

List of Typical SOPs for a Water Treatment Plant:

Safety and Personal Protective Equipment Procedures:

- ▶ Self-Contained Breathing Apparatus
- ▶ Escape Mask Respirators
- ▶ Confined Space Entry
- ▶ Using an Air Monitor
- ▶ Using a Fall Arrest
- ▶ Incident Investigation
- ▶ Incident Reporting
- ▶ Handling Chemical Spills
- ▶ Chlorine Area Entry and Exit
- ▶ Lockout Tagout

Operating Procedures

- ▶ Testing Backup Systems
- ▶ Operator Routine Duties
- ▶ Operating on Standby Systems
- ▶ Plant Shutdown and Startup
- ▶ Control System Startup
- ▶ Clarifier Startup and Shutdown
- ▶ Managing Clarifier Upset Conditions
- ▶ Local Control of Pumps, Clarifiers, Chemical Feed, etc
- ▶ Operating Pump Engines
- ▶ Operating to Minimize System Pressure Fluctuations
- ▶ Local Operation of Chemical Feed Systems
- ▶ Receiving Chemical Deliveries
- ▶ Calculating Chemical Dosages and Feed Rates
- ▶ Chemical Waste Handling
- ▶ Switching Chemical Feed Points
- ▶ Starting and Stopping Chemical Feed Systems
- ▶ Pigging Chemical Feed Lines (e.g. lime)
- ▶ Chlorine System Tonner Changeover and Configuration
- ▶ Local Filter Operation
- ▶ Backwashing Filters
- ▶ Sampling and Testing Samples
- ▶ Reconfiguring Backup Power Systems
- ▶ Operating Boilers and HVAC Systems

Contingency Plans

- ▶ Loss of Remote Control
- ▶ Loss of Utility Power
- ▶ Loss of Raw Water

- ▶ Contamination of Clearwells/Reservoirs
- ▶ Loss of Instrumentation
- ▶ Pump or Valve Failures
- ▶ Loss of Raw Water Screens
- ▶ Loss of Clarifiers
- ▶ Pipe Ruptures (raw water, finished water, etc)
- ▶ High Turbidity (filter effluent, finished water, etc)
- ▶ Loss of Filters
- ▶ Loss of Plant Communications
- ▶ Loss of Security System
- ▶ Loss of Plant Air
- ▶ Loss of Uninterruptible Power Supply

Emergency Plans

- ▶ Bomb Threat
- ▶ Site Security Breach
- ▶ Filter Breakthrough
- ▶ Evacuation of Plant
- ▶ Fire or Explosion
- ▶ System Depressurization
- ▶ Raw Water Contamination
- ▶ Emergency Chlorination
- ▶ Major and Minor Chlorine Leaks

Maintenance Procedures:

- ▶ Routine Maintenance Procedures
- ▶ Vehicle Inspections
- ▶ Cleaning/Calibrating Instruments
- ▶ Isolating, Cleaning and Disinfecting Clarifiers, Clearwells, Reservoirs, etc
- ▶ Cleaning Chemical Feed Lines and Systems
- ▶ Changing Filter Media
- ▶ Maintenance Procedures when Working Over Open Vessels
- ▶ Preparing Filters for Return to Service