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IMPROVING WATER AND SANITATION SERVICES IN THE MENA REGION (IWSMR)

TRAINING IMPACT ASSESSMENT (TIA) REPORT 2: ROCTP PILOT-SANA'AYEMEN

WASTEWATER TREATMENT-LEVEL 1 ON THE JOB FOLLOW-UP

AUGUST 2015

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1. Assessment Description - ROCTP Pre/Post-Training (on-job follow-up)

Background

As a part of the ACWUA Regional Operator Certification and Training Program (ROCTP) pilot implementation, the ACWUA and IWSMR Project utilized the Training Impact Assessment (TIA) approach and methodology developed by the USAID-funded Operations and Maintenance Training (OMT) project, to evaluate the performance impact at the facilities where the pilot training was taking place. ACWUA will continue to use this approach and methodology to measure the effectiveness of the ROCTP on improved water and wastewater facility O&M and to make improvements in the program as indicated.

TIA Report 2 - Post-Training- On-Job Follow-up provides both baseline quantitative data for the Sana'a wastewater treatment plant and an analysis of the first set of TIA data collected back on the job after the completion of training as shown below:

Course	Level		Pilot Site	TIA Type	Date
Wastewater Treatment	1		Sana'a Wastewater Treatment Plant	Pre-Training Post-Training- On Job follow up after 6 months	December 2014 August, 2015

Purpose

By design, the first round of post-training TIA is conducted on-job six months after training to collect both quantitative and qualitative data to compare and identify any change in O&M performance as measured against the pre-training baseline established for the designated facilities. The findings of this assessment will be used to further improve the operator certification and training program and to assist managers in improving O&M performance at their facilities.

Due to the recent unstable conditions in Yemen and difficulties communicating with concerned staff and trainees in Sana'a wastewater treatment plant, there was a delay in receiving required data and feedback for the TIA at the 6 month interval set for the post training – on job follow up. The Sana'a Wastewater Treatment Level 1 training course was held in Aqaba/ Jordan (Dec. 7-18, 2014) and the pre training survey was conducted on the first day of the training course. However, the first on-job TIA was conducted after (8) months of the training. Results are contained in this report.

ACWUA has a full description of the TIA methodology and the raw data for this the Sana'a/Yemen ROCTP Wastewater Treatment Operator – Level 1 available upon request from ACWUA.

2. Summary Results

Quantitative Performance Indicators

Performance data is collected and reported annually. Below are the 2013 baseline, the 2014 and the 2015 data collected for the Sana'a/Yemen wastewater treatment plant. In future TIAs, annual performance data will be summarized and compared with the results reported for previous years.

Sana'a/Yemen Wastewater Treatment Plant (WWTP) Year 2013 - 2015

#	Indicator	2013 baseline	2014	2015	Remarks
1	Quality of Water/Waste Water treated – Non-compliance Citations	N/A – Yemen has no WW standard	N/A	N/A	N/A
	Quality of Water/Waste Water treated based on BOD5	BOD5 =174mg/l	BOD5 =200mg/l	BOD5 =215mg/l Until 17 April	The inlet BOD5 Design :- 500 mg/l actually :- 1200 mg/l The outlet BOD5 Design :-30mg/l The treatment plant operates with full capacity hydraulic load.
2	Major Unplanned Shut-downs	Daily Electricity Shut down	Daily Electricity Shut down	Damage to the grounding, DC unit and electronic cards of generators control and signal cables; buildings windows and doors.	Due to bombing of the facility.
3	Emergency Actions	Total: 2 Actions Inlet: repair 2 pump stoppages Aeration tank: repair 3 motor and 2 mixers stoppages	Total: 2 Actions Inlet: repair 2 pump stoppages Aeration tank: repair 6 motor and repair 2 mixers	Repairs of the above.	
4	Accident Reports	No	No	Bombing of treatment plant wall.	
5	Operating Costs (in Dollar)	3,351,025.84	3,498,603.59	921,830.18	**The cost for year 2015 covers until end of May.
6	Maintenance Costs (in Dollar)	252,950.76	169,910.42	44,430.98	**The cost for year 2015 covers until end of May.
7	Waste Water Quality (Lab) a) number of external lab tests conducted	not applicable	not applicable	not applicable	All analyses performed in the laboratory at WWTP; Yemen has no WW standard.
	b) percentage of results of noncompliance with the baseline standard set for the WWT	not applicable	not applicable	not applicable	

** Operation costs cover 5 months (January – May), hence the expected operation cost to cover through December 2015 if calculated based on the actual cost of the first 5 months of the year will be approximately \$2,200,000 which is less by about \$1,300,000 compared with 2014, i.e. 36% reduction. According to the Acting Plant Manager (Abdel Wahab Salah), this high reduction in the operation cost was mainly due to the local instability which forced cuts in costs in employee allowances including transportation and overtime allowance, etc. In addition, there have been reductions in the electricity and fuel invoices due to intermittent plant shutdowns and the complete shutdown since mid-April 2015 because of electrical power and fuel shortages.

Reduction in the maintenance cost can be also observed by applying the same method in calculating the expected maintenance cost for the total year of 2015, where it will be totaled to approximately \$106,600, which is less than the total maintenance cost for year 2014, by about \$63,000. The manager reported that this reduction was due to the stoppage of the regular/preventive maintenance activities and being limited to emergencies only.

3. Quantitative Indicators

The pre-training survey was conducted for the trainees on the first day of the training course using the questionnaire shown in Annex B1 for the trainees and B2 for the supervisor. It involved (8) operator trainees from Sana'a Water and Sanitation Local Corporation/Wastewater Treatment Plant including their supervisor (Annex A1). The number of trainees involved in the survey is about 33% of the total number of trainees participated in the training course from different water utilities in Yemen.

The post training/on job follow up survey conducted almost 8 months after the training, used the questionnaire shown in Annex B3 for the trainees and B4 for the supervisor, with participation of the same (8) operators and supervisor.

As mentioned above, in addition to the impact on the plant performance; instability and warfare conditions prevailing in Yemen undoubtedly affected the trainees work and the circumstances required to properly test all aspects of the training impact assessment.

4. Qualitative Indicators

Trainee's pre/post training on-job follow-up survey questionnaires results

Following is a summary of the main results/conclusions of the post training/on job follow up survey including comparison of these results with the pre training survey results:

1- Relevance of training

After 8 months of the training, 100% of the questioned operators reconfirmed their pre-training opinion of their interest in learning and improving their job skills.

On the pre-training survey, 62% agreed/strongly agreed on studying topics that directly related to their jobs compared with 75% on the post-training survey. 100% of the operators in both surveys indicated their agreement/strong agreement in studying topics within the field in general and beyond their current jobs. This can be explained as the operators wanting complete knowledge in their current jobs as well as in their field in general.

Such results indicate importance of the technical training in satisfying operator interest in improving their job skills and the need for covering the field in general when designing training programs contents.

2- Language of instruction

In both surveys, operators had a clear preference with a percentage of about 87% (agreed/strongly agreed) in using Arabic as the primary language for instruction.

It is worth mentioning that a considerable change was noticed in the opinions of the trainees, where 62.5% of them in the post-training agreed/strongly agreed of having no language preference against 37.5% in the pre-training survey. This could result from their experience with using both Arabic and English in the training, which didn't affect their comprehension in general, evidenced by their achievements in the final certification test (100% passed).

3- Knowledge/ Understanding

Operator responses assured increasing their knowledge/understanding in their fields as a result of the training, where:

- 100% of the questioned operators indicated in the post-training survey their agreement/strong agreement of becoming more aware of the new technologies that could improve their performance and of the safety equipment and safe O&M procedures. This reflects a high degree of change in the awareness of trainees in regard to new technologies, safety equipment and safe O&M procedures as a result of training, since 62.5% of the trainees in the pre-training survey indicated that they aren't aware of those two areas.

All trainees indicated in the post-training survey their agreement/strong agreement with the following:

- The training increased their knowledge of new international developments and new technologies in their fields.
- They now better understand the importance of safe drinking water and/or pollution control laws/regulations to their jobs.

Trainee opinions in the post-training survey correspond with their expectations in the pre-training survey.

4- Attitude/Confidence; Self Esteem

All questioned operators in the post-training survey agreed/strongly agreed that the training had given them the confidence to apply new knowledge on their jobs, which correspond to their expectation in the pre-training survey at the same rate of agreement/strong agreement (100%).

Also, 100% of trainees in the post-training survey and corresponding to their expectations in the pre-training survey were in agreement/strong agreement regarding gaining confidence as a result of the training to pursue promotion and career objectives. While regarding confidence to pursue job opportunities elsewhere, the percentage was somewhat lower (75%).

Taking into consideration the prevailing unstable conditions in Yemen, the resulting percentages are relatively high. However this may reflect the degree of confidence and self-esteem that trainees have gained from the training through upgrading their technical knowledge and skills on one hand, and their optimism and hope for a better future for Yemen that will enable them to benefit from their acquired knowledge and skills on the other hand.

37% of the operators in the post-training survey agreed/strongly agreed that their families, friends and neighbors are not aware of the importance of their jobs in protecting public health and controlling pollution, which is less than the percentage in the pre-training survey (50%). This change in the operator opinions regarding public awareness could be explained within the current situation and the shutdown of the plant, which caused the community in general, and plant's workers in particular to discuss the pollution risks, and consequently assisted in improving awareness to some extent.

5- Skills/ Technical; Management

Operator responses in this field also confirmed the success of the training in achieving its objectives in developing trainees technical and management skills, where:

- 100% of the questioned operators in the post-training survey agreed/strongly agreed that they had acquired new technical skills as a result of the training that enabled them of better perform their jobs, which is identical to their pre-training survey opinions.

- For the management skills, the questioned operators confirmed their pre-training survey opinion at a rate of 87.5% (agree/strongly agree) that they had acquired new ways for solving work problems, and learning new ways to organize people and tasks as result of the training.

6- Impact of training

Corresponding with their expectations in the pre-training survey, 100% of the operators were in agreement/strong agreement with the following:

- They can see improvement in their performance and the performance of their work units as a result of training.
- They are receiving the support of their supervisor and the utility in the application of new knowledge and skills on the job.
- Their supervisor is monitoring their application of the new knowledge and skills to determine the impact on their performance and the performance of their work unit.

Operator responses in general indicate that the effects of the training are not short-lived, since after 8 months back on the job, they continued to agree/strongly agree that the training enabled them to perform better, and they could see improvements in their work unit performance, which reflects the overall success of the training program.

Supervisor pre/ post training- on- job follow up surveys questionnaires results

Following are the main results/conclusions from the post-training supervisor's survey at the Sana'a Wastewater Treatment Plant including comparison with the pre-training survey results:

1- Relevance of training

The supervisor in both surveys (pre and post-training) agreed that his staff is interested in learning and improving their job skills, while his staff was more certain in this regard and indicated 100% strong agreement opinion in both surveys.

Regarding training topics, confirming the trainee opinions in both pre and post-training surveys, the supervisor strongly agreed in having his staff receive complete knowledge of the field regardless of their current jobs relevance.

2- Language of instruction

The supervisor indicated his strong agreement with a preference of using Arabic as the primary language for staff training instruction in the pre and post-training surveys respect. The supervisor's opinion to a large extent conformed with the trainee opinions in both surveys, where about 87% of them indicated their agreement/strong agreement in using the Arabic language in training instruction.

3- Knowledge/Understanding

The supervisor's opinions showed considerable change in the post-training survey compared with his opinions in the pre-training survey regarding the improvements of his staff knowledge and understanding as a result of received training, where he indicated his:

- Agreement that his staff is better aware of the new technologies that could improve their performance, and strong agreement that the staff is better aware of safety equipment and safe O&M procedures in their fields. While he was uncertain (neutral) about these two areas in the pre-training survey.
- Strong agreement that his staff has more knowledge of new international developments and new technologies in their field meeting his demand in the pre-training survey.
- Strong agreement that his staff better understand the importance of safe drinking water and/or pollution control laws/regulations to their jobs, compared with his disagreement in the pre-training survey.

The supervisor opinions correspond largely with the trainee opinions, and reflect the success of the program in improving operator knowledge/understanding of their field that could improve their performance.

4- Attitude, Confidence and Self esteem

Similar to his expectation in the pre-training survey, and aligned with trainee opinions, the supervisor confirmed his agreement that the training had given his staff confidence to apply new knowledge on their jobs.

Regarding the staff confidence in pursuing promotion and career objectives as a result of the training, the supervisor opinion changed from uncertainty (neutral) in the pre-training survey to agreement in the post-training survey. Thus, almost matching operator opinions who at rate of 100% indicated their agreement/strong agreement.

Unlike his expectation in the pre-training survey where he agreed that the training will give his staff confidence to pursue job opportunity elsewhere, the supervisor opinion changed to uncertainty (neutral) in the post-training survey. This change can be linked with to the prevailing unstable circumstances that limited work opportunities for water/wastewater operators in Yemen.

Also, his opinion regarding staff families, neighbors, and friends lack of awareness of the importance of their work in protecting public health and environment changed from agreement in the pre-training survey to uncertainty (neutral) in the post-training survey. This also can be explained as due to the risks witnessed by the community and resulted in untreated wastewater flowing out of the plant due to its shutdown.

5- Skills/ Technical; Management

8 months after the training, the supervisor confirmed his agreement that the staff had acquired/ learned new technical skills/ways of working that enabled them to do their jobs better, solve work problems and organize people and tasks. Supervisor responses in the post-training survey conformed largely to his expectations in the pre-training survey.

Supervisor opinions confirm the success of the program in developing technical and management skills of the operators that enabled them to do their jobs and manage work relations better.

6- Impact of training

8 months after the training, the supervisor agreed that he is supporting his staff in applying new knowledge and skills on their jobs, monitoring the performance of staff after training to assess impact and can see improvements in staff and work unit performance as a result of training.

Upon comparing above indicated supervisor responses with his in the pre-training survey, it is noticed that there is a retreat from strongly agree to agree. This can also be attributed to the prevailing unstable circumstances in Yemen that do not provide the appropriate work conditions to enable the supervisor to be very sure in his responses.

On the other hand, supervisor responses are closely aligned with operator responses in the pre and post-training surveys.

ANNEX A.1 LIST OF SANA'AYEMEN- WWT01 TRAINEES AND IMMEDIATE SUPERVISOR

Trainee	Position	Contact Details	Immediate Supervisor	Position	Contact
Abdulwahab Esmail Rashed Salah	Deputy Director – Sana'a Wastewater Utility	T: ++ 967771717830 E mail: awsesalah@gmail.com	Nabeel Al-Wazeer	General Manager of Sana'a Water & Sanitation local Corp	T: ++ 967 1250126 E mail: info@swsle-yemen.com.ye
Noria Hasan Qasem Ghallap	Division Head /Water Lab	T: ++ 967770275508 E mail: Majd200860@gmail.com	Abdulwahab Esmail Rashed Salah	Deputy Director – Sana'a Wastewater Utility	T: ++ 967771717830 E mail: awsesalah@gmail.com
Manar Abdel Baqi Hussein Salah	Biological Analyst	T: ++ 967774955389 E mail: Thebeast20095@gmail.com	Abdulwahab Esmail Rashed Salah	Deputy Director – Sana'a Wastewater Utility	T: ++ 967771717830 E mail: awsesalah@gmail.com
Ebrahim Salem Ahmad Al-Garadi	Operation Technician	T: ++967777935537 E mail: isasj76@gmail.com	Abdulwahab Esmail Rashed Salah	Deputy Director – Sana'a Wastewater Utility	T: ++ 967771717830 E mail: awsesalah@gmail.com
Nabil Saleh Nasser Saleh Al-Gahafi	Treatment Utility Lab Technician	T: ++967770680106 E mail: abdumpuni9@gmail.com	Abdulwahab Esmail Rashed Salah	Deputy Director – Sana'a Wastewater Utility	T: ++ 967771717830 E mail: awsesalah@gmail.com
Abdulsalam Ali Mohammed Al- Naggar	Shift Supervisor	T: ++967774546618 E mail: Aamnj82@gmail.com	Abdulwahab Esmail Rashed Salah	Deputy Director – Sana'a Wastewater Utility	T: ++ 967771717830 E mail: awsesalah@gmail.com
Osamah Mohsen Mohsen Al-Halli	Electrical Technician- Utility Generators Operator	T: ++967771434030 E mail: osamahalhlli@gmail.com	Abdulwahab Esmail Rashed Salah	Deputy Director – Sana'a Wastewater Utility	T: ++ 967771717830 E mail: awsesalah@gmail.com
Waleed Saleh Ali Khairan	Utility's shifts Supervisor	T: ++967773955972 E mail: wsakh82@gmail.com	Abdulwahab Esmail Rashed Salah	Deputy Director – Sana'a Wastewater Utility	T: ++ 967771717830 E mail: awsesalah@gmail.com

ANNEX A.2 YEMEN WWT01- TRAINING IMPACT ASSESSMENT SURVEY- PRE/POST TRAINING (EIGHT-MONTH FOLLOW-UP) TRAINEE RESPONSE SUMMARY

Pre Training Survey		Post Training Survey	
1. Relevance of Training 1.1 I am 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.	1.1 100% of the trainees strongly agreed that they are interested in learning and improving their job skills. 1.2 62% of the trainees were in agreement/ strongly agreement of studying topics that are only directly related to their current jobs. 1.3 100% of the trainees agreed or strongly agreed that they want a complete knowledge of their fields regardless of the current relevance.	1. Relevance of Training 1.1 I am 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.	1-1 100% of the trainees continued expressing their agreement/ strongly agreement of their interest in learning and improving their job skills. 1-2 75% of the trainees still agreed/ strongly agreed that they only want to study topics that are directly related to their current jobs. 1-3 As in the pre-training survey, the trainees confirmed with 100% (agreement / strongly agreement) that after training they still want a complete knowledge of their field regardless of their current jobs. Although, it looks as if it contradict with 1-2 for those answered with agreement/ strongly agreement for both questions, it can be explained that they want complete knowledge in their current jobs as well as in their field in general.
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.	2.1 87% of Trainees agreed/ strongly agreed that they prefer to study their fields in Arabic. 2.2 Trainees opinions were distributed along the range regarding their preferences of studying their fields in English. 2.3 50% of the trainees were neutral regarding language preference, while 37.5% agreed that they have no language preferences against 12.5% who disagreed with that.	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.	2-1 87.5% of the trainees, almost the same percentage as in the pre-training survey confirmed their opinions (agreement/ strongly agreement) of their preferences to study their fields in Arabic. 2-2 As in the pre-training survey, the trainees opinions were distributed along the range regarding their preferences of studying their fields in English. 2-3 High change was noticed here in the opinions of the trainees where 62.5% of them agreed/ strongly agreed of having no language preference. This can be justified due to their experience in using of both Arabic and English language in conducting the training, which obviously didn't affect their understanding taking in consideration the 100% success results they have achieved in the final certification test.
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.	3.1 62.5% of the trainees opinions were in agreement/ strongly agreement that they are unaware of the new technology in their fields. 3.2 100% of the trainees agreed/ strongly agreed that the training should increase their knowledge of new international developments and new technologies in their fields. 3.3 100% of the trainees agreed/ strongly agreed that they would like to understand the importance of safe drinking water and/or pollution control laws/regulations to their job. 3.4 62.5% of the trainees agreed/ strongly agreed that they are not aware of safety equipment and safe O&M procedures in their fields.	3. Knowledge/Understanding 3.1 I am now more aware of new technologies that could improve my performance. 3.2 The training increased my knowledge of new international developments and new technologies in my field. 3.3 I now better understand the importance of safe drinking water and/or pollution control laws/regulations to my job. 3.4 I am now more aware of safety equipment and safe O&M procedures in my field.	3-1 100% of trainees agreed/strongly agreed that as a result of the training they have a greater awareness of new technologies that could improve their job performance. 3-2 As they expected in the pre-training survey, 100% of trainees agreed/strongly agreed that the training have increased their knowledge of new international developments and new technologies in their fields. 3-3 In line with their wish in the pre training survey, 100% of trainees agreed/ strongly agreed that as a result of the training, they are now better understand the importance of safe drinking water and/or pollution control laws/regulations to their jobs. 3-4 100% of trainees agreed/ strongly agreed that they are now more aware of safety equipment and safe O&M procedures in their fields.
4. Attitude/Confidence; Self Esteem 4.1 I expect the training to give me confidence to apply new knowledge to my job.	4.1 100% of trainees strongly agreed that the training will give them confidence to apply new knowledge to their jobs.	4. Attitude/Confidence; Self Esteem 4.1 The training is giving me confidence to apply new knowledge to my job.	4-1 Trainees continued with 100% rate, but with agreement/ strongly agreement their confidence of applying the new knowledge to their jobs complying with

<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>4.2 100% of trainees agreed/ strongly agreed that the training will give them confidence to pursue promotion and career objectives.</p> <p>4.3 75% of trainees agreed/ strongly agreed that the training will give them confidence to pursue job opportunities elsewhere.</p> <p>4.4 50% of trainees agreed/ strongly agreed that their families, friends and neighbors are not aware of the importance of their jobs to protect the public health by providing safe drinking water and/or the importance of controlling pollution to protect the environment. Other trainees were evenly distributed either neutral or disagreed.</p>	<p>4.2 The training is giving me confidence to pursue promotion and career objectives.</p> <p>4.3 The training is giving 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><i>their expectations in the pre training survey.</i></p> <p>4-2 <i>The trainees, as they expected in the pre-training survey continued with the same percentage of 100% of agreement/ strongly agreement that training have given them confidence to pursue promotion and career objectives.</i></p> <p>4-3 <i>Similar to their expectation in the pre training survey, 75% of trainees agreed/ strongly agreed that the training has given them confidence to pursue job opportunities elsewhere. This could be explained as reflection of their trust in the skills and knowledge that they have gained from the training, which increased their self-confidence in getting jobs elsewhere.</i></p> <p>4-4 <i>37.5% of trainees which is slightly less than the pre training survey still in agreement/ strongly agreement that their families, friends and neighbors are not aware of the importance of their jobs to protect the public health by providing safe drinking water and/or the importance of controlling pollution to protect the environment.</i></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>5.1 100% of trainees agreed/ strongly agreed that they expect to acquire new technical skills that enable them to do their jobs better.</p> <p>5.2 87.5% of trainees agreed/ strongly agreed that they expect to acquire new ways to solve work problems.</p> <p>5.3 100% of trainees agreed/ strongly agreed that they expect to learn new ways to organize people and tasks.</p>	<p>5. Skills/Technical; Management</p> <p>5.1 I acquired new technical skills that enable me to do my job better.</p> <p>5.2 I acquired new ways to solve work problems.</p> <p>5.3 I learned new ways to organize people and tasks.</p>	<p>5-1 <i>After eight months of training 100% of trainee's confirmed their agreement/ strongly agreement that as a result of training they have acquired new technical skills that enabled them to do their jobs better.</i></p> <p>5-2 <i>Similar to their expectation, 87.5% of trainees agreed/ strongly agreed that as a result of training they have acquired new ways to solve work problems.</i></p> <p>5-3 <i>Similar to their expectation in the pre training survey, 100% of trainees agreed/ strongly agreed that the have learnt new ways to organize people and tasks as a result of training.</i></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 training.</p>	<p>6.1 100% of trainees agreed/ strongly agreed that they expect to receive the support of their supervisor and the utility in the application of new knowledge and skills on the job</p> <p>6.2 100% of trainees agreed/ strongly agreed that they expect their supervisor to monitor their application of new knowledge and skills to determine impact on their performance and the performance of their work unit.</p> <p>6.3 100% of trainees strongly agreed that they expect to see improvements in their performance and the performance of their work unit as a result of the training.</p>	<p>6. Impact</p> <p>6.1 I am receiving the support of my supervisor and the utility in the application of new knowledge and skills on the job.</p> <p>6.2 My supervisor is monitoring 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 can see improvements in my performance and the performance of my work unit as a result of the training.</p>	<p>6-1 <i>Similar to their expectation in the pre-training survey, 100% of trainees confirmed their agreement/ strongly agreement of receiving the support of their supervisor and the utility in the application of new knowledge and skills on the job.</i></p> <p>6-2 <i>Identical to their expectation in the pre-training survey, 100% of trainees confirmed their agreement/ strongly agreement that their supervisor is monitoring their application of new knowledge and skills to determine impact on their performance and the performance of their work unit.</i></p> <p>6-3 <i>Almost corresponding to their expectations in the pre- training survey 100% of trainees agreed/ strongly agreed that they could see improvements in their performance and the performance of their work unit as a result of the training.</i></p>

ANNEX A.3 YEMEN TRAINING IMPACT ASSESSMENT SURVEY- PRE/PORT TRAINING (EIGHT-MONTH FOLLOW-UP) /SUPERVISOR RESPONSE SUMMARY

Pre training survey		Post training survey	
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.	1.1 Agreed (rating:4) 1.2 Agreed (rating:4) 1.3 Strongly agreed (rating:5)	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.	1-1 <i>Remained agreed (rating: 4).</i> 1-2 <i>Remained agreed (rating: 4).</i> 1-3 <i>Remained strongly agreed (rating:5)</i>
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.	2.1 Strongly agreed (rating: 5) 2.2 Strongly disagreed (rating: 1) 2.3 Neutral (rating: 3)	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.	2-1 <i>Decreased to agree (rating: 4)</i> 2-2 <i>Changed to neutral (rating: 3)</i> 2-3 <i>Remained neutral (rating: 3)</i>
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.	3.1 Neutral (rating: 3) 3.2 Neutral (rating: 3) 3.3 Strongly agreed (rating: 5) 3.4 Disagreed (rating: 2)	3. Knowledge/Understanding 3.1 My staff is now better aware of the new technologies that could improve their performance. 3.2 My staff is now better aware of safety equipment and safe O&M procedures in their fields. 3.3 The training has increased staff knowledge of new international developments and new technologies in their field. 3.4 My staff now better understand the importance of safe drinking water	3-1 <i>Increased to agreed (rating: 4)</i> 3-2 <i>Increased to strongly agreed (rating: 5)</i> 3-3 <i>Remained strongly agreed (rating: 5)</i> 3-4 <i>Increased to strongly agreed (rating: 5)</i>

		and/or pollution control laws/regulations to their jobs.	
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.	4.1 Agreed (rating: 4) 4.2 Neutral (rating: 3) 4.3 Agreed (rating: 4) 4.4 Agreed (rating: 4)	4. Attitude/Confidence 4.1 The training is giving my staff confidence to apply new knowledge on their job. 4.2 The training is giving my staff confidence to pursue promotion and career objectives. 4.3 The training is giving my 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.	4-1 Remained agreed (rating: 4) 4-2 Increased to agreed (rating: 4) 4-3 Changed to neutral (rating: 3) 4-4 Changed to neutral (rating: 3)
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.	5.1 Agreed (rating: 4) 5.2 Strongly agreed (rating: 5) 5.3 Agreed (rating: 4)	5. Skills/Technical; Management 5.1 My staff is acquiring new technical skills that enable them to do their job better. 5.2 My staff is acquiring new ways to solve work problems. 5.3 My staff is learning new ways to organize people and tasks.	5-1 Remained agreed (rating: 4) 5-2 Decrease to agreed (rating: 4) 5-3 Remained agreed (rating: 4)
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.	6.1 Strongly agreed (rating: 5) 6.2 Strongly agreed (rating: 5) 6.3 Strongly agreed (rating: 5)	6. Impact 6.1 I am supporting staff in applying new knowledge and skills on the job. 6.2 I am monitoring the performance of staff after training to assess impact. 6.3 I can see improvements in staff and work unit performance as a result of training	6-1 Decreased to agreed (rating: 4) 6-2 Decreased to agreed (rating: 4) 6-3 Decreased to agreed (rating: 4)

ANNEX B.1 PRE-TRAINING SURVEY TRAINEE QUESTIONNAIRE

**Improving Water and Sanitation Services in the MENA Region
Training Impact Assessment
Pre Training Survey/ Trainee's Questionnaire**

Name: _____

Job position: _____

Job Location: _____

Please refer to the level of agreement and disagreement by putting (X) in each box:

Capacity Building - Learning-to-Perform		(1) Strongly Disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Agree
1. Relevance of Training	1.1 I am 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.					
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.					
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.					

Capacity Building - Learning-to-Perform		(1) Strongly Disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Agree
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.					
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.					
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.					

ANNEX B.2 POST TRAINING-ON-JOB FOLLOW-UP SURVEY TRAINEE QUESTIONNAIRE

Training Impact Assessment Survey Post Training- On- job Follow Up Survey/ Trainee's Questionnaire

Training course
Venue:

Trainer:
Dates:

Please refer to the level of agreement and disagreement by putting (X) in each box:

Capacity Building - Learning-to-Perform		(1) Strongly Disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Agree
1. Relevance of Training	1.1 I am 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 to receive complete knowledge to the field regardless of the current relevance.					
2. Language of Instructi	2.1 I prefer to study in Arabic.					
	2.2 I prefer to study in English.					
	2.3 I have no language preference.					
3. Knowledge/ Understanding	3.1 I am now more aware of the new technologies that could improve my performance.					
	3.2 The training had increased my knowledge of new international developments and new technologies in my field.					
	3.3 I now had better understand the importance of safe drinking water and/or pollution control laws/regulations to my job.					
	3.4 I am now more aware of safety equipment and safe O&M procedures in my field.					

Capacity Building - Learning-to-Perform						
4. Attitude/ Confidence; Self Esteem	4.1 The training had given me confidence to apply new knowledge on my job.					
	4.2 The training had given me confidence to pursue promotion and career objectives.					
	4.3 The training had given me confidence to pursue job opportunities elsewhere.					
	4.4 In my opinion my family, friends and neighbors are not aware of the importance of the jobs that I do 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 I had acquired new technical skills that enabled me to do my job better.					
	5.2 I had acquired new ways to solve work problems.					
	5.3 I had learned new ways to organize people and tasks.					
6. Impact	6.1 I am receiving the support of my supervisor and the utility in the application of new knowledge and skills on the job.					
	6.2 My supervisor is monitoring my application of new knowledge and skills to determine impact on my performance and the performance of my work unit.					
	6.3 I can see improvements in my performance and the performance of my work unit as a result of the training.					

ANNEX B.3 PRE-TRAINING SURVEY SUPERVISOR'S QUESTIONNAIRE

Training Impact Assessment Survey Pre Training Survey/ Supervisor's Questionnaire

Name:

Job position:

Work place:

Please refer to the level of agreement and disagreement by putting (X) in each box:

Capacity Building - Learning-to-Perform		(1) Strongly Disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Agree
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.					
2. Language of Instruction	2.1 I prefer My staff to study in Arabic.					
	2.2 I prefer My staff to study in English.					
	2.3 I have no language preference.					
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.					

Capacity Building - Learning-to-Perform						
4. Attitude/ Confidence; Self Esteem	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.					
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.					
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.					

ANNEX B.4 POST-TRAINING ON-JOB FOLLOW-UP SURVEY/ SUPERVISOR QUESTIONNAIRE

Training Impact Assessment Survey

Post Training- On- job Follow Up Survey/ Supervisor’s Questionnaire

Training course:

Trainer:

Venue:

Dates:

Please refer to the level of agreement and disagreement by putting (X) in each box:

Capacity Building - Learning-to-Perform		(1) Strongly Disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Agree
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 my staff to receive complete knowledge to the field regardless of the current relevance.					
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.					
3. Knowledge/ Understanding	3.1 My staff is now more aware of the new technologies that could improve their performance.					
	3.2 My staff is now more aware of safety equipment and safe O&M procedures in their fields.					
	3.3 The training had increased staff knowledge of new international developments and new technologies in their field.					
	3.4 My staff now understands the importance of safe drinking water and/or pollution control laws/regulations to their job.					

Capacity Building - Learning-to-Perform						
4. Attitude/ Confidence; Self Esteem	4.1 The training has given my staff confidence to apply new knowledge on their jobs.					
	4.2 The training has given my staff confidence to pursue promotion and career objectives.					
	4.3 The training has given my 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 that 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. Skills/ Technical; Management	5.1 My staff has acquired new technical skills that enable them to do their job better.					
	5.2 My staff has acquired new ways to solve work problems.					
	5.3 My staff has learnt new ways to organize people and tasks.					
6. Impact	6.1 I am supporting staff in applying new knowledge and skills on the job.					
	6.2 I am monitoring the performance of the staff after training to assess impact.					
	6.3 I can see improvements in staff and work unit performance as a result of training.					

Name:
Working Place:
Signature:

Job Title:
Date: