

Underground Mine Ventilation & Gas Detection Checklist

Site / Project	_____	Address	_____
Inspector name	_____	Company	_____
Date	_____	Time	_____

Documentation aid only. Adapt this resource to the site, manufacturer instructions, and applicable local requirements. It does not replace a competent person, professional judgment, legal advice, or a required statutory form.

Inspection checklist

Ventilation System Integrity

☐ Is the approved MSHA ventilation plan readily available and understood by all personnel in the working section? (30 CFR §75.370)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐ Is the required CFM (Cubic Feet per Minute) of airflow being maintained at the working face as specified in the ventilation plan? Measure airflow using an anemometer. (30 CFR §75.360)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐ Inspect brattice cloth for tears, holes, or improper installation. Are all overlaps properly sealed to prevent air leakage? (30 CFR §75.333)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐ Is the line brattice installed within the specified distance from the face as per the ventilation plan (typically within 10 feet)? (30 CFR §75.333(h))	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐ Are all ventilation controls (e.g., stoppings, regulators, overcasts) free from damage and functioning as intended? (30 CFR §75.334)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐ Check stoppings for excessive air leakage. Seal any leaks immediately to maintain proper airflow. (30 CFR §75.334)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐ If booster fans are in use, are they operating correctly and inspected regularly? Are the required safety devices (e.g., methane monitors, automatic shut-off) functioning properly? (30 CFR §75.312)	☐ Pass	☐ Fail	☐ N/A	Notes: _____

☐	Are auxiliary fans positioned correctly to effectively ventilate the face without creating recirculation? (30 CFR §75.311)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Verify air velocity at designated monitoring points aligns with the ventilation plan. Record measurements. (30 CFR §75.360)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Are all changes to the ventilation system documented and approved by a qualified person? (30 CFR §75.370)	☐ Pass	☐ Fail	☐ N/A	Notes: _____

Gas Detection and Monitoring

☐	Are all methane monitors properly calibrated and functioning correctly? Check calibration dates. (30 CFR §75.340)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Monitor methane levels at the working face. If methane levels exceed 1.0%, take immediate corrective action. If levels exceed 1.5%, de-energize equipment and withdraw personnel. (30 CFR §75.323)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Monitor methane levels in the return air. If methane levels exceed 2.0%, take immediate corrective action. (30 CFR §75.323)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Check for adequate oxygen levels (minimum 19.5%). Use a multi-gas meter to monitor oxygen, carbon monoxide, and hydrogen sulfide. (30 CFR §75.321)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Monitor for carbon monoxide (CO) levels. Take action if levels exceed permissible limits. (30 CFR §75.321)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Verify that gas monitor alarms are functioning correctly and audible in the working area. (30 CFR §75.342)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Are all personnel trained in the proper use and maintenance of gas monitoring equipment? (30 CFR §75.1501)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	If methane drainage systems are in place, are they operating effectively and monitored regularly? (30 CFR §75.335)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Assess the effectiveness of rock dusting in preventing coal dust explosions. Ensure adequate coverage, especially in return airways. (30 CFR §75.400)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Are records of methane monitor readings and calibrations maintained and readily available for review? (30 CFR §75.340)	☐ Pass	☐ Fail	☐ N/A	Notes: _____

Equipment and Electrical Safety

☐	Is all electrical equipment used in the working section MSHA-permissible and properly maintained? (30 CFR §75.500)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Inspect trailing cables for damage, splices, and proper support. Ensure cables are not lying in water or across walkways. (30 CFR §75.517)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Verify grounding continuity of all electrical equipment. (30 CFR §75.600)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Ensure all machine guards are in place and functioning correctly to protect workers from moving parts. (30 CFR §75.1725)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Is adequate lighting provided in the working section to ensure safe visibility? (30 CFR §75.1719)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Are fire suppression systems on mobile equipment inspected and maintained regularly? (30 CFR §75.1101-23)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Are battery charging areas properly ventilated to prevent the accumulation of explosive gases? (30 CFR §75.526)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Are maintenance records for all equipment readily available and up-to-date? (30 CFR §75.1719)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Verify that emergency shutdown devices are accessible and functioning properly on all equipment. (30 CFR §75.1725)	☐ Pass	☐ Fail	☐ N/A	Notes: _____

Emergency Preparedness

☐	Are escapeways clear, unobstructed, and properly marked? (30 CFR §75.380)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Is a reliable communication system in place to contact personnel in case of an emergency? Test the system regularly. (30 CFR §75.1600)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Are self-rescuers readily available and in good working condition for all personnel? (30 CFR §75.1714)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Is the mine's emergency response plan up-to-date and understood by all personnel? (30 CFR §75.1502)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Are adequate first-aid supplies readily available and accessible? (30 CFR §75.1713)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Are fire extinguishers readily accessible, inspected regularly, and properly charged? (30 CFR §75.1101-17)	☐ Pass	☐ Fail	☐ N/A	Notes: _____

☐ Are emergency drills conducted regularly to ensure personnel are familiar with evacuation procedures? (30 CFR §75.1502)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐ Verify the availability and readiness of the mine rescue team. (30 CFR Part 49)	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐ Are up-to-date mine maps readily available for emergency response purposes? (30 CFR §75.1200)	☐ Pass	☐ Fail	☐ N/A	Notes: _____

Findings

#	Item	Location	Severity	Action required
1				
2				
3				
4				
5				
6				
7				
8				

Signature

Inspector signature _____

Name _____

Date _____