

Stilling Well with Confined Space Generic Job Hazard Analyses

Required Protective Clothing and Safety Equipment: forced air ventilator, fresh air ducting, fall-protection equipment for ladder greater than 20ft, water pump

Sequence of Basic Job Steps	Potential Accidents/Hazards	Recommended Safe Job Procedures
Prepare for field trip	Poor preparation & judgment	Review WRD memo 2000.10 "Policy and Guidelines for Surface Water Gaging Stations that meet OSHA's Definition of Confined Space". Review latest stilling well safety evaluation. If longer than 1 yr since last evaluation, a Safety Evaluation must be conducted prior to entry. If the air quality tests failed in the last inspection, do not enter the stilling well; consult with the supervisor and regional safety manager. SM 445-2-H CH 40, Confined Spaces.
Pre-entry procedures	Inadvertent entrapment, asphyxiation, poor air quality.	Follow pre-entry inspection procedures.
Pre-entry procedures	Confined Space Hazards - Oxygen deficiency, presence of toxic gasses, asphyxiation.	Forced air ventilation must be used the entire time someone is in the stilling well. Total volume of air should be exchanged 3 times every minute. Fresh air duct should be placed in the stilling well near the water surface.
Pre-entry procedures	Atmospheric Hazards, asphyxiation	Gasoline-powered equipment must be located downwind and down gradient of stilling well to prevent accidental contamination of the stilling well atmosphere.
Entering the stilling well & work within the stilling well	Unknown Hazards that may have developed since last visit: Physical Hazards, Electrical Hazards, Biological Hazards	Perform a visual safety inspection using the Stilling Well Safety Evaluation Form as a check list. Inspect structural integrity, ladders, & shelter floor. Secure or remove tools & tanks. GFCI must be installed on AC electrical circuits. Use double insulated power tools. Decontaminate the stilling well, wear PPE, remove snakes, wasp, & rodents.
Entering the stilling well & work within the stilling well	Falling Objects	Secure or remove any equipment that may fall into the stilling well. Wear a hardhat.
Entering the stilling well & work within the stilling well	Falling Hazard	Ladders over 20 ft long require use of fall-protection safety equipment
Entering the stilling well & work within the stilling well	Entrapment Hazard	Keep doors secured open, wear a PFD and have an attendant present.
Emergency or Accident	Rescue needed	See JHA for Servicing Field Site for emergency contact numbers.

For additional information about Job Hazard Analyses visit <http://1stop.usgs.gov/safety/topic/jha/index.html>