (Revision -1) for Abu Metana FMRP have been completed and will be distributed on 16th June 2009.
 - C/P team will start the P& ID drawings for Kafr Saqkr WTP and Shobra El Enab FMRP on 15th June 2009.
- (2) Action S2: Operation Records for O& M for other remaining facilities
 - > Records for Abu Metan and Qenayat FMRP are proceeding.
- (3) Action S3: Measuring intake /production water volume at 7 WTPs
 - > The C/P reported that electrical works for Kafr Farag FMRP will be completed by 16^{th} June 2009 and installation of flow meter will be completed by 18^{th} June 2009. Preparation for installation of flow meter at Hihya -Branch-2 is proceeding and it is expected to complete installation works for the flow meter by the end of June 2009. The civil works for flow meter chamber at Old Faqus has been started and it is expected to complete the installation of flow meter by end of June 2009.

(4) Action S4: Development of SOPs for Model Facilities

Preparation of New SOPI

- > Preparation of first version of SOP documents for model facilities have been completed and distributed to the model facilities.
- For SOP documents for remaining facility (Qenayat FMRP), the first version has been completed and distributed to the facility.
- Draft of SOP document for Abu Metana (remaining facility) has been completed and will be distributed for the facility on 15th June 2009

- (5) Action S6: Applying SOPs in O&M
 - > Records by unified recording forms are proceeding.
- (6) Action S7: Development of SOP's for the Remaining Facilities
 - In the course of Action S6 and although development of SOPs for the remaining facilities has been started in remaining facilities such as Qenayat and Abu Metana (FMRP) as explained above in Action S7, the Team and SOP H/Q team has surveyed other facilities such as Huseinia, Kafr Saqr and Faqus WTPs and other FMRPs such as Al Seds, Mashtoul Al Sooq, etc.
 - The Team requested SHAPWASCO to allocate the required staff in order to proceed to further application of SOPs to the remaining facilities.
 - Also, the Team requested SHAPWASCO to start establishment of SOP section and strengthen the current staff (2 engineers and one head of the team) with other young engineers, staff for collecting data such as data logger information, data from facilities, etc. in addition to secretary because the current staff is overloaded by many tasks.
 - SHAPWASCO H/Q team prepared his requirement to overcome the current shortage
 of the staff and to strengthen the H/Q team. The Chairman explained that internal
 discussion about this request will be held to revise this request within the next week.
 Upon reaching to the final conclusion of the required staff procedures for hiring staff
 will start and it is expected to be finalized by October 2009
- (7) Action S8: Preparation of O&M Plan
 - > Equipment card for Zagazig started and will be continued.
- (8) Action S10: Well Monitoring

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- Continuous measurements of groundwater level were continued at four well stations where the recorders were installed. Data entry for the record is also continued.
- > Well Monitoring is continued and updating data is continued.
- As about 50% of the production of water in SHAPWASCO is from wells, the Chairman decided to have a meeting with related departments in SHAPWASCO in order to study SHAPWASCO strategy regarding necessity to construct, improve, upgrade and/or construct Iron and Manganese Removal plants based on the outputs obtained from the above Action \$10.
- 3-2. Schedule for next week

Above activities will be continued to the next week.

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Attachment-2

Sharkia Potable Water and Sanitation Company (SHAPWASCO)

Plan for Expanding UFW Reduction Activity To the Governorate Level

(Revision-0)

14th June 2009

SHAPWASCO Counterpart Team Yachiyo Engineering Co., Ltd. (JICA Expert Team)

Schedul	Schedule of UFW Reduction Activity from May to June 2009	m May to June 2009				-					14th June 2009
			Абдівзая	Addition 3 Markax		Pilot Project Ex	Pilot Preject Expansion 2 Areas	Berkiniya-Securd Trial	General Activity	anth	
		P7: Alte Shenad Market	19: Math Al	19: Math Alpend Market	P): Bilbais Markaz	POR Zagonig Markan (Expansion) PLI: Breskiniga Markan (Expansion)	P.L. Beskinja Muńaz (Szpazden)	Pf: Berkinje Matax			
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	Shifts			Thorach	These scivities shall be finished by the end of June 2009	June 2009		This schooly shall be finished by the cod of July 2019	This scribity shall be finished by the end of July 1999		This society shall be facilitied by the and of Jane 1979
Acden UI	Creeds the graining of CP staff is Montered Traing Center		ità Algerah ani Bilbais have bess tra	OF suffi in Abri Henna, Metal Adaptants and Olibias have been trained in the new Hitty Training Gener of SUGWASCO in Plant-I	of SRATWASCO in Plane 3.				East Area-1: plesion record has on lapat in GES	Draft of this plan (revision-0) is was submitted to CP on 14th Jane 2009.	Remaining area UFWRSQ nears has asked GIS Center to make copy of GIS DWG
ð	Creducing leaking (AOVP) survey for cardidate area (45 cardidate area)	Aoise Už finished	Anisa UZ Saided.	Action U2 finished.	Action US Builded.			registerests of this wants needs in the activity of this co.d.	Shybratio analysis is not done. 2.Zaganig float Area-4:		D. Zegang Markazi Area-2,3,4,5 2) Bilbate markazi
Action U3	Determining pilot project size for each pilot project one.	Anisa UJ Falshed	Action US Stational.	Action US Stated.	Action US finished.			JICA Faul Brakastes Missies pointed cet and requested to clarify the reason why replacement of non-	Shoe hydradic analysis has already been done in Arm-4, Arm-4 was alcated for fini activity.		C)-eur
Action Us	-	Acrisa Ul finished	Acies U4 finished.	Action Us firsished.	Action Un finished.	Assists U4 Strethol.	Action D4 flaided.		U.Phys hunt records are laper by GB Center, UPWHQ team will follow.		Aces-2 and Aces-3 of Zagang Narbax are completed.
Action US	Learning experiences of Jeelan UFW reduction project							2) UPV team is required to do the replacement of non-verifing maters. Action UIS (Conducting NNY acress that remain vectors and	been done by Na Hebs and Mr Eladawy. 3) This acroity has to be		
Aceton Us de U7	Making Bild survey of distribution estimates (Antions 10) Surveying institution considerate of Native respects and combating street residings (Antions 7)	Aufon U.O. & UT flationd. Total number of network 68 No. of working meteors 233 No. of non-reciding meteors 233 No. of mplaced memory 100 No. of mplaced memory 100	Action U6 & U7 flushed. Total number of uncoest518 No. of verbing meteor/91 No. of rose-weeking meteor/27 No. of rose-weeking meteor/27 No. of replaced meteor/		Action US & UT fasible. Total number of misror 941 No. of working neters 951 No. of man working meters 250 No. of may working meters 250 No. of mylaced meter 250	ished. com203 com203 com203 comen219 com203	ished. im:1,276 m:1,201 meter;73 er;75	Action UL4 stoods be conducted again in Area's. Action US and US4 started US6 June.	Starkin Gevernorie.		
Action 138				Action UR will be stanted in the middle of June.	Action Ut Baiched	Anisa Ul finished.	Action US finished.				
Action Co	Conducting Instages (ARM) narrony (Azaban US) / Moduling water balance analysis before sepair wards (Assian U16)	odice UIO	Action UP finished.	a .	Action UP finished and Action UD finished. Imparing data was finished on 23 May.	915	Aution UP Galdhood and Aution UPD will be done during May.				
Author Ull	Cashadiay bakaga describes survey	2 leakage points were detected.	No leakage paints were detected due to arm selvoch. Therefore, further actions have been essectled.	Action U11 will be done in fune.	3 foldage points were detected.	2 Inalogy points were detected.	3 instage points were detected.				
Acrise U12	Republig hadding parts	I point flood in front of JICA Final Porkazion Team and no felage voza firand es another I point.			3 beking pelas were repaired. May, 2 beking points were repaired	2 leaking points were repaired.	3 inking points were regalated.				
Acrise U13	Conducting beliege rursey (Including reter- readings) after repair words:	Anisas U15 finished.			Action UI3 was finished.		Action U13 will be done in Pane.				
Action U14	Making water balance arelysis ofter repair works and to evaluation	Action U14 will be done during lune after obtaining from from McTourse.		Action U14 will be done in fune.	Action U14 was fireided.	Acrisar U14 will be done in Jane.	Anisa U14 will be done in buse.				
Notes: 1. Data for Condition	borne. Data for water balance analysis are as follows: - Conditions of water meets - Scattles of water resets reading.										

Plan for Expanding UFW Reduction Activity to the Governorate Level (Revision-0)

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Plan for Expanding UFW Reduction Activity to the Governorate Level (Revision-0)

Through the Project for Improvement of Management Capacity of Operation and Maintenance for SHAPWASCO (hereinafter referred to as "the Project" under the Japan technical cooperation by JICA, UFW reduction technique has been transferred to the SHAPWASCO staff by the Japanese expert team from November 2006 to October 2009.

However, in order to achieve the overall goal as "Maintenance capacity of operation and maintenance of water supply facilities is improved in Sharkia Governorate", SHAPWASCO is required to expand their activity to the Governorate level by carrying out the following:

- ➤ Establishing UFW department
- Recruiting necessary staff for UFW department
- ➤ Procuring necessary leakage survey equipment
- > Setting out a practicable methodology for UFW reduction activity

JICA expert team and C/P team conducted capacity assessment survey of following 16 UFW teams (SHAPWASCO headquarters (HQ) and branch offices). The survey results are shown in Annex-1 and Annex-3. As shown in Annex-1, more than half of the UFW team members are over 50 years old. Therefore, recruiting young staff less than 30 years old is considered one of the key issues of SHAPWASCO.

- 1. Headquarter
- Zagazig East
- 3. Zagazig West
- Zagazig Markaz
- 5. El Huseinia Markaz 6. Awlad Saqr Markaz
- 7. Faqus Markaz
- 8. Kafr Saqr Markaz
- Abu Kabier Markaz
 Diarb Nigm Markaz
- Diaro Nigm Marka:
 Ibrahimiya Markaz
- 12. Hihya Markaz
- 13. Abu Hamad Markaz
- Bilbais Markaz
 Menia Algamah Markaz
- 16. Mashtool El Sooq Markaz

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1. Establishment of UFW Depart

1-1 Organization and Tasks of UFW Department

1-1-1 Organization of UFW Department

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UFW department will be composed of HQ team and 16 branch teams ant the number of employees will become 105. The organization of the department is proposed as shown in Figure-1.

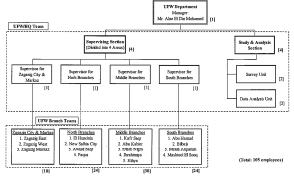


Figure-1 osed Ore rtment of SHAPWASCO

1-1-2 Organization of UFW/HQ Team

UFW/HQ team shall be composed of the following members:

- Head of UFW/HQ team: 1 (Head of UFW Department)
- Supervisor for UFW branch teams: 1 x 4 areas=4
- Study & data analysis: 4

The organization of UFW/HQ team is proposed in Figure-2.

Plan for Expanding UFW Reduction Activity to the Governorate Level (Revision-0)

Table-1 Tasks and Roles of UFW/HQ Team Members

No.	Task	Head of UFW/HQ Team	Supervisor for Branch Teams	Study & Analysis Section
(1)	Formulating action plan for UFW reduction activity	0		
(2)	Preparing program for training UFW branch members	0		
(3)	Preparing training schedule and conducting training to UFW branch members	0	Δ	Δ
(4)	Formulating a plan for DMA and conducting supervision of UFW reduction activity for DMAs	Δ	0,	Δ
(5)	Analyzing leakage survey results and examining countermeasures for leakage prevention	Δ		0
(6)	Preparing a plan for recruiting UFW members	0		
(7)	Conducting procurement and maintenance of leakage survey equipment (including repairs and regular check-up)	Δ	0	
(8)	Preparing an annual budgetary plan for UFW Department	0		

Note: ○: Main task, △: Assisting other staff's task

1-1-3 Job Description of UFW/HO Team

(1) Formulating action plan for UFW reduction activity

UFW/HQ team shall formulate an annual budgetary plan for UFW reduction activity of UFW department. This plan shall include an action plan prepared by each UFW branch team. The action plan shall include at least the following items:

- Target areas
- GIS drawing of DMA for the target areas
- Leakage survey schedule for DMAs

(2) Preparing training program for UFW branch team members

The contents of the program for training are as follows:

[Class Room Training]

- Meaning of UFW reduction activity
- Leakage survey method such as Minimum Night Flow (MNF) survey, leak detection survey, etc.
- Outline of leakage survey equipment
- Evaluation of leakage survey results
- Explanation and distribution of SOP for leakage survey prepared in the project

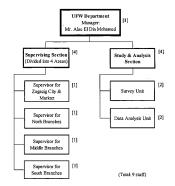


Figure-1 Proposed Organization of UFW/HQ Team of SHAPWASCO

1-1-2 Tasks for UFW/HQ Team

Tasks for UFW/HQ team are as follows:

- (1) Formulating action plan for UFW reduction activity
- (2) Preparing program for training UFW branch members
- (3) Preparing training schedule and conducting training to UFW branch members
- (4) Formulating a plan for District Metered Area (DMA) and conducting supervision of UFW reduction activity for DMAs
- (5) Analyzing leakage survey results and examining countermeasures for leakage prevention
- (6) Preparing a plan for recruiting UFW members
- (7) Conducting procurement and maintenance of leakage survey equipment (including repairs and
- (8) Preparing an annual budgetary plan for UFW Department (HQ team and branch teams)

For the tasks mentioned above, the roles of UFW/HO team members are as shown in Table-1.

Plan for Expanding UFW Reduction Activity to the Governorate Level (Revision-0)

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[OJT at Hihya Training Center]

- Method of MNF survey
- Leak detection survey
- (3) Preparing training schedule and conducting training of UFW branch members UFW/HQ team shall prepare an annual training plan for UFW branch teams and conduct training according to the training plan by means of the training program
- (4) Formulating a plan for DMA and conducting supervision of UFW reduction activity for DMAs UFW/HQ team has a responsibility of the following:
 - Designing DMA
 - Monitoring of distributed volume at DMA
 - Analyzing causes of unusual results, if any
 - Giving advices to UFW branch team for leakage survey
 - Supervising leakage survey by UFW branch team
- (5) Analyzing leakage survey results and examining countermeasures for leakage prevention
 - Analyzing results of leakage survey by preparing water balance analysis sheet
 - Giving guidance for countermeasures for leakage prevention
- (6) Recruit Plan for new staff of UFW Department (HQ team and branch teams) In order to realize continuous activity for UFW reduction, two (2) new members less than 30 years old shall be employed from 2009 to 2011 for each UFW team. The recruiting plan is shown in Annex-1.
- (7) Procurement and maintenance of leakage survey equipment

UFW/HQ team has following responsibility for leakage survey equipment:

- Conducting regular check-up for leakage survey equipment
- Conducting control for spare parts of the equipment (checking inventory stock, preparing list of the required quantity to be procured)
- Taking necessary action for repairing the equipment when it has become out of order
- (8) Preparing an annual budgetary plan for UFW Department

UFW/HQ team has following responsibility for budgetary plan:

- Preparing annual budgetary plan for UFW Department including the following cost: > Operation cost for UFW/HO team (personnel cost, fuel cost, training cost, maintenance cost of Hihya training center, etc.)
 - > Operation cost for UFW branch teams (personnel cost, repairing leakage cost, etc.)

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1-2 Organization and Tasks of UFW Branch Teams

1-2-1 Organization of UFW Branch Teams

UFW branch teams shall be composed of the following members:

- Head of UFW branch team: 1
- Engineer/technician: 3
- Worker: 2

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Organization of UFW branch team is shown in Figure-2.

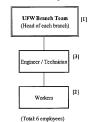


Figure-2 Organization of UFW Branch Team of SHAPWASCO

1-2-2 Tasks of UFW Branch Team

Tasks for UFW branch team are as follows:

- Determining DMAs in water distribution areas through consultation with HQ team
- \blacksquare Conducting leakage survey according to the action plan for UFW reduction activity for DMAs
- Conducting leakage detection survey for the DMAs where the current UFW is over the allowable level
- Repairing leaking points or replacing with new piping materials, if necessary
- Monitoring measured flow at flow meter of DMA
- Reporting the results of the above works to HQ at a regular basis

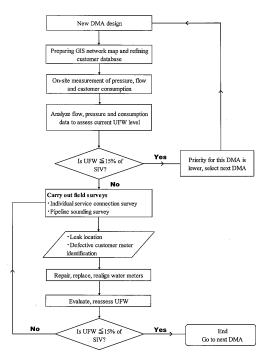
2. Recruiting Plan for UFW Department Staff

Recruiting plan for UFW department staff (HQ team and branch teams) up to 2020 is shown in Annex-1. In formulating the plan, following points have been taken into account:

- For the coming three (3) years from 2009 to 2011, two (2) young staff less than 30 years old shall be employed for HQ team and each branch team.
- Since more than a half of the current team members are over 50 years old, recruited young staff
 shall be trained within a year and these young staff shall be replaced with the aged staff.

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Plan for Expanding UFW Reduction Activity to the Governorate Level (Revision-0)



SIV = System Input Volume (or Distribution Volume)

Figure-3 Flow Chart for Practicable UFW Reduction Activity

3. Procurement Plan for Leakage Survey Equipment

Leakage survey equipments to be procured by SHAPWASCO for the coming three (3) years are shown in Annex-2. In formulating the plan, following points have been taken into account:

- For Zagazig East, Zagazig West and Zagazig Markaz teams, leakage survey equipments procured under the project shall be utilized.
- For the daily activity by HQ team, vehicles for operation of the team and supervision of branch teams are required and included in the plan.
- Since potable ultrasonic flow meter for large diameters are not so frequently used in the activity, only sensor shall be procured.
- For water pressure recorder, digital type shall be procured.

4. Establishment of Methodology for Practicable UFW Reduction Activity

In order to conduct UFW reduction activity efficiently and practicably, the activity shall be focused on the areas having a relatively high UFW ratio. For this purpose, District Metered Areas (DMA) shall firstly be prepared.

After determining DMAs, MNF survey shall be conducted for the selected DMAs to confirm the current situation of the leakage ratio. Then, the current UFW ratio shall be compared with the allowable level (15%) obtained from the pilot projects in the Project. If the current UFW ratio is more than the allowable level, the DMA shall be considered as the target area for conducting leakage survey.

The method mentioned above is explained by flow chart in Figure-3.

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Plan for Expanding UFW Reduction Activity to the Governorate Level (Revision-0)

Annex-1

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Area	Team		No. of		Age (as							ear ar									Total
			Staff		40-44	45-49	50-54	55-59	2009	201	201	2012	2013	2014	2015	2016	2017	2018	2019	2020	
IQ	HQ	Current	3	2			1			1000	1888	1000	100	1100	100	200			1853	250	100
		Reserve*1	0						1588		1862	100				9000		1500	1000	Sub.	100000
		To be recruited	- 1						2					1		1	_	-			3
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lity &		Reserve	4				1	3	2011	eisa	1980	2200	1000	NO.	1000	5000	10000	12020	SH	2550	200001
darkaz		To be recruited	- 1						2	_	T	1	_	1	1	-	-	1	_		3
	Zagazig West	Current .	4			2	2			1980	100	協改	188	100	SUE	統第		12.651	900	1900	Strings
		Reserve	4			1	3		(ta)	200	1150	188	100						機區		889825
		To be recruited	0						2	_	_	-	T	_	T						2
	Zagazig Markaz	Current	4			2	2		1999		1000	100	#Bible	813	1810	aligh:	eries eries	1870x	21014	864	50800
	1	Reserve	4			4			1788	100	less:					200	200	248	100	No.	10300
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Branches	1	Reserve	4			1	3		300		1	1956	133	375	188		200	100		les i	SERVICE SERVICE
	1	To be recruited	2				Ė		2		1	1	1	1	1				2	1	4
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		Reserve	4			3	1		3,000	200	diom:	100.00	000	A STATE OF	19200	1000	25500	BEES!	RIS	10100	HIRMIN
		To be recruited	0				_		2	1100	1	1	1	T	-	-	-/-	-	1	1	2
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		Reserve	4	-		4	_		1000	200								1000			193883
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		To be recruited	4			_	_		-	2	1	-	1200	1	1000	2	-	-	-	-	4
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	Total	Reserve	2	2	4 2	23	24	9	-	SHO		12900		-		-		-	1	-	

From 2009 to 20011, two (2) young members who are less than 30 years old shall be recruited for the UFW team of each branch.
 Reserve members have been nominated from the current network section of each branch and they are supposed to assist UFW team in case that

Reserve members are also required to assist UFW team until recruit staff has not required skills for UFW reduction activity.

Staff shall be recruited when the staff becomes 59 years old that is one year before his
 Two (2) workers are require for each UFW team and not included in this recruiting pla

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Capacity Assessment Survey for UFW Team Members of SHAPWASCO

Markaz/City: Zagazig East (No.2)

Date of Survey: 6/1/2009

4													
4	1	Mohamed Hatez Lotfy	46	Assistant Engineer	School	Head of Zagazig	East Water	Networks	24 years	Water Department	All Activities	Attend workshops	Expert Team
ember		Mechat Mount Mahmoud	44	Assistant Engineer	School	Supervisor of	Zagazig Ciry Water	Networks	16 years	Water Department	All Activities	Aftend workshops held by JICA –	Expert Team
List of UFW Team Member	7	Mohamed Mohamed Bakr	43	Assistant Engineer	School	Supervisor of	Lagazig City Water	Networks	15 years	Water Department	All Activities	Attend workshops held by JICA -	Expert Team
List		Salama Mohamed Abd El Azí	90	ıer	School	Head of Zagazig	City Water	Networks	26 years	Water Department	All Activities	Attend workshops held by JICA	Expert Team
Ifem		Name	Age	Educational background		Job category (eng. or technician)			Working years in Water Sector	Section or Department	Experience of UFW activity	UFW workshop or training	
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Sector: Mr. Ibrahim Abd El Hameed

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Annex-3 Capacity Assessment of UFW Team Members

Plan for Expanding UFW Reduction Activity to the Governorate Level (Revision-0)

No.3 Zagaztg West

Date of Survey: 6/1/2009

Capacity Assessment Survey for UFW Team Members of SHAPWASCO

Markaz/Citv: Zagazig West (No.3)

No.	Item	1	2	3	4	5
	Name	Samir Mohmond	Mahmoud	Nabil Fathy El Sayed George Abd El	George Abd El	
		Abd El Hameed	Mohamed El Hariry		Maseeh	
61	Age	45	45	52	15	
	Educational background	Assistant Engineer	Assistant Engineer	Assistant Engineer	Assistant Engineer	
		Technical High	Technical High	Technical High	Technical High	
		School	School	School	School	
-	Job category (eng. or technician)	Head of Zagazig	Supervisor of	Supervisor of	Supervisor of	
		West Water	Zagazig City Water	Zagazig City Water	Zagazig City Water	
		Networks	networks	networks	Networks	
5	Working years in Water Sector	20 years	18 years	30 years	24 years	
100	Section or Department	Zagazig City Water	Zagazig City Water Zagazig City Water Zagazig City Water	Zagazig City Water	Zagazig City Water	
		Networks	Networks	Networks	Networks	
7	7 Experience of UFW activity	All Activities	All Activities	All Activities	All Activities	
60	UFW workshop or training	Attend workshops	Attend workshops	Attend workshops	Attend workshops	
		held by JICA-	held by JICA-	held by JICA -	held by JICA-	
		Expert Team	Expert Team	Expert Team	Expert Team	

Nofe: Head of Sector: Mr. Ibrahim Abd El Hameed

Annex-3 Capacity Assessment of UFW Team Members

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Plan for Expanding UFW Reduction Activity to the Governorate Level (Revision-0)

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Annex-2

Equipment Purchasing Plan for UFW Teams

					Quantity and Price of Lealage Survey Equipment	Price of Lea	Anna Survey	Equipment				Tend Daine	Direct	Burchesine Cohedula	olo
Area	UFW Team	dJW.1	2. AR	3. PUM-L	4. PUM-S	S. WPR	6. PCL	7. ML	8. LD	9. CED	10. CTC	Odline (TE)	in ,	ritasing series	2
		22,200	1,000	3,400	43,500	009'9	35,700	8,300	125,000	150,000	100,000	(27)	2009	2010	2011
НО		_	ŀ	-		2		_	_		_	273,100			
	Zagazig East		Equ	ipment No.1	Equipment No.1 to 9 provided in the project shall be used	in the proje	et shall be u	pos.		-		150,000	8		
Cagazig City	Zagazig West		ם	ipment No.1	Equipment No.1 to 9 provided in the project shall be used	in the proje	ot shall be u	pas.							
& Markaz	Zagazig Markaz		Edu	ipment No.1	Equipment No.1 to 9 provided in the project shall be used	in the proje	ct shall be u	Sed.							
	Huseinia Markaz	_	7	-	2	~	-	_	-	-		446,800	8		
North	New Salhia	_	2	-	2	2	-	-	-			296,800	8		
Sranches	Awlad Sagr	-	2	1	2	2	-	_	_			296,800	8		
	Faqus	-	2	_	2	2	-	-	-			296,800	8		
	Kafr Sagr	-	2	Ī	2	2	-	_	-	-		446,800		8	
	Abu Kabier	-	2	-	2	2	-	_	-			296,800		8	
annuic .	Diarb Nigm	ī	2	1	2	2	-	-	-			296,800		888	
erancues erancues	Ibrahimiya	-	2	1	2	2	-	_	_			296,800			
	Hihya	-	2	-	2	2	-	_	-			296,800		888	
	Abu Hamad	1	7	1	2	2	-	_	-	_		446,800			888
South	Bilbais	-	2	1	2	2	-	_	_			296,800			3
Branches	Menia Algamah	_	2	-	2	2	-	-	_			296,800			
	Mashtool El Suoq	-	2	-	2	2	-	_	_			296,800			88
libya															
raining		-	-		-		-	_	-			235,700	8		
enfer															
Total Qua	Total Quantity (pcs)	15	28	14	27	28	14	15	15	4	_				
Total P.	Total Price (LE)	333,000	28,000	47,600	1,174,500	184,800	499,800	124,500	000,009 000,278,1	000,009	100,000	4,967,200	1,996,000	1,634,000	1,337,200

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Plan for Expanding UFW Reduction Activity to the Governorate Level (Revision-0)

Capacity Assessment Survey for UFW Team Members of SHAPWASCO

Markaz/City: Head Quarter (No.1)

Date of Survey: 12/1/2009

	5															
	77	Tamer Kamel		27	Electrical	Engineer - Faculty	of Engineering	Member of UFW	C/P Team	1 year	SHAPWASCO	Head Quarter	All Activities	Attend workshops	held by JICA -	Expert Team
emper	3	Wala Hamdi		24	Civil Engineer -	Faculty of	Engineering	Member of UFW C/P Member of UFW	Team	1.5 years	SHAPWASCO Head	Quarter	All Activities	Attend workshops	held by JICA-	Expert Team
List of UFW leam Member	e4	Wala Mohamed Ali		24	Civil Engineer -	Faculty of	Engineering	Member of UFW	C/P Team	1.5 years	SHAPWASCO	Head Quarter	All Activities	Attend workshops	held by JICA-	Expert Team
LIST	1	Alae El Din	Mohamed	53	Mechanical	Engineer- Faculty	of Engineering	Head of UFW C/P	Team	20 years	SHAPWASCO	Head Quarter	All Activities	Attend workshops	held by JICA -	Expert Team
	Item	1 Name		Age	Educational background			4 Job category (eng. or technician)		Working years in Water Sector	Section or Department		7 Experience of UFW activity	UFW workshop or training		
	Ŋ.	-		3	m			4		10	9		7	60		

Note: Head of Sector: Dr. Salah Bayoumi

Annex-3 Capacity Assessment of UFW Team Members

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Capacity Assessment Survey for UFW Team Members of SHAPWASCO

Markaz/City: Awlad Sagr Markaz (No.6)

Date of Survey: December 1, 2008

		List	List of UFW Team Member	fember			
No.	Item	1	2	3	4	5	
	Name	Mr. Emad Ahmed	Mr Bendary hassan	Mr Bendary lassan Mr. Hegazy El Sayed Mr. Saeed Abd El	Mr. Sneed Abd El		
		Abd El Kader	El Adawi	Ali	Salam		
3	Age	48 years	47 years	47 years	52 years		
3	Educational background	Faculty of	Assistant Engineer	Assistant Engineer	Assistant Engineer		
		Engineering	Technical High	Technical High	Technical High		
			School	School	School		
17	Job categoty (eng. or technician) Manger of Water	Manger of Water	Assistant Engineer.	Assistant Engineer.	Assistant Engineer.		
		Networks	Head of City	Supervisor of Water	Supervisor of Water		
			Water Network	Network	Network		
2	Working years in Water Sector	17 Years	21 Years	14 Years	14 Years		
9	Section or Department	Water Department	Water Department	Water Department	Water Department		
7	Experience of UFW activity	Yes, Hihya	Yes, Zagazig City &				
			Hillyn				
8	UFW workshop or training	Attend workshops	Attend workshops				
		held by	held by				
		JICA-Expert Team	JICA-Expert Team.				

Note: Head of Awlad Sagr Sector: Mr. Thrwat Abd El Fatah

Annex-3 Capacity Assessment of UFW Team Members

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Plan for Expanding UFW Reduction Activity to the Governorate Level (Revision-D)

No.7 Fagus

Capacity Assessment Survey for UFW Team Members of SHAPWASCO

Markaz/City: Faqus (No.7)

Date of Survey: 13/1/2009

	5														
	4	Salah El Dien	Abbas	84	Assistant Engineer	Technical High	School	Supervisor Water	Networks	22 years	Water Networks	All Activities	Attend workshops	held by JICA-	Expert Team
[emper	3	El Sayed Abd El Aziz Salah El Dien	Soliman	45	Assistant Engineer	Technical High	School	Supervisor water	Networks	15 years	Water Networks	All Activities	Attend workshops	held by JICA-	Expert Team
List of UFW Team Member	2	Mostafa Mohamed	Mousabah	47	Assistant Engineer	Technical High	School	Supervisor of Water	Networks	21 years	Water Networks	All Activities	Attend workshops	held by JICA-	Expert Team
List	1	Sebacy Mohamed	Rabee	51	Mechanical	Engineer- Faculty	of Engineering	Head of Water	Nervorks	21 years	Water Department	All Activities	Attend workshops	held by IICA -	Expert Team
	Item	1 Name		Age	Educational background			Job category (eng. or technician)		Working years in Water Sector	Section or Department	Experience of UFW activity	UFW workshop or training		
	No.			3	3			4		5	9	7	00		

Note: Head of Sector: Mr Mohamed Abd El Hameed Nafe'a

Annex-3 Capacity Assessment of UFW Team Members

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Plan for Expanding UFW Reduction Activity to the Governorate Level (Revision-U)

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Date of Survey: 6/1/2009

Capacity Assessment Survey for UFW Team Members of SHAPWASCO

Markaz/City: Zagazig Markaz (No.4)

List of UFW Team Member

ģ	Item	1	2	3	4	5	
	Name	Asma'a Mohamed	Mohamed	El Sayed Farag	Ibrahim Bayoumi		
_		Farag	Mohamed Sabry	Almed	Mohamed		
	Age	51	50	49	47		
	Educational background	Mechanical	Assistant Engineer	Assistant Engineer	Assistant Engineer		
		Engineer- Faculty	Technical High	Technical High	Technical High		
		of Engineering	Sthool	School	School		
	Job category (eng. or technician)	Head of Zagazig	Head of Zagazig	Supervisor of	Supervisor of		
		Markaz Water	Markaz Water	Zagazig Markaz	Zagazig Markaz		
		Department	Networks	Water Networks	Water Networks		
2	Working years in Water Sector	22years	25 years	13 years	21 years		
v	Section or Department	Water Department	Water Networks	Water Networks	Water Networks		
	Experience of UFW activity	All Activities	All Activities	All Activities	All Activities		
	UFW workshop or training	Attend workshops	Artend workshops	Attend workshops	Attend workshops		
		held by JICA -	held by JICA-	held by JICA -	held by JICA-		
		Expert Team	Espert Team	Expert Team	Expert Team		

Note:
Head of Sector: Mr. Mohamed Hassan Attia

Annex-3 Capacity Assessment of UFW Team Members

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Plan for Expanding UFW Reduction Activity to the Governorate Level (Revision-0)

Capacity Assessment Survey for UFW Team Members of SHAPWASCO

Markaz/Citv: El Huseinia (No.5)

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Date of Survey: 21/1/2009

List of UFW Team Member

la la			t								9		
Mohamed Abd A	Mohamed	49	Assistant Engineer	Technical High	School	Supervisor Water	Networks	22 years	Water Networks	All Activities	Attend workshops	held by JICA-	Expert Team
El Sayed Ibrahim Ali Mohamed Abd Ala		¥	Assistant Engineer	Technical High	School	Supervisor water	Networks	29 years	Water Networks	All Activities	Attend workshops	held by JICA -	Expert Team
Mohamed Abd El	Monean Hashem	49	Assistant Engineer	Technical High	School	Supervisor of Water	Networks	17 years	Water Networks	All Activities	Anend workshops	held by JICA-	Expert Team
Salah Abd El Haq		20	Mechanical	Engineer- Faculty	of Engineering	Head of Water	Department	19 years	Water Department	All Activities	Attend workshops	held by JICA-	Expert Team
1 Name		Age	Educational background			Job category (eng. or technician)		Working years in Water Sector	Section or Department	Experience of UFW activity	UFW workshop or training		
	-	2	'n			-7		S	v	7	60		

Note: Head of Sector: Mr. Abd El Hady Ghaith

Annex-3 Capacity Assessment of UFW Team Members

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Capacity Assessment Survey for UFW Team Members of SEAPWASCO

List of UFW Team Member

Markaz/City: Diarb Nigm (No.10)

Date of Survey: 12/1/2009

4 5	Mohamed Megahed		ZIZIZ	57	57 5 Engineer	557 Engineer 1High	227 237 Engineer il High	Ador is AZZ Ador is AZZ Assistant Engineer Technical High School Superviour of Whee	252 257 1 High cr of Water	257 57 Engineer 1 High or of Wheel	137 15. Engineer 1 High 1 Cr of Whee	15.75 Shaker Thigh or of Whee	Lizz. 25 7 18 Engineer I High c of Wheer s twods	Lings Engineer High or of Wher s s mworks	12.12.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2	Lizz. Lizz. S. Faginer I High or of Where s moods ides inter
3	Molamed El Sayed Mohamed	El Killany Abd El Aziz		5	gineer Assistant											
2	Khairy Abd El		8	25	gineer		19	ğ	ig ig			Engineer High Jiath y Water rworks	Engineer High Jiarb y Water noonks	Engineer High Jiarb y Water noorks	Engineer High Jiarb y Water noorks ities	
1	Handi El Sayed	Abd El Fatah Sharaf Motelb Mohamed	52		Mechanical	iculty	eculty ng	eculty ng	reulty ng er	eculty ng er	ng coulty	eculty ng er	reulty ng er er trument trument s	ng ng et	ng et et trulty truent s	ng et et et skops shops
Item	Name		Age		Educational background	Educational background	Educational background	Educational background Job category (eng. or technician)	Educational background Job category (eng. or technician)	Educational background Job category (eng. or technician)	Educational background Job category (eng. or technician) 7 Working years in Water Sector	Educational background Job category (eng. or technician) \[\times\chi \text{Wedking years in Water Sector} \text{Section on Department} \]	Educational background Ach entegory (eng. or technician) Working years in Where Sector Section or Department Section or Department Respectate of UPV settiny	Educational background Job cavegory (eng. or technician) Verbring years in Water Sector Section or Department Esperience of UFW tertivity	Educational background Job category (eng. or technician) Working your in Where Sector Section to Department Experience of UFW serisity UFW workshop or training	Educational background Ab category (eng, or technician) Whising years in Where Sector Section or Department Experience of UPW sectivity UTW workshop or training
No.	-		2 4		3							E 4 00	W 4 00 C	W 4 N 0 L	E 4 20 C 8	E 4 20 C 8

Note: Head of Sector: Mr. Adel Salah Sadek

Annex-3 Capacity Assessment of UFW Team Members

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Plan for Expanding UFW Reduction Activity to the Governorate Level (Revision-0)

Capacity Assessment Survey for UFW Team Members of SHAPWASCO

Date of Survey: 13/1/2009

	5														
	4	Mohamed Ragab	Assar		Assistant Engineer	Technical High	School	Supervisor of Water	Networks	20 years	Water Networks	No	No		
ember	3	Ramadan Abd Allah	Hassan	40	Assistant Engineer	Technical High	School	Supervisor of water	Networks	20 years	Water Networks	All Activities	Attend workshops	held by JICA -	Expert Team
List of UFW Team Member	2	Samir Mohamed	Almed Farag	55	Assistant Engineer	Technical High	School	Supervisor of Water	Networks	20 years	Water Networks	All Activities	Attend workshops	held by JICA-	Expert Team
List	1	Abd Allah Abd El	Mageed	35	Assistant Engineer	Technical High	School	Head of Water	Networks	21 years	Water Department	All Activities	Attend workshops	held by JICA -	Expert Team
	Item	Name		Age	Educational background			Job category (eng. or technician)		Working years in Water Sector	Section or Department	Experience of UFW activity	UFW workshop or training		
	No.	-		2	3			4		2	9	Ŀ	so		

Note: Head of Sector: Mr. Roshdy El Nagar

Annex-3 Capacity Assessment of UFW Team Members

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Plan for Expanding UFW Reduction Activity to the Governorate Level (Revision-4)

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No.S Kafr Sagr

Capacity Assessment Survey for UFW Team Members of SHAPWASCO

Markaz/City: Kafr Sagr (No.8)

Date of Survey: 20/1/2009

List of UFW Team Member

	ġ.	Item		2	3	4	2
_	_	Name	Faluny Mohamed	Mehamed Ibrahim	Mohamed Awad Abd Osman Mansour	Osman Mansour	
			Khalf Allah	Mehamed	Allah	Mohamed	
_	61	Age	55	46	47	52	
_	3	Educational background	Assistant Engineer	Assistant Engineer	Assistant Engineer	Assistant Engineer	
			Technical High	Technical High	Technical High	Technical High	
_			School	School	School	School	
_	4	Job category (eng. or technician)	Head of Water	Supervisor of Water	Supervisor of Water Supervisor of water Supervisor of Water	Supervisor of Water	
			Networks	Networks	Networks	Networks	
_	2	Working years in Water Sector	25 years	22 years	19 years	25 years	
_	v	Section or Department	Water Department	Water Networks	Water Networks	Water Networks	
L	7	Experience of UFW activity	All Activities	AllActivities	All Activities	No	
	s	UFW workshop or training	Attend workshops	Atknd workshops	Attend workshops	No	
			held by JICA-	held by JICA-	held by JICA-		
			Expert Team	Expert Team	Expert Team		

Note: Head of Sector: Mr. Mohamed El Sayed Abd El Kader

Annex-3 Capacity Assessment of UFW Team Members

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Plan for Expanding UFW Reduction Activity to the Governorate Level (Revision-tl)

Capacity Assessment Survey for UFW Team Members of SHAPWASCO

Markaz/Citv: Abu Kabeir Markaz (No.9)

Date of Survey: December 1, 2008

Supervisor of Water Network 16 Years 26 Years 26 Years
Water Department Water Department Water Department Yes, Zagazig City & Yes, Zagazig City & Yes, Zagazig City 48 years Assistant Engineer Technical High List of UFW Team Member Assistant Engineer Technical High Head of Water Mr. El Sayed Abd
El Raheem
49 years
Engineer- Faculty
of Engineering Job category (eng. or technician) Manger of Water
Networks Section 5 Working years in Water Sector
6 Section or Department
7 Experience of UFW activity

Note: Head of Abu Kabeir Sector: Mr. Ahmed El Sayed Labouta

Annex-3 Capacity Assessment of UFW Team Members

Yes, Zagazig City

Attend workshops held by IICA-Expert Teum.

Attend workshops

Attend workshops held by.

JICA-Expert Team.

UFW workshop or training

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Capacity Assessment Survey for UFW Team Members of SHAPWASCO

Markaz/Citv: Bilbais Markaz (No.14)

List of UFW Team Member

Date of Survey: May 27, 2008

No.	Item	1	2	3	4	5	
	Name	Mr. Bendary Abd El	Mr. Reda Abd El	Mr. Salah Mohamed	Mr. Mahmoud El		
		Kader Sharawy	Hansed Abd Allah	Kamel	Sayed El Killany		
61	Age	74	48	52	49		
	Educational background	Assistant Engineer	Assistant Engineer	Assistant Engineer	Assistant Engineer		
		Technical High	Technical High	Technical High	Technical High		
		School	School	School	School		
4	4 Job category (eng. or technician) Manger of Belbais	Manger of Belbais	Supervisor of Water	Supervisor of Water Supervisor of Water Supervisor of Water	Supervisor of Water		
		Water Networks	Networks	Networks	Networks		
2	5 Working years in SHAPWASCO 12 Years	12 Years	12 Years	12 Years	12 Years		
9	Section or Department	Water Department	Water Department	Water Department	Water Department		
7	Experience of UFW activity	No	All Activities	All Activities	All Activities		
80	UFW workshop or training	Attend workshops	Attend workshops	Attend workshops	Attend workshops		
		held by	held by	held by JICA-Expert	held by		
		JICA-Expert Team	JICA-Expert Team	Team	JICA-Expert Team		

Note: Head of Belbais Sector: Mr. Hassan Elaiwa

Annex-3 Capacity Assessment of UFW Team Members

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Plan for Expanding UFW Reduction Activity to the Governorate Level [Revision-0]

Date of Survey: May 29, 2008

Capacity Assessment Survey for UFW Team Members of SHAPWASCO

Markaz/City: Menia Algamah Markaz (No.15)

Assistant Engineer Technical High Mr. Ibrahim Fatehy 1 All Activities
Attend workshops
held by JICA-Expert
Team Assistant Engineer Technical High List of UFW Team Member Mr. Adel Mohamed Saleh Assistant Engineer Technical High School Manger of Menia Al qamah City Water Networks Engineer -Faculty of Engineering Manger of Menia Algamah Water Mr. Mohamed Abd El Wahab Job category (eng. or technician)

Note: Manger of Menia Al qamah Sector: Mr. Fately Ameen

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Annex-3 Capacity Assessment of UFW Team Members

Plan for Expanding UFW Reduction Activity to the Governorate Level (Revision-9)

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Capacity Assessment Survey for UFW Team Members of SHAPWASCO

List of UFW Team Member

Markaz/City: Hibya (No.12)

Date of Survey: 5/1/2009

No.	Ifem	1	2	3	4	5
	1 Name	Mahdy Fathy	Gunal Mohamed El Hady Fathy	El Hady Fathy		
	,	Ahmed	Hassein	Ahmed		
2	Age	20	23	44		
m	Educational background	Engineer -	Assistant Engineer	Assistant Engineer Assistant Engineer		
		Faculty of	Technical High	Technical High		
		Engineering	School	School		
4	4 Job category (eng. or technician) Manger of Water	Mauger of Water	Supervisor of	Supervisor of Water		
		Department	Water Networks	Networks		
		,				
5	Working years in Water Sector	18 years	20 years	15 years		
9	Section or Department	Water Department	Water Department Water Department	Water Department		
7	Experience of UFW activity	All Activities	All Activities	All Activities		
co	UFW workshop or training	Aftend workshops	Attend workshops Attend workshops Attend workshops	Attend workshops		
		held by JICA -	held by JICA -	held by JICA-		
		Expert Team	Expert Team	Expert Team		

Note: Head of Sector: Mr. El Shahat Hosny Akel

Annex-3 Capacity Assessment of UFW Team Members

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Plan for Expanding UFW Reduction Activity to the Governorate Level (Revision-d)

No.13 Abn Hamad

Capacity Assessment Survey for UFW Team Members of SHAPWASCO

Markaz/City: Abu Hamad Markaz (No.13)

List of UFW Team Member

Date of Survey: May 27, 2008

T	No.	Item	1	2	3	4	2
	-	Name	Mr. Mostafa Abd	Mr. Taher Mansour Mr. Mohamed	Mr. Mohamed	Mr. Youssay Abd El	
	Ī		Allah Ghanaiem	Metwaly	Malmoud Radwan	Monem Hassan	
	2	Age	57	47	55		
	3	Educational background	Faculty of	Assistant Engineer	Assistant Engineer.	Assistant Engineer.	
			Engineering	Technical High	Technical High	Technical High	
				School	School	School	
_	4	Job category (eng. or technician) Manger of Water	Manger of Water	Head of Water	Supervisor of Water	Supervisor of Water	
			Department	Network in Abu	Network in Abu	Network in Abu	
	Ī			Hamad Markaz	Hamad Markaz	Hanned Markaz	,
	5	Working years in SHAPWASCO 12 Years	12 Years	12 Years	12 Years	12 Years	
	9	Section or Department	Water Department	Water Department	Water Department	Water Department	
	7	Experience of UFW activity	No	No	No	No	
	89	UFW workshop or training	Attend workshops	Attend workshops	Attend workshops	Attend workshops	
			held by	held by	held by JICA-Expert	held by	
			JICA-Expert Team.	JICA-Expert Team. JICA-Expert Team.	Team.	JICA-Expert Team.	

<u>Note;</u> Head of Abn Hamad Sector: Mr. Farouk Basha

Annex-3 Capacity Assessment of UFW Team Members

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Capacity Assessment Survey for UFW Team Members of SHAPWASCO

Item		List	List of UFW Team Member	lember 3	4	9
1 Name Saeed Abd El	SacedAl	i e	Mohamed Ahmed	Abd El Baset	Soliman Hassan	,
Rahman	Rahmar	Raluman Hefny	Ali Hozayen	Mostafa Mohamed	Soliman	
Age		53	49	52	14	
Educational background Mechanical	Mecha	ical	Assistant Engineer	Assistant Engineer	Assistant Engineer	
Engine	Engine	Engineer- Faculty	Technical High	Technical High	Technical High	
ofEngi	of Engi	of Engineering	School	School	School	
Job category (eng. or technician) Manger	Manger	Manger of Water	Head of Mashtool	Supervisor water	Supervisor Water	
Networks	Networks		El 500q City Water	Networks	Networks	
			Networks			
Working years in Water Sector 23years	23years		24 years	29 years	15 years	
Section or Department Water D	Water D	Water Department	Water Networks	Water Networks	Water Networks	
Experience of UFW activity All Activities	All Activ	rities	AllActivities	All Activities	All Activities	
UFW workshop or training Attend v	Attend	Attend workshops	Attend workshops	Attend workshops	Attend workshops	
held by	held by	held by JICA-	held by JICA -	held by JICA -	held by JICA-	
Frank	Experi	Expert Team	Expert Team	Exnert Team	Expert Team	

Sector: Mr. Ezat El Sayed Khalil

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Minutes of Meeting for 3rd Project Team Meeting for PH-4 MM-PTM4-3 [09.10.31]

Date	31st October (Sat) 2009		
Time	13:00~14:00		Signature
Place	SHAPWASCO chairman's ro	om	
Attendants	[SHAPWASCO : C/P]		s.Bayou
	Dr. Salah Bayoumi	: Chairman/Project Manager	2. Danton
	Eng. Alae El Din Mohamed	: Head of UFW/HQ Team	A 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Mr. Abd El Shafi Abd El Aziz	: Head of SOP/HQ Team	100
	Eng. Gamal Abd El Hameed	Morsi : SOP/HQ Team (Well Monitoring)	
	Eng. Ibrahim Shahin	: SOP/HQ Team (Electrical)	
	Ms. Heba Mohmoud	: SOP Team (Hydraulic Analysis)	1.0
	Ms. Walaa Hamdi	: UFW Team	
	Ms. Walaa Mohamed	: UFW Team	N
	[JICA Expert Team : The Te	eam]	22 2 2
	Mr. Masahiro Takeuchi	: Team Leader	(
	Mr. Keizo Kimura	: SOP Activity	1 20
	Mr. Mitsuhito Omori	: Coordinator	111
	Mr. Mohamed Nagi	: Project Facilitator	

Completion of Activities by JICA Experts in Egypt

All the Japanese expert team will leave Egypt on 2nd November 2009 after they have completed their activities in Egypt for the Project.

- Mr. Masahiro Takeuchi (Chief Advisor)
- Mr. Keizo Kimura (Water Treatment-2/Mechanical Equipment)
- Mr. Mitsuhito Omori (Coordinator)

2. UFW Reduction Activity

2-1. Progress

All the UFW activities for 9 pilot projects in the project scope and 2 pilot projects for expansion by own effort of SHAPWASCO have been completed. The results of the activities are shown in Attachment-1.

2-2. Cost-Benefit Analysis

Expert team and C/P team conducted cost-benefit analysis taking into account the results of

MM-PTM4-3

the pilot projects as shown in Attachment-2. According to the results, both sides confirmed that UFW reduction activities are much beneficial for SHAPWASCO in terms of the period of five (5) years after the reduction activities that is considered as the expected recurrence period

2-3. Long-term Target for UFW Ratio (Related to Overall Goal for the Project)

Expert team and C/P team conducted setting long-term target of UFW ratio for SHAPWASCO related to the Overall Goal for the Project as follows:

In 2009: 31.4% (current UFW ratio)

- For 2015: 27%
- For 2020: 24%
- For 2025: 21%
- > For 2030: 19%

The details are shown in Attachment-3. These targets have been calculated using the results of the pilot projects.

2-4. Establishment of UFW Department

Board of Directors of SHAPWASCO decided to establish a new department for UFW in the meeting No. 57 dated on 25th October 2009.

According to the regulations, this decision will be verified by the Board of Directors in the coming meeting that will be held within this week (4th November 2009).

Practical steps to formulate this department have been already started and these steps are:

- A- UFW H/Q Team already prepared long term plan for expansion of UFW activities to the whole Governorate.
- B- A discussion with Human Resource Department about the required man power needed for strengthening the current number staff has been started in order to apply the
- C- Examination for detailed activities such as organization of the new department duties, required qualifications of the staff, action plan, etc., has been started.

3. SOP Activity

3-1. Progress

All the SOP activities have been completed in cooperation with JICA experts. From now on, C/P team is requested to continue the activity as a routine work.

3-2. Performance Indicator (Related to Overall Goal for the Project)

Expert team and C/P team conducted setting performance indicators (PIs) for SHAPWASCO related to the Overall Goal for the Project as shown in Attachment-4. Pls have been calculated using the monitoring data at the facilities where SOP activities have been conducted in the Project.

3-3. Establishment of SOP Department

Board of Directors of SHAPWASCO decided to establish a new department for UFW in the meeting No. 57 dated on 25th October 2009.

According to the regulations, this decision will be verified by the Board of Directors in the coming meeting that will be held within this week (4th November 2009).

Practical steps to formulate this department have been already started and these steps are:

- A- A discussion with Human Resource Department about the required man power needed for strengthening the current number staff has been started in order to apply the prepared plan.
- B- Examination of detailed activities such as organization of the new department duties, required qualifications of the staff, action plan, etc have been started.

Attachments

Attachment-1: Results of UFW Reduction Activities

Attachment-2: Cost-Benefit Analysis for UFW Reduction Activity Attachment-3: Long-Term UFW Targets for SHAPWASCO

Attachment-4: Setting of Performance Indicator (PI) regarding SOP Activities

No.	Pilot Project Site	UFW Ratio				
		Before Repair (%)	After Repair (%)	Reduction (point)		
1	Zagazig City-East	40.8	20.8	20.0		
2	Hihya Markaz	27.5	16.6	10.9		
3	Zagazig City-West	35.3	19.3	16.0		
4	Zagazig Markaz-1	39.3	14.1	25.1		
5	Ibrahimiya Markaz-1	30.0	14.0	16.0		
6	Diarb Nigm Markaz	26.2	18.6	7.5		
7	Zagazig Markaz-2	30.7	23.0	7.6		
8	Ibrahimiya Markaz-2	19.7	12.7	7.0		
9	Bilbais Markaz	21.3	12.8	8.5		
10	Abu Hamad Markaz	39.2	29.7	9.5		
11	Menia Alqamah M.	29.2	23.4	5.8		
	Average	31.4	19.1	123		
DOMEST.	The state of the s	for the second second second	The state of the s	9.3		

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8,153 5,858 63,683 Cost-Benefit Analysis for UFW Reduction Menia pamah M Activity Cost-Benefit Analysis for UFW Reduction.

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Setting of Performance Indicator (PI) for SOP Activities

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Quantity Chit

Measurement of flow rate for intake water and transmission water in 6 w Records of these flow rate are informed to SOP H/Q team from managers calculated by SOP H/Q team. Following PIs were calculated as one of the activities in this project:

of prioucion was visualized to a performance indicator of management for the business unit. Therefore, the records for calculation of Pf include whole records in the business unit. In this project, and allow rate of inflate and transmission water can be measured only at water treatment plants. In this stage, we can not measure the flow rate of intake and transmission water for all water facilities including well station, booster pump station and torof managemes emonoal plant.

Therefore, in this project, we calculated Pf in 2009 and we estimated Pf as the target to be achieved in 2010 regarding WTP.

The follwing water treatment plants are still under rehabilitation since 2008 and m Therefore, Pls for those plants could not be calculated.

1) Old Zagassig WTP

2) Old Faqus WTP

2. Calculation results of PI for WTPs

		PI-PW	(kWh/m3)	Difference	with Ave
WTP	Maximum	Minimum	Average	Maximun	Minimu
Hihya	0.327	0.305	0.315	0.012	0.01
Zagazig	0.322	0.287	0.300	0.022	0.01
NewFagus	0.369	0.247	0.289	0.080	0.04
Kafr Sagr	0.359	0.0087	0.246	0.113	0.237
Huseinia	0.533	0.277	0.439	0.094	0.16
Abbasa	0.485	0.295	0.341	0.144	0.04
Average	0.399	0.2366	0.3217		

2	PI-CL					
			PI-CL	(g/m3)	Difference	with Ave.
	WTP	Maximum	Minimum	Average	Maximun	Minimum
	Hihya	6.68	4.68	5.43	1.25	0.75
	Zagazig	5.01	4.75	4.88	0.13	0.13
	NewFaqus	8.53	4.35	6.49	2.04	2.14
	Kafr Sagr	7.32	5.37	6.16	1.16	0.79
	Huseinia	5.07	4.66	5.05	0.02	0.39
	Abbasa	5.96	4.08	4.74	1.22	0.66

Long Term Target (%)

Long-Term UFW Targets for SHAPWASCO

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2-3 PI-AL

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			PI-AL	(g/m3)	Difference	with Ave.	
1946 14-11-12	WTP	Maximum	Minimum	Average	Maximun	Minimum	
	Hihya	26.1	16.2	21.7	4.4	5.5	
	Zagazig	29.6	22.8	25.1	4.5	2.3	
	NewFaqus	24.6	18.8	22.0	2.6	3.2	
100000	Kafr Saqr	22.1	18.9	21.3	0.8	2.4	
	Huseinia	18.3	12.4	14.4	3.9	2.0	
	Abbasa	52.2	38.0	41.0	11.2	3.0	
		27.8	20.3	21.9	5.97	1.6	as solid alum
	Average	24.8	21.9	24.3			
2-4	PI-EF						
			PI-EF	(-)			
Control of the Contro	WTP	Maximum		Average			
	Llibura	0.000	0.710	0.051			

		PI-EF (-)		
WTP	Maximum	Minimum	Average	
Hihya	0.999	0.710	0.951	
Zagazig	0.933	0.853	0.898	
NewFaqus	0.963	0.628	0.846	
Kafr Sagr	0.951	0.895	0.918	
Huscinia	0.930	0.853	0.913	
Abbasa	0.977	0.882	0.940	
Average	0.959	0.804	0.911	

2-5 PI-Man

	PI-Man	(m3/persor	1)
	Production	Number	Production
WTP	water volume	of	water volume per
	(m3 in 9 months)	Emproyee	employee
Hihya	9,049,918	28	323,211
Zagazig	9,867,686	48	205,577
NewFaqus	25,963,222	65	399,434
Kafr Saqr	24,322,895	51	476,920
Huseinia	9,195,119	49	187,655
Abbasa	32,441,161	90	360,457
Average	110,840,001	331	334,864

3. Improvement target of PI in 2010

3-1 Power consumption per unit production water volume: PI-PW

Electrical power consumed as-Electrical power consumed mainly by main pumps, such as intake pumps and transmisston pumps, in water treatment plant in SHAPWASCO.
When we improve the value of PF.PW, We have to focus to operation and maintenance activities for main pump.

Action to reduce power consumption in WTP Cotrol of operation number of transmission pur

Target

operation number of transmission pumps to maintain water pressure in adequate for the network.]
Hutenina WTP Less than 0.42 (AWInn3)
New Faqua WTP Less than 0.25 (KWInn3)
Kaff Saqn WTP Less than 0.25 (KWInn3)
WTP except Huseinia
Note
Huseinia WTP is operated under special condition on power supplying
Wattmeter is installed at the place near by water istake fallily located 25km away from WTP
Power supply loss arises while supplying electric power for WTP.

3-2 Chlorine consumption per unit production water volume: PI-CL

Chlorine consumption will be changed based on raw water quality such as break point. Hence, target of PI can not be set up as a value common to all the water treatment plant.

Actions to reduce chlorine consumption and keep the value in stable condition in WTP

1) Rasidatal chlorine control procedures shall be continued after completion of this project

2) Monitor and review periodically pre and post chlorine dosing rate, free residual chlorine of treated water at end of the process 1000

WTP	Average Annual Target	Monthly Target
Hihya	Not more than 4.5(g/m3)	4.5(g/m3) ±0.5(g/m3)
Zagazig	Not more than 4.5(g/m3)	4.5(g/m3) ±0.5(g/m3)
NewFagus	Not more than 5.0(g/m3)	5.0(g/m3) ±0.5(g/m3)
Kafr Saqr		$5.0(g/m3) \pm 0.5(g/m3)$
Huseinia	Not more than 4.5(g/m3)	$4.5(g/m3) \pm 0.5(g/m3)$
Abbasa	Not more than 4.5(g/m3)	$4.5(g/m3) \pm 0.5(g/m3)$

3-3 Alum consumption per unit production water volume: PI-AL

Alum consumption will be changed based on raw water quality such as turidity, pH, algae accounts etc. Therefore, target of PI can not be set up as a value common to all the water treatment plant.

- Actions to reduce alum consumption and keep the value in stable condition in WTP

 1) Alum dosing control procedures shall be continued after completion of this project
 2) Monitor and review pertoidically alum dosing rate, unbidly of treated water at end of the process.
 3) Maintain adequate dosing flowrate of alum based on alum dosing rate and raw water flowrate.
 3) Maintain adequate dosing flowrate of alum based on alum dosing rate and raw water flowrate.
 4) Adjust the concentration of alum solution according to adequate procedures for making alum solution.

WTP	Average Annual Target	Monthly Target
Hihya	Not more than 20(g/m3)	· 20(g/m3) ±2(g/m3)
Zagazig	Not more than 23(g/m3)	23(g/m3) ±2(g/m3)
NewFagus	Not more than 20(g/m3)	20(g/m3) ±2(g/m3)
Kafr Sagr	Not more than 20(g/m3)	20(g/m3) ±2(g/m3)
Huseinia	Not more than 15(g/m3)	$15(g/m3) \pm 2(g/m3)$
Abbasa	Not more than 38(g/m3)	$38(g/m3) \pm 2(g/m3)$

3-4 Ratio of production water vplume and intake water volume: PI-EF
At water recyle from daninage equipment, Hillya WTP differs from other WTPs in SHAPWASCO.
Water from drainage equipment returns to receiving well as recycle water in Hillya WTP.
Therefore, intake water volume can be reduced by the amount of recycled water.
As a result, efficiency expressed as the ratio of production water volume to intake water volume will be improved.

- As a result, efficiency expressed as the ratio of production water volume to intake water volume will be improve
 Actions to improve the ratio of production water volume to intake water volume in WTP are as follows:
 (Reduction or water watage in the plant)

 1) Review of fifter washing regime and filtering time based on assessment results of filter media

 2) Filtering load to the filter shall be reduced as much as possible by keekping turbudity of clarified water in good condition according to the set target of treatment affocialistion and sedimentation basis.

 3) Monitoring of filter washing operation and water quality of clarified water according to the set target of treatment affocialistic mass destinentation basis.

 4) Check and repairing of wastage by leakage from water treatment facilities such as structures, pipes and valves.

WTP	Average Annual Target
Hihya	Not less than 0.98
Zagazig	Not less than 0.93
NewFagus	Not less than 0.93
Kafr Sagr	Not less than 0.93
Huseinia	Not less than 0.93
Abbasa	Not less than 0.95

3-5 Manpower in water treatment plant

Load of operation and maintenance will be changed according to the level of automation for facilities, deterioration level of facilities, etc. of the plant. Flux accelulated for reference repending employment in the plant as production water volume per employee. This PI shall be evaluated on the basis of deliberation based on operation and maintenance load of each plant. And this PI shall be evaluated on the basis of deliberation based on operation and maintenance load of each plant. Therefore, we can not set up PI for 2010 at present.