

Job Hazard Analysis

(Always Wear Proper PPE)

Project:	Superintendent:
Task: Sewer Line Air Testing	Date:

Step	Potential Hazards	Safe Procedures/ Crew Responsibilities
Preparation		<ul style="list-style-type: none"> Designate a Competent Person or persons Review P3 (Preparation Planning Procedures) and Hazard Analysis with crew Assess location and conditions* Complete and review STA's daily Review system and testing specifications
Remove manhole cover	Strains and sprains	<ul style="list-style-type: none"> Have proper tools and a safe plan to handle frames and covers Work in teams; communicate safe plan before starting
	Hand and finger injuries	<ul style="list-style-type: none"> Wear gloves; do not put hands and fingers in pinch points
Dewater manhole if needed	Sewer water in manhole	<ul style="list-style-type: none"> Refer to 'Dewatering' JHA if there is water in structure
Prepare to enter structure	Multiple confined space hazards listed below	<ul style="list-style-type: none"> Fill out Confined Space Entry Permit Confined space entry training for all entry team members Always have "top man" when working in confined space
	Improper setup/inexperienced attendant	<ul style="list-style-type: none"> Train personnel on equipment to be used Be sure to read instructions or have prior experience with tripod and winch

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Set up retrieval system	Falling or tripping into manhole	<ul style="list-style-type: none"> • Good housekeeping around structure • Use barricades to keep spectators away from hole Leave cover in place if possible when placing tripod • Fully erect tripod before placing it over the opening • When testing air, wear harness and be attached to tripod • Attendant must use fall protection when hole is >6' deep
Check air quality of space	False reading of air quality	<ul style="list-style-type: none"> • Check calibration of air tester and make sure self-test is performed when unit is turned on
	Hazardous or explosive gases or liquids coming from upstream, downstream, or from within the space	<ul style="list-style-type: none"> • Be sure to lower the gas meter into all zones of the confined space for a minimum of one minute in each zone, and continue to monitor the air while personnel are in the confined space • Be sure to retest the air in the structure before each re-entry
Install, fill and brace test balls in pipes Pressurize pipe for air test	Access into manhole	<ul style="list-style-type: none"> • Inspect permanent manhole ladder if available • Inspect and use portable ladder if manhole does not have one
	Stings or bites from insects, snakes, or other animals	<ul style="list-style-type: none"> • Be aware of dangerous snakes, spiders, etc. in the area, be able to identify them, and know how to care for bites and stings • Have appropriate first aid supplies on hand
	Hit by dropped test ball, bracing materials, or testing equipment	<ul style="list-style-type: none"> • While all personnel are outside the manhole, lower all necessary materials into manhole with a rope
	Test balls failing or bursting	<ul style="list-style-type: none"> • Inspect all equipment before installing • Keep everyone out of the structure when inflating or deflating test balls; NEVER be inside of structure while filling test balls • Install balls correctly and avoid pinching airlines • Do not over inflate test balls; follow manufacturer directions

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Pressurize pipe for air test	Bracing becomes dislodged	<ul style="list-style-type: none"> • Brace test balls after they have been filled; check bracing before pressurizing pipe line
	Struck by test ball, bracing, or test equipment	<ul style="list-style-type: none"> • If bracing becomes dislodged, stop test immediately, fully release all air from inside of the pipe, and re-brace test balls • Have test gauges outside manhole; do not enter during test • Do not stand directly over manhole while performing test
Remove testing equipment	Potential for stored energy in pipeline	<ul style="list-style-type: none"> • De-energizing stored energy systems; remove all air from pipeline before deflating test balls or removing any bracing • Have ropes attached to test balls, blocking, and equipment so everything can be removed from outside the confined space
Prepare for the next test		<ul style="list-style-type: none"> • After testing equipment is removed, inspect and store properly
Other Steps (if any):	Other Hazards:	<p>Other Safe Procedures:</p> <p>* If work is to be performed in a travel way, complete and follow 'Work in Travel Way' Job Hazard Analysis</p>