

DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES-LICENSING AND REGULATORY AFFAIRS

DIRECTOR'S OFFICE

OCCUPATIONAL HEALTH STANDARDS

**Filed with the Secretary of State on March 24, 2016**

These rules **become effective** ~~take effect~~ immediately upon

filing with the Secretary of State unless adopted under ~~section~~ sections 33, 44, or 45a(6) of 1969 PA 306. Rules adopted under these sections become effective 7 days after filing with the Secretary of State.

(By authority conferred on the director of the department of **licensing and regulatory affairs** by sections 14 and 24 of 1974 PA 154, MCL 408.1014 and 408.1024; and Executive Reorganization Orders Nos. 1996-1, 1996-2, 2003-1, 2008-4, and 2011-4, MCL 330.3101, 445.2001, 445.2011, 445.2025, and 445.2030.)  
~~labor and economic growth by sections 14 and 24 of 1974 PA 154 and Executive Reorganization Order Nos. 1996-1, 1996-2, and 2003-18, MCL 408.1014, 408.1024, 330.3101, 445.2001, and 445.2011)~~

R 325.52001, R 325.52002, R 325.52003, R 325.52005, R 325.52008, and R 325.52011 of the Michigan Administrative Code are amended as follows:

**PART 520. VENTILATION CONTROL**

R 325.52001 **Scope.** ~~Scope; applicability; replacement of O.H. rules.~~

Rule 1. ~~(1) These rules apply to all processes and places of employment.  
(2) These rules replace O.H. rule 3101.~~

R 325.52002 Reference of standards.

Rule 2. The following Michigan occupational safety and health standards (**MIOSHA**) are referenced in these rules. Up to 5 copies of these standards may be obtained at no charge from the Michigan Department of **licensing and regulatory affairs**, ~~Labor and Economic Growth~~, **MIOSHA Regulatory Services Standards Section**, 7150 ~~Harris Drive~~ **530 West Allegan Street**, P.O. Box 30643, Lansing, Michigan, 48909-8143 or via the internet at web-site: [www.michigan.gov/mioshastandards](http://www.michigan.gov/mioshastandards). For quantities greater than 5, the cost, at the time of adoption of these rules, is 4 cents per page.

(a) **Occupational Health Standard Part 301 "Air Contaminants for General Industry," R 325.51101 to R 325.51108.** ~~Part 301. Air Contaminants, R 325.51101 et seq.~~

(b) **Occupational Health Standard Part 526 "Dipping and Coating Operations," R 325.52601 to R 325.52602.** ~~Part 526. Open Surface Tanks, Rule 3220 et seq.~~

(c) **General Industry Safety Standard Part 76 "Spray Finishing Using Flammable and Combustible Materials," R 408.17601 to R 408.17699.** ~~Part 528. Spray Finishing Operations, Rule 3235 et seq.~~

R 325.52003 Definitions.

Rule 3. ~~As used in these rules:~~

(1) ~~(a)~~ "Aerosol" means particulate matter suspended in air.

(2) ~~(b)~~ "Contaminant" means an airborne material capable of causing occupational disease or significant physiological disturbances to a person, and **includes**, ~~includes~~ but is not limited to, the substances listed in **Occupational Health Standard Part 301 "Air Contaminants for General Industry," as referenced in R 325.52002.** ~~Part 301. Air Contaminants, R 325.51101 et seq.~~

(3) ~~(c)~~ "Control" means the limitation of worker exposure to contaminant levels not exceeding the exposure limits as set forth in **Occupational Health Standard Part 301 "Air Contaminants for General Industry," as referenced in R 325.52002.** ~~Part 301. Air Contaminants, R 325.51101 et seq.~~

(4) ~~(d)~~ "Controlled process" means an arrangement of equipment to control the contaminant by means of suitable design measures.

(5) ~~(e)~~ "Enclosure" means a room, booth, or exhaust hood that confines contaminants at their sources.

(6) ~~(f)~~ "Gas" means a normally formless fluid **that which** occupies a space or enclosure and **that which** can be changed to the liquid or solid state by the effect of increased pressure or decreased temperature, or both.

(7) ~~(g)~~ "General ventilation" means the supply and removal of air from a space to dilute or remove contaminants.

(8) ~~(h)~~ "Local exhaust ventilation system" means an arrangement of exhaust hoods, ducts, and fans that removes air to control a contaminant at its source.

- (9) ~~(i)~~ "Mg/m<sup>3</sup>" means milligrams of particulate per cubic meter of air.
- (10) ~~(j)~~ "Mppcf" means millions of particulates per cubic foot of air based on impinger samples counted by light field microscopic techniques.
- (11) ~~(k)~~ "Ppm" means parts of vapor or gas per million parts of air by volume at 25 degrees Celsius and 760 millimeters of mercury pressure.
- (12) ~~(l)~~ "Permissible exposure limits" means the exposure limits as set forth in **Occupational Health Standard Part 301 "Air Contaminants for General Industry," as referenced in R 325.52002.** ~~Part 301. Air Contaminants, R 325.51101 et seq.~~
- (13) ~~(m)~~ "Process space" means a tunnel, process equipment, shaft, or enclosed space.
- (14) ~~(n)~~ "Source" means a process or equipment ~~that which~~ releases a contaminant into the air in concentrations exceeding the permissible exposure limits.
- (15) ~~(o)~~ "Supply ventilation system" means an arrangement of inlet openings or equipment to introduce outside air into the working environment.
- (16) ~~(p)~~ "Vapor" means the gaseous state of a substance.

R 325.52005 Supply ventilation systems.

Rule 5. (1) **An employer shall provide a** supply ventilation system ~~shall be provided~~ to ensure a flow of air into the working environment to equally replace the volume of air exhausted.

(2) **An employer shall provide a** mechanical air supply system ~~shall be provided~~ if its absence will result in building negative pressures sufficient to cause ~~back-drafting~~ **backdrafting** of vents from fuel-fired equipment or ineffective control.

(3) Mechanical air supply volumes shall be heated to maintain a minimum air temperature of 65 degrees Fahrenheit measured at the point of air discharge to the space. Exceptions to this requirement are refrigerated storage rooms, special process rooms, and similar locations where low air temperatures are essential to the preservation of the product or service, or, if in the opinion of the director, a lower air temperature will not be harmful to the health of the persons affected.

(4) Make-up air for spray-finishing operations shall be as prescribed in **General Industry Safety Standard Part 76 "Spray Finishing Using Flammable and Combustible Materials," as referenced in R 325.52002.** ~~Part 528. Spray-Finishing Operations, O.H. rule 3235(9) Make-up air.~~

(5) Make-up air for open surface tanks shall be as prescribed in **Occupational Health Standard Part 526 "Dipping and Coating Operations," as referenced in R 325.52002.** ~~Part 526. Open-surface Tanks, O.H. rule 3220(8)(c).~~

R 325.52008 Local exhaust ventilation.

Rule 8. (1) **An employer shall provide local** ~~Local~~ exhaust ventilation ~~shall be provided~~ at all stationary sources. The director may allow a variance from this subrule if control is accomplished with general ventilation.

(2) If a local exhaust system is used, then the exhaust air volume shall create an ~~in-draft~~ **indraft** air volume at an enclosure, hood, duct, or fan sufficient to control the contaminant.

(3) A local exhaust system shall be designed to capture and control the contaminant. Distribution of exhaust air between various exhaust points may be accomplished by balanced duct design. If balancing gates are used, they shall be locked permanently in place after final adjustment.

(4) **An employer shall ensure that the** ~~The~~ design and construction of a local exhaust ventilation system ~~is shall be~~ adequate for the contaminant and conditions of service. A listing of practical ventilation texts and references shall be available from the director upon request. Technical information and experience regarding specific contaminants and control measures may be obtained from the director.

R 325.52011 Recirculation of air from exhaust systems.

Rule 11.(1) The recirculation of air containing a contaminant whose permissible exposure limit is equal to or exceeds 1000 ppm, 15 mg/m<sup>3</sup>, or 50 mppcf, shall be permitted if the exhaust ventilation system is equipped with an air-cleaning device capable of reducing the contaminant concentrations to 10% or less of their permissible exposure limits in the returned air.

(2) The director may allow the recirculation of air containing a contaminant whose permissible exposure limit is less than 1000 ppm, 15 mg/m<sup>3</sup>, or 50 mppcf, if the toxicity of the contaminant and the degree of air cleaning to be achieved create an environment ~~that which~~ will not impair the health of the workers, and if the contaminant concentrations in the return air ~~does shall~~ not exceed 10% of its permissible exposure limits.

(3) A recirculation system shall include an alternate air duct connection to discharge the return air outside of the building if necessary to protect the workers' health.

(4) Spray-finishing operations using flammable and combustible materials shall be as prescribed in **General Industry Safety Standard Part 76 "Spray Finishing Using Flammable and Combustible Materials," as referenced in R 325.52002.** ~~Part 528. Spray-Finishing Operations, O.H. rule 3235(6)(j) Air exhaust.~~