

#### **9.18.4 Marine Safety (Diver Operations)**

Operation and maintenance activities will be required at the storm water outfalls; this type of maintenance is extremely hazardous work and requires careful planning, competence, implementation and execution.

In the absence of any specific regulations in the emirate of Abu Dhabi, it is recommended that the Contractor follows and implements the United Kingdom Diving at work Regulations 1997 and refers to the Approved Code of Practice second edition issued in 2014.

For Specific technical requirements on diving, the British standards for diving operations are also a good source of technical information.

### **9.19 Safety Practices During Repair & Operation of the System**

#### **9.19.1 Planning**

A safety drill during construction and maintenance of the water distribution system has two major aspects — preparation and planning and operation.

Proper maps of the system shall be maintained and studied. A study of the character of the area in which the work is to be carried out is an accident prevention item.

#### **9.19.2 Traffic Control**

- a) Warning signs shall be placed well ahead of the work area. Signs and barricades can be used.
- b) Vehicles can be parked between work area and the coming traffic.
- c) Use red warning lights or flashers during the night.
- d) Use a flag man for one way operation.
- e) Traffic police shall be informed and their help taken.
- f) Safety Practices in Repair and Laying of Pipes
- g) Excavations should be closely watched. Type of soil shall be studied and necessary precautions taken to provide adequate side slopes or to shore up the trench. The proximity of poles and buildings shall be taken into consideration.
- h) All soil shall be stacked at least three feet from the edge of the trench.
- i) Repair of broken mains is a hand job. The ground is usually saturated or washed out. Care shall be taken to protect other utilities especially electric cables which can be dangerous. Welding shall be done in dry conditions.
- j) The workmen shall use safety hats and other protective equipment.
- k) Only one trained and experienced man should give signals to a crane operator.
- l) The inspection of the equipment to be used should be done before it is sent to the site. In case of a burst main, the advance crew should carry plans showing the location of valves to be closed, barricading equipment, signage, valve and chamber keys etc. Portable pumps to drain out the water should also be sent.
- m) The pipe for replacement shall be blocked to prevent it from rolling. Proper equipment should be used when lowering it into the trench. Sufficient men should also be engaged.
- n) When the job is completed, cleaning up shall be done to prevent hazards to others.