



USAID
FROM THE AMERICAN PEOPLE

OPERATIONS AND MAINTENANCE
TRAINING PROJECT

TRAINING IMPACT ASSESSMENT

PERFORMANCE MANAGEMENT
SYSTEM

WASTEWATER LEVEL 1 - PILOT

USAID OPERATIONS AND MAINTENANCE TRAINING PROJECT

January 2011

This document was produced for review by the United States Agency for International Development. It was prepared by Chemonics International Inc.



Jordan Water and Wastewater Operator Certification and Training Program Training Impact Assessment (TIA)

Background – In May 2008, USAID/Amman implemented the 52-month Jordan Operations and Maintenance Training (OMT) Project with the goal of improving the operation and maintenance (O&M) of water and wastewater treatment plants in Jordan. Training and certification in O&M helps ensure efficient operation, dependable service, and sustainability of infrastructure, but OMT is not a typical technical training program. The central objective of OMT is to establish a mandatory operator certification requirement in Jordan including a highly defined career path stipulating detailed need-to-know competencies. This competency hierarchy is supported by a standardized training and testing program customized for the particular needs in Jordan from successful US models.

As a part of the pilot implementation of the operator training program, the OMT Project designed a preliminary approach and methodology to assess the impact of the training on O&M performance. This approach and methodology will be refined over the duration of the OMT project and will be turned over to the Board of Certification for their continued use. It is anticipated that the beneficial results of the Jordan program on facility O&M will be used for regional marketing of the program.

Purpose – Although the reporting of results achieved by operator trainees on standardized certification tests provides an indication of the degree of learning that has been accomplished, it does not show the impact of the training on the job and any associated O&M performance improvement by the work unit or the facility as a whole. Therefore, the OMT Project is designing an approach to measure and report the O&M performance impacts of certification and training at Jordanian treatment facilities.

This training impact assessment will collect both quantitative and qualitative data describing the pre-training O&M performance baseline and compare that with the post-training O&M performance impact at selected facilities. The findings of this assessment will be used to further improve the training program and to assist managers in supporting training and certification to achieve the greatest results.

Theory - There is wide recognition that capacity building and training are prerequisites to development. However, most evaluations of capacity building stop well short of attributing benefits specifically to training. Most only go so far as to claim that the capacity building made a significant contribution to achieving objectives. In spite of limited empirical evidence, the OMT project and the Jordan water and wastewater operators' certification and training program are committed to the assessment of the training impact at treatment facilities. The approach used here is based on the following basic assumptions:



- Improving human capacity through relevant training (formal or informal) is inherently valuable and absolutely necessary for the achievement of performance improvement,
- Given a supportive organizational environment, individual employees will apply newly acquired knowledge and skills on the job,
- The effects of these changes in practice and/or behavior can be observed, described, often measured based on the controls and accomplishments reported, and,
- These effects can have a positive impact on productivity, efficiency, and cost of services or outputs delivered.

The ultimate beneficiaries of the training and certification, apart from the trainees in terms of greater self esteem and financial reward, are the water utilities and their customers. It is accepted here that improved individual performance will lead collectively to facility O&M that ensures greater compliance with potable water, effluent quality, and environmental standards as well as protecting the investment in treatment infrastructure and contributing to its sustainability.

The Enabling Environment – The greatest variable when considering attribution is the enabling environment, which plays a key role in determining the degree to which employees are encouraged and supported in the application of new knowledge, skills, behaviors, and practices. As a rule of thumb, performance improvement interventions that, along with relevant high-quality training, include a nurturing management commitment, securing financial resources, and providing access to the necessary tools and spare parts will be more successful in achieving and demonstrating measurable results.

The OMT project advocates strongly for a Jordan operator training and certification program that adopts a pro-active change strategy that recognizes the importance of the enabling environment in achieving performance impacts. The Board of Certification is being coached to ensure that a comprehensive and inclusive approach will be sustained. The OMT project is conducting orientations to kick-off training at each site to secure management commitment, encourage application by trained employees, and make tools and spare parts available.

Assessment Design – Most training takes place in an organizational setting, typically in support of skill and knowledge requirements originating in the workplace. This certainly applies to the Jordan operator training and certification program. The job performance competencies, knowledge, and skills supported by the Jordan program are based on the need-to-know criteria developed by the Association of Boards of Certification (ABC) by conducting on-going job task assessments of US and Canadian treatment plant operators. The ABC criteria were reviewed by local subject matter experts and tailored to the specific needs and requirements of Jordanian operators.



The important relationship between training and the workplace has been adhered to in the design of the Jordan training and certification program. Using this relationship as a framework, the following four basic points can be identified at which the OMT project will take measurements, conduct assessments, and reach judgments: Before Training; During Training; After Training or Before Returning to the Job; and, On-the-Job at the Facility.

Collecting data at these four points provides an understanding of the effectiveness of the training and the impact on performance at the plant. Collecting data before training establishes the performance baseline and provides a picture of the performance improvement expectations of operator trainees, their supervisors, and company managers. Any changes in performance resulting from the operator training and certification program will be measured against this initial baseline.

Testing during and after training measures the degree of new learning taking place as well as the reaction of the trainees to the instruction itself – in other words, how well the trainees liked the training. Monitoring the trainees when they are back on the job measures changes in behavior or the degree to which newly learned practices are being applied. The measureable quantitative and qualitative results of the trainee application of new practices can provide an assessment of the training impact on individual, work unit, and overall plant performance.

Quantitative Measures – Indicators of measureable facility performance have been determined with the cooperation of Jordanian utility managers. Baseline and performance data is being collected in the following activities: Operations and Maintenance, Finance, Customer Service, and Human Resources/Staff Training and Certification. Indicators being applied for the initial pilots include:

Quality of W/WW treated – Non-compliance Citations/Year

Major Unplanned Shut-downs/Year

Emergency Actions (unit; facility)/Year

Accident Reports (unit; facility)/Year

Operating Costs (unit; facility)/Year

Maintenance Costs (unit; facility)/Year



Qualitative Measures - In addition to collecting facility performance data, the training impact assessment also collects qualitative, opinion-based input from trainees and their supervisors/managers using standardized surveys and interviews for pre- and post-training comparison. On-the-job observations of trainee practical performance at their facilities are also conducted periodically to assess application of new knowledge and skills. These surveys and interviews require the respondent to provide their opinion on the following issues: Relevance of Training, Language of Instruction, Knowledge/Understanding, Attitude/Confidence; Self Esteem, Skills/Technical; Management, and Impact on the Job.

Frequency - The initial indicators and survey/interview data gathering are associated with the pilot training of new operator training programs. Once the pilot versions of the impact assessment instruments have been finalized, it is expected that the W/WWSST (the interim Board) will consider formalizing the data collection based on the guidelines suggested below: Trainee – Pre/Post (6 months; annual); Supervisor and Manager Pre/Post (6 months; annual); On-Site Observation of Performance (associated with Interview).

TIA Handbook – As the TIA is refined over the course of pilot applications, the procedures will be finalized and ultimately issued by the Board of Certification for use at all facilities.



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SYSTEM

*WASTEWATER LEVEL 1 - PILOT
FINAL*

USAID OPERATIONS AND MAINTENANCE TRAINING PROJECT

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Prepared by Chemonics International Inc.

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Jordan Water and Wastewater Operator Certification and Training Program

Training Impact Assessment (TIA)

1. Introduction

1.1 Background – In May 2008, USAID/Amman implemented the 52-month Jordan Operations and Maintenance Training (OMT) Project with the goal of improving the operation and maintenance (O&M) of water and wastewater treatment plants in Jordan to ensure efficient operation, dependable service and sustainability of the infrastructure. OMT is not a typical technical training program. The central objective of OMT is to establish a mandatory operator certification requirement in Jordan including a highly defined career path stipulating detailed need-to-know competencies. This competency hierarchy is supported by a standardized training and testing program customized for the particular needs in Jordan from successful US models.

As a part of the pilot implementation of the wastewater operator training program in March 2010, the OMT Project designed a preliminary approach and methodology to assess the impact of the training on the O&M performance at the designated wastewater facility in Aqaba. This approach and methodology will be refined over the duration of the OMT project and will be turned over to the Board of Certification for their continued use to measure the effectiveness of the program on improved water and wastewater facility O&M and to make improvements in the program as indicated.

It is anticipated that the beneficial results of the Jordan operator certification and training program on facility O&M will be used in the marketing of the program regionally as a convincing justification for investment in a standardized program designed to develop the knowledge, skills and practices of treatment operators.

1.2 Purpose – Although the reporting of the results achieved by operator trainees on standardized certification tests provides an indication of the degree of learning that has been accomplished, it does not show the impact of the training on the job and any associated O&M performance improvement by the work unit or the facility as a whole. Therefore, the OMT Project is designing, developing and testing an approach to measure and report the O&M performance impacts of certification and training at Jordanian treatment facilities.

This training impact assessment will collect both quantitative and qualitative data describing the pre-training O&M performance baseline at Jordanian treatment facilities and compare that with the post-training O&M performance impact at the same facilities. The findings of this assessment will be used to further improve the training program and to assist managers in supporting training and certification to achieve the greatest results.

2. Theory

2.1 From improved individual capacity to improved O&M – There is wide recognition that capacity building and training are prerequisites to development. However, most evaluations of capacity building stop well short of attributing benefits specifically to training, mainly only going so far as to claim that the capacity building made a significant contribution to achieving objectives. In spite of limited empirical evidence, the OMT project and the Jordan water and wastewater operators' certification and training program are committed to the assessment of the training impact at treatment facilities. The approach used here is based in the following basic assumptions:

- Improving human capacity through relevant training (formal or informal) is inherently valuable and absolutely necessary for the achievement of performance improvement
- Given a supportive organizational environment, individual employees will apply newly acquired knowledge and skills on the job
- The effects of these changes in practice and/or behavior can be observed, described, often measured based on the controls and accomplishments reported, and,
- These effects can have a positive impact on productivity, efficiency and cost of services or outputs delivered.

The ultimate beneficiaries of the training and certification, apart from the trainees in terms of both greater self esteem and financial reward, are the water utilities and their customers. It is accepted here that improved individual performance will lead collectively to facility O&M that ensures greater compliance with potable water, effluent quality and environmental standards as well as protecting the investment in treatment infrastructure and contributing to its sustainability.

It must be noted that the competency-based training provided by the Jordan operator certification and training program is intended to provide operators with the knowledge and skills they need to effectively perform their jobs based on internationally recognized standards and best practices adjusted to meet Jordan's requirements and needs. This training is not directly linked to any specific O&M performance improvement target nor is it uniquely designed to fill a particular performance gap. As such, the impacts of this form of training can be diffused rather than focused.

Operator training and certification adds to the overall capacity of the employees at a facility; it is not typically linked directly with a specific targeted change. The collective effect of the program leads, over time, to the expected O&M improvements at treatment facilities. As a consequence, compared with a focused gap-driven intervention, deriving specific measurable results from a purely quantitative assessment of the performance impacts of operator certification training can be more difficult. Therefore, this

approach to the assessment of the performance impact of training and certification also relies on qualitative input from the trainees, their supervisors and utility managers regarding the perceived benefits of the program.

2.2 The enabling environment – The greatest variable when considering attribution is the enabling environment which plays a key role in determining the degree to which employees are encouraged and supported in the application of new knowledge, skills, behaviors and practices. As a rule of thumb, performance improvement interventions that, along with relevant high-quality training, include variables such as nurturing management commitment, securing financial resources, and providing access to the necessary tools and spare parts will be more successful in achieving and demonstrating measurable results.

The OMT project advocates strongly for a Jordan operator training and certification program that adopts an assertive pro-active change strategy which recognizes the importance of the enabling environment in achieving performance impacts. The Board of certification will be coached to ensure that a comprehensive and inclusive approach that accounts for enabling variables in treatment facilities where operator training and certification is being introduced. The OMT project will conduct orientations to kick-off training at each site to inform management and appeal to them for their commitment to encourage application by trained employees and for their support in terms of making tools and spare parts available. The Board will be encouraged to continue, follow-up and sustain this practice.

Management commitment can be reinforced by encouraging certification. Training sessions to prepare operators for certification will assist operators improve performance on certification examinations and result in better utility performance. Rewards for passing certification examinations can include increases in salary and promotions to higher levels with greater responsibility. If operators and managers are recognized and rewarded for achieving and gaining higher levels of certification, then training and certification become desirable methods to improve performance and certification levels.

The OMT project's assessment approach will address the issue of attribution by covering variables associated with the enabling environment via qualitative surveys and interview questionnaires. On a case-by-case basis, the Board will be able to review the enabling effects of the work environment on the impact of training by comparing results from different companies, facilities and units. This will lead to the development of case studies to demonstrate the degree to which training impact can be affected by environment.

3. Assessment Framework

3.1 Assessment Design – Most training takes place in an organizational setting, typically in support of skill and knowledge requirements originating in the workplace. This certainly applies to the Jordan operators training and certification program. The job performance competencies, knowledge and skills supported by the Jordan program are based on the need-to-know criteria developed by the Association of Boards of Certification (ABC) by conducting on-going job task assessments of US and Canadian treatment plant operators. The ABC criteria were reviewed by local subject matter experts and tailored to the specific needs and requirements of Jordanian operators. For example, grease removal during wastewater pretreatment was added to the Jordanian wastewater operator need-to-know criteria as this technology is common in Jordan but rarely if ever found in the US.

The important relationship between training and the workplace has been adhered to in the design of the Jordan training and certification program. Using this relationship as a framework, the following four basic points can be identified where the OMT project will take measurements, conduct assessments and reach judgments.

- Before Training
- During Training
- After Training or Before Returning to the Treatment Plant
- On the Job at the Treatment Plant

Collecting data at these four points provides an understanding of the effectiveness of the training and the impact on performance at the plant. Collecting data before training establishes the performance baseline and provides a picture of the performance improvement expectations of operator trainees, their supervisor and company managers. Any changes in performance resulting from the operator training and certification program will be measured against this initial baseline.

Testing during and after training measures the degree of new learning taking place as well as the reaction of the trainees to the instruction itself – in other words, how well the trainees liked the training.

Monitoring the trainees when they are back on-the-job measures changes in behavior or the degree to which newly learned practices are being applied. The measureable quantitative and qualitative results of the trainee application of new practices can provide an assessment of the training impact on individual, work unit and overall plant performance.

The OMT Project assessment framework collects data at all four of these points. As the purpose of this report is the assessment of training impact, discussion here does not address the testing of learning during and after training or the reaction of trainees to the training. A complete description of the OMT approach to trainee testing and training evaluation is covered

separately. The OMT project has established test development standards, validation and administration procedures as well as an evaluation system that includes the collection and analysis of feedback from trainees, trainers and specialists regarding the quality of the materials, the trainer, and the venue. This data is used to improve the overall quality of the training program thus further supporting the achievement of improved performance on-the-job at the treatment plants.

The following sections describe the quantitative and qualitative measures available for use in assessing the impact of the Jordan operator training and certification program.

3.2 Quantitative Measures (IBNET)

3.2.1 Operational

Quality of W/WW treated (compliance with Jordanian standard)

Number of Noncompliance reports

Major Unplanned Shut-downs - Service; Treatment (unit; facility)

Number of Service Interruptions (facility shutdowns; flow stoppages)

Number of Treatment Unit Shutdowns

Emergency Actions (unit; facility)

Accident Reports (unit; facility)

Number of Accident Reports per XXX employees

Lost work days due to accident per XXX employees

3.2.2 Financial

Efficiency – Cost per unit (cubic meter) of treated water

Productivity – Amount of water produced per employee

Operating Costs (unit; facility)

Maintenance Costs (unit; facility)

3.2.3 Customer Service – Treatment

Service complaints per xxxx population served

Water quality only

Wastewater: Odors

3.2.4 HR/Staff

Employee Job Performance Appraisal

Average Employee Appraisal prior to Training and Certification vs. Post

Employee Job Satisfaction (Pre/Post Training) – if available

Average Employee Job Satisfaction

Employee Resignations and/or Transfers

3.2.5 Training & Certification

Managers - % Yes when asked if training and certification improved performance

Operators - % Yes when asked if training and certification improved performance

3.2.6 Performance Return-on-Training Investment

Training Costs* % of Operating Costs (per trainee; employee)

Training Costs* % of Maintenance Costs (per trainee; employee)

*Training Costs = Fees paid for Training and Certification Process: Total Facility; Treatment Unit; Trainee – Manager, Operator, and Technician

3.2.7 Summary List of Quantitative Indicator Candidates for Pilots

Quality of W/WW treated – Non-compliance Citations/Year

Major Unplanned Shut-downs/Year

Emergency Actions (unit; facility)/Year

Accident Reports (unit; facility)/Year

Operating Costs (unit; facility)/Year

Maintenance Costs (unit; facility)/Year

These indicators were accepted by the Aqaba Water Company (AWC) for use as part of the Wastewater Level 1 pilot. Annex A contains the associated performance data report by AWC in 2009 which will be used as the pre-training baseline for the TIA.

3.3 Qualitative Measures

In addition to collecting facility performance data, the training impact assessment also collects qualitative opinion-based input from trainees and their supervisors/managers using standardized surveys and interviews for pre and post-training comparative purposes. On-job observations of trainee practical performance at their facilities are also conducted periodically to assess application of new knowledge and skills.

3.3.1 Content Description – Survey and interviews assess:

- a. Relevance of Training
- b. Language of Instruction
- c. Knowledge/Understanding
- d. Attitude/Confidence; Self Esteem
- e. Skills/Technical; Management
- f. Impact on the Job

3.3.2 Frequency

The initial indicators and survey/interview data gathering are associated with the pilot training of new operator training programs. Once the pilot versions of the impact assessment instruments have been finalized, it is expected that the W/WWSSST (interim Board) will consider formalizing the data collection based on the guidelines suggested below:

Trainee – Pre/Post (6 months; annual)

Supervisor & Manager Pre/Post (6 months; annual)

On-Site Observation of Performance (associated with Interview)

3.4 Data and information sources

What baseline data is already being collected at target plant?
How can this data be validated?

4. Methodology

This section will be developed during OMT Year 3 and 4 based on experience gained from pilot applications of the TIA approach and instruments. In final form, it is expected that this section will represent “A TIA Handbook” that can be issued by the Board for use at all facilities as training and certification is implemented.

4.1 Applying the Framework

4.2 Roles and Responsibilities (link to CBAP)

Board

Program Administrator

Facility Management

Trainees, Trainer, Quality Control Specialist

4.3 Procedures for Performance Indicators, Pre/Post-Training Surveys, Interviews and Observations

4.3.1 Data Collection

4.3.2 Data Analysis

4.3.3 Reporting & Action Planning

Training Impact Assessment Report – Annual; Case Studies

Annex A – Pre-Training Assessment Tools and Forms/Pilot Version-April 2010

A.1 Quantitative Performance Indicators – AWC WWTP/Baseline 2009

A.2 AWC Trainee Bio-data

A.3 Summary of Responses to Pre-Training Survey

A.4 Summary of Responses to Pre-Training Interview

A.5 Pre-Training Trainee Survey and Interview Forms

A.6 Pre-Training Supervisor Survey and Interview Forms

Annex B – Post-Training Assessment Forms/Pilot Version-April 2010

B.1 Post-Training Trainee Survey and Interview Forms

B.2 Post-Training Supervisor Survey and Interview Forms

Annex A – Pre-Training Assessment Tools, Forms and Summary Results/Pilot Version-April 2010

A.1 Quantitative Performance Indicators – AWC WWTP/Baseline 2009

A.2 AWC Trainee Bio-data

A.3 Summary of Responses to Pre-Training Survey

A.4 Summary of Responses to Pre-Training Interview

A.5 Pre-Training Trainee Survey and Interview Forms

A.6 Pre-Training Supervisor Survey and Interview Forms

A.1 Quantitative Performance Indicators
Aqaba Wastewater Treatment Plant (WWTP) - Pilot
Baseline Performance Data - 2009

#	Indicator	2009
1	Quality of WW treated – Non-compliance Citations	2
2	Major Unplanned Shut-downs	1
3	Emergency Actions	1
4	Accident Reports	7
5	Operating Costs	1,229,598 JD
6	Maintenance Costs	146,130 JD
7	Wastewater Quality (Lab)	
	a) number of external lab tests conducted *	156
	b) percentage of results of noncompliance with the standard	1.28%

*Measured by external labs: Water Authority of Jordan (WAJ); Ministry of Health (MoH)

A.2 AWC Trainee Bio-data

AWC Wastewater Operators Information														
No.	Name	Position	Department/Section/Plant	Education		Experience (Years)		Report to	Career Path					
				Degree	Major Subject	General	Related		A	B	C	D	Level*	Note
1	Nasha't Ibrahim Al-Kiswani	WW Operator	Aqaba WWTP	High School	Industrial	14	5	Ahmad Abu Sumagah	X				1	(e)
2	Hassan Nayf Al-Awadat	WW Operator	Aqaba WWTP	Diploma (a)	Electrical Engineering	4	4	Ahmad Abu Sumagah		X			1	(e)
3	Yazan Falah Anabosi	WW Operator	Aqaba WWTP	Diploma (a)	Chemical Engineering	1	1	Ahmad Abu Sumagah		X			1	(e)
4	Ismail Shawqi Ahmad	WW Operator	Aqaba WWTP	High School	Industrial	18	18	Ahmad Abu Sumagah	X				1	(e)
5	Hassan Al-Said Yossef	WW Operator Assistant	Aqaba WWTP	High School	Commercial	5	5	Ahmad Abu Sumagah	X				1	(e)
6	Ismail Simi Gheith	WW Operator	Aqaba WWTP	Vocational Diploma (b)	Industrial	19	19	Ahmad Abu Sumagah	X				1	(e)
7	Ahmad Musa Hanaqta	Laboratory Technician	Aqaba WWTP	Bachelor	Applied Chemistry	4	4	Eng. Zyad Al Ta'nee (Lab Manager)				X	1	(e)
8	Mofeed Saleh Al-Khateeb	Laboratory Technician	Aqaba WWTP	Diploma (a)	Food industries	25	21	Eng. Zyad Al Ta'nee (Lab Manager)		X			1	(e)
9	Khlood Falah Jaafreh	Laboratory Technician	Aqaba WWTP	Bachelor	Chemical Engineering	8	2	Eng. Zyad Al Ta'nee (Lab Manager)				x	2	(c)
10	Kawthar Aberahman Musa	Laboratory Technician	Aqaba WWTP	Diploma (a)	Medical Lab	26	11	Eng. Zyad Al Ta'nee (Lab Manager)		x			1	(e)

AWC Wastewater Mangers/Supervisors Information														
No.	Name	Position	Department/Section/Plant	Education		Experience (Years)		Report to	Career Path					
				Degree	Major Subject	General	Related		A	B	C	D	Level*	Note
1	Eng. Yasser Mohammed Al Hanaqta	WW Director	Aqaba WWTP	Bachelor	Mechanics Engineering	10	10	Eng. Jehad Al Sagarat AWC CEO Deputy				X	2	c
2	Eng. Malek Nabil Al Kateeb	WW Operation Engineer/ Supervisor	Aqaba WWTP	Bachelor	Chemical Engineering	2	2	Eng. Yasser Al Hanaqta				X	2	c
3	Eng. Mohamed Hani Mahameed	WWTP Manager (Ma'an)	Ma'an WWTP	Master	Civil-Water & Environment	7	4	Eng. Yasser Al Hanaqta				X	2	c
4	Eng. Laith Sa'eed Al Ma'aitah	Water Reuse Engineer/ Supervisor	Aqaba WWTP	Bachelor	Agricultural Engineering	2	2	Eng. Yasser Al Hanaqta				X	2	c
5	Ahmad Mohamed Abu-Sumaqa	WW Operation Supervisor	Aqaba WWTP	Diploma (a)	Chemical Engineering	10	10	Eng. Malek Al Kateeb		X			1	d

* Level shows current highest Level for which someone is quali

(a)	Community College													A = General Secondary Diploma
(b)	Less than High School													B = Community College - Science
(c)	An engineer or B.S. holder needs 2 years of Level 2 certified working experience to go to level 3													C = Community College - Sanitary Engineering
(d)	A Community College-Science graduate needs 1 year of Level 1 certified working experience to go to level 2													D = B.S. Engineering, Hydrology, Biology, Chemistry, etc.
(e)	Other Community College graduates need 1 year of Level 1 certified working experience to go to level 2													

A.3 Summary of Responses to Pre-Training Survey

A.3 OMT Training Impact Assessment Survey – Pre-Training/Trainee

A.3 OMT Training Impact Assessment Survey – Pre-Training/Trainee																										
		Values										Survey Analysis						Survey Analysis Percentages								
		(1) Strongly Disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Agree	Yazan Anabosi WW Operator	Ismael Ahmad WW Operator	Ahmad Hanaqta Laboratory Technician	Nasha't Al-Kiswani WW Operator	Ismael Gheith WW Operator	Hassan Al-Awadat WW Operator	Mofeed Al-Khateeb Laboratory Technician	Hassan Al-Said WW Operator Assistant	Kholoud Jaafreh Laboratory Technician	Kawthar Musa Laboratory Technician	(1) Strongly Disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Agree	(1) Strongly Disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Agree
Capacity Building - Learning-to-Perform		Values										Avg	Number of Trainees					Total	Number of Trainees							
1. Relevance of Training	1.1 I have been interested in learning and improving my job skills.	5	5	5	5	5	4	4	5	5	5	4.8	0	0	0	2	8	10	0%	0%	0%	20%	80%			
	1.2 I only want to study topics that are directly related to my current job.	3	2	2	2	2	1	2	3	3	2	2.2	1	6	3	0	0	10	10%	60%	30%	0%	0%			
	1.3 I want a complete knowledge of my field regardless of the current relevance.	5	4	5	4	4	4	4	5	5	4	4.4	0	0	0	6	4	10	0%	0%	0%	60%	40%			
2. Language of Instruction	2.1 I prefer to study my field in Arabic	3	5	3	4	4	3	2	5	3	4	3.6	0	1	4	3	2	10	0%	10%	40%	30%	20%			
	2.2 I prefer to study my field in English.	5	2	3	4	3	3	4	1	5	3	3.3	1	1	4	2	2	10	10%	10%	40%	20%	20%			
	2.3 I have no language preference.	3	2	4	4	4	3	2	2	3	3	3	0	3	4	3	0	10	0%	30%	40%	30%	0%			
3. Knowledge/Understanding	3.1 I am not aware of the new technologies that could improve my performance.	4	3	3	4	2	4	4	5	4	4	3.7	0	1	2	6	1	10	0%	10%	20%	60%	10%			
	3.2 The training should increase my knowledge of new international developments and new technologies in my field.	4	4	4	4	4	4	4	5	5	5	4.3	0	0	0	7	3	10	0%	0%	0%	70%	30%			
	3.3 I would like to understand the importance of safe drinking water and/or pollution control laws/regulations to my job.	4	4	5	4	5	4	4	5	4	5	4.4	0	0	0	6	4	10	0%	0%	0%	60%	40%			
	3.4 I am not aware of safety equipment and safe O&M procedures in my field.	1	2	4	4	2	4	3	4	4	4	3.2	1	2	1	6	0	10	10%	20%	10%	60%	0%			
4. Attitude/Confidence, Self Esteem	4.1 I expect the training to give me confidence to apply new knowledge to my job.	5	5	4	4	4	4	4	5	5	5	4.5	0	0	0	5	5	10	0%	0%	0%	50%	50%			
	4.2 I expect the training to give me confidence to pursue promotion and career objectives.	4	3	5	4	3	3	4	5	4	5	4	0	0	3	4	3	10	0%	0%	30%	40%	30%			
	4.3 I expect the training to give me confidence to pursue job opportunities elsewhere.	5	4	4	4	4	3	3	4	4	4	3.9	0	0	2	7	1	10	0%	0%	20%	70%	10%			
	4.4 My family, friends and neighbors are not aware of the importance of my job to protect the public health by providing safe drinking water and/or the importance of controlling pollution to protect the environment.	4	5	5	4	4	5	4	4	4	5	4.4	0	0	0	6	4	10	0%	0%	0%	60%	40%			
5. Skills/Technical; Management	5.1 I expect to acquire new technical skills that enable me to do my job better.	4	4	4	4	4	3	4	5	4	5	4.1	0	0	1	7	2	10	0%	0%	10%	70%	20%			
	5.2 I expect to acquire new ways to solve work problems.	4	4	4	4	4	3	4	5	4	4	4	0	0	1	8	1	10	0%	0%	10%	80%	10%			
	5.3 I expect to learn new ways to organize people and tasks.	4	3	4	4	5	3	3	5	4	4	3.9	0	0	3	5	2	10	0%	0%	30%	50%	20%			
6. Impact	6.1 I expect to receive the support of my supervisor and the utility in the application of new knowledge and skills on the job.	4	4	4	5	4	3	3	5	5	5	4.2	0	0	2	4	4	10	0%	0%	20%	40%	40%			
	6.2 I expect my supervisor to monitor my application of new knowledge and skills to determine impact on my performance and the performance of my work unit.	4	4	4	4	2	4	2	5	5	4	3.8	0	2	0	6	2	10	0%	20%	0%	60%	20%			
	6.3 I expect to see improvements in my performance and the performance of my work unit as a result of the training.	4	5	4	5	4	3	4	5	5	4	4.3	0	0	1	5	4	10	0%	0%	10%	50%	40%			

A. 3 AWC - Training Impact Assessment Survey – Pre-Training/Trainee Response Summary

Survey	Summary of Responses
<p>1. Relevance of Training 1.1 I have been interested in learning and improving my job skills. 1.2 I only want to study topics that are directly related to my current job. 1.3 I want a complete knowledge of my field regardless of the current relevance.</p>	<p>Trainees indicated a significant interest in improving their job performance and expressed the need to be trained in all aspects of operator responsibilities versus training limited to their current position.</p>
<p>2. Language of Instruction 2.1 I prefer to study my field in Arabic. 2.2 I prefer to study my field in English. 2.3 I have no language preference.</p>	<p>Trainee responses do not show any strong preference for Arabic or English as the language of instruction.</p>
<p>3. Knowledge/Understanding 3.1 I am not aware of the new technologies that could improve my performance. 3.2 The training should increase my knowledge of new international developments and new technologies in my field. 3.3 I would like to understand the importance of safe drinking water and/or pollution control laws/regulations to my job. 3.4 I am not aware of safety equipment and safe O&M procedures in my field.</p>	<p>Trainees honestly reported that they are generally not aware of new technologies and that they want training that will fill those gaps. They expressed strong interest in understanding the relationship of their work to quality compliance standards. They generally indicated limited knowledge of safety procedures and equipment.</p>
<p>4. Attitude/Confidence; Self Esteem 4.1 I expect the training to give me confidence to apply new knowledge to my job. 4.2 I expect the training to give me confidence to pursue promotion and career objectives. 4.3 I expect the training to give me confidence to pursue job opportunities elsewhere. 4.4 My family, friends and neighbors are not aware of the importance of my job to protect the public health by providing safe drinking water and/or the importance of controlling pollution to protect the environment.</p>	<p>100% agreed or strongly agreed that they wanted the training to build their confidence to apply new knowledge on the job. The majority expected to training to enable them to pursue promotion and/or job opportunities elsewhere. 100% indicated that their family and friends were not aware of the importance of their work</p>
<p>5. Skills/Technical; Management 5.1 I expect to acquire new technical skills that enable me to do my job better. 5.2 I expect to acquire new ways to solve work problems. 5.3 I expect to learn new ways to organize people and tasks.</p>	<p>A significant majority (88%) of trainees indicated they expected training that would enable them to do their job better and help them solve work problems. To a lesser extent (63%) of trainees expected to learn new ways to organize people and tasks</p>
<p>6. Impact 6.1 I expect to receive the support of my supervisor and the utility in the application of new knowledge and skills on the job. 6.2 I expect my supervisor to monitor my application of new knowledge and skills to determine impact on my performance and the performance of my work unit. 6.3 I expect to see improvements in my performance and the performance of my work unit as a result of the training.</p>	<p>A majority (75%) of trainees expected to receive the support of their supervisor and utility in the application of new knowledge and skills while an equal number expected their supervisor to closely monitor their performance after training to assess impact. 88% expected to see improvements in their performance and that of their work unit as a result of training.</p>

A.3 OMT Training Impact Assessment Survey – Pre-Training/Supervisor; Manager

		Values							Survey Analysis					Survey Analysis Percentages						
		(1) Strongly Disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Agree			(1) Strongly Disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Agree			(1) Strongly Disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Agree
		Yasser Hanaqta WW Director	Mohamed Mohammed (Ma'an) WWTP Manager	Ahmad Abu-Sumaqa WW Operation Supervisor	Malek Ibrahim WW Operation Engineer/ Supervisor	Laith Ma'atah Water Reuse Engineer/ Supervisor														
		Values					Avg	Number of Supervisors; Managers					Total	Number of Supervisors; Managers						
1. Relevance of Training	1.1 My staff is interested in learning and improving their job skills.	4	4	5	3	4	4	0	0	1	3	1	5	0%	0%	20%	60%	20%		
	1.2 I only want staff to study topics that are directly related to their current job.	3	4	1	4	2	2.8	1	1	1	2	0	5	20%	20%	20%	40%	0%		
	1.3 I want staff to receive complete knowledge of the field regardless of the current relevance.	4	2	4	4	4	3.6	0	1	0	4	0	5	0%	20%	0%	80%	0%		
2. Language of Instruction	2.1 I prefer to study my field in Arabic	4	4	5	4	5	4.4	0	0	0	3	2	5	0%	0%	0%	60%	40%		
	2.2 I prefer to study my field in English.	3	2	3	3	1	2.4	1	1	3	0	0	5	20%	20%	60%	0%	0%		
	2.3 I have no language preference.	2	2	3	3	1	2.2	1	2	2	0	0	5	20%	40%	40%	0%	0%		
3. Knowledge/Understanding	3.1 My staff is aware of the new technologies that could improve their performance.	3	4	1	2	2	2.4	1	2	1	1	0	5	20%	40%	20%	20%	0%		
	3.2 My staff is not aware of safety equipment and safe O&M procedures in their fields.	2	4	4	4	1	3	1	1	0	3	0	5	20%	20%	0%	60%	0%		
	3.3 The training should increase staff knowledge of new international developments and new technologies in their field.	5	4	5	5	5	4.8	0	0	0	1	4	5	0%	0%	0%	20%	80%		
	3.4 My staff currently understands the importance of safe drinking water and/or pollution control laws/regulations to their jobs.	3	3	1	2	2	2.2	1	2	2	0	0	5	20%	40%	40%	0%	0%		
4. Attitude/Confidence; Self Esteem	4.1 I expect the training to give staff confidence to apply new knowledge on their job.	4	4	5	4	4	4.2	0	0	0	4	1	5	0%	0%	0%	80%	20%		
	4.2 I expect the training to give staff confidence to pursue promotion and career objectives.	4	4	3	3	3	3.4	0	0	3	2	0	5	0%	0%	60%	40%	0%		
	4.3 I expect the training to give staff confidence to pursue job opportunities elsewhere.	4	4	4	3	4	3.8	0	0	1	4	0	5	0%	0%	20%	80%	0%		
	4.4 In my opinion, the families, friends and neighbors of my staff are not aware of the importance of the jobs my staff do to protect the public health by providing safe drinking water and/or the importance of controlling pollution to protect the environment.	5	4	4	4	4	4.2	0	0	0	4	1	5	0%	0%	0%	80%	20%		
5. Skills/Technical; Management	5.1 I expect staff to acquire new technical skills that enable them to do their job better.	4	4	4	4	4	4	0	0	0	5	0	5	0%	0%	0%	100%	0%		
	5.2 I expect staff to acquire new ways to solve work problems.	4	4	4	3	4	3.8	0	0	1	4	0	5	0%	0%	20%	80%	0%		
	5.3 I expect staff to learn new ways to organize people and tasks.	4	4	3	3	3	3.4	0	0	3	2	0	5	0%	0%	60%	40%	0%		
6. Impact	6.1 I intend to support staff in applying new knowledge and skills on the job.	5	4	5	4	4	4.4	0	0	0	3	2	5	0%	0%	0%	60%	40%		
	6.2 I intend to monitor the performance of staff after training to assess impact.	5	4	5	4	4	4.4	0	0	0	3	2	5	0%	0%	0%	60%	40%		
	6.3 I expect to see improvements in staff and work unit performance as a result of training.	4	4	4	5	3	4	0	0	1	3	1	5	0%	0%	20%	60%	20%		

A.3 AWC - Training Impact Assessment Survey – Pre-Training/Supervisor; Manager Response Summary

<i>Survey</i>	<i>Summary of Responses</i>
<p>1. Relevance of Training 1.1 My staff is interested in learning and improving their job skills. 1.2 I only want staff to study topics that are directly related to their current job. 1.3 I want staff to receive complete knowledge of the field regardless of the current relevance.</p>	<p>The majority of supervisors (80%) indicated that their staff is interested in training and that they wanted their staff to get a complete operator training program regardless of the current relevance.</p>
<p>2. Language of Instruction 2.1 I prefer staff to study in Arabic. 2.2 I prefer staff to study in English. 2.3 I have no language preference.</p>	<p>100% of supervisors preferred that staff study in Arabic.</p>
<p>3. Knowledge/Understanding 3.1 My staff is aware of the new technologies that could improve their performance. 3.2 My staff is not aware of safety equipment and safe O&M procedures in their fields. 3.3 The training should increase staff knowledge of new international developments and new technologies in their field. 3.4 My staff currently understands the importance of safe drinking water and/or pollution control laws/regulations to their jobs.</p>	<p>Most supervisors acknowledged that their staff did not have current knowledge of applied technologies. There was no clear consensus among supervisors with regard to the knowledge of safety among their staff. 80% want training to increase knowledge of new developments and technologies. The majority indicated that their staff currently does not understand the relationship of quality compliance to their job.</p>
<p>4. Attitude/Confidence 4.1 I expect the training to give staff confidence to apply new knowledge on their job. 4.2 I expect the training to give staff confidence to pursue promotion and career objectives. 4.3 I expect the training to give staff confidence to pursue job opportunities elsewhere. 4.4 In my opinion, the families, friends and neighbors of my staff are not aware of the importance of the jobs my staff do to protect the public health by providing safe drinking water and/or the importance of controlling pollution to protect the environment.</p>	<p>100% expect the training to give staff the confidence to apply new knowledge and skills however they do not believe as strongly with regard to promotion. The majority expect staff to have the confidence to pursue employment elsewhere. 100% responded that the family and friends of their staff are not aware of the importance of their work.</p>
<p>5. Skills/Technical; Management 5.1 I expect staff to acquire new technical skills that enable them to do their job better. 5.2 I expect staff to acquire new ways to solve work problems. 5.3 I expect staff to learn new ways to organize people and tasks.</p>	<p>100% of supervisors expect staff to acquire new knowledge and skills that will improve their job performance. While 90% expect training to assist in problem solving. Only 40% expect training to help staff to organize people and tasks.</p>
<p>6. Impact 6.1 I intend to support staff in applying new knowledge and skills on the job. 6.2 I intend to monitor the performance of staff after training to assess impact. 6.3 I expect to see improvements in staff and work unit performance as a result of training.</p>	<p>100% of supervisors intend to support their staff in the application of new learning on the job as well as monitor their performance. 80% expect to see improvements in individual and work unit performance</p>

	as a result of training and support.
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A.4 Summary of Responses to Pre-Training Interview

A 4 OMT Training Impact Assessment – Pre-Training/Trainee Interview

A 4 OMT Training Impact Assessment – Pre-Training/Trainee Interview											
	Capacity Building - Learning-to-Perform	Yazan Anabosi WW Operator	Ismail Ahmad WW Operator	Ahmad Hanaqta Laboratory Technician	Nasha't Al-Kiswani WW Operator	Ismail Gheith WW Operator	Hassan Al-Awadat WW Operator	Mofeed Al-Khateeb Laboratory Technician	Hassan Al-Said WW Operator Assistant	Kholoud falah Jaafreh Laboratory Technician	Kawthar Abderahman Musa Laboratory Technician
1. Relevance of Training	1.1 Why are you interested in learning and improving your job skills?	- Develop my performance.	- Develop my performance - able to carry full responsibilities in my work	- Develop my and facility performance.	- Develop Performance - increase my self confidence - Develop Problem Solving skills - Promotient	- Develop my performance.	- To acquire practical and academic knowledge and skills - Develop my performance	- Develop my performance.	- To acquire practical and academic knowledge and skills - Develop my performance	- Develop my performance. - increase my self confidence - Incentives	Develop my performance
	1.2 What training topics are of greatest importance to you? Why?	- Water Reuse - Laboratory Why? No idea about these subjects	- Water Reuse and Chlorination - Basics on Pumps and Electrical Control Boards Why? Related to my daily work ☑	- WWTP Operations and the linkage between the Operations process and the Laboratory results. Why? Acquire comprehensive knowledge in WWTP Processes	- Water Reuse - Maintenance - SCADA System - Laboratory Why? Improve my future professional career.	-Any prctical training (in field) Why? develop my practical skills	- Water Reuse Why? develop my knowledge	- Laboratory tests for the incoming and outgoing water from the WWTP. Why? it is the core responsibility in my work.	- Water Reuse Processes Why? Develop my performance	- Operations Process Why ? To evaluate lab Results and impact on Operations	new lab tests and analysis why? Enrich my knowledge
2. Language of Instruction	2.1 Did you express a preference in language of instruction - Arabic or English?	English	Arabic	Both	Arabic, but the scientific abbreviations should be in English too	Arabic	Both	Arabic, but the scientific abbreviations should be in English too	Arabic	English	Arabic
	2.2 Why?	- Language of Science - Improve technical English language.	Easy to receive information	- To understand the training materials - Strengthen my technical English Language	Easy to receive information	I don't know English	- To understand the training materials - Strengthen my technical English Language	Easy to receive information	I don't know English	- Lanuage of science - Strengthen my technical English Language	- Easy to learn/understand - Create better interactions among the Trainees/Trainer
3. Knowledge/Understanding	3.1 Are you aware of any new technologies that you want to know more about?	No	Yes. - Recent Water Reuse - Chlorination	Yes. - Oder Control - Advanced Chlorination Systems	Yes. Recent Water Reuse processes	No	No	No	No	No	No
	3.2 To what extent do you understand the importance of safe drinking water and/or pollution control laws/regulations to your job?	Fully understand	Fully understand	Fully understand	Fully understand	Fully understand	Fully understand	Fully understand	Fully understand	Fully understand	Fully understand
	3.3 To what extent are you aware of the safety equipment and safe O&M procedures associated with your job?	Fully aware	Aware	limited aware	Aware	Aware	Fully aware	Not Aware	Aware	Not aware	Limited aware
4. Attitude/Confidence; Self Esteem	4.1 How can this training help you in your career?	- Acquire new knowledge, skills and experience to develop my performance and improve my career situation and opportunities.	- Acquire new knowledge, skills and experience to develop my performance and improve my career situation and opportunities	Improve my career bath through my understanding the operations and laboratory processes.	Promotion and Incentive	Develop my career level and promotion	- Develop my career level -communicating others professionally	- Developing my performance and practical skills - Promotion	Promotion	Develop my career level	- Promotion - Develop my career level
	4.2 To what extent are your family, friends and neighbors aware of the importance of your job to protect the public health by providing safe drinking water and/or the importance of controlling pollution to protect the	Not aware.	Not aware.	Not aware	Not aware.	Not aware	Not aware	Not aware	Not aware	Not aware	Not aware
5. Skills/Technical; Management	5.1 What new technical skills do you expect to acquire that will enable you to do your job better?	- New Water Reuse processes skills - Recent WWTP operations processes skills	- Recent Standardized/ Best Practice WWTP operations processes skills	- New Laboratory analysis and evaluation methods - Standrized WWTP operations processes skills	- Equipment Preventive Maintenance skills - GlobalWater Reuse Processes skills	- Standardized WWTP Operations Process	- New Water Reuse skills	- Standardized WWTP Operations Process	- Standardized WWTP Operations Process skills - New Laboratory analysis and evaluation	Operation processes - Evaluation and monitoring	Don't know
	5.2 What new problem solving skills do you expect to acquire that will enable you to do your job better?	Mechanical and electrical maintenance	Equipment maintenance	Laboratory impact on WWTP operation process	- Mechanical and Electrical maintenance	Equipment maintenance	- Mechanical and Electrical maintenance	Don't know	Technical Monitoring	Don't know	Don't know
	5.3 What new supervisory/management skills do you expect to acquire that enable you to do my job better?	- Organizing work - Communication - Controlling and Directing.	- Leadership - Controlling	- Organizing work - Reporting	- Organizing Work - Time Management	Organizing work	- Leadership - Reporting	Don't know	Don't know.	- Employees appraisal - Reporting	Organizing work
6. Impact	6.1 In what ways do you expect to receive the support of your supervisor and the utility in the application of new knowledge and skills on the job?	- Confidence	- Confidence and incentives	- Job Secured - Promotion and incentives	Don't know	Don't know	- Confidence	Don't know	- Confidence	- Confidence and incentives	Don't know
	6.2 How do you expect your supervisor to monitor your application of new knowledge and skills to determine impact on your performance and the performance of your	Evaluation	- Observation - Discussion Meetings	- Observation	Don't know	Observation	- Observation - Follow-up Laboratory results	I don't know	- Observation - Evaluation	- Observation - Evaluation	Evaluation
	6.3 What improvements do you expect to see in your performance and the performance of your work unit as a result of the training?	Highly Positive	Positive	Highly Positive	Highly Positive	Positive	Not much Positive (light positive)	Positive	Positive	Positive	Positive
	6.4 I expect to see improvements in facility performance in terms of (A) compliance and (B) minimizing repairs and down time.	Highly Positive	Positive	Highly Positive	Highly Positive	Positive	Not much Positive (light positive)	Positive	Positive	Positive	Highly positive

A4 OMT Training Impact Assessment – Pre-Training/Supervisor; Manager Interview						
Capacity Building - Learning-to-Perform		Yasser Hanaqta WW Director	Mohamed Mohammed (Ma'an) WWTP Manager	Ahmad Abu-Sumaqa WW Operation Supervisor	Malek Ibrahim WW Operation Engineer/ Supervisor	Laith Ma'aitah Water Reuse Engineer/ Supervisor
1. Relevance of Training	1.1 To what extent do you support your staff in learning and improving their job skills? How?	Full support. by - Training Programs. - Participating in decision making.	Full support. by - Encouragement discussions - Training programs.	Full support. By Training programs	Full support. by Encouragement discussions in order to develop their careers future	Full support. by Encouragement discussions in order to develop their careers future
	1.2 What are the top priority topics do you want your staff to study? Why?	- Team work. - Maintenance. - Managerial Skills. Why? Fulfill the standardized requirements in the facility. Develop their and facility performance.	- Water reuse. - New Operations process. - Health and Safety. Why? Develop their and facility performance	- Preventive Maintenance - Pumps and Mechanical Equipments - Operations Problem Solving - Laboratory and its relation with the Operations Why? Develop their and facility performance	- Water reuse. - Operations Laboratory - Health and Safety. Why? Develop their and facility performance	- Water reuse networks process and maintenance. Why? Develop their and facility performance
2. Language of Instruction	2.1 The training is conducted in Arabic. What is your opinion of this decision?	I agree, but with the possibility of using the English language for the technical abbreviations for the operators. As for Supervisors, it should be completely in English.	I agree, but with the possibility of using the English language for the technical abbreviations, especially for the Engineers.	Totally agree	I agree, but with the possibility of using the English language for the technical abbreviations, especially for the Engineers.	Totally agree
	2.2 Why?	Operatores don't know English well and the Arabic language will be easy for them to receive information. The supervisors will improve their English language skills and it will be fruitful for external communication	- Easy to receive information/learn	- The staff does not know English. - Easy to receive information/learn - Utilizing the interaction between the trainees and the trainer.	- Easy to receive information/learn. - Develop their knowledge by learning the technical abbreviations in english.	- The staff does not know English. - Easy to receive information/learn

3. Knowledge/Understanding	3.1 To what extent do you increase the awareness of your staff of new technologies that could improve their performance? How?	<p>High extent of increasing the awareness.</p> <p>By open communications, meetings for discussions and by encouraging them to be professional in their career.</p>	<p>High extent of increasing the awareness.</p> <p>By encouraging them to be professional in their career.</p>	<p>High extent of increasing the awareness.</p> <p>By sending them to other facilities that use new technologies to improve their performance. Also, providing them with new problem solving technologies.</p>	<p>High extent of increasing the awareness.</p> <p>By encouraging them to be professional in their career.</p>	<p>High extent of increasing the awareness.</p> <p>By encouraging them to be professional in their career.</p>
	3.2 What specific new international developments and new technologies do you want your staff to learn? Why?	<ul style="list-style-type: none"> - Operations & Control Systems (PLC, SCADA). - Supporting Software's and Programs. - New Operations process techniques. <p>To enrich the knowledge and skills of the employees in order to upgrade the level of staff/facility performance.</p>	<ul style="list-style-type: none"> - New operations and controlling process techniques (PLC, SCADA) - New Water Reuse techniques. <p>To develop their skills in order to upgrade the performance level.</p>	<ul style="list-style-type: none"> - Discovering and reducing the leakage in water pipes - Remote control and problem solving. <p>To enrich their knowledge and skills in operation problem solving and shut downs.</p>	<p>Water Reuse.</p> <p>To be capable in performing the new and recent techniques.</p>	<ul style="list-style-type: none"> - New operations maintenance techniques. <p>To develop their skills in order to upgrade the performance level.</p>
	3.3 To what extent do you ensure that your staff currently understands the importance of safe drinking water and/or pollution control laws/regulations to their jobs? How?	<p>60% ensured.</p> <ul style="list-style-type: none"> - By observance and discussions. 	<p>50% ensured.</p> <ul style="list-style-type: none"> - By observance and discussions. 	<p>70% ensured.</p> <ul style="list-style-type: none"> - By following up, observance and discussions. 	<p>50% ensured.</p> <ul style="list-style-type: none"> - By following up and observance. 	<p>50% ensured.</p> <ul style="list-style-type: none"> - By following up, observance and discussions.
	3.4 To what extent do you ensure that your staff is aware of safety equipment and safe O&M procedures associated with their work? How?	<p>70% ensured.</p> <ul style="list-style-type: none"> - Monitoring and Controlling. - Reporting and Analyzing accidents. - Analyzing shut downs and causes. - Applying preventive maintenance procedures. - Monitoring the maintenance and equipment cost. <ul style="list-style-type: none"> - meetings and discussions 	<p>50% ensured.</p> <ul style="list-style-type: none"> - By observation. - Number of accidents and shut downs. 	<p>60% ensured.</p> <ul style="list-style-type: none"> - Complying with the health and safety requirements (wearing the appropriate safety clothes) - Number of accidents and shut downs. - meetings and discussions 	<p>60% ensured.</p> <ul style="list-style-type: none"> - By monitoring their performance. - By observation. - Number of shut downs. - Operators injuries. 	<p>50% ensured.</p> <ul style="list-style-type: none"> - Complying with the health and safety requirements (wearing the appropriate safety clothes) - Number of shutdowns

4. Attitude/Confidence; Self Esteem	4.1 Do you expect this training to result in a loss of staff to other employers?	Yes.	Yes.	Yes.	No	Yes.
	4.2 How can this be avoided?	- Promotions and Incentives. - Career Development.	- Promotions and Incentives.	- Open Communications and build trust with the staff and improve their job conditions. - Promotions and Incentives.		- Sitting Trainings and manpower plans. - Promotions and Incentives.
	4.3 In your opinion, to what extent are the families, friends and neighbors of your staff aware of the importance of their jobs in the protection of public health by providing safe drinking water and/or the importance of controlling	Limited awareness.	Very limited knowledge.	Very limited knowledge.	They are not aware.	Very limited knowledge.
5. Skills/Technical; Management	5.1 What specific new technical skills does your staff need to enable them to do their job better?	- Controlling operations and Water Reuse quality. - Technical operations Softwares.	- Controlling Operations Systems.	- New preventive maintenance techniques. - New operations remote monitoring techniques.	- New Operations and Maintenances techniques - best Usage of the safety equipments. - Technical Computer Softwares (PLC, SCADA). ☒	- Water Reuse techniques. - Operations networks maintenance. - Standardized International and local specifications for water reuse techniques ☒
	5.2 What specific new supervisory/management skills does your staff need to enable them to do their job better?	- Time Management. - Technical Reporting. - Computer and English Language. - Team work and Leadership. - Analysis.	- Time Management. - Monitoring and decision making.	- Filing - Technical Reporting - Operations and Maintenance Processes Management Systems. - Communication and Customer Service skills.	- Monitoring. - Organizing Work	- Technical Reporting. - Communications. - Computer skills.
6. Impact	6.1 How do you intend to support staff in applying new knowledge and skills on the job?	- Follow-up and confidence - Empowerment. - Incentives system. - Promotions and career development	- Empowerment - Incentives	- Empowerment - Confidence - Enroll them in any decisions related to their work.	- Empowerment - Promotion	- Empowerment.
	6.2 How do you intend to monitor the performance of staff after training to assess impact?	- measuring the indicators of performance - Analyse maintenance cost. - Employee contribution in developing and improving the performance. - Observance ☒	- Follow up on the facility performance improvement. - Observance	- Follow up their performance improvement. - Follow up the number of shut downs. - Measure and observe the improvement of the facility performance.	- Evaluation Programs to measure their and facility performance.	- Observation. - Measure the operations process development. - Measure the development of the staff/facility performance.
	6.3 What improvements in staff and work unit performance do you expect to see as a result of training?	Positive	Positive	Positive	Highly Positive	Positive
	6.4 What improvements do you expect to see in facility performance in terms of (A) compliance and (B) minimizing repairs and down time?	Positive	Highly Positive	Positive	Positive	Positive

المسح التقييمي (استبيان)

متدرب/مشغل

أثر تدريب مشروع التدريب على الإدارة والصيانة – مرحلة ما قبل التدريب

يرجى الإشارة إلى مستوى الاتفاق/الاختلاف بوضع علامة (✓) مقابل البيان:

5	4	3	2	1
أوافق بشدة	أوافق	محايد	أختلف	أختلف بشدة

بناء القدرات -- التعلم من أجل التطبيق

1. أهمية التدريب:

- 1.1 أنا مهتم في التعلم وتحسين مهاراتي في أدائي العملي .
- 2.1 أريد دراسة الموضوعات التي تتصل بشكل مباشر بوظيفتي الحالية فقط .
- 3.1 أريد معرفة كاملة في مجال عملي بغض النظر عن مدى ارتباطها بوظيفتي الحالية .

2. لغة التدريس:

- 1.2 أنا افضل الدراسة باللغة العربية في مجال عملي .
- 2.2 أنا افضل الدراسة باللغة الإنجليزية في مجال عملي .
- 3.2 ليس لدي تفضيل لأي لغة تدريس .

3. المعرفة:

- 1.3 أنا لست على اطلاع حول التقنيات الحديثة التي يمكن أن تحسن من أدائي لعملي .
- 2.3 التدريب سوف يزيد معرفتي حول التطورات العالمية الجديدة والتقنيات الحديثة في مجال عملي .
- 3.3 أود أن أفهم أهمية المياه الصالحة للشرب و/أو قوانين أنظمة مراقبة التلوث المتعلقة بعملي .
- 4.3 أنا لست على علم بمعدات السلامة و إجراءات التشغيل و الصيانة السليمة في مجال عملي .

4. السلوكيات:

- 1.4 أتوقع أن التدريب سيمنحني الثقة لتطبيق المعرفة الجديدة في أدائي العملي .
- 2.4 أتوقع أن التدريب سيعطيني الثقة للحصول على ترقية في عملي وتحقيق الأهداف الوظيفية .
- 3.4 أتوقع أن التدريب سيعطيني الثقة للحصول على فرص عمل في أماكن عمل أخرى .
- 4.4 عائلتي والأصدقاء والجيران ليسوا على دراية بأهمية وظيفتي في حماية الصحة العامة من خلال توفير المياه الصالحة للشرب و/أو أهمية السيطرة على التلوث لحماية البيئة.

5. المهارات:

- 1.5 أتوقع اكتساب مهارات فنية لأقوم بعملها بشكل أفضل .
- 2.5 أتوقع اكتساب طرق/أساليب جديدة لحل مشاكل العمل .
- 3.5 أتوقع اكتساب طرق وأساليب إدارية جديدة لتنظيم الموظفين والمهام .

6. الأثر المستقبلي:

- 1.6 أتوقع أن أتلقى الدعم من المشرف والإدارة عند تطبيق المعارف والمهارات الجديدة في أدائي لعملي .
- 2.6 أتوقع من المشرف مراقبة تطبيقي للمعارف والمهارات الجديدة التي اكتسبتها في التدريب لتحديد أثرها على دائي وأداء الوحدة .
- 3.6 أتوقع أن أرى تحسن في أدائي وأداء الوحدة نتيجة للتدريب .

A.5 OMT Training Impact Assessment – Pre-Training/Trainee Interview

Capacity Building - Learning-to-Perform

1. Relevance of Training

- 1.1 Why are you interested in learning and improving your job skills?
- 1.2 What training topics are of greatest importance to you? Why?

2. Language of Instruction

- 2.1 Did you express a preference in language of instruction – Arabic or English?
- 2.2 Why?

3. Knowledge/Understanding

- 3.1 Are you aware of any new technologies that you want to know more about?
- 3.2 To what extent do you understand the importance of safe drinking water and/or pollution control laws/regulations to your job?
- 3.3 To what extent are you aware of the safety equipment and safe O&M procedures associated with your job?

4. Attitude/Confidence; Self Esteem

- 4.1 How can this training help you in your career?
- 4.2 To what extent are your family, friends and neighbors aware of the importance of your job to protect the public health by providing safe drinking water and/or the importance of controlling pollution to protect the environment?

5. Skills/Technical; Management

- 5.1 What new technical skills do you expect to acquire that will enable you to do your job better?
- 5.2 What new problem solving skills do you expect to acquire that will enable you to do your job better?
- 5.3 What new supervisory/management skills do you expect to acquire that enable you to do your job better?

6. Impact

- 6.1 In what ways do you expect to receive the support of your supervisor and the utility in the application of new knowledge and skills on the job?
- 6.2 How do you expect your supervisor to monitor your application of new knowledge and skills to determine impact on your performance and the performance of your work unit?
- 6.3 What improvements do you expect to see in your performance and the performance of your work unit as a result of the training?
- 6.4 I expect to see improvements in facility performance in terms of (A) compliance and (B) minimizing repairs and down time. What improvements do you expect?

A.5 OMT Training Impact Assessment – Pre-Training/Trainee Interview- Arabic

نموذج مقابلة (متدرب/مشغل)

بناء القدرات -- التعلم من أجل التطبيق

1. أهمية التدريب:

- 1.1 لماذا أنت مهتم في التعلم وتطوير مهارات أدائك لعملك؟
- 2.1 ما هي المواضيع التدريبية التي لها أهمية قصوى بالنسبة لك؟ لماذا؟

2. لغة التدريس:

- 1.2 ما اللغة التي تفضلها في التدريس -- العربية أم الإنجليزية؟
- 2.2 لماذا؟

3. المعرفة:

- 1.3 هل سمعت عن تقنيات عمل حديثة تريد أن تعرف عنها المزيد؟ ماهي؟
- 2.3 ماذا تعرف عن أهمية المياه الصالحة للشرب و/أو قوانين/أنظمة مراقبة التلوث بالنسبة لعملك؟
- 3.3 ماذا تعرف عن أهمية معدات السلامة و إجراءات التشغيل و الصيانة السليمة المرتبطة بعملك؟

4. السلوكيات:

- 1.4 كيف يمكن لهذا التدريب أن يساعدك في عمك وحياتك المهنية؟
- 2.4 إلى أي حد تدرك عائلتك وأصدقائك والجيران أهمية وظيفتك في حماية الصحة العامة من خلال توفير المياه الصالحة للشرب و/أو على أهمية السيطرة على التلوث لحماية البيئة؟

5. المهارات:

- 1.5 ماهي المهارات الفنية الجديدة التي تتوقع اكتسابها لتمكنك من القيام بعملك بشكل أفضل؟
- 2.5 ماهي المهارات الجديدة في حل المشاكل التي تتوقع اكتسابها لتمكنك من القيام بعملك بشكل أفضل؟
- 3.5 ما هي المهارات الإشرافية/الإدارية الجديدة التي تتوقع اكتسابها لتمكنك من القيام بعملك بشكل أفضل؟

6. الأثر المستقبلي:

- 1.6 ما هي الطرق التي تتوقع أن تتلقى بها الدعم من مسؤولك وإدارتك عند تطبيقك للمعارف والمهارات الجديدة في عملك؟
- 2.6 كيف تتوقع أن يقوم مسؤولك بمراقبة تطبيقك للمعارف والمهارات الجديدة لتحديد أثر التدريب على أدائك وأداء الوحدة التي تعمل بها؟
- 3.6 ما هي توقعاتك حول رفع وتحسين مستوى أدائك وأداء الوحدة التي تعمل بها نتيجة للتدريب؟
- 4.6 ما هي توقعاتك حول رفع وتحسين مستوى أداء المرفق من حيث الالتزام بمتطلبات العمل وتقليل الأعطال/الإصلاحات وتوقف العمل؟

A.6 OMT Training Impact Assessment Survey – Pre-Training/Supervisor; Manager-Arabic

المسح التقييمي (استبيان) (مشرف/مدير)

أثر تدريب مشروع التدريب على الإدارة والصيانة -- مرحلة ما قبل التدريب
يرجى الإشارة إلى مستوى الاتفاق/الاختلاف بوضع (✓) مقابل البيان:

5 أوافق بشدة	4 أوافق	3 محايد	2 أختلف	1 أختلف بشدة
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بناء القدرات -- التعلم من أجل التطبيق

1. أهمية التدريب:

- 1.1 الموظفون لديهم الاهتمام في التعلم وتحسين مهاراتهم في أدائهم لعملهم .
- 2.1 أريد فقط من الموظفين دراسة وتعلم الموضوعات ذات العلاقة المباشرة بوظائفهم الحالية .
- 3.1 أريد من الموظفين تلقي المعرفة الكاملة في مجال عملهم بغض النظر عن مدى ارتباطها بوظائفهم الحالية .

2. لغة التدريس:

- 1.2 أنا أفضل للموظفين الدراسة باللغة العربية .
- 2.2 أنا أفضل للموظفين الدراسة باللغة الإنجليزية .
- 3.2 ليس لدي تفضيل لأية لغة تدريس .

3. المعرفة:

- 1.3 الموظفون على اطلاع حول التقنيات الحديثة التي قد تحسن من أدائهم .
- 2.3 الموظفون ليسوا على علم بمعدات السلامة وإجراءات التشغيل و الصيانة السليمة في مجال عملهم .
- 3.3 تدريب الموظفون يؤدي الى زيادة معرفتهم بالتطورات العالمية الجديدة والتقنيات الحديثة في مجال عملهم .
- 4.3 الموظفون حاليا على دراية بأهمية المياه الصالحة للشرب و/أو قوانين أنظمة مراقبة التلوث المتعلقة بعملهم .

4. السلوكيات:

- 1.4 أتوقع أن تدريب الموظفين سيعطيهم الثقة بتطبيق المعرفة الجديدة في أداء عملهم .
- 2.4 أتوقع أن تدريب الموظفين سيعطيهم الثقة للحصول على ترقية وتحقيق أهدافهم الوظيفية .
- 3.4 أتوقع أن تدريب الموظفين سيعطيهم الثقة للحصول على فرص عمل في أماكن عمل أخرى .
- 4.4 في رأيي ، أسر وأصدقاء وجيران الموظفين ليسوا على دراية بأهمية وظائفهم في حماية الصحة العامة من خلال توفير المياه الصالحة للشرب و/أو أهمية السيطرة على التلوث لحماية البيئة .

5. المهارات:

- 1.5 أتوقع من الموظفين اكتساب المهارات الفنية الجديدة التي تمكنهم من القيام بعملهم على نحو أفضل.
- 2.5 أتوقع من الموظفين اكتساب طرق وأساليب جديدة لحل مشاكل العمل .
- 2.5 أتوقع من الموظفين اكتساب طرق وأساليب إدارية جديدة لتنظيم الموظفين والمهام .

6. الأثر المستقبلي:

- 1.6 سوف أدمج الموظفين في تطبيق المعارف والمهارات الجديدة التي اكتسبها أثناء التدريب عند أدائهم لأعمالهم .
- 2.6 سوف أقوم بمراقبة أداء الموظفين بعد التدريب لتقييم أثر التدريب .
- 3.6 أتوقع أن أرى تحسينات في مستوى أداء الموظفين والوحدة نتيجة للتدريب

A.6 OMT Training Impact Assessment – Pre-Training/Supervisor; Manager Interview

Capacity Building - Learning-to-Perform

1. Relevance of Training

- 1.1 To what extent do you support your staff in learning and improving their job skills? How?
- 1.2 What are the top priority topics that you want your staff to study? Why?

2. Language of Instruction

- 2.1 The training is conducted in Arabic. What is your opinion of this decision?
- 2.2 Why?

3. Knowledge/Understanding

- 3.1 To what extent do you increase the awareness of your staff of new technologies that could improve their performance? How?
- 3.2 What specific new international developments and new technologies do you want your staff to learn? Why?
- 3.3 To what extent do you ensure that your staff currently understands the importance of safe drinking water and/or pollution control laws/regulations to their jobs? How?
- 3.4 To what extent do you ensure that your staff is aware of safety equipment and safe O&M procedures associated with their work? How?

4. Attitude/Confidence; Self Esteem

- 4.1 Do you expect this training to result in a loss of staff to other employers?
- 4.2 How can this be avoided?
- 4.3 In your opinion, to what extent are the families, friends and neighbors of your staff aware of the importance of their jobs in the protection of public health by providing safe drinking water and/or the importance of controlling pollution to protect the environment?

5. Skills/Technical; Management

- 5.1 What specific new technical skills does your staff need to enable them to do their job better?
- 5.2 What specific new supervisory/management skills does your staff need to enable them to do their job better?

6. Impact

- 6.1 How do you intend to support staff in applying new knowledge and skills on the job?
- 6.2 How do you intend to monitor the performance of staff after training to assess impact?
- 6.3 What improvements in staff and work unit performance do you expect to see as a result of training?
- 6.4 What improvements do you expect to see in facility performance in terms of (A) compliance and (B) minimizing repairs and down time?

نموذج مقابلة

(مشرف/مدير)

بناء القدرات -- التعلم من أجل التطبيق

1. أهمية التدريب:

1.1 إلى أي مدى تدعم موظفيك في التعلم وتحسين مهاراتهم الوظيفية؟ وكيف؟

2.1 ما هي المواضيع ذات الأولوية العليا التي تريد لموظفيك تعلمها؟ لماذا؟

2. لغة التدريس:

1.2 سيكون التدريب باللغة العربية. ما هو رأيكم في ذلك؟

2.2 لماذا؟

3. المعرفة:

1.3 إلى أي مدى يمكنك زيادة الوعي لدى موظفيك حول التقنيات الجديدة التي قد تحسن من أدائهم؟ وكيف؟

2.3 ما هي التطورات العالمية الجديدة والتقنيات الحديثة التي تريد من موظفيك تعلمها؟ ولماذا؟

3.3 إلى أي مدى يمكنك التأكد من أن الموظفين يدركون أهمية المياه الصالحة للشرب و/أو قوانين/أنظمة

مراقبة التلوث أثناء ممارستهم لأعمالهم؟ وكيف؟

4.3 إلى أي مدى يمكنك التأكد من أن موظفيك يدركون أهمية معدات السلامة واجراءات التشغيل والصيانة

السليمة بعملهم؟ وكيف؟

4. السلوكيات:

1.4 هل تتوقعون أن هذا التدريب سيؤدي إلى خسارة في الموظفين وانتقالهم إلى شركات/مؤسسات أخرى؟

2.4 كيف يمكن تفادي ذلك؟

3.4 برأيك ، إلى أي حد يدرك أهالي وأصدقاء وجيران موظفيكم أهمية وظائفهم في حماية الصحة العامة من

خلال توفير المياه الصالحة للشرب و/أو أهمية السيطرة على التلوث لحماية البيئة؟

5. المهارات:

- 1.5 ما هي المهارات التقنية الجديدة التي يحتاجها موظفيك بحيث يستطيعوا القيام بعملهم على نحو أفضل؟
- 2.5 ما هي المهارات الادارية/الإشرافية الجديدة التي يحتاجها موظفيك بحيث يستطيعوا القيام بعملهم على نحو أفضل؟

6. الأثر المستقبلي:

- 1.6 كيف ستعملون على دعم الموظفين في تطبيق المعارف والمهارات الجديدة في عملهم؟
- 2.6 كيف ستعملون على مراقبة أداء الموظفين بعد التدريب لتقييم أثر التدريب؟
- 3.6 ما هي توقعاتكم حول رفع مستوى أداء الموظفين والوحدات التي يعملون بها كنتيجة للتدريب؟
- 4.6 ما هي توقعاتكم حول رفع أداء المرفق (المحطة) من حيث الالتزام بمتطلبات العمل وتقليل الأعطال/الإصلاحات وتوقف العمل؟

Annex B – Post-Training Assessment Tools and Forms/Pilot Version-April 2010

B.1 Summary of Responses to Post-Training Survey

B.2 Summary of responses to Post-Training Interview

B.3 OMT Training Impact Assessment Survey – Post-Training/Trainee

OMT Training Impact Assessment Survey – Post-Training/Trainee-Arabic

OMT Training Impact Assessment – Post-Training/Trainee Interview

OMT Training Impact Assessment – Post-Training/Trainee Interview-Arabic

B.4 OMT Training Impact Assessment Survey – Post Training/Supervisor

OMT Training Impact Assessment Survey – Post Training/Supervisor-Arabic

OMT Training Impact Assessment – Post-Training/Supervisor Interview

OMT Training Impact Assessment – Post-Training/Supervisor Interview-Arabic

B.1 Summary of Responses to Post Training-Survey

B.1 OMT Training Impact Assessment Survey – Post-Training/Trainee																																
		Values																Survey Analysis					Survey Analysis Percentages									
		(1) Strongly Disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Agree	Ahmad AL-hanaqia	Yazen AL-ambosee	Esm'a'ael Shawqee	Kholoud Jaafreh	Kawthar Musa	Mofeed AL-kateeb	Hassan AL-sated	Nashat AL-Keswani	Hassen awdat	Esm'a'ael Selme												(1) Strongly Disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Agree
													Number of Trainees					Total	Number of Trainees													
1. Relevance of Training	I am interested in learning and improving my job skills	5	5	4	2	4	5	5	5	5	5	5	5	5	4	4.4	0	1	0	3	6	10	0%	10%	0%	30%	60%					
	I only want to study topics that are directly related to my current job.	2	3	3	5	2	2	5	2	1	3	2.8	1	4	3	0	2	10	10%	40%	30%	0%	20%									
	I want a complete knowledge of my field regardless of the current relevance.	5	4	5	5	4	4	5	5	5	4	4.6	0	0	0	4	6	10	0%	0%	0%	40%	60%									
2. Language of Instruction	I prefer to study my field in Arabic.	3	3	4	4	4	4	4	4	2	5	3.7	0	1	2	6	1	10	0%	10%	20%	60%	10%									
	I prefer to study my field in English.	3	3	2	4	4	3	4	4	2	3	3.2	0	2	4	4	0	10	0%	20%	40%	40%	0%									
	I have no language preference	5	3	3	4	4	2	3	3	4	3	3.4	0	1	5	3	1	10	0%	10%	50%	30%	10%									
3. Knowledge/Understanding	I am now more aware of new technologies that could improve my performance.	4	4	4	4	4	4	4	4	4	4	4	0	0	0	10	0	10	0%	0%	0%	100%	0%									
	The training increased my knowledge of new international developments and new technologies in my field.	4	5	5	4	4	4	4	4	4	4	4.2	0	0	0	8	2	10	0%	0%	0%	80%	20%									
	I now better understand the importance of safe drinking water and/or pollution control laws/regulations to my job.	3	5	4	4	3	4	4	4	4	4	3.9	0	0	2	7	1	10	0%	0%	20%	70%	10%									
	I am now more aware of safety equipment and safe O&M procedures in my field.	4	5	5	4	4	4	5	4	4	5	4.4	0	0	0	6	4	10	0%	0%	0%	60%	40%									
4. Attitude/Confidence; Self Esteem	The training is giving me confidence to apply new knowledge to my job.	4	5	5	4	4	4	4	4	4	5	4.3	0	0	0	7	3	10	0%	0%	0%	70%	30%									
	The training is giving me confidence to pursue promotion and career objectives	3	4	5	4	4	3	5	4	4	5	4.1	0	0	2	5	3	10	0%	0%	20%	50%	30%									
	The training is giving me confidence to pursue job opportunities elsewhere.	4	5	5	4	4	4	5	4	4	4	4.3	0	0	0	7	3	10	0%	0%	0%	70%	30%									
	My family, friends and neighbors are not aware of the importance of my job to protect the public health by providing safe drinking water and/or the importance of controlling pollution to protect the environment.	5	4	4	4	3	4	5	2	4	4	3.9	0	1	1	6	2	10	0%	10%	10%	60%	20%									
5. Skills/Technical; Management	I acquired new technical skills that enable me to do my job better.	4	5	5	4	4	3	5	5	4	4	4.3	0	0	1	5	4	10	0%	0%	10%	50%	40%									
	I acquired new ways to solve work problems.	3	5	5	4	4	4	5	5	4	5	4.4	0	0	1	4	5	10	0%	0%	10%	40%	50%									
	I learned new ways to organize people and tasks.	3	5	5	4	4	4	5	5	4	4	4.3	0	0	1	5	4	10	0%	0%	10%	50%	40%									
6. Impact	I am receiving the support of my supervisor and the utility in the application of new knowledge and skills on the job.	3	4	4	4	4	2	5	4	3	4	3.7	0	1	2	6	1	10	0%	10%	20%	60%	10%									
	My supervisor is monitoring my application of new knowledge and skills to determine impact on my performance and the performance of my work unit.	3	4	5	3	4	4	5	4	4	4	4	0	0	2	6	2	10	0%	0%	20%	60%	20%									
	I can see improvements in my performance and the performance of my work unit as a result of the training.	3	4	4	4	4	4	4	4	4	4	3.9	0	0	1	9	0	10	0%	0%	10%	90%	0%									

B.1 AWC - Training Impact Assessment Survey – Post-Training/Trainee Response

Summary

Survey

Summary of Responses

<p>1. Relevance of Training</p> <p>1.1 I have been interested in learning and improving my job skills.</p> <p>1.2 I only want to study topics that are directly related to my current job.</p> <p>1.3 I want a complete knowledge of my field regardless of the current relevance.</p>	<p>Trainees confirmed their pre-training opinions. After training they continue to see the value in receiving training in all aspects of operator responsibilities. A total of 100% agreed or strongly agreed that they want a complete knowledge of the field regardless of current position.</p>
<p>2. Language of Instruction</p> <p>2.1 I prefer to study my field in Arabic.</p> <p>2.2 I prefer to study my field in English.</p> <p>2.3 I have no language preference.</p>	<p>Trainees showed a preference to study in Arabic with 70% in agreement.</p>
<p>3. Knowledge/Understanding</p> <p>3.1 I am not aware of the new technologies that could improve my performance.</p> <p>3.2 The training should increase my knowledge of new international developments and new technologies in my field.</p> <p>3.3 I would like to understand the importance of safe drinking water and/or pollution control laws/regulations to my job.</p> <p>3.4 I am not aware of safety equipment and safe O&M procedures in my field.</p>	<p>100% of trainees agreed that as a result of the training they have a greater awareness of new technologies that could improve their job performance and international developments in their field. 100% agreed/strongly agreed that they now have better knowledge of safety equipment and procedures.</p>
<p>4. Attitude/Confidence; Self Esteem</p> <p>4.1 I expect the training to give me confidence to apply new knowledge to my job.</p> <p>4.2 I expect the training to give me confidence to pursue promotion and career objectives.</p> <p>4.3 I expect the training to give me confidence to pursue job opportunities elsewhere.</p> <p>4.4 My family, friends and neighbors are not aware of the importance of my job to protect the public health by providing safe drinking water and/or the importance of controlling pollution to protect the environment.</p>	<p>Post-training responses regarding attitudes showed that the training fulfilled expectations as measured pre-training. Post-training responses were almost identical to pre-training results. 100% of trainees either agreed or strongly agreed that the training gave them the confidence to apply their new knowledge to the job. 100% also reported that the training gave them the confidence to pursue employment elsewhere.</p>
<p>5. Skills/Technical; Management</p> <p>5.1 I expect to acquire new technical skills that enable me to do my job better.</p> <p>5.2 I expect to acquire new ways to solve work problems.</p> <p>5.3 I expect to learn new ways to organize people and tasks.</p>	<p>90% of trainees indicated that the training would enable them to do their job better, help them solve work problems and improve the ways they organize people and tasks. This represents a significant positive change from the 60% of trainees who expected to learn new ways to organize people and tasks on the pre-training survey.</p>
<p>6. Impact</p> <p>6.1 I expect to receive the support of my supervisor and the utility in the application of new knowledge and skills on the job.</p> <p>6.2 I expect my supervisor to monitor my application of new knowledge and skills to determine impact on my performance and the performance of my work unit.</p> <p>6.3 I expect to see improvements in my performance and the performance of my work unit as a result of the</p>	<p>After training, the majority of trainees continued to expect to receive the support of their supervisor and utility in the application of new knowledge and skills. 80% expected their supervisor to closely monitor their performance after training to assess impact. 90% continued to expect improvements in their performance and that of their work unit as</p>

training.

a result of training.

B.1 OMT Training Impact Assessment Survey – Post Training/Supervisor; Manager

		Values							Survey Analysis					Survey Analysis Percentages									
		(1) Strongly Disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Agree			(1) Strongly Disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Agree			(1) Strongly Disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Agree			
							Yasser Hanaqta WW Director	Mohamed Mohammed (Ma'an) WWTP Manager	Ahmad Abu-Sumaqa WW Operation Supervisor	Malek Ibrahim WW Operation Engineer/ Supervisor	Laith Ma'aitah Water Reuse Engineer/ Supervisor												
		Values					Avg	Number of Supervisors; Managers					Total	Number of Supervisors; Managers									
1. Relevance of Training	My staff is interested in learning and improving their job skills.	4	4	5	5	4	4.4	0	0	0	3	2	5	0%	0%	0%	60%	40%					
	I only want staff to study topics that are directly related to their current job.	2	4	3	4	4	3.4	0	1	1	3	0	5	0%	20%	20%	60%	0%					
	I want staff to receive complete knowledge of the field regardless of the current relevance.	4	2	5	4	4	3.8	0	1	0	3	1	5	0%	20%	0%	60%	20%					
2. Language of Instruction	I prefer staff to study in Arabic.	3	5	5	5	4	4.4	0	0	1	1	3	5	0%	0%	20%	20%	60%					
	I prefer staff to study in English.	3	5	4	3	3	3.6	0	0	3	1	1	5	0%	0%	60%	20%	20%					
	I have no language preference.	2	3	3	3	3	2.8	0	1	4	0	0	5	0%	20%	80%	0%	0%					
3. Knowledge/Understanding	My staff is now better aware of the new technologies that could improve their performance.	4	4	4	4	4	4	0	0	0	5	0	5	0%	0%	0%	100%	0%					
	My staff is now better aware of safety equipment and safe O&M procedures in their fields.	4	4	4	3	4	3.8	0	0	1	4	0	5	0%	0%	20%	80%	0%					
	The training has increased staff knowledge of new international developments and new technologies in their field	4	4	4	2	4	3.6	0	1	0	4	0	5	0%	20%	0%	80%	0%					
	My staff now better understand the importance of safe drinking water and/or pollution control laws/regulations to their jobs.	4	4	4	4	4	4	0	0	0	5	0	5	0%	0%	0%	100%	0%					
4. Attitude/Confidence; Self Esteem	The training is giving my staff confidence to apply new knowledge on their job.	4	5	5	4	4	4.4	0	0	0	3	2	5	0%	0%	0%	60%	40%					
	The training is giving my staff confidence to pursue promotion and career objectives.	4	4	4	3	4	3.8	0	0	1	4	0	5	0%	0%	20%	80%	0%					
	The training is giving my staff confidence to pursue job opportunities elsewhere.	4	4	5	4	4	4.2	0	0	0	4	1	5	0%	0%	0%	80%	20%					
	In my opinion, the families, friends and neighbors of my staff are not aware of the importance of the jobs my staff do to protect the public health by providing safe drinking water and/or the importance of controlling pollution to protect the environment.	3	3	5	4	4	3.8	0	0	2	2	1	5	0%	0%	40%	40%	20%					
5. Skills/Technical; Management	My staff is acquiring new technical skills that enable them to do their job better.	4	5	4	4	4	4.2	0	0	0	4	1	5	0%	0%	0%	80%	20%					
	My staff is acquiring new ways to solve work problems.	4	4	4	4	4	4	0	0	0	5	0	5	0%	0%	0%	100%	0%					
	My staff is learning new ways to organize people and tasks.	4	4	4	4	3	3.8	0	0	1	4	0	5	0%	0%	20%	80%	0%					
6. Impact	I am supporting staff in applying new knowledge and skills on the job.	4	5	5	4	4	4.4	0	0	0	3	2	5	0%	0%	0%	60%	40%					
	I am monitoring the performance of staff after training to assess impact.	5	5	4	4	4	4.4	0	0	0	3	2	5	0%	0%	0%	60%	40%					
	I can see improvements in staff and work unit performance as a result of training.	4	5	4	4	4	4.2	0	0	0	4	1	5	0%	0%	0%	80%	20%					

B.1 AWC - Training Impact Assessment Survey – Post-Training/Supervisor; Manager Response Summary

Survey	Summary of Responses
<p>1. Relevance of Training 1.1 My staff is interested in learning and improving their job skills. 1.2 I only want staff to study topics that are directly related to their current job. 1.3 I want staff to receive complete knowledge of the field regardless of the current relevance.</p>	<p>Supervisor responses increased from 80% on the pre-training survey to 100% on the post-training regarding level of staff interest in training and that they wanted their staff to get a complete operator training program regardless of the current relevance.</p>
<p>2. Language of Instruction 2.1 I prefer staff to study in Arabic. 2.2 I prefer staff to study in English. 2.3 I have no language preference.</p>	<p>The majority of supervisors (80%) continued to prefer that staff study in Arabic, however post-training, 80% versus 40% pre-training expressed language neutrality.</p>
<p>3. Knowledge/Understanding 3.1 My staff is aware of the new technologies that could improve their performance. 3.2 My staff is not aware of safety equipment and safe O&M procedures in their fields. 3.3 The training should increase staff knowledge of new international developments and new technologies in their field. 3.4 My staff currently understands the importance of safe drinking water and/or pollution control laws/regulations to their jobs.</p>	<p>Where only 20% of supervisors thought their staff had knowledge of new technologies that could improve performance on the pre-training survey, 100% agreed on the post-training survey that staff now had this knowledge. 80% acknowledged better awareness of safety after training. There was no clear consensus among supervisors with regard to the knowledge of safety among their staff. 100% of supervisors agreed that staff had improved knowledge water quality and pollution standards where the majority had the opposite opinion on the pre-training survey.</p>
<p>4. Attitude/Confidence 4.1 I expect the training to give staff confidence to apply new knowledge on their job. 4.2 I expect the training to give staff confidence to pursue promotion and career objectives. 4.3 I expect the training to give staff confidence to pursue job opportunities elsewhere. 4.4 In my opinion, the families, friends and neighbors of my staff are not aware of the importance of the jobs my staff do to protect the public health by providing safe drinking water and/or the importance of controlling pollution to protect the environment.</p>	<p>100% expect the training to give staff the confidence to apply new knowledge and skills however they do not believe as strongly with regard to promotion. The majority expect staff to have the confidence to pursue employment elsewhere. 100% responded that the family and friends of their staff are not aware of the importance of their work.</p>
<p>5. Skills/Technical; Management 5.1 I expect staff to acquire new technical skills that enable them to do their job better. 5.2 I expect staff to acquire new ways to solve work problems. 5.3 I expect staff to learn new ways to organize people and tasks.</p>	<p>100% of supervisors confirmed that staff acquired new knowledge and skills that will improve their job performance and their problem solving skills. While only 40% expected training to help staff to organize people and tasks, on the post-training survey 80% agreed that these skills had improved.</p>
<p>6. Impact 6.1 I intend to support staff in applying new knowledge and skills on the job. 6.2 I intend to monitor the performance of staff after training to assess impact. 6.3 I expect to see improvements in staff and work unit performance as a result of training.</p>	<p>Results on the post-training survey matched expectations from the pre-training. 100% of supervisors reported supporting their staff in the application of new learning on the job as well as monitor their performance. 100% of supervisors reported on the post-training survey that they see improvements in individual and work unit performance as a result of training and support.</p>

B.2 Summary of responses to Post- Training Interview

B 2 OMT Training Impact Assessment – Post-Training/Trainee Interview											
Capacity Building - Learning-to-Perform		Yazan Anabosi WW Operator	Ismail Ahmad WW Operator	Ahmad Hanaqta Laboratory Technician	Nasha't Al-Kiswani WW Operator	Ismail Gheith WW Operator	Hassan Al-Awadat WW Operator	Mofeed Al-Khateeb Laboratory Technician	Hassan Al-Said WW Operator Assistant	Kholoud falah Jaafreh Laboratory Technician	Kawthar Abderahman Musa Laboratory Technician
1. Relevance of Training	1.1 Are you interested in learning and improving your job skills? Why?	Yes To develop my knowledge and skills.	Yes To develop my performance	Yes To acquire comprehensive knowledge in operations and lab	Yes To increase my self confidence and develop my performance	Yes To develop my performance	Yes To increase my knowledge and develop the unit performance.	Yes To develop my knowledge	Yes To improve my performance	Yes To improve my performance effectively	Yes To develop my unit performance
	1.2 What training topics were of greatest importance to you? Why?	Sedimentation and flocculation, sludge and chlorination, to develop my performance	Maintenance and safety to minimize repairs and shutdown time	Operations and maintenance , safety to develop my knowledge	Operations and water reuse, to develop my knowledge and skills in performing my work	Maintenance to develop my maintenance workskills	Operations and laboratory to develop my performance.	Operations and laboratory to develop my performance.	Sludge, maintenance and safety to develop knowledge and skills.	Maintenance and safety, to reduce cost and repairs, to protect the environment	Water reuse and safety to develop my and unit performance
2. Language of Instruction	2.1 Was the combination of Arabic and English useful?	Yes	Yes	Yes	Yes	Yes	Yes, learning and improving my language skills	Yes	Yes	Yes	Yes
	2.2 Why?	To be aware of the technical English language	To improve my English language in my work	To improve my technical English language	To improve my technical English language	To improve my technical English language	To improve my technical English language	To improve my technical English language	To improve my technical English language	To improve my technical English language	To improve my technical English language
3. Knowledge/Understanding	3.1 Did the training cover new technologies that you wanted to know more about?	Yes 85%	Yes 50%	Yes 50%	Yes 100%	Yes 75%	Yes, 100%	Yes 80%	Yes (75%)	Yes 60%	Yes 70%
	3.2 To what extent did you learn the importance of safe drinking water and/or pollution control laws/regulations to your job?	90%	70 %	75%	60%	95%	95	60%	80%	70%	80%
	3.3 To what extent did you learn about the safety equipment and safe O&M procedures associated with your job?	95%	85%	75%	70%	95%	90%	60%	90%	70%	90%
4. Attitude/Confidence: Self Esteem	4.1 How will this training help you in your career?	Confidence , promotion	Develop my career path, promotion	Improve my knowledge and skills, promotion	Increase my self confidence, develop my interest in operation work, develop my	Improve my knowledge and develop my career path	Organize my work effectively	Develop my performance	Develop my performance, develop my career path, promotion	Develop my performance, promotion.	Develop my performance, promotion
	4.2 To what extent are your family, friends and neighbors aware of the importance of your job to protect the public health by providing safe drinking water and/or the importance of controlling pollution to protect the	Limited aware	Not aware	Rarely aware	Not aware	Not aware	Not aware	Not aware	Not aware	Not aware	Rarely aware
5. Skills/Technical: Management	5.1 Did the training cover the technical skills that you expected to acquire to help you do your job better?	Yes 90%	Yes 75%	Yes 70%	Yes 85%	Yes 75%	Yes 85%	50%	Yes 80%	Yes 60%	Yes 80%
	5.2 What new problem solving skills did you acquire that will enable you to do your job better?	Follow-up skills, maintenance process	Maintenance process and safety	Maintenance process	Lab test analysis, water reuse process, safety, equipment maintenance	Preventive and routine maintenance	Lab test analysis	Preventive and routine maintenance	Efficient operations and maintenance processes	Problem assessment, observation, preventive maintenance	Problem assessment, teamwork
	5.3 What new supervisory/management skills did you acquire that will enable you to do your job better?	Time management, reporting, job organization, monitoring	Reporting , problem solving	Work organization	Organizing the work, reporting, teamwork	Did not acquire any new management skills	Coordination, communication.	Reporting, organizing, teamwork	Work organization, reporting, teamwork	Time management, evaluation	Organizing work
6. Impact	6.1 In what ways are you receiving the support of your supervisor and the utility in the application of new knowledge and skills on the job?	Verbal and morale support, delegation of higher responsibility tasks	Verbal and morale support	No support	Verbal and morale support	Verbal and morale support	No support	No support	Verbal and morale support	Morale and verbal support	Verbal and morale support
	6.2 How is your supervisor monitoring your application of new knowledge and skills to determine impact on your performance and the performance of your work unit?	Follow-up , meetings	Review work reports, meetings	Review work reports	Meeting evaluation, review work reports	Review daily and monthly reports	Monitoring the plant output results	Meetings, review, work reports	Follow up, meetings, review job reports	Review work reports	Meetings, review work reports
	6.3 What improvements can you see in your performance and the performance of your work unit as a result of the training? *	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6.4 What improvements can you see in facility performance in terms of (A) compliance and (B) minimizing repairs and down time? *	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
* N/A - To be answered after 6 months											

B 2 OMT Training Impact Assessment – Post-Training/Supervisor; Manager Interview

Capacity Building - Learning-to-Perform						
	Yasser Hanaqta WW Director	Mohamed Mohammed (Ma'an) WWTP Manager	Ahmad Abu-Sumaqa WW Operation Supervisor	Malek Ibrahim WW Operation Engineer/ Supervisor	Laith Ma'aitah Water Reuse Engineer/ Supervisor	
1. Relevance of Training	1.1 To what extent are you supporting your staff in learning and improving their job skills? How?	Full support. Morale support, orientation sessions, empowerment	Full support. Morale support, positive discussions	Full support. Morale support, teamwork	Full support. Morale support, positive discussions	Full support. Morale support, positive encouragement
	1.2 your staff study the topics that you consider to be top priority?	Yes	Yes	Yes	Yes	Yes
2. Language of Instruction	2.1 The training is conducted in Arabic with introduction of some English terms. What is your opinion of this decision?	Fully agree	Fully agree	Fully agree	Fully agree	Fully agree
	2.2 Why?	To improve their technical English language skills	To improve their technical English language skills	To improve their technical English language skills	To improve their technical English language skills	To improve their technical English language skills
3. Knowledge/Understanding	3.1 To what extent are you aware of the content of the training that your staff received?	100%	100%	100%	100%	100%
	3.2 What specific new international developments and new technologies did you want your staff to learn? Were these technologies included in the training?	Treatment technology, odor control, safety Yes	New treatment technology , safety Yes	Maintenance of treatment technology, chlorination, sludge Yes	Safety, sludge, odor control Yes	New treatment operations technology Yes
	3.3 To what extent did the training ensure that your staff learned the importance of safe drinking water and/or pollution control laws/regulations to their jobs?	65%	85%	40%	90%	30%
	3.4 To what extent did the training ensure that your staff learned the safety equipment and safe O&M procedures associated with their work?	95%	90%	85%	100%	90%
4. Attitude/Confidence; Self Esteem	4.1 Do you expect this training to result in a loss of staff to other employers?	Yes	Yes	Yes	No	Yes
	4.2 How can this be avoided?	Promotion and incentives; Provide training to encourage them to stay	Promotion and incentives	Promotion and incentives	N/A (see his answer above 4.1)	Promotion and incentives
	4.3 In your opinion, to what extent are the families, friends and neighbors of your staff aware of the importance of their jobs in the protection of public health by providing safe drinking water and/or the importance of controlling pollution to protect the environment?	Aware.	Not aware	Limited awareness	Rarely aware	Not aware
5. Skills/Technical Skills	5.1 What specific new technical skills did your staff learn to enable them to do their job better?	Safety, maintenance.	Problem assessment and solving	Water reuse process, safety, sludge, gauges and measuring devices	Technical reporting, problem assessment, preventive maintenance	Problem assessment and solving, preventive maintenance
	5.2 What specific new supervisory/management skills did your staff learn to enable them to do their job better?	Communication, job organization.	Reporting	Monitoring and reporting	Job organization, monitoring, teamwork	Communication and reporting
6. Impact	6.1 How are you supporting staff in applying new knowledge and skills on the job?	Morale support, team work, delegation/empowerment	Teamwork	Teamwork and participation, delegation	Awareness and orientation sessions, delegation	Delegation
	6.2 How are you monitoring the performance of staff after training to assess impact?	Follow up the practice, review work reports, unit performance development, work injuries and accidents	Follow-up	Water quality improvement, review work reports, follow-up	Meetings, follow-up	Follow-up
	6.3 What improvements in staff and work unit performance do you see as a result of training?*	N/A	N/A	N/A	N/A	N/A
	6.4 What improvements do you see in facility performance in terms of (A) compliance and (B) minimizing repairs and down time?*	N/A	N/A	N/A	N/A	N/A

* N/A - To be answered after 6 months

B.3 OMT Training Impact Assessment Survey – Post-Training/Trainee “Arabic”

المسح التقييمي (استبيان)

متدرب/مشغل

أثر تدريب مشروع التدريب على الإدارة والصيانة – مرحلة ما قبل التدريب

يرجى الإشارة إلى مستوى الاتفاق/الاختلاف بوضع علامة (✓) مقابل البيان:

5 أوافق بشدة	4 أوافق	3 محايد	2 أختلف	1 أختلف بشدة
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بناء القدرات -- التعلم من أجل التطبيق

1. أهمية التدريب:

- 1.1 أنا مهتم في التعلم وتحسين مهاراتي في أدائي العملي .
- 2.1 أريد دراسة الموضوعات التي تتصل بشكل مباشر بوظيفتي الحالية فقط .
- 3.1 أريد معرفة كاملة في مجال عملي بغض النظر عن مدى ارتباطها بوظيفتي الحالية .

2. لغة التدريس:

- 1.2 أنا افضل الدراسة باللغة العربية في مجال عملي .
- 2.2 أنا افضل الدراسة باللغة الإنجليزية في مجال عملي .
- 3.2 ليس لدي تفضيل لأي لغة تدريس .

3. المعرفة:

- 1.3 أنا حاليا على اطلاع وادراك افضل حول التقنيات الحديثة التي يمكن أن تحسن من أدائي لعملي .
- 2.3 التدريب قد زاد معرفتي حول التطورات العالمية الجديدة والتقنيات الحديثة في مجال عملي .
- 3.3 أنا حاليا على علم افضل عن أهمية المياه الصالحة للشرب و/أو قوانين أنظمة مراقبة التلوث المتعلقة بعملي.
- 4.3 أنا لست على علم بمعدات السلامة و إجراءات التشغيل و الصيانة السليمة في مجال عملي .

4. السلوكيات:

- 1.4 التدريب يمنحني الثقة لتطبيق المعرفة الجديدة في أدائي العملي .
- 2.4 التدريب يمنحني الثقة للحصول على ترقية في عملي وتحقيق الأهداف الوظيفية .
- 3.4 التدريب يمنحني الثقة للحصول على فرص عمل في أماكن عمل أخرى .
- 4.4 عائلتي والأصدقاء والجيران ليسوا على دراية بأهمية وظيفتي في حماية الصحة العامة من خلال توفير المياه الصالحة للشرب و/أو أهمية السيطرة على التلوث لحماية البيئة.

5. المهارات:

- 1.5 اكتسبت مهارات فنية جديدة لأقوم بعملية بشكل أفضل .
- 2.5 اكتسبت طرق/أساليب جديدة لحل مشاكل العمل .
- 3.5 تعلمت طرق وأساليب إدارية جديدة لتنظيم الموظفين والمهام .

6. الأثر المستقبلي:

- 1.6 انا اتلقى الدعم من المشرف والادارة عند تطبيق المعارف والمهارات الجديدة في أدائي لعملي .
- 2.6 المشرف يراقب تطبيقي للمعارف والمهارات الجديدة التي اكتسبتها في التدريب لتحديد أثرها على دائي وأداء الوحدة .
- 3.6 أستطيع أن أرى تحسينات في أدائي وأداء الوحدة نتيجة للتدريب .

B.3 OMT Training Impact Assessment – Post-Training/Trainee Interview

Based on having completed the WW/L1 training, please answer the following:

Capacity Building

1. Relevance of Training

- 1.1 Are you interested in learning and improving your job skills? Why?
- 1.2 What training topics were of greatest importance to you? Why?

2. Language of Instruction

- 2.1 Was the combination of Arabic and English useful?
- 2.2 Why?

3. Knowledge/Understanding

- 3.1 Did the training cover new technologies that you wanted to know more about?
- 3.2 To what extent did you learn the importance of safe drinking water and/or pollution control laws/regulations to your job?
- 3.3 To what extent did you learn about the safety equipment and safe O&M procedures associated with your job?

4. Attitude/Confidence; Self Esteem

- 4.1 How will this training help you in your career?
- 4.2 To what extent are your family, friends and neighbors aware of the importance of your job to protect the public health by providing safe drinking water and/or the importance of controlling pollution to protect the environment?

5. Skills/Technical; Management

- 5.1 Did the training cover the technical skills that you expected to acquire to help you do your job better?
- 5.2 What new problem solving skills did you acquire that will enable you to do your job better?
- 5.3 What new supervisory/management skills did you acquire that will enable you to do your job better?

6. Impact

- 6.1 In what ways are you receiving the support of your supervisor and the utility in the application of new knowledge and skills on the job?
- 6.2 How is your supervisor monitoring your application of new knowledge and skills to determine impact on your performance and the performance of your work unit?
- 6.3 What improvements can you see in your performance and the performance of your work unit as a result of the training?
- 6.4 What improvements can you see in facility performance in terms of (A) compliance and (B) minimizing repairs and down time?

B.3 OMT Training Impact Assessment – Post-Training/Trainee Interview “Arabic”

نموذج مقابلة (متدرب/مشغل)

بناء القدرات -- التعلم من أجل التطبيق

1. أهمية التدريب:

- 1.1 هل أنت مهتم في التعلم وتطوير مهارات أدائك لعملك؟ لماذا؟
- 2.1 ما هي المواضيع التدريبية التي كانت لها أهمية قصوى بالنسبة لك؟ لماذا؟

2. لغة التدريس:

- 1.2 هل كان الجمع بين اللغة العربية والانجليزية مفيداً؟
- 2.2 لماذا؟

3. المعرفة:

- 1.3 هل التدريب غطى التقنيات الحديثة التي كنت تريد معرفة المزيد عنها؟
- 2.3 إلى أي مدى تعلمت عن أهمية المياه الصالحة للشرب و/أو قوانين/أنظمة مراقبة التلوث بالنسبة لعملك؟
- 3.3 إلى أي مدى تعلمت عن أهمية معدات السلامة و إجراءات التشغيل و الصيانة السليمة المرتبطة بعملك؟

4. السلوكيات:

- 1.4 كيف سيساعدك التدريب في عملك وحياتك المهنية؟
- 2.4 إلى أي حد تدرك عائلتك وأصدقائك والجيران أهمية وظيفتك في حماية الصحة العامة من خلال توفير المياه الصالحة للشرب و/أو على أهمية السيطرة على التلوث لحماية البيئة؟

5. المهارات:

- 1.5 هل غطى التدريب المهارات الفنية التي كنت تتوقع اكتسابها لتساعدك في القيام بعملك بشكل أفضل؟
- 2.5 ماهي المهارات الجديدة في حل المشاكل التي اكتسبتها والتي ستمنحك من القيام بعملك بشكل أفضل؟
- 3.5 ما هي المهارات الإشرافية/الإدارية الجديدة التي اكتسبتها و التي ستمنحك من القيام بعملك بشكل أفضل؟

6. الأثر المستقبلي:

- 1.6 ما هي الطرق التي تتلقى بها الدعم من مسؤولك وادارتك عند تطبيقك للمعارف والمهارات الجديدة في عملك؟
- 2.6 كيف يقوم مسؤولك بمراقبة تطبيقك للمعارف والمهارات الجديدة لتحديد أثر التدريب على أدائك وأداء الوحدة التي تعمل بها؟
- 3.6 ما هي التحسينات التي تستطيع ان تراها في أدائك وأداء الوحدة التي تعمل بها نتيجة للتدريب؟
- 4.6 ماهي التحسينات التي تستطيع ان تراها في أداء المرفق من حيث الالتزام بمتطلبات العمل وتقليل الأعطال/الإصلاحات وتوقف العمل؟

B.4 OMT Training Impact Assessment Survey – Post Training/Supervisor “Arabic”

المسح التقييمي (استبيان) (مشرف/مدير)

أثر تدريب مشروع التدريب على الإدارة والصيانة -- مرحلة ما قبل التدريب
يرجى الإشارة إلى مستوى الاتفاق/الاختلاف بوضع (✓) مقابل البيان:

5 أوافق بشدة	4 أوافق	3 محايد	2 أختلف	1 أختلف بشدة
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بناء القدرات -- التعلم من أجل التطبيق

1. أهمية التدريب:

- 1.1 الموظفون لديهم الاهتمام في التعلم وتحسين مهاراتهم في أدائهم لعملهم .
- 2.1 أريد فقط من الموظفين دراسة وتعلم الموضوعات ذات العلاقة المباشرة بوظائفهم الحالية .
- 3.1 أريد من الموظفين تلقي المعرفة الكاملة في مجال عملهم بغض النظر عن مدى ارتباطها بوظائفهم الحالية.

2. لغة التدريس:

- 1.2 أنا أفضل للموظفين الدراسة باللغة العربية .
- 2.2 أنا أفضل للموظفين الدراسة باللغة الإنجليزية .
- 3.2 ليس لدي تفضيل لأية لغة تدريس .

3. المعرفة:

- 1.3 الموظفون حالياً مدركين وعلى اطلاع أفضل حول التقنيات الحديثة التي قد تحسن من أدائهم .
- 2.3 الموظفون حالياً مدركين وعلى اطلاع أفضل بمعدات السلامة وإجراءات التشغيل و الصيانة السليمة في مجال عملهم .
- 3.3 تدريب الموظفون قد زاد معرفتهم بالتطورات العالمية الجديدة والتقنيات الحديثة في مجال عملهم .
- 4.3 الموظفون حالياً على دراية أفضل بأهمية المياه الصالحة للشرب و/أو قوانين أنظمة مراقبة التلوث المتعلقة بعملهم .

4. السلوكيات:

- 1.4 التدريب يعطي الموظفين الثقة لتطبيق المعرفة الجديدة في أداء عملهم .
- 2.4 التدريب يعطي الموظفين الثقة للحصول على ترقية وتحقيق أهدافهم الوظيفية .
- 3.4 التدريب يعطي الموظفين الثقة للحصول على فرص عمل في أماكن عمل أخرى .
- 4.4 في رأيي ، أسر وأصدقاء وجيران الموظفين ليسوا على دراية بأهمية وظائفهم في حماية الصحة العامة من خلال توفير المياه الصالحة للشرب و/أو أهمية السيطرة على التلوث لحماية البيئة .

5. المهارات:

- 5.1 الموظفين يكتسبون المهارات الفنية الجديدة التي تمكنهم من القيام بعملهم على نحو أفضل.
- 5.2 الموظفين يكتسبون طرق وأساليب جديدة لحل مشاكل العمل .
- 5.3 الموظفين يتعلمون طرق وأساليب إدارية جديدة لتنظيم الموظفين والمهام .

6. الأثر المستقبلي:

- 1.6 انا أدمع الموظفين في تطبيق المعارف والمهارات الجديدة التي اكتسبها أثناء التدريب عند أدائهم لأعمالهم .
- 2.6 انا أقوم بمراقبة أداء الموظفين بعد التدريب لتقييم أثر التدريب .
- 3.6 أستطيع ان أرى التحسينات في مستوى أداء الموظفين والوحدة نتيجة للتدريب

B.4 OMT Training Impact Assessment – Post-Training/Supervisor Interview

Based on your staff having completed the WW/L1 training, please answer the following:

Capacity Building

1. Relevance of Training

- 1.1 To what extent are you supporting your staff in learning and improving their job skills?
How?
- 1.2 Did your staff study the topics that you consider to be top priority?

2. Language of Instruction

- 2.1 The training is conducted in Arabic with introduction of some English terms. What is your opinion of this decision?
- 2.2 Why?

3. Knowledge/Understanding

- 3.1 To what extent are you aware of the content of the training that your staff received?
- 3.2 What specific new international developments and new technologies did you want your staff to learn? Were these technologies included in the training?
- 3.3 To what extent did the training ensure that your staff learned the importance of safe drinking water and/or pollution control laws/regulations to their jobs?
- 3.4 To what extent did the training ensure that your staff learned the safety equipment and safe O&M procedures associated with their work?

4. Attitude/Confidence; Self Esteem

- 4.1 Do you expect this training to result in a loss of staff to other employers?
- 4.2 How can this be avoided?
- 4.3 In your opinion, to what extent are the families, friends and neighbors of your staff aware of the importance of their jobs in the protection of public health by providing safe drinking water and/or the importance of controlling pollution to protect the environment?

5. Skills/Technical; Management

- 5.1 What specific new technical skills did your staff learn to enable them to do their job better?
- 5.2 What specific new supervisory/management skills did your staff learn to enable them to do their job better?

6. Impact

- 6.1 How are you supporting staff in applying new knowledge and skills on the job?
- 6.2 How are you monitoring the performance of staff after training to assess impact?
- 6.3 What improvements in staff and work unit performance do you see as a result of training?
- 6.4 What improvements do you see in facility performance in terms of (A) compliance and (B) minimizing repairs and down time?

B.4 OMT Training Impact Assessment – Post-Training/Supervisor Interview “Arabic”

نموذج مقابلة

(مشرف/مدير)

بناء القدرات -- التعلم من أجل التطبيق

1. أهمية التدريب:

1.1 إلى أي مدى تدعم موظفيك في التعلم وتحسين مهاراتهم الوظيفية؟ وكيف؟

1.2 هل تعلم موظفيك المواضيع التي اعتبرتها ذات اولويه عليا؟

2. لغة التدريس:

2.1 تم التدريب باللغة العربية مع استخدام اللغة الانجليزية لبعض المصطلحات، ما هو رايكم في ذلك؟

2.2 لماذا؟

3. المعرفة:

1.3 إلى أي مدى تدرك محتوى التدريب الذي تعلمه موظفيك؟

2.3 ما هي بشكل محدد التطورات العالمية الجديدة والتقنيات الحديثة التي أردت من موظفيك تعلمها؟ هل كانت هذه التقنيات ضمن التدريب؟

3.3 الى أي مدى ضمن التدريب بان الموظفين قد تعلموا أهمية المياه الصالحة للشرب و/أو قوانين/أنظمة مراقبة التلوث أثناء ممارستهم لأعمالهم؟

4.3 الى أي مدى ضمن التدريب بان الموظفين قد تعلموا أهمية معدات السلامة واجراءات التشغيل والصيانة السليمة بعملهم؟

4. السلوكيات:

1.4 هل تتوقعون أن هذا التدريب سيؤدي الى خسارة في الموظفين وانتقالهم الى شركات/مؤسسات أخرى؟

2.4 كيف يمكن تفادي ذلك؟

3.4 برأيك ، إلى أي حد يدرك أهالي وأصدقاء وجيران موظفيكم أهمية وظائفهم في حماية الصحة العامة من خلال توفير المياه الصالحة للشرب و/أو أهمية السيطرة على التلوث لحماية البيئة؟

5. المهارات:

- 1.5 ما هي المهارات التقنية الجديدة التي تعلمها موظفيك لتمكنهم من القيام بعملهم على نحو أفضل؟
- 2.5 ما هي المهارات الادارية/الإشرافية الجديدة التي تعلمها موظفيك لتمكنهم من القيام بعملهم على نحو أفضل؟

6. الأثر المستقبلي:

- 1.6 كيف تدعمون موظفيكم في تطبيق المعارف والمهارات الجديدة في عملهم؟
- 2.6 كيف تراقبون أداء الموظفين بعد التدريب لتقييم أثر التدريب؟
- 3.6 ما هي التحسينات في أداء الموظفين والوحدات التي يعملون بها كنتيجة للتدريب؟
- 4.6 ما هي التحسينات في أداء المرفق (المحطة) من حيث الالتزام بمتطلبات العمل وتقليل الأعطال/الاصلاحات وتوقف العمل؟