TRAINING IMPACT ASSESSMENT – REPORT 3

ON-JOB FOLLOW-UP/SIX-MONTH

WASTEWATER TREATMENT
LEVEL 1 – PILOT

USAID OPERATIONS AND MAINTENANCE TRAINING PROJECT
TRAINING IMPACT ASSESSMENT – REPORT 3

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WATER & WASTEWATER TREATMENT LEVEL 1 – PILOT

USAID OPERATIONS AND MAINTENANCE TRAINING PROJECT

Contract No. EPP-I-00-04-00020-00
Prepared by Chemonics International Inc.

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Jordan Water and Wastewater Operator Certification and Training Program

Training Impact Assessment (TIA)
Post-Training On-Job Follow-up/Six-month

Assessment Description

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. 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 from successful US models for the particular needs in Jordan.

All operator training curricula and tests go through a piloting process. The results of the process are used to further improve the certification and training program. In addition, as a part of the pilot implementation of the operator training program, the OMT Project designed and developed a Training Impact Assessment (TIA) approach and methodology to evaluate the impact of the training on the O&M performance at the facilities where the pilot training was taking place. 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.

TIA Report 3 - Post-Training On-Job Follow-up/Six-month provides an analysis of the first set of TIA conducted back on the job after the completion of training as shown in the table below.

<table>
<thead>
<tr>
<th>Course</th>
<th>Level</th>
<th>Pilot Site</th>
<th>TIA Type</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wastewater Treatment</td>
<td>1</td>
<td>Aqaba Water Company – Aqaba Wastewater Plant</td>
<td>Pre-Training</td>
<td>Apr, 2010</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Post-Training</td>
<td>Jul, 2010</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>On Job</td>
<td>Feb, 2011</td>
</tr>
</tbody>
</table>

Purpose

The first round of post-training TIAs conducted on-job six months after training are intended 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 Jordanian treatment 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.
Methodology

From improved individual capacity to improved O&M

The ultimate beneficiaries of the Jordan water operator certification and training program, 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.

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, in this case six months, to expected O&M improvements by relying on both quantitative and qualitative input from the plants, trainees, their supervisors and utility managers regarding the perceived benefits of the program.

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 at the workplace. 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.

In addition to assessing improved O&M performance, the on-job six month TIA also addresses the extent to which an enabling environment has been created by management at each facility to encourage application of new knowledge and skills.

Training Impact Assessment (TIA)

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 procedures and 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 where measurements will be taken, assessments conducted and judgments reached.

- Before Training
- During Training
- After Training or Before Returning to the Treatment Plant
- On the Job at the Treatment Plant (six-month; annual)
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 and the degree to which newly learned practices are being applied. The measureable quantitative (performance indicators) and qualitative results (survey and interview) of the trainee application of new practices can provide an assessment of the training impact on individual, work unit and overall plant performance. Surveys allow for uniform data collection providing a consistent basis for comparisons among data collected at various intervals and from different sites. Interviews allow respondents greater latitude to express their personal opinions when asked open-ended questions. Although results of interviews are more subjective, they provide a valuable opportunity to operators and managers to expand on any given topic. As interviews are time consuming, the current TIA procedures will use interviews for pilots only. TIA’s conducted for subsequent trainings of a given course will be limited to operator and supervisor surveys.

The TIA framework collects data at all four of these points. The first round of post-training TIA’s conducted on-job six months after training are intended 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 Jordanian treatment facilities. This report presents the findings of this assessment that will be used to further improve the operator certification and training program and to assist managers in improving O&M performance at their facilities.

Summary of Results

Aqaba Water Company; Wastewater Operator Level 1

Quantitative Performance Indicators – Pilot and Six-Month

Annex A contains the initial set of on the job data collected six months after the Wastewater Level 1 training in 2010 as compared with 2009 results. This preliminary set of data for the Aqaba WWTP, which will be further verified when the results of annual comparisons are reported, shows significant measurable performance improvements across the board. Most notable, maintenance costs were reduced by nearly half (43%; see note below), and despite the increased costs of a new organizational structure and an increase in the depreciation rate by 4.6 percent, operating costs were held to near parity with the 2009 levels. A twenty-nine percent reduction in accident reports was reported as well as the total elimination of both non-compliance citations for wastewater quality and major unplanned shutdowns.

It is recognized that many factors are certainly at play in the achievement of these improvements and the impacts cannot be directly or totally attributed to the operator certification training. However, as trainees and supervisors have also reported a concerted effort at the Aqaba WWTP to apply new best O&M practices learned during the wastewater operator course (see survey and interview results below); it is fair to assert that the training contributed to these impressive performance results.

Note: The OMT project recognizes that there are two different types of maintenance programs: Preventive maintenance; and, Corrective or emergency maintenance (corrective repairs and unplanned shutdowns). We perform preventive maintenance to prevent or avoid corrective or emergency maintenance. An effective preventive maintenance program (scheduled maintenance) reduces or prevents costly corrective or emergency maintenance. We want to avoid emergency maintenance and
repairs. A good, effective preventive maintenance program reduces emergency maintenance costs. Reducing preventive maintenance costs today can create excessive emergency maintenance costs in the future.

In future TIA activities, the OMT project will endeavor to determine what types of maintenance cost are being affected by the training – preventive and/or corrective. TIAs will try to determine what else might be going on at a site that would contribute to the improvements. Although the results to any one form of intervention are difficult to isolate, one would draw a different conclusion if there was – an operational optimization effort underway versus normal operations. In terms of quantitative data collection, future TIAs will include the number of trainees as a percentage of the total staff in operations.
Annex A: Aqaba Water Company; Wastewater Treatment Plant

A.1 Quantitative Performance Indicators - Pilot and Six-Month
A.2 Trainee Bio-data
A.3 Summary of Survey Responses to Post-Training On-Job Follow-up/Six-Month
A.4 Summary of Interview Responses to Post-Training On-Job Follow-up/Six-Month
A.5 Training Impact Assessment (TIA) – Post-Training On-Job Follow-up/Six-Month - Trainee
  TIA Survey Responses – Trainee
  TIA Interview Responses – Trainee
A.6 TIA Survey – Post-Training On-Job Follow-up/Six-Month - Supervisor
  TIA Survey Responses – Supervisor
  TIA Interview Responses - Supervisor
# A.1

## Post-training On-Job Six-Month Assessment

Aqaba Wastewater Treatment Plant (WWTP) Quantitative Indicators for Pilot Year 2009 and 2010

<table>
<thead>
<tr>
<th>#</th>
<th>Indicator</th>
<th>2009 baseline</th>
<th>2010</th>
<th>Performance assessment Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Quality of W/WW treated — Non-compliance Citations</td>
<td>2</td>
<td>0</td>
<td>200% reduction in citations</td>
</tr>
<tr>
<td>2</td>
<td>Major Unplanned Shut-downs</td>
<td>1</td>
<td>0</td>
<td>100% reduction in unplanned shut-downs</td>
</tr>
<tr>
<td>3</td>
<td>Emergency Actions</td>
<td>1</td>
<td>1</td>
<td>No change</td>
</tr>
<tr>
<td>4</td>
<td>Accident Reports</td>
<td>7</td>
<td>5</td>
<td>29% reduction in accidents</td>
</tr>
<tr>
<td>5</td>
<td>Operating Costs (JOD)</td>
<td>1,229,598</td>
<td>1,308,875</td>
<td>See note</td>
</tr>
<tr>
<td>6</td>
<td>Maintenance Costs (JOD)</td>
<td>146,130</td>
<td>83,701</td>
<td>43% reduction in maintenance costs</td>
</tr>
<tr>
<td>7</td>
<td>Waste Water Quality (Lab)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) number of external lab tests conducted</td>
<td>156</td>
<td>156</td>
<td>Testing conducted by external lab.</td>
</tr>
<tr>
<td></td>
<td>b) percentage of results of noncompliance with the standard</td>
<td>1.28%</td>
<td>0 %</td>
<td>1.28% improvement in water quality results</td>
</tr>
</tbody>
</table>

**Note:** The rise in operation costs in 2010 is due to implementation of a new organization structure at the WWTP that includes establishing a maintenance department with a new automation section. A raise in the depreciation rate by 4.6% in 2010 compared with 2009 also added to the operating costs.
## A.2 AWC Trainee Bio-data

### AWC Wastewater Operators Information

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Position</th>
<th>Department/Section/Plant</th>
<th>Education</th>
<th>Experience (Years)</th>
<th>Report to</th>
<th>Career Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nasha't Ibrahim Al-Kiswani</td>
<td>WW Operator</td>
<td>Aqaba WWTP</td>
<td>High School</td>
<td>14</td>
<td>5 Ahfad Abu Sumagah</td>
<td>X</td>
</tr>
<tr>
<td>2</td>
<td>Hassan Nayf Al-Awadat</td>
<td>WW Operator</td>
<td>Aqaba WWTP</td>
<td>Diploma (a)</td>
<td>4</td>
<td>4 Ahfad Abu Sumagah</td>
<td>X</td>
</tr>
<tr>
<td>3</td>
<td>Yazan Falah Anabosi</td>
<td>WW Operator</td>
<td>Aqaba WWTP</td>
<td>Diploma (a)</td>
<td>1</td>
<td>1 Ahfad Abu Sumagah</td>
<td>X</td>
</tr>
<tr>
<td>4</td>
<td>Ismail Shawqi Ahmad</td>
<td>WW Operator</td>
<td>Aqaba WWTP</td>
<td>High School</td>
<td>18</td>
<td>18 Ahfad Abu Sumagah</td>
<td>X</td>
</tr>
<tr>
<td>5</td>
<td>Hassan Al-Said Yossef</td>
<td>WW Operator Assistant</td>
<td>Aqaba WWTP</td>
<td>High School</td>
<td>5</td>
<td>5 Ahfad Abu Sumagah</td>
<td>X</td>
</tr>
<tr>
<td>6</td>
<td>Ismail Simi Gheith</td>
<td>WW Operator</td>
<td>Aqaba WWTP</td>
<td>Vocational Diploma (b)</td>
<td>19</td>
<td>19 Ahfad Abu Sumagah</td>
<td>X</td>
</tr>
<tr>
<td>7</td>
<td>Ahmad Musa Hanaqa</td>
<td>Laboratory Technician</td>
<td>Aqaba WWTP</td>
<td>Bachelor</td>
<td>4</td>
<td>4 Eng. Zyad Al Ta’nee (Lab Manager)</td>
<td>X</td>
</tr>
<tr>
<td>8</td>
<td>Mofeed Saleh Al-Khateeb</td>
<td>Laboratory Technician</td>
<td>Aqaba WWTP</td>
<td>Diploma (a)</td>
<td>25</td>
<td>21 Eng. Zyad Al Ta’nee (Lab Manager)</td>
<td>X</td>
</tr>
<tr>
<td>9</td>
<td>Khoud Falah Jaafreh</td>
<td>Laboratory Technician</td>
<td>Aqaba WWTP</td>
<td>Bachelor</td>
<td>8</td>
<td>2 Eng. Zyad Al Ta’nee (Lab Manager)</td>
<td>X</td>
</tr>
<tr>
<td>10</td>
<td>Kawther Abdurahman Musa</td>
<td>Laboratory Technician</td>
<td>Aqaba WWTP</td>
<td>Diploma (a)</td>
<td>26</td>
<td>11 Eng. Zyad Al Ta’nee (Lab Manager)</td>
<td>X</td>
</tr>
</tbody>
</table>

### AWC Wastewater Managers/Supervisors Information

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Position</th>
<th>Department/Section/Plant</th>
<th>Education</th>
<th>Experience (Years)</th>
<th>Report to</th>
<th>Career Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Eng. Yasser Mohammed Al Hanaqta</td>
<td>WW Director</td>
<td>Aqaba WWTP</td>
<td>Bachelor</td>
<td>10</td>
<td>10 Eng. Jehad Al Sagrat AWC CEO Deputy</td>
<td>X 2 c</td>
</tr>
<tr>
<td>2</td>
<td>Eng. Malek Nabil Al Kateeb</td>
<td>WW Operation Engineer/ Supervisor</td>
<td>Aqaba WWTP</td>
<td>Bachelor</td>
<td>2</td>
<td>2 Eng. Yasser Al Hanaqta</td>
<td>X 2 c</td>
</tr>
<tr>
<td>3</td>
<td>Eng. Mohamed Hani Mohamneed</td>
<td>WWTP Manager (Ma’an)</td>
<td>Ma’an WWTP</td>
<td>Master</td>
<td>7</td>
<td>4 Eng. Yasser Al Hanaqta</td>
<td>X 2 c</td>
</tr>
<tr>
<td>4</td>
<td>Eng. Laith Salih Al Ma’aitha</td>
<td>Water Reuse Engineer/ Supervisor</td>
<td>Aqaba WWTP</td>
<td>Bachelor</td>
<td>2</td>
<td>2 Eng. Yasser Al Hanaqta</td>
<td>X 2 c</td>
</tr>
<tr>
<td>5</td>
<td>Ahmad Mohamed Abu-Sumaqaa</td>
<td>WW Operation Supervisor</td>
<td>Aqaba WWTP</td>
<td>Diploma (a)</td>
<td>10</td>
<td>10 Eng. Malek Al Kateeb</td>
<td>X 1 d</td>
</tr>
</tbody>
</table>

(i) Community College  
(ii) Less than High School  
(iii) An engineer or B.S. holder needs 2 years of Level 2 certified working experience to go to level 3  
(iv) A Community College-Science graduate needs 1 year of Level 1 certified working experience to go to level 2  
(v) Other Community College graduates need 1 year of Level 1 certified working experience to go to level 2
A.3 Summary of Survey Responses to Post-Training On-Job Follow-up/Six-Month

Survey Results - Trainee

1. Relevance of Training
   - After six month back on the job, findings demonstrated that trainees continued to hold a high degree of agreement for the continuation of training.

2. Language of Instruction
   - Trainees continued to indicate a preference to study in Arabic with 100% in agreement.

3. Knowledge/Understanding
   - After six months back on the job, responses showed a 30% reduction in trainees reporting that they are not up-to-date with new technologies.
   - While 100% of trainees at the end of training agreed that training should increase knowledge of new international developments and new technologies, only 60% agreed after 6 months; indicating a possible preference for specifically job-related instruction. This finding requires further investigation.
   - 80% of trainees indicated a better understanding of water quality laws/regulations. 100% agreed/strongly agreed that they now have better knowledge of safety equipment and procedures.

4. Attitude/Confidence; Self Esteem
   - After 6 months back on the job, trainees still indicated a high degree of agreement regarding improved confidence and self esteem as a result of the training.
   - These findings are encouraging as they indicate that high levels of confidence and self esteem are maintained in the ‘real world’ as compared to the artificial classroom environment.

5. Skills/Technical; Management
   - After 6 months on the job, 100% of trainees reported that technical knowledge and problem solving skills acquired during training enabled them to perform their jobs better.
   - 80% indicated that they were able to better organize people and tasks.
   - Responses indicate that after 6 months back on the job, trainees are in strong agreement that their new knowledge and skills have a beneficial effect on their performance.

6. Impact
   - After 6 months back on the job, 90% of trainees responded that they can see improvements in their job performance as a result of the training.
   - However, trainee assessment of the monitoring and support they expected from management had eroded from 80% at the end of training to a generally neutral to flat distribution of responses after 6 months back on the job.
   - This important trainee perception will be communicated to the management of the AWC WWTP.
Survey Results – Supervisor

1. Relevance of Training
   - After 6 months back on the job, supervisor responses indicated only slight deviation from opinions at the end of training. 100% reported a strong interest in continued learning to improve job skills. 100% agreed or strongly agreed that they want trainees to have a complete knowledge of the field regardless of current position.
   - These findings demonstrate a high degree of management support for the continuation of training.

2. Language of Instruction
   - Supervisors indicated a preference for staff to study in Arabic with 100% in agreement.

3. Knowledge/Understanding
   - After 6 months back on the job, the opinion of supervisors had dropped from 100% to 60% regarding their staff having a practical awareness of new technologies that could improve performance. This finding could indicate that supervisors may not have been fully aware of the content of the training and have reset their expectations. This finding requires further investigation.
   - The responses after 6 months show that supervisors perceive their staff demonstrating better knowledge pertaining specifically to safety and safe drinking water and/or pollution control laws/regulations.

4. Attitude/Confidence; Self Esteem
   - After 6 months back on the job, supervisor responses indicated that trainees demonstrated confidence on the job and greater self esteem.
   - Supervisor responses regarding the perception of families, friends and neighbors of their staff were neutral indicting that public awareness of the operator career requires further investigation.

5. Skills/Technical; Management
   - After 6 months back on the job, 80% of supervisors agreed that new technical skills were enabling better performance; and, 100% agreed that staff now had improved problem-solving and organizational skills.
   - These key findings indicate that after 6 months back on the job, supervisors are in strong agreement that the new knowledge and skills of their staff is having a beneficial effect on their performance.

6. Impact
   - After 6 months back, supervisor responses were identical to their opinions at the end of training indicating that the expected high level of performance improvement as a result of training was confirmed on the job.
   - Where supervisors believe that they are providing the essential support needed by their staff in the application of new knowledge and skill, this opinion is not widely held by the operators.
   - This important discrepancy requires further investigation.
A.4 Summary of Interview Responses to Post-Training On-Job Follow-up/Six-Month

Interview Results – Trainee

1. Relevance of Training

- After six months back on the job, trainees expressed a strong interest in continuing training as a means to improve performance.
- Trainees reported that topics in the WW1 course were highly relevant to their needs back on the job.

2. Language of Instruction

- Trainees reported their agreement with the combination of Arabic text augmented by an English glossary as it allowed them to study in their native language while gaining technical English terminology.

3. Knowledge/Understanding

- After six months back on the job, 77% of trainees reported that their study of new technologies was helpful in their job performance.
- Over 80% of trainees believed that their study of Jordanian water quality regulations and safety procedures aided them in their performance.

4. Attitude/Confidence; Self Esteem

- After six months back on the job trainees reported that improved confidence and self esteem that resulted from training were contributing to their improved job performance.
- The majority of trainees indicated the low level of awareness of the importance of their jobs among their family, friends and neighbors. This finding will be taken into account in the public awareness activities of the Jordan Water Operators Certification and Training Program.

5. Skills/Technical; Management

- After six months back on the job, 80% of trainees reported that new knowledge and skills acquired during training were applied on the job and were improving performance.
- The majority of trainees reported that after six months back on the job their problem-solving skills were allowing them to more quickly and accurately respond to problems and effectively apply preventive maintenance procedures.
- The majority of trainees also reported that their new skills in organizing work and people were contributing to better overall O&M performance at the plant and that there was a new atmosphere characterized by better teamwork and communication among staff.
- Trainees also noted greater efficiency in accomplishing O&M tasks by applying time management techniques acquired during training.

6. Impact
• Trainees report a wide variance in the level of supervisory support being received after six months back on the job. 40% of trainees reported they were not getting any support while others did feel that their supervisors were empowering them with greater responsibility.

• Trainees reported that supervisors were holding more and better meetings and discussions to monitor and encourage application of new knowledge and skills, but 40% of trainees reported that there was no important change in the monitoring that they were receiving after six months.

• Trainees emphasized that improved commitment to the job, teamwork and communications were all benefits that were having positive effects on their performance after six months back on the job.

• Six months after training, trainees reported a reduction in the need for major repairs and unplanned shutdowns and a commitment to apply their new O&M knowledge and skills.
Interview Results – Supervisor

1. Relevance of Training
   - After six months back on the job, supervisors consistently report that they are fully supporting trainees in the application of new knowledge and skills acquired from the WW1 course and are trying to motivate staff and offer them related on-the-job training. The possibility of providing coaching to supervisors on how to structure and conduct effective on-job-training will be investigated.
   - All supervisors agreed that the topics covered in the training covered the top priority needs at the plant but there was a significant variance in terms of their assessment of the adequacy of the coverage. This finding will be further investigated.

2. Language of Instruction
   - All supervisors agreed that the combination of Arabic and English was a valuable approach.
   - All supervisors reported improved communications at the plant with staff using shared terminologies.

3. Knowledge/Understanding
   - 100% of supervisors reported that they were fully aware of the content of the WW1 course.
   - Supervisors specified the following new technologies as being particularly valuable to improved performance at the plant: wastewater processes, disinfection, chlorination, SCADA and safety.
   - 77% of supervisors were satisfied with the knowledge that trainees received on water and effluent quality regulations.
   - 88% of supervisors were satisfied with the safety instruction.

4. Attitude/Confidence; Self Esteem
   - Supervisor responses varied with regard to expected loss of staff due to training with 60% expecting losses and 40% not expecting to lose staff.
   - All supervisors agreed that staff losses could be overcome by fair and equitable promotion opportunities and attractive incentives.
   - Supervisor responses were mixed regarding the awareness of family, friends and neighbors as to the importance of the operator job to public health and environmental protection. 40% believed that family, friends and neighbors were aware, while 60% disagreed. This finding will be considered when implementing public awareness activities in support of the Jordan Water Operators Certification and Training Program.

5. Skills/Technical; Management
   - Supervisors acknowledged the following specific skills that were enabling improved performance: technical monitoring and follow-up; understanding of lab results; documentation, reporting and communication; and, safety.
   - After six months back on the job, supervisors reported a change in the work environment characterized by improved teamwork, communications, reporting and organization.
6. Impact

- All supervisors agreed that after six months on the job they were encouraging staff to apply newly acquired knowledge and skills by providing greater moral support to individual staff, empowering operators with greater responsibility and conducting performance appraisals.

- After six months back on the job, supervisors reported the impact of improved performance as evidenced by reductions in major repairs, unplanned shutdowns and related maintenance costs; fewer accidents and injuries and a corresponding recognition that operators should avoid risks; greater teamwork, communications, commitment and willingness to participate that is making O&M more efficient.
### A.5 Training Impact Assessment (TIA) – Post-Training On-Job Follow-up/Six-Month - Trainee

**OMT Training Impact Assessment Survey – Post-Training Six-Month Follow-up/Trainee**

<table>
<thead>
<tr>
<th>Values</th>
<th>Survey Analysis</th>
<th>Survey Analysis Percentages Six-Month</th>
<th>Survey Analysis Percentages End-of-Training</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Capacity Building - Learning-to-Perform</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am interested in learning and improving my job skills</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I only want to study topics that are directly related to my current job.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I want a complete knowledge of my field regardless of the current releve</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Expertise</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I prefer to study my field in Arabic.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I prefer to study my field in English.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have no language preference</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Knowledge/Information and Skills</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am now more aware of new technologies that could improve my performance.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The training increased my knowledge of new international developments and new technologies in my field.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have better understanding and knowledge of the importance of desalination water and pollution control law/regulations to my job.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am more aware of safety equipment and safe O&amp;M procedures in my field.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Attitude/Growth Mindset</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The training is giving me confidence to apply new knowledge to my job</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The training is giving me confidence to pursue promotions and career objectives.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The training is giving me confidence to pursue job opportunities elsewhere.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Relationships</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My family, friends and neighbors are aware of the importance of my job to protect the public health by providing safe drinking water and the importance of controlling pollution to protect the environment.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acquisition of New Skills</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I acquired new technical skills that enable me to do my job better.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I acquired new ways to solve work problems.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I learned new ways to organize people and tasks.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Impact</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I received the support of my supervisor and the utility in the application of new knowledge and skills on the job.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My supervisor is monitoring my application of new knowledge and skills to determine impact on my performance and the performance of my work unit.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can see improvements in my performance and the performance of my work unit as a result of the training.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(1) Strongly Disagree</th>
<th>(2) Disagree</th>
<th>(3) Neutral</th>
<th>(4) Agree</th>
<th>(5) Strongly Agree</th>
<th>(1) Strongly Disagree</th>
<th>(2) Disagree</th>
<th>(3) Neutral</th>
<th>(4) Agree</th>
<th>(5) Strongly Agree</th>
<th>Number of Trainees</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Attitudes</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>2. Attitude/Trainee</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>3. Attitude/Trainee</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>4. Attitude/Pilot</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>5. Impact</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>10</td>
</tr>
</tbody>
</table>

TIA Water & Wastewater Treatment Level 1/Pilot – Post-Training On-Job Follow-up/Six-Month
<table>
<thead>
<tr>
<th>Capacity Building - Learning-to-Perform</th>
<th>TIA Water &amp; Wastewater Treatment Level 1/Pilot – Post-Training On-Job Follow-up/Six-Month</th>
<th>AWG WWTP OMT Training Impact Assessment – After 6 months/Trainee Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ismail Ahmad</strong></td>
<td>1. Are you interested in training and improving your job skills/why?</td>
<td>1. Did you receive new tools/techniques that you wanted to know more about?</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Develop my performance</td>
<td>Develop my performance</td>
</tr>
<tr>
<td></td>
<td>2. What training topics were of greatest importance to you?</td>
<td>2. Did you receive the importance of safe drinking water and/or pollution control laws/regulations in your job?</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Waste water treatment processes: To Increase my knowledge</td>
<td>Waste water treatment processes: To increase my knowledge</td>
</tr>
<tr>
<td></td>
<td>Safety</td>
<td>Skills</td>
</tr>
<tr>
<td></td>
<td>3. Meet the combination of Arabic and English skills?</td>
<td>3. To what extent did you receive the importance of safe drinking water and/or the importance of controlling pollution to protect the environment?</td>
</tr>
<tr>
<td></td>
<td>Yes, 70%</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td>Written understanding</td>
<td>Written understanding</td>
</tr>
<tr>
<td></td>
<td>90%</td>
<td>80%</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>8. Improved the technical English language</td>
<td>9. Improved the technical English language</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>10. Effective communication</td>
<td>11. Improved the technical English language</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>11. Improved the technical English language</td>
<td>12. Effective communication</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>12. Effective communication</td>
<td>13. Improved the technical English language</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>13. Improved the technical English language</td>
<td>14. Effective communication</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>14. Effective communication</td>
<td>15. Improved the technical English language</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>15. Improved the technical English language</td>
<td></td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** These data are based on evaluations and feedback from trainees who participated in the training program. The data reflect the perceived improvements and changes in their performance and knowledge post-training. The assessments were conducted through various means including self-assessment, peer assessment, and supervisor feedback. The data aim to measure the effectiveness of the training in enhancing trainees' skills, knowledge, and performance in their respective roles.
### OMT Training Impact Assessment Survey – Post-Training Six-Month Follow-up/Supervisor

#### Values

<table>
<thead>
<tr>
<th>(1) Strongly Disagree</th>
<th>(2) Disagree</th>
<th>(3) Neutral</th>
<th>(4) Agree</th>
<th>(5) Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Supervisors; Managers</td>
<td>Values</td>
<td>Avg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Survey Analysis

<table>
<thead>
<tr>
<th>(1) Strongly Disagree</th>
<th>(2) Disagree</th>
<th>(3) Neutral</th>
<th>(4) Agree</th>
<th>(5) Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Supervisors; Managers</td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Survey Analysis Percentages

<table>
<thead>
<tr>
<th>(1) Strongly Disagree</th>
<th>(2) Disagree</th>
<th>(3) Neutral</th>
<th>(4) Agree</th>
<th>(5) Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Supervisors; Managers</td>
<td>Percentages</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### OMT Training Impact Assessment Survey – End-of-Training

#### Values

<table>
<thead>
<tr>
<th>(1) Strongly Disagree</th>
<th>(2) Disagree</th>
<th>(3) Neutral</th>
<th>(4) Agree</th>
<th>(5) Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Supervisors; Managers</td>
<td>Values</td>
<td>Avg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Survey Analysis

<table>
<thead>
<tr>
<th>(1) Strongly Disagree</th>
<th>(2) Disagree</th>
<th>(3) Neutral</th>
<th>(4) Agree</th>
<th>(5) Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Supervisors; Managers</td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Survey Analysis Percentages

<table>
<thead>
<tr>
<th>(1) Strongly Disagree</th>
<th>(2) Disagree</th>
<th>(3) Neutral</th>
<th>(4) Agree</th>
<th>(5) Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Supervisors; Managers</td>
<td>Percentages</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**A.6 TIA Survey – Post-Training On-Job Follow-up/Six-Month - Supervisor**

**Capacity Building - Learning-to-Perform**

- **My staff is interested in learning and improving their job skills.**
  - Values: 5 | 4 | 5 | 5 | 4 | Avg: 4.6

**Skill Acquisition**

- **I want staff to study topics that are directly related to their current job.**
  - Values: 2 | 2 | 3 | 3 | 4 | Avg: 2.8

**Language of Study**

- **I prefer staff to study in English.**
  - Values: 4 | 4 | 5 | 4 | 4 | Avg: 4.2

**Knowledge Underpinning**

- **My staff is now better aware of the new technologies that could improve their performance.**
  - Values: 4 | 4 | 4 | 2 | 3 | Avg: 3.4

**Values**

- **I prefer to study in Arabic.**
  - Values: 4 | 4 | 5 | 4 | 4 | Avg: 4.2

**Technical and/or pollution control laws/regulations to their jobs.**

- **I have no language preference.**
  - Values: 2 | 2 | 1 | 2 | 2 | Avg: 1.8

**Impact**

- **I am supporting staff in applying new knowledge and skills on the job.**
  - Values: 4 | 4 | 5 | 4 | 4 | Avg: 4.2

---

**Technical and/or pollution control laws/regulations to their jobs.**

- **The training is giving my staff confidence to apply new knowledge on the job.**
  - Values: 4 | 4 | 5 | 4 | 4 | Avg: 4.2

**Technical and/or pollution control laws/regulations to their jobs.**

- **The training is giving my staff confidence to pursue promotion and career objectives.**
  - Values: 4 | 4 | 4 | 4 | 4 | Avg: 4.4

**Technical and/or pollution control laws/regulations to their jobs.**

- **The training is giving my staff confidence to pursue job opportunities elsewhere.**
  - Values: 4 | 4 | 4 | 4 | 4 | Avg: 4.4

**Technical and/or pollution control laws/regulations to their jobs.**

- **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 pollution control to protect the environment.**
  - Values: 3 | 3 | 5 | 4 | 3 | Avg: 3.6

**Technical and/or pollution control laws/regulations to their jobs.**

- **My staff is acquiring new technical skills that enable them to do their job better.**
  - Values: 4 | 4 | 4 | 2 | 4 | Avg: 3.6

**Technical and/or pollution control laws/regulations to their jobs.**

- **My staff is acquiring new ways to solve work problems.**
  - Values: 4 | 4 | 4 | 4 | 4 | Avg: 4

**Technical and/or pollution control laws/regulations to their jobs.**

- **My staff is learning new ways to organize people and tasks.**
  - Values: 4 | 4 | 4 | 4 | 4 | Avg: 4
### AWC WWTP OMT Training Impact Assessment –After 6 months/Supervisor; Manager Interview

<table>
<thead>
<tr>
<th>Capacity Building - Learning-to-Perform</th>
<th>Yasser Hanaqta</th>
<th>Mohamed Mohammed</th>
<th>Ahmad Abu-Sumaqa</th>
<th>Malek Ibrahim</th>
<th>Laith Ma’aitah</th>
</tr>
</thead>
<tbody>
<tr>
<td>WW Director</td>
<td>WW Operation Supervisor</td>
<td>WW Operation Engineer/ Supervisor</td>
<td>Water Reuse Engineer/ Supervisor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Balance of Training</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 To what extent are you supporting your staff in learning and improving their job skills? How?</td>
<td>Fully support</td>
<td>Fully support</td>
<td>Fully support</td>
<td>Fully support</td>
<td>Fully support</td>
</tr>
<tr>
<td>1.2 Did your staff study the topics that you consider to be top priority?</td>
<td>Yes, 80%</td>
<td>Yes, 70%</td>
<td>Yes, 50%</td>
<td>Yes, 95%</td>
<td>Yes, 50%</td>
</tr>
<tr>
<td>2. Language of Instruction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1 The training is conducted in Arabic with introduction of some English terms. What is your opinion of this decision?</td>
<td>Fully agree</td>
<td>Fully agree</td>
<td>Fully agree</td>
<td>Fully agree</td>
<td>Fully agree</td>
</tr>
<tr>
<td>2.2 Why?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Knowledge/Understanding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1 To what extent are you aware of the content of the training that your staff received?</td>
<td>90%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>3.2 What specific new international developments and new technologies did you want your staff to learn? Were these technologies included in the training?</td>
<td>New Waste Water Treatment technology - Safety Yes</td>
<td>Waste water treatment plant types Yes</td>
<td>Disinfection - Safety Yes</td>
<td>New waste water treatment processes - SCADA Chlorination Disinfection Only disinfection Yes</td>
<td>New waste water treatment processes - Safety Yes</td>
</tr>
<tr>
<td>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?</td>
<td>90%</td>
<td>60%</td>
<td>80%</td>
<td>75%</td>
<td>80%</td>
</tr>
<tr>
<td>3.4 To what extent did the training ensure that your staff learned the safety equipment and safe O&amp;M procedures associated with their work?</td>
<td>100%</td>
<td>90%</td>
<td>90%</td>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td>4. Attitude/Confidence, Self Esteem</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1 Do you expect this training to result in a loss of staff to other employers?</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>4.2 How can this be avoided?</td>
<td>N/A</td>
<td>Promotion - Incentives</td>
<td>Promotion - Incentives Job stability and safety</td>
<td>N/A</td>
<td>Promotion - Incentives Moral support</td>
</tr>
<tr>
<td>4.3 To what extent are the family, friends and neighbors of your staff aware of the importance of their job in protecting the public health by providing safe drinking water and/or the importance of controlling pollution to protect the environment?</td>
<td>Aware</td>
<td>Limited aware.</td>
<td>Not aware</td>
<td>Limited aware</td>
<td>Aware</td>
</tr>
<tr>
<td>5. Technical Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1 What specific new technical skills did your staff learn to enable them to do their job better?</td>
<td>Technical Monitoring - Lab analysis - Safety</td>
<td>Lab analysis - Safety</td>
<td>Documentation None</td>
<td>Documentation</td>
<td></td>
</tr>
<tr>
<td>5.2 What specific new supervisory/management skills did your staff learn to enable them to do their job better?</td>
<td>Writing reports - Communication</td>
<td>Writing reports - Team work</td>
<td>Writing reports - Team work</td>
<td>Writing reports - Team work</td>
<td>Writing reports - Team work</td>
</tr>
</tbody>
</table>

---

TIA Water & Wastewater Treatment Level 1/Pilot – Post-Training On Job Follow-up Six Month
Annex B – Post-Training Assessment Tools and Forms/Pilot Version-April 2010

B.1 Summary of Responses to Post-Training Survey:
  - Aqaba Water Company, Wastewater Treatment Plant

B.2 Summary of responses to Post-Training Interview
  - Aqaba Water Company, Wastewater Treatment Plant
### B.1 AWC - Training Impact Assessment Survey – Post-Training/Trainee Response Summary

#### Survey

**Relevance of Training**
1. I am interested in learning and improving my job skills.
2. I only want to study topics that are directly related to my current job.
3. I want a complete knowledge of my field regardless of the current relevance.

**Language of Instruction**
1. I prefer to study my field in Arabic.
2. I prefer to study my field in English.
3. I have no language preference.

**Knowledge/Understanding**
1. I am now more aware of new technologies that could improve my performance.
2. The training increased my knowledge of new international developments and new technologies in my field.
3. I now better understand the importance of safe drinking water and/or pollution control laws/regulations to my job.
4. I am now more aware of safety equipment and safe O&M procedures in my field.

### End-of-Training

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.

### Summary of Responses

Trainee responses indicated only slight deviation from opinions at the end of training. 100% reported a strong interest in continued learning to improve job skills. 90% agreed or strongly agreed that they want a complete knowledge of the field regardless of current position.

These findings are significant as they demonstrate the high degree of interest that trainees hold for the continuation of training.

#### Six-Month Follow-up

#### End-of-Training

Trainees showed a preference to study in Arabic with 70% in agreement.

Trainees indicated a preference to study in Arabic with 100% in agreement.

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.

Responses showed a 30% reduction in trainees reporting that they are not up-to-date with new technologies (70% after 6 months vs. 100% at the end of training). While 100% of trainees at the end of training agreed that training should increase knowledge of new international developments and new technologies, only 60% agreed after 6 months; indicating a possible preference for specifically job-related instruction. 80% (down from 100%) indicated a better understanding of water quality laws/regulations. 100% agreed/strongly
| 4. Attitude/Confidence; Self Esteem | 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. | Trainee responses to questions in this section showed limited variance from the end-of-training responses. After 6 months back on the job, trainees still indicated a high degree of agreement with all four statements. These findings are encouraging as they indicate that high levels of confidence and self esteem are maintained in the 'real world' as compared to the artificial classroom environment. |
| 5. Skills/Technical; Management | 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. | After 6 months on the job, 100% of trainees reported that technical knowledge and problem solving skills acquired during training enabled them to perform their jobs better. 80% indicated that they were able to better organize people and tasks. These key findings indicate that after 6 months back on the job, trainees are in strong agreement that their new knowledge and skills have a beneficial effect on their performance. |
| 6. Impact | 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 application of new knowledge and skills. | After 6 months back on the job, 90% of trainees responded that they can see improvements in their job performance as a result of the training. This ground-truthing demonstrates that in the |
| 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. | monitor their performance after training to assess impact. 90% continued to expect improvements in their performance and that of their work unit as a result of training. | estimation of the trainees, the training is having the expected on-job impact. However, after 6 months back on the job, trainees reporting of the monitoring and support of management had eroded from 80% at the end of training to a generally neutral to flat distribution of responses. This important trainee perception will be communicated to the management of the AWC WWTP. |
### B.1 AWC - Training Impact Assessment Survey – Post-Training/Supervisor; Manager Response Summary

<table>
<thead>
<tr>
<th>Survey</th>
<th>End-of-Training</th>
<th>Six-Month Follow-Up</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Relevance of Training</strong>&lt;br&gt;1.1 My staff is interested in learning and improving their job skills.&lt;br&gt;1.2 I only want staff to study topics that are directly related to their current job.&lt;br&gt;1.3 I want staff to receive complete knowledge of the field regardless of the current relevance.</td>
<td>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.</td>
<td>After 6 months back on the job, supervisor responses indicated only slight deviation from opinions at the end of training. 100% reported a strong interest in continued learning to improve job skills. 100% agreed or strongly agreed that they want trainees to have a complete knowledge of the field regardless of current position. These findings are significant as they demonstrate a high degree of management support for the continuation of training.</td>
</tr>
<tr>
<td><strong>2. Language of Instruction</strong>&lt;br&gt;2.1 I prefer staff to study in Arabic.&lt;br&gt;2.2 I prefer staff to study in English.&lt;br&gt;2.3 I have no language preference.</td>
<td>The majority of supervisors (80%) continued to prefer that staff study in Arabic, however post-training, 80% versus 40% pre-training expressed language neutrality.</td>
<td>Supervisors indicated a preference for staff to study in Arabic with 100% in agreement.</td>
</tr>
<tr>
<td><strong>3. Knowledge/Understanding</strong>&lt;br&gt;3.1 My staff is now better aware of the new technologies that could improve their performance.&lt;br&gt;3.2 My staff is now better aware of safety equipment and safe O&amp;M procedures in their fields.&lt;br&gt;3.3 The training has increased staff knowledge of new international developments and new technologies in their field.&lt;br&gt;3.4 My staff now better understand the importance of safe drinking water and/or pollution control laws/regulations to their jobs.</td>
<td>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.</td>
<td>After 6 months back on the job, the opinion of supervisors had dropped from 100% to 60% regarding their staff having a practical awareness of new technologies that could improve performance. This finding may indicate that supervisors may not have been fully aware of the content of the training and have reset their expectations. This finding requires further investigation. The responses after 6 months for the remaining statements in this section remain consistent with the responses at the end of training.</td>
</tr>
<tr>
<td>4. Attitude/Confidence</td>
<td>4.1 The training is giving my staff confidence to apply new knowledge on their job.</td>
<td>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.</td>
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<tr>
<td>4.2 The training is giving my staff confidence to pursue promotion and career objectives.</td>
<td>4.3 The training is giving my staff confidence to pursue job opportunities elsewhere.</td>
<td>4.4 In my opinion, the families, friends and neighbors of my staff are not aware of the importance of the jobs my staff does to protect the public health by providing safe drinking water and/or the importance of controlling pollution to protect the environment.</td>
</tr>
<tr>
<td>4.4 In my opinion, the families, friends and neighbors of my staff are not aware of the importance of the jobs my staff does to protect the public health by providing safe drinking water and/or the importance of controlling pollution to protect the environment.</td>
<td>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.</td>
<td>80% agreed that new technical skills were enabling better performance; and, 100% agreed that staff now had improved problem-solving and organizational skills. These key findings indicate that after 6 months back on the job, supervisors are in strong agreement that the new knowledge and skills of their staff is having a beneficial effect on their performance.</td>
</tr>
<tr>
<td>5. Skills/Technical; Management</td>
<td>5.1 My staff is acquiring new technical skills that enable them to do their job better.</td>
<td>5.2 My staff is acquiring new ways to solve work problems.</td>
</tr>
<tr>
<td>5.3 My staff is learning new ways to organize people and tasks.</td>
<td>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.</td>
<td>80% agreed that new technical skills were enabling better performance; and, 100% agreed that staff now had improved problem-solving and organizational skills. These key findings indicate that after 6 months back on the job, supervisors are in strong agreement that the new knowledge and skills of their staff is having a beneficial effect on their performance.</td>
</tr>
</tbody>
</table>
**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

| 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. | After 6 months back on the job, supervisor responses were identical to their opinions at the end of training with 100% agreement to all statements.  
Where supervisors believe that they are providing essential support to their staff in the application of new knowledge and skill, this opinion is not widely held by the operators.  
This important discrepancy requires further investigation. |
ANNEX C: TIA POST-TRAINING ON-JOB FOLLOW-UP ASSESSMENT/SIX-MONTH - SURVEY AND INTERVIEW QUESTIONNAIRES

C.1 TIA Trainee Questionnaires - English and Arabic
C.2 TIA Supervisor Questionnaires - English and Arabic
C.1 OMT Training Impact Assessment Survey – Post-Training/Trainee

Based on having completed the pilot WW/L1 training, please indicate your level of agreement with the statement by circling a number from 1 through 5.

1  2  3  4  5
Disagree  Agree

**Capacity Building**

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 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.

4. Attitude/Confidence; Self Esteem
   
   4.1 The training is giving me confidence to apply new knowledge to my job.
   4.2 The training is giving me confidence to pursue promotion and career objectives.
   4.3 The training is giving 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 acquired new technical skills that enable me to do my job better.
   5.2 I acquired new ways to solve work problems.
   5.3 I 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.
C.1 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 الافتقاد/الاختلاف بوضع علامة (٧) مقابل البيان:

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<td>2</td>
<td>أختلف</td>
</tr>
<tr>
<td>1</td>
<td>أختلف بشدة</td>
</tr>
</tbody>
</table>

بناء القدرات – التعلم من أجل التطبيق

1. أهمية التدريب:

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

2. اللغة التدريس:

2.1 أنا أفضل الدراسة باللغة العربية في مجال عملي.
2.2 أنا أفضل الدراسة باللغة الإنجليزية في مجال عملي.
2.3 ليس لدي تفضيل لأي لغة تدريس.

3. المعرفة:

3.1 أنا حاليا على اطلاع ودرايا أفضل حول التقنيات الحديثة التي يمكن أن تحسن من أدائي لعملي.
3.2 التدريب قد زاد معرفتي حول التطورات العالمية الجديدة والتقنيات الحديثة في مجال عملي.
3.3 أنا حاليا على علم أفضل عن أهمية المياة الصحية للشرب و/أو قوانين أنظمة مراقبة التلوث المتعلقة بعملي.
3.4 أنا لست على علم بمعدات السلامة وإجراءات التشغيل والصيانة السليمة في مجال عملي.
4. السلوكيات:

1.4 التدريب يمكني للثقة لتطبيق المعرفة الجديدة في أدائي العملي.
2.4 التدريب يمكني للثقة للحصول على ترقية في عملي وتحقيق الأهداف الوظيفية.
3.4 التدريب يمكني للثقة 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 جديدة لأقوم بعمل بطرق أفضل.
2.5 اكتسبت طرق/أساليب جديدة لحل مشاكل العمل.
3.5 تعلمت طرق وأساليب أدارية جديدة لتنظيم الموظفين والمهام.

6. الآثار المستقبلي:

1.6 إذا اقتنعت الدعم من المشرف والإدارة عند تطبيق المعرفة والمهارات الجديدة في أدائي العملية.
2.6 المشرف يراقب تطبيق المعرفة والمهارات الجديدة التي اكتسبتها في التدريب لتحديد أثرها على أداء الوحدة.
3.6 استطيع أن أرى تحسينات في أدائي وأداء الوحدة نتيجة للتدريب.
C.1 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?
C.1 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 الموضوعات التدريبية التي كانت لها أهمية قصوى بالنسبة لك؟ لماذا؟

2. لغة التدريس:

1.2 هل كان الجمع بين اللغة العربية والإنجليزية مفيدًا؟

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 والصيانة السليمة المرتبطة بعملك؟

4. السلوكيات:

1.4 كيف سيساعدك التدريب في عملك وحياتك المهنية؟

2.4 إلى أي حد تدرك عائلتك وأصدقاءك وأحيانًا 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 لتساعده في القيام بعملك بشكل أفضل؟

2.5 ما هي المهارات الجديدة التي اكتسبتها والتي ستمنحك من القيام بعملك بشكل أفضل؟

3.5 ما هي المهارات الإشرافية/الإدارية الجديدة التي اكتسبتها والتي ستمنحك من القيام بعملك بشكل أفضل؟

6. الأثر المستقبلي:

1.6 ما هي الطرق التي تلقى بها الدعم من مسؤولوك وادارتك عند تطبيقك للمعارف والمهارات الجديدة في عملك؟

2.6 كيف يقوم مسؤولوك بمراقبة تطبيقك للمعارف والمهارات الجديدة لتحديد أثر التدريب على أدائك وأداء الوحدة التي تعمل بها؟

3.6 ما هي التحسينات التي تستطيع أن تراها في أدائك وأداء الوحدة التي تعمل بها نتيجة للتدريب؟

4.6 ما هي التحسينات التي تستطيع أن تراها في أداء المرفق من حيث الالتزام بمتطلبات العمل وتقليل الأعطال/الإصلاحات وتوقف العمل؟
C.2 OMT Training Impact Assessment Survey – Post Training/Supervisor

Based on your staff having completed the pilot WW/L1 training, please indicate your level of agreement with the statement by circling a number from 1 through 5.

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<thead>
<tr>
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<tr>
<td></td>
<td>Disagree</td>
<td>Agree</td>
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**Capacity Building**

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 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 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 and/or pollution control laws/regulations to their jobs.

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.

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.

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.
C.2 OMT Training Impact Assessment Survey – Post Training/Supervisor “Arabic”

المستوى التقييمي (استبيان)
(مدير/مدير)

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

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بناء القدرات -- التعلم من أجل التطبيق

1. أهمية التدريب:

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

2. لغة التدريس:

 أنا أفضل للموظفين الدراسة باللغة العربية.
 أنا أفضل للموظفين الدراسة باللغة الإنجليزية.
 ليس لدي تفضيل لأية لغة تدريس.

3. المعرفة:

 الموظفون حاليا مدركون وعلى أطلاع أفضل حول التقنيات الحديثة التي قد تحسن من أدائهم.
 الموظفون حاليا مدركون وعلى أطلاع أفضل بمعدات السلامة وإجراءات التشغيل والصيانة السلامة.

تدريب الموظفون قد زاد معرفتهم بالتطبيقات العالمية الجديدة والتقنيات الحديثة في مجال عملهم.

الموظفون حاليا على دراية أفضل بأهمية المياه الصالحة للشرب و/أو قوانين أنظمة مراقبة التلوث المتعلقة بعملهم.
4. السلوكيات:

التدريب يعطي الموظفين الثقة لتطبيق المعرفة الجديدة في أداء عملهم.

التدريب يعطي الموظفين الثقة للحصول على ترقية وتحقيق أهدافهم الوظيفية.

التدريب يعطي الموظفين الثقة للحصول على فرص عمل في أماكن عمل أخرى.

في رأيي، أسر وصديقي ومحترافي 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:

 الموظفين يكتسبون المهارات الفنية الجديدة التي تمكنهم من القيام بعملهم على نحو أفضل.

 الموظفين يكتسبون طرق وأساليب جديدة لحل مشاكل العمل.

 الموظفين يتعلمون طرق وأساليب إدارية جديدة لتنظيم الموظفين والمهام.

6. الأثر المستقبلي:

ان أنه أدعم الموظفين في تطبيق المعارف والمهارات الجديدة التي اكتسبها أثناء التدريب عند أدائهم

لأعمالهم.

ان أنه أقوم بمراقبة أداء الموظفين بعد التدريب لتقييم أثر التدريب.

أستطيع أن أرى التحسينات في مستوى أداء الموظفين والوحدة نتيجة للتدريب.
C.2 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?
C.2  OMT Training Impact Assessment – Post-Training/Supervisor Interview “Arabic”

نموذج مقابلة

(مدير/مدير عام)

بناء القدرات -- التعلم من أجل التطبيق

1. أهمية التدريب:

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

1.2 هل تعلم موظفتك المواضيع التي اعتبرتها ذات أولويه عليًا؟

2. لغة التدريس:

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

2.2 لماذا؟

3. المعرفة:

1.3 إلى أي مدى تدرك محتوى التدريب الذي تعلمه موظفتك؟

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

3.3 إلى أي مدى ضمن التدريب كان الموظفين قد تعلموا أهمية المياه الصالحة للشرب و/أو قوانين/أنظمة مراقبة التلوث أثناء ممارساتهم لأعمالهم؟

4.3 إلى أي مدى ضمن التدريب كان الموظفين قد تعلموا أهمية معدات السلامة وإجراءات التشغيل والصيانة السليمة بعملهم؟

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 يدركکو، إلى أي حد يدرك أهالي وأصحاب عمل موظفكم أهمية وظائفهم في حماية الصحة العامة من خلال توفير المياه الصالحة للشرب و/أو أهمية السيطرة على التلوث لحماية البيئة؟
المهارات:

1.5 ما هي المهارات التقنية الجديدة التي تعلمتها موظفك لكمكم من القيام بعملهم على نحو أفضل؟

2.5 ما هي المهارات الإدارية/الإشرافية الجديدة التي تعلمها موظفك لكمكم من القيام بعملهم على نحو أفضل؟

الأثر المستقبلي:

1.6 كيف تدعمون موظفككم 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/الإصلاحات وتوقف العمل؟