



Wastewater Collection Network O&M Course: Sewer CCTV, Lift Stations, H₂S and Blockage Control

5 – 9 September 2027

Jeddah - Corniche four-star



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Introduction:

Wastewater collection network O&M covering sewer CCTV, lift stations, H2S and blockage control is a 5-day course for managers and engineers who run gravity sewers, rising mains and pumping stations, ending with a Collection Network O&M Plan for a case utility. Networks that are cleaned only after complaints suffer repeat chokes, spills from manholes, crown corrosion and odour near homes. Nominees already supervise crews, jetting units or pump stations and work through inspection walkthroughs of CCTV footage, wet well layouts and spill records. CoreConcept Training Center delivers this wastewater collection network O&M course.

Course Objectives:

- Assess gravity sewer and manhole condition from CCTV footage, PACP defect codes, sonar profiles and manhole survey sheets to set inspection frequencies
- Plan risk-based cleaning cycles with jetting, combination units, root cutting and debris removal tied to blockage hot spots
- Operate and maintain lift stations, wet wells, submersible pumps, level controls and telemetry alarms to cut pump trips and overflow events
- Control hydrogen sulphide generation, crown corrosion and odour in rising mains and gravity sewers using monitoring data and dosing options
- Run a fats, oil and grease source control scheme with grease interceptor inspection, food outlet permits and public awareness
- Prepare a Collection Network O&M Plan with spill response, infiltration and inflow reduction targets and network KPIs for a case utility

Target Audience:

- Managers responsible for the operation and maintenance budget of municipal sewer networks
 - Engineers responsible for sewer inspection, cleaning schedules and blockage reduction
 - Supervisors responsible for lift station crews, standby pumps and telemetry alarm response
 - Specialists responsible for odour complaints, hydrogen sulphide monitoring and corrosion of sewer assets
 - Officers responsible for trade effluent and grease interceptor control at commercial premises
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Course Outline:

Day 1: Collection System Anatomy, Failure Modes and O&M Baseline

- Gravity Sewers, Rising Mains, Manholes and Lift Station Hierarchy
- Sanitary Sewer Overflow Causes From Blockages, Roots and Wet Weather
- Infiltration and Inflow Sources and Dry Weather Flow Baselines
- GIS Network Records, Asset Attributes and Service Request Logs
- O&M Baseline Review Using Spill, Choke and Complaint Data

Day 2: Sewer Condition Assessment and CCTV Inspection Practice

- CCTV Crawler, Pan-and-Tilt and Zoom Camera Survey Selection
- PACP Structural, Operational and Construction Defect Coding
- Manhole Inspection Sheets and Benching, Cover and Frame Defects
- Sonar and Laser Profiling of Surcharged or Silted Sewers
- Inspection Frequency Matrix by Pipe Criticality and Defect Score

Day 3: Cleaning Programmes, Lift Station O&M and Grease Control

- High-Pressure Jetting Nozzle Choice and Combination Unit Practice
- Root Cutting, Debris Traps and Hot Spot Cleaning Cycles
- Wet Well Level Settings, Pump Cycling and Rag Clogging Response
- Submersible Pump Guide Rail Lifting, Seal Checks and Standby Testing
- Grease Interceptor Inspection, Food Outlet Permits and FOG Outreach

Day 4: Hydrogen Sulphide, Odour, Corrosion and Overflow Risks

- Sulphide Generation in Rising Mains and Low-Velocity Sewers
- Crown Corrosion Survey of Concrete Pipes and Manhole Chambers
- Iron Salt, Nitrate, Oxygen and pH Dosing for Sulphide Control
- Gas Detection and Confined Space Entry Permits for Wet Wells
- Spill Response Card, Bypass Pumping and Clean-Up Reporting

Day 5: Inspection Walkthrough Building the Collection Network O&M Plan

- Case Utility Walkthrough of CCTV Clips and Lift Station Photographs
 - Case Hot Spot Map Linking Chokes, Grease and Odour Complaints
 - Case Lift Station Reliability Review With Telemetry Alarm Logs
 - Network KPI Set for Spills per Kilometre and Pump Availability
 - Collection Network O&M Plan Completion and Peer Challenge
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Skills You Will Gain:

- Sewer Defect Coding
- Risk-Based Cleaning Scheduling
- Lift Station Reliability Management
- Sulphide and Odour Control
- Grease Source Control
- Overflow Response Planning
- Confined Space Hazard Awareness
- Network Performance Reporting

Why Attend This Course:

- Deliver a Collection Network O&M Plan to the head of wastewater operations for approval and budgeting
- Decide which sewers to inspect, clean or escalate for repair using defect scores and blockage history
- Avoid repeat chokes, manhole spills, pump burnouts and odour complaints that draw fines and public criticism
- Coach jetting crews, pump station technicians and grease inspectors with the checklists and hot spot maps

Conclusion:

Back at work, the participant presents the Collection Network O&M Plan to the head of wastewater operations and the asset management team. Management uses it to fix inspection frequencies, assign cleaning crews to hot spots, set lift station maintenance routines, choose sulphide dosing points and agree spill response duties. After the first six months under the plan, the utility should compare spills, chokes, pump trips and odour complaints with the KPI targets and adjust the cleaning cycles and dosing that have not delivered.

Frequently Asked Questions FAQ:

What should participants know before a wastewater collection network O&M course?

Participants should already supervise sewer crews, pump stations or network planning and be able to read a network map and a pump data sheet. Bringing anonymised spill records, CCTV clips or lift station alarm logs from their own utility helps during the walkthrough day.

How does wastewater collection network O&M differ from a sewage treatment or pipe rehabilitation course?

This course covers keeping sewers and lift stations flowing day to day: inspection, cleaning, pumping, odour, grease and spill control. Treatment courses focus on biological processes inside the works, and rehabilitation courses focus on designing and installing liners or replacement pipes.

Why does hydrogen sulphide matter in wastewater collection network O&M?

Hydrogen sulphide forms when sewage turns septic in rising mains and slow sewers. It causes rotten-egg odour complaints, converts to acid that corrodes concrete crowns and manholes, and is a deadly gas hazard for crews entering wet wells and chambers.

What do participants take back from the wastewater collection network O&M course?

Participants take back a Collection Network O&M Plan with an inspection frequency matrix, a hot spot cleaning schedule, lift station routines, a sulphide control plan, a grease control scheme, a spill response card and a KPI set they can adapt to their own utility.
