

As-Samra Project



A Major Asset in Jordan with high standards in Human Resources, Quality, Health, Safety, and Environment Management





As Samra, an Environmental Success

- 70% of the wastewater treated in Jordan
- 100% of treated water used for irrigation
- 10% of global water consumption thanks to high quality treated water that frees up fresh water
- 80% self-sufficient in energy with renewable resources
- 185 tons/day valuable resource of biosolids (organic fertilizer, soil conditioner, energy recovery, etc.). Landfill for now.





Description of the project

- Public Private Partnership (BOT) contract signed in 2003 between the Government of Jordan and Suez/CCC groups
- Grants by USAID (phase 1) and MCC (phase 2)
- Operation and Maintenance up to 2037
- Phase 1: operational in 2008
- Phase 2: completed in October 2015
- Nominal capacity: 364,800 m³/d (3,27 million inhabitants)
- Water line: primary settling tank + aeration + clarification + chlorination
- Sludge line: anaerobic digestion + belt filter press + solar drying beds





Management of Staff: Training & Development

- Training & development needs are generated from: business plan, department plan, annual performance interview & employee development needs (career wishes)
- Our training strategic focus: wastewater technologies and health & safety
- All training nominations are linked to KPIs to measure the impact after training is concluded
- Professional exchange & visits within Suez Group is a main line of building & sharing knowledge & experiences
- In-house training on health & safety standards





Management of Staff: Training & Development

Year	# of training		# of trainees		# of hours	
	Internal	External	Internal	External	Internal	External
2016	44	32	659	295	1,522	3,284

- Training budget represents about 3% of mass salary each year
- Training hours in 2016 represent 600 working days



Management of Staff: Employment Qualifications

Any approved employees must meet the following qualifications:

1) Academic & technical qualifications:

- Management, engineering & supervision positions must have at least university degree
- Technical positions must have at least vocational training center degree
- Assistance site positions must be graduated from schools

2) Medical check

3) Capabilities & competencies assessment in the interview



Management of Staff: How Do We Keep Our Team Members Motivated & Engaged?

We implement several methodologies:

1) Open & diversified communication channels:

- TBT weekly meeting to discuss general directions of the company or any topic of interest & it could be suggested by team member(s)
- We implement “Open Door” policy where any team member could discuss with his supervisors his professional concerns & wishes
- We encourage our team members to submit their ideas & suggestions to improve work environment & processes, and we provide an annual reward for the best ideas & suggestions



Management of Staff: How Do We Keep Our Team Members Motivated & Engaged? ... Cont.

2) Social Activities:

- Annual picnic
- Ramadan Feast (Iftar)
- Social Committee activities
- Annual Samra Day





Management of Staff: How Do We Keep Our Team Members Motivated & Engaged? ... Cont.

3) Performance based compensation:

We conduct 2 performance review sessions for each employee per year to decide:

- Annual increases
- Annual bonus
- Special recognitions





Management of Staff: Team Distribution

Work Location	# of Employees	Average age	# of Professionals	# of Skilled Labors
Samra Plant	178	37	66	112
Pumping Stations	44	38	2	42
Total	222	37	68	154



Health, Safety and Environment Measures

Commitment of Managers

- HSE Policy
- Communication
- Objectives & action plans (safety contract)
- Roles & responsibilities
- HSE management review (annual basis)
- Environmental liabilities
- Managerial HSE site visit
- Emergency plan, Emergency response team
- Crisis management plan and drills



Continuous Improvement

- Internal Audit
- Return of Experience (REX)
- Major environmental non-conformities
- Accident & near miss reporting and analysis

Risk Assessment

- Risk analysis (revisions at least once a year)
- Job Hazard Analysis (JHA)
- Vigilance minute
- Risk Identification Report (RIR) used by staff on site.





Health, Safety and Environment Measures

Management of Subcontractors

- Subcontractor selection plan
- Prevention plan
- Subcontractor's HSE performance evaluation

Operational Control

- Work permit (hot works , confined space , LOTO)

Competencies Management

- Training Plan
- HSE Induction

Health Management

- Recruitment medical examination
- Periodical examinations
- Annual special examination
- Annually following examinations are implemented for some employees based on their work nature:
 - Spirometry: for employees who are works with gases; vapor; and welding.
 - Audiogram: for employees who are working in noisy area.
 - Tumor marker: for employees who are exposed to chemical materials.
 - Vision acuity: to employees who are working with micro instrument and to all vehicle drivers.
 - Emergency Response Team (ERT) test: special physical check-up in cardiology clinic to perform effort test (treadmill test, ECG, ECHO) and request report that confirms members are healthy and fit medically
- Vaccinations.
- Medical insurance program.
- Provide on site clinic , Nurse and physician.





Health, Safety and Environment Training

The HSE training program is part of the global Samra Training and Skills Development Program of the plant.

The safety training is based on the results of the risks and impacts assessments and on the outcome of the QHSE Management Reviews.

When employees are recruited or when employees change of department and function, the Line Manager of the employee must define the training needs with the QHSE Manager using the 'HSE pre-employment and transfer form' document.

Four types of training are provided:

1 - Basic Safety Induction for all visitors

2 - Advanced health and safety Induction for all new workers, trainees & subcontractors (orientation program)

All new staff regardless of prior experience must attend a health, safety and environmental induction: this should give staff an understanding of safety and environmental issues on site and what the minimum requirement is expected from each of them.

This induction is also mandatory for trainees and subcontractors prior to start of any work on site.

Health, Safety and Environment Training



3- Specialized technical training

It is developed and provided according to the risk assessments.

The technical safety training, meant to re-enforce workers and supervisory personnel's knowledge of safe work practices, methods and procedure, will include, but not limited to:

- Working at height
- Electrical works
- Lock-out/tag-out
- Confined space
- ATEX
- Chemical handling
- Chlorine
- Mechanical hazards
- Breathing apparatus
- First Aid Training
- Fire fighting
- Manual handling
- Emergency response
- Hazard identification, risk assessment and Permit to Work
- Defensive driving





Health, Safety and Environment Training

4- Accreditations

To ensure a high level of professionalism and control over the works related to major risks, a system of accreditation is used.

For the following activities, only qualified and accredited personnel are permitted to intervene:

- Electrical works,
- Confined space entry
- Chemicals handling
- ATEX (Atmosphere Explosive)
- Chlorine handling
- LOTO (Lockout / Tag Out)



- Accreditations are given by accredited center through the General Manager approval and are based on the 3 following criteria:

- The person must be trained by a competent trainer
- The person must be medically fit to perform the job
- The person must have enough experience to perform the job safely.

- As shown in the following diagram, the accreditation is based on 3 levels (except for confined space that has only Level 1 and 2). Each level gives a specific access and authorization.

	Non-accredited personnel	Accreditation		
		Level 0	Level 1	Level 2
Access to the hazard zone	Prohibited	Authorized		
Activity in the hazard zone <i>The risk is low and acceptable, it is properly identified and indicated</i>	Prohibited	Authorized		
Activity in the hazard zone <i>The risk is high or the activity is liable to modify the hazard, to increase its severity.</i>	Prohibited	Prohibited	Authorized	
Supervision of work in the hazard zone	Prohibited	Prohibited		Authorized

Health, Safety and Environment Training

HSE inductions & HSE training statistics in 2016:

<u>Induction types</u>	<u>Total of 2016</u>
Nb. of new employees induction	7
Nb. of visitors induction	65
Nb. of subcontractors' employees induction	197
Nb. of total inductions done in 2016	269

<u>Training type</u>	<u>Trainees</u>	<u>Training hours</u>
Accreditations	182	1,780
Internal training	659	1,970

Management system with international certificates



Certificates	Successfully Implemented	Date of re-certification	Planning to implement
<i>ISO 9001 - Quality</i>	<i>2013</i>	<i>2016</i>	
<i>ISO 14001 - Environment</i>	<i>2013</i>	<i>2016</i>	
<i>OHSAS 18001 - Health & Safety</i>	<i>2013</i>	<i>2016</i>	
<i>ISO 50001 - Energy Management</i>	<i>2015</i>	<i>2016</i>	
<i>ISO 55001 - Asset Management</i>	<i>2017</i>		
<i>ISO 17025 - Lab Management</i>			<i>November 2017</i>

