

(59) Preshift examinations shall be made of all working areas by qualified persons within 3 hours before any workmen, other than the examiners, enter the mine.

(60) Each examiner shall be responsible for a definite underground area and shall:

(a) Inspect the working places and test the air therein with a permissible flame safety lamp for oxygen deficiency and with a device approved by the department for detecting flammable gas.

(b) Examine the seals and doors to determine whether they are functioning properly.

(c) Inspect the roadways, travelways, approaches to abandoned workings, and accessible falls in active areas for flammable gas.

(d) Determine whether the air in each split is traveling in its proper course and in normal volume.

(e) Place his initials and the date at or near the face of each place he examines.

(f) Indicate places that he considers may be dangerous to persons who may enter or be in such places by posting danger signs conspicuously at points that persons must pass to enter such dangerous places.

(g) After completing his examination, report the results to the mine operator or other designated persons, at a designated place on the surface of the mine or underground, before other persons enter the underground areas of such mine.

(h) Record the results of his examination with ink or indelible pencil in a book kept for that purpose at a designated place on the surface of the mine.

(61) Only qualified examiners and persons authorized to correct the dangerous conditions shall enter places or areas where danger signs are posted.

(62) Danger signs shall not be removed until the dangerous conditions have been corrected.

(63) Underground working places shall be examined for hazards by qualified persons at least once during each producing shift, and more often, if necessary. Examinations shall include tests for oxygen deficiency with a permissible flame safety lamp and for flammable gas with a device approved by the department for such use.

(64) Idle and abandoned areas shall be inspected for gas and for oxygen deficiency and other dangerous conditions by a qualified person as soon as possible, but not more than 3 hours before other employes are permitted to enter or work in such places. However, persons who are required regularly to enter such areas in the performance of their duties, and who are trained and qualified in means approved by the department for detecting flammable gas and who are trained in the use of a permissible flame safety lamp for oxygen deficiency are authorized to make such examinations for themselves,

and each such person shall be properly equipped and shall make such examinations upon entering any such area.

(65) Advisory.

(66) Advisory.

EQUIPMENT

(75) Diesel-powered equipment not approved as permissible by the department for use in mines subject to these regulations shall not be used underground. Permissible equipment shall be maintained in permissible condition.

(76) Diesel-powered equipment shall not be taken into or operated in places where flammable gas exceeds 1.0 percent at any point not less than 12 inches from the back, face, and rib.

(77) Trolley wires and trolley feeder wires shall be on intake air and shall not extend beyond the last open crosscut or other ventilation opening. Such wires shall be kept at least 150 feet from pillar workings.

(78) Only permissible equipment maintained in permissible condition shall be used beyond the last open crosscut or in places where dangerous quantities of flammable gases are present or may enter the air current.

(79) Only permissible distribution boxes shall be used in working places and other places where dangerous quantities of flammable gas may be present or may enter the air current.

(80) Tests for flammable gas shall be made with a device approved by the department, by persons trained in the use of such lamps or devices, before electrically powered or diesel-powered equipment is taken into or operated in face regions, and such tests shall be made frequently during such operations.

(81) No electric equipment shall be taken into or operated in places where flammable gas can be detected in the amount of 1.0 percent or more at any point not less than 12 inches from the back, face, and rib.

ILLUMINATION

(90) Only permissible electric lamps shall be used for portable illumination underground.

EXPLOSIVES

See Wis. Adm. Code, chapter Ind 5, Explosives and Blasting Agents.
(101) Advisory.

History: Cr. Register, April, 1972, No. 196, eff. 5-1-72.

Ind 3.23 Miscellaneous.

GENERAL-SURFACE AND UNDERGROUND

(1) Intoxicating beverages and narcotics shall not be permitted or used in or around mines. Persons under the influence of alcohol or narcotics shall not be permitted on the job.

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(2) Potable water. A supply of potable water shall be provided for the employees. Portable containers used to dispense drinking water shall be equipped with a tight-fitting lid and a tap. The use of common drinking cups is prohibited. Single service cups shall be kept in a sanitary container.

(3) Advisory.

(4) Advisory.

(5) Carbon tetrachloride shall not be used.

(6) Advisory.

(7) Advisory.

(8)* Toilet facilities. Toilet facilities shall be provided for the employees at convenient locations. Where both sexes are employed, separate toilet rooms for each sex shall be provided in accordance with the sanitation requirements established in Wis. Adm. Code chapters Ind 50-64—Building and Heating, Ventilating and Air Conditioning Code. In locations where a public sewer system is not available and where a sewage disposal system cannot be provided, privies, chemical toilets, recirculating toilets or combustion toilets may be used. Toilet facilities shall be provided in the mines unless the miners are permitted to use the toilet facilities provided on the surface.

*See Appendix B for sanitation requirements.

(9) Dusts suspected of being explosive shall be tested for explosibility. If tests prove positive, appropriate control measures shall be taken.

(10) If failure of a water or silt retaining dam will create a hazard, it shall be of substantial construction and inspected at regular intervals.

SURFACE ONLY

(20) Access to unattended mine openings shall be restricted by gates or doors, or the openings shall be fenced and posted.

(21) Upon abandonment of a mine, the owner or operator shall effectively close or fence off all surface openings down which persons could fall or through which persons could enter. Upon or near all such safeguards, trespass warnings and appropriate danger notices shall be posted.

UNDERGROUND ONLY

(30) Whenever any working place in a mine is being advanced in an area where a dangerous inrush of water, silt, or gas may be encountered, test holes of sufficient depth, proper orientation, and number shall be drilled in advance of such workings to insure that at least 20 feet of tested ground remains to prevent an uncontrolled inrush after any blast advancing the face.

(31) In areas where dangerous accumulations of water, gas, mud, or fire atmosphere could be encountered, men shall be removed to safe places before blasting.

(32) Advisory.

(33) Maps:

(a) A clear and accurate map or maps, with sections, if necessary, showing clearly all the workings of the mine shall be made and maintained. At least twice in every calendar year or oftener, if necessary, all excavations made during the time elapsed since such excavations were last shown on such map or maps, and all parts of said mine that have been worked out or abandoned shall be clearly indicated on the map or maps. All underground workings shall be surveyed and mapped before they are allowed to become inaccessible. All surveys shall be tied to the legal subdivision.

(b) Before any mine having underground workings is abandoned, the operator of such mine shall cause to be made by a competent engineer or surveyor, a map on a scale not smaller than 100 feet to the inch, showing all underground workings. A certified print or copy of such map shall be filed in the office of the department. This map shall be made available at the discretion of the department to any person whose operations are endangered by the abandoned operation beneath adjoining property.

(34) Whenever any mine shaft, exploration shaft, or test well is abandoned or its use discontinued, the operator or contractor shall promptly fill same to grade or enclose the same with a fence of strong, woven wire not less than 46 inches wide, installed with no crawl space, and with one barbwire above, or cap same with a reinforced concrete slab at least 6 inches thick or with a native boulder at least 3 times the diameter of the test well hole, or with a tapered concrete plug. When a fence is used the strands of woven wire shall not be smaller than No. 12 wire and the cross wires and meshes shall not be smaller than No. 16 wire; the strands shall not be more than 12 inches apart, and the meshes shall not exceed 8 inches. All wires shall be tightly stretched and fastened to substantial posts firmly set not more than 8 feet apart.

(35) A competent man or men shall be detailed to make daily inspection of those parts of the mine which are traversed or are being worked. He shall inspect the roof, side walls, and pillars of those parts of the mine where men are employed and he shall promptly retimber or bar down or cause to be retimbered or barred down in a safe manner any dangerous or questionable ground. Workmen shall stand to one side when barring down or picking loose material.

(36) Protection against water:

(a) No mine workings shall be allowed to approach nearer than 30 feet of any part of a winze, stope, or other opening in which there is known or suspected dangerous accumulation of water.

(b) Notice shall be given to the department in writing before starting to advance a mine workings toward another mine workings that is suspected of being filled with water. A borehole shall be drilled at least 30 feet in advance of the face of the drift when in the vicinity of such mine workings filled with water, and also, if necessary in other directions.

(c) Where there is danger of a sudden inburst of water, such additional raises, drifts, or other safety provisions shall be constructed as are necessary in the opinion of the department to insure the escape of workmen.

(37) Sanitation requirements:

(a) A miner's dry-house shall be provided for the purpose of drying the work clothes of miners employed in and about the mine. The dry-house shall comply with the minimum requirements established in Wis. Adm. Code chapters Ind 50-64—Building and Heating, Ventilating and Air Conditioning Code.

1. Washing facilities;
2. Shower facilities, where miners are exposed to lead, cyanide, zinc and other materials injurious to health;
3. At least 2 exits;
4. Clothes lockers or approved hangers;
5. Minimum levels of illumination and heat maintained at a temperature of 80° F at all times when miners are changing their clothes.

(b) Dressing rooms, dry-houses, toilet rooms, lavatories and showers shall be kept clean and sanitary.

(38) Only competent men who are able to speak and read the English language shall be employed to operate mine hoists. Each hoistman shall be given a thorough medical physical examination at least every 6 months by a competent physician authorized to practice in Wisconsin. The physician shall fill out the examination blank, form SB-33, copies of which are available from the department, and return it to the employer.

(39) Hoistmen shall be familiar with the details and workings of a hoisting engine, and, except in cases of emergency, no others than such duly appointed hoistmen shall run such engine or hoisting machinery; except that learners may be taught the operation of the hoisting engine at such times and under such restrictions as may be free of risk to life and limb.

History: Cr. Register, April, 1972, No. 196, eff. 5-1-72; am. (2) and (8), r. and recr. (37), Register, March, 1977, No. 255, eff. 4-1-77.

APPENDIX A

ADVISORY SAFETY GUIDELINES

Note: The following advisory safety guidelines are based on title 30-Mineral Resources, chapter 1-Bureau of Mines, Department of the Interior, published in the Federal Register, Volume 34, No. 145, July 31, 1969.

A 3.03 Ground control.

(22) The miners should examine and test the back, face, and ribs of their working places at the beginning of each shift and frequently thereafter. Supervisors should examine the ground conditions during daily visits to insure that proper testing and ground control practices are being followed. Loose ground should be taken down or adequately supported before any other work is done. Ground conditions along haulageways and travelways should be examined periodically and scaled or supported as necessary.

(29) Shaft pillars should have sufficient strength to protect operating shafts.

(30) Rock-bolted reinforcement should be installed in a manner to provide safe and effective ground support.

(32) When needed, rock bolts should be installed as soon as possible after an area is exposed.

(33) Torque meters should be available at mines where rock bolts are used. Periodic tests should be made to determine if bolts meet recommended torque.

A 3.04 Fire prevention and control.

(5) Unburied flammable-liquid storage tanks should be mounted securely on firm foundations. Outlet piping should be provided with flexible connections or other special fittings to prevent adverse effects from tank settling.

(6) Buildings or rooms in which oil, grease, flammable liquids, or similar flammable materials are stored should be of fire-resistant construction and well ventilated.

(31) A firefighting organization should be established, equipped, and trained in firefighting; drills should be held at least twice a year.

(43) Buildings and other structures within 100 feet of mine openings should be fire-resistant.

(45) Blacksmith shops should be:

(a) A safe distance from mine openings and not in buildings or snowsheds adjoining mine openings.

(b) Of fire-resistant construction.

(c) Well ventilated and equipped with exhaust hoods over the forge and welding areas.

(d) Occupied when the forge fire is burning.

(e) Inspected carefully for smoldering fires at the end of the shift.

(60) Power circuits should be deenergized in all areas on idle shifts or idle days, except where power is required. These required circuits should be protected with minimum-capacity fuses.

(61) Fire doors should be provided at shaft stations or other appropriate locations to prevent the spread of smoke or gas; the doors should be equipped with latches operable from both sides.

(62) Timbered mine entrances should be fire-resistant for at least 200 feet inside the mine portal or collar or provided with fire protection adequate to control a fire for at least 200 feet inside the mine portal or collar.

(63) Waterline outlets should be located so as to be accessible if a fire is at a station.

(64) All air lines in timbered mines should be readily convertible into waterlines if a water supply is available, unless the air lines are paralleled by waterlines.

(66) Adequate fire extinguishers or equivalent fire protection should be provided at the head, tail, and drive pulleys of belt conveyors and at suitable intervals along the belt line.

(68) Mines at which individual mine rescue stations are not maintained should affiliate with central or cooperative mine rescue stations.

(70) At least 2 rescue crews (10 men) should be trained annually in the use, care, and limitation of self-contained breathing and fire fighting apparatus and in mine-rescue procedures at mines employing 75 or more men. Smaller mines should have one or more trained men available.

(71) Rescue crews should include supervisory and key personnel familiar with all mine installations that could prove vital to fire fighting and rescue operations.

(72) Only trained mine rescue men should participate in fire fighting operations in advance of the fresh air base.

A 3.05 Air quality, ventilation, and radiation.

(4) Muck piles, haulage roads, rock transfer points, crushers, and other points where dust is produced should be wet down at the beginning of the shift and thereafter as necessary, unless dust is controlled adequately by other methods.

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A 3.06 Ventilation and radiation.

(4) Separate mine openings should be provided for main intake and return air currents. A multiple compartment shaft does not constitute separate mine openings.

(10) Ventilation tubing should be installed so that the air current sweeps the face areas effectively. Maximum distance of the end of the tubing from the face generally should be 30 feet for blowing and 6 feet for exhausting.

(11) Ventilation doors not operated mechanically should be hung so that they are self-closing, and installed so as to remain closed regardless of the direction of air current.

A 3.07 Drilling.

(6) Receptacles or racks should be provided for drill steel stored on drills.

(7) Tools and other objects should not be left loose on the mast or drill platform.

(9) The drill helper, when used, should be in sight of the operator at all times while the drill is being moved to a new location.

(14) Men operating or working near jackhammers or jackleg drills and other drilling machines should position themselves so that they will not be struck or lose their balance if the drill steel breaks or sticks.

(15) Men should not drill from positions that hinder their access to the control levers or from insecure footing or staging, or from atop equipment not designed for this purpose.

(16) Bit wrenches or bit knockers should be used to remove detachable bits from drill steel.

(17) Starter steels should be used when collaring holes with handheld or feed-leg drills.

(19) Air should be turned off and bled from the hose before handheld drills are moved from one working area to another.

(25) Men operating or working near drilling machines should position themselves so that they will not be struck or lose their balance if the steel breaks or sticks.

(26) Men should not attempt to operate drills from positions that hinder their access to the control levers.

(27) Drilling should not be attempted from insecure footing or staging, or from atop equipment not designed for this purpose.

(28) Men should not hold the drill steel while collaring holes, or rest their hands on the chuck or centralizer while drilling.

(29) Air should be turned off before moving portable drills from one face to another.

(30) Receptacles or racks should be provided for drill steel stored on jumbos.

(31) Before drilling cycle is started, warning should be given to men working below jumbo decks.

APPENDIX B

SANITATION REQUIREMENTS

B-3.23 (8) Sanitation Requirements. Wis. Adm. Code chapters Ind 50-64 — Building and Heating, Ventilating and Air Conditioning Code, requires separate toilet rooms and fixtures to be provided for each sex in accordance with the following table:

NUMBER OF FIXTURES REQUIRED FOR EMPLOYEES*

Type of Occupancy	Type of Fixture				
	Water Closets		Urinals	Lavatories (L) Showers (S)	
	Males	Females	Males		
Places of employment (employees/shift)				One (L) for each 2 water closets and/or urinals, or fraction	One (S) for each 10 employees of each sex, or fraction
0- 5 employees	1		0		
3- 9 employees of each sex	1	1	0		
10- 15 employees of each sex	1	1	1		
16- 35 employees of each sex	1	2	1		
36- 55 employees of each sex	2	3	1		
56- 80 employees of each sex	2	4	2		
81-110 employees of each sex	3	5	2		
111-150 employees of each sex	4	6	2		
Over 150 employees of each sex	One additional fixture for each additional 40 employees of each sex; 2/3 of the additional water closets for males may be urinals.				

*Adapted from Table 54.12.