DEPARTMENT OF NATURAL RESOURCES
LAW ENFORCEMENT DIVISION
WHOLESALE FISH DEALERS REPORT FORMS #9165

R 308.1
Source: 1987 AACS.

LOCAL HUNTING AND FIREARMS CONTROLS

Regulation No. 101, Alcona county.

R 317.101.1
Source: 1981 AACS.

Regulation No. 108, Barry county.

R 317.108.2
Source: 1980 AACS.

Regulation No. 111, Berrien county.

R 317.111.2
Source: 1983 AACS.

Regulation No. 123, Eaton county.

R 317.123.1
Source: 1982 AACS.

R 317.123.3
Source: 1982 AACS.

R 317.123.4
Source: 1982 AACS.

Regulation No. 125, Genesee county.

R 317.125.8
Source: 1984 AACS.

Regulation No. 135, Iosco county.

R 317.135.2
Source: 1980 AACS.

R 317.135.3
Source: 1984 AACS.

Regulation No. 138, Jackson county.

R 317.138.2
Source: 1980 AACS.

R 317.138.3

Source: 1980 AACS.

Regulation No. 147, Livingston county.

R 317.147.8
Source: 1981 AACS.

Regulation No. 150, Macomb county.

R 317.150.1
Source: 1982 AACS.

R 317.150.5
Source: 1997 AACS.

R 317.150.9
Source: 1985 AACS.

R 317.150.10
Source: 1997 AACS.

R 317.150.12
Source: 1983 AACS.

Regulation No. 151, Manistee county.

R 317.151.1
Source: 1985 AACS.

Regulation No. 163, Oakland county.

R 317.163.6
Source: 1984 AACS.

R 317.163.7
Source: 1984 AACS.

R 317.163.8
Source: 1997 AACS.

R 317.163.10
Source: 1997 AACS.

R 317.163.11
Source: 1997 AACS.

R 317.163.12
Source: 1997 AACS.

R 317.163.20
Source: 1997 AACS.

R 317.163.25
Source: 1997 AACS.

R 317.163.36
Source: 1997 AACS.

R 317.163.38
Source: 1997 AACS.

R 317.163.41
Source: 1997 AACS.

R 317.163.42
Source: 1985 AACS.

R 317.163.43
Source: 1980 AACS.

R 317.163.44
Source: 1984 AACS.

R 317.163.45
Source: 1981 AACS.

R 317.163.46
Source: 1981 AACS.

Regulation No. 169, Otsego county.

R 317.169.2
Source: 1980 AACS.

Regulation No. 171, Presque Isle county.

R 317.171.3
Source: 1985 AACS.

Regulation No. 173, Saginaw county.

R 317.173.1
Source: 1985 AACS.

R 317.173.3
Source: 1982 AACS.

Regulation No. 181, Washtenaw county.

R 317.181.5
Source: 1982 AACS.

Regulation No. 182, Wayne county.

R 317.182.1
Source: 1983 AACS.

R 317.182.8
Source: 1980 AACS.

R 317.182.9
Source: 1983 AACS.

R 317.182.10
Source: 1983 AACS.

R 317.182.11
Source: 1982 AACS.

R 317.182.12
Source: 1982 AACS.

MACKINAC ISLAND STATE PARK COMMISSION

GENERAL RULES

PART 1. DEFINITIONS

R 318.119b
Source: 1997 AACS.

PART 2. REGULATIONS

R 318.136
Source: 1982 AACS.

R 318.145a
Source: 1997 AACS.

R 318.146
Source: 1988 AACS.

NATURAL RESOURCES COMMISSION

RECREATION BOND PROGRAM

R 318.201
Source: 1989 AACS.

R 318.202
Source: 1989 AACS.

R 318.203
Source: 1989 AACS.

R 318.204
Source: 1989 AACS.

R 318.205
Source: 1989 AACS.

R 318.206
Source: 1989 AACS.

R 318.207
Source: 1989 AACS.

R 318.208
Source: 1989 AACS.

R 318.209
Source: 1989 AACS.

R 318.210

Source: 1989 AACS.

R 318.211
Source: 1989 AACS.

WILDERNESS AND NATURAL AREAS

Regulation No. 3, Allegan county.

R 322.3.1
Source: 1988 AACS.

DEPARTMENT OF ENVIRONMENTAL QUALITY
LAND AND WATER MANAGEMENT
GREAT LAKES SUBMERGED LANDS

R 322.1001
Source: 1986 AACS.

R 322.1002
Source: 1982 AACS.

R 322.1003
Source: 1986 AACS.

R 322.1004
Source: 1982 AACS.

R 322.1005
Source: 1982 AACS.

R 322.1006
Source: 1982 AACS.

R 322.1007
Source: 1982 AACS.

R 322.1008
Source: 1982 AACS.

R 322.1009
Source: 1982 AACS.

R 322.1010
Source: 1982 AACS.

R 322.1011
Source: 1986 AACS.

R 322.1012
Source: 1982 AACS.

R 322.1013
Source: 1986 AACS.

R 322.1014
Source: 1982 AACS.

R 322.1015
Source: 1982 AACS.

R 322.1016
Source: 1982 AACS.

R 322.1017
Source: 1982 AACS.

R 322.1018
Source: 1982 AACS.

DEPARTMENT OF NAUTURAL RESOURCES
NATURAL RESOURCES COMMISSION
STATE REVOLVING LOAN FUND

R 323.951
Source: 1989 AACS.

R 323.952
Source: 1989 AACS.

R 323.953
Source: 1989 AACS.

R 323.954
Source: 1989 AACS.

R 323.955
Source: 1989 AACS.

R 323.956
Source: 1989 AACS.

R 323.957
Source: 1989 AACS.

R 323.958
Source: 1989 AACS.

R 323.959
Source: 1989 AACS.

R 323.960
Source: 1989 AACS.

R 323.961
Source: 1989 AACS.

R 323.962
Source: 1989 AACS.

R 323.963
Source: 1989 AACS.

R 323.964
Source: 1989 AACS.

R 323.965
Source: 1989 AACS.

DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER RESOURCES PROTECTION

PART 2. ORGANIZATION, OPERATIONS, PROCEDURES, AND HEARINGS

R 323.1011
Source: 1988 AACS.

R 323.1012
Source: 1988 AACS.

R 323.1014
Source: 1997 AACS.

R 323.1015
Source: 1988 AACS.

R 323.1017
Source: 1988 AACS.

R 323.1018
Source: 1997 AACS.

R 323.1021
Source: 1988 AACS.

R 323.1025
Source: 1988 AACS.

R 323.1027
Source: 1997 AACS.

R 323.1031
Source: 1997 AACS.

R 323.1032
Source: 1997 AACS.

R 323.1033
Source: 1997 AACS.

R 323.1034
Source: 1997 AACS.

R 323.1035
Source: 1997 AACS.

R 323.1036
Source: 1997 AACS.

R 323.1038 Rescinded.
Source: 1997 AACS.

PART 4. WATER QUALITY STANDARDS

R 323.1041

Source: 1994 AACS.

R 323.1043 Definitions; A to L.

Rule 43. As used in this part:

(a) "Acceptable daily exposure (ADE)" means an estimate of the maximum daily dose of a substance that is not expected to result in adverse noncancer effects to the general human population, including sensitive subgroups.

(b) "Acceptable wildlife endpoints" means subchronic and chronic endpoints that affect reproductive or developmental success, organismal viability, or growth or any other endpoint that is, or is directly related to, a parameter that influences population dynamics.

(c) "Acute-chronic ratio (ACR)" means a standard measure of the acute toxicity of a material divided by an appropriate measure of the chronic toxicity of the same material under comparable conditions.

(d) "Adverse effect" means any deleterious effect to organisms due to exposure to a substance. The term includes effects that are or may become debilitating, harmful, or toxic to the normal functions of the organism. The term does not include nonharmful effects such as tissue discoloration alone or the induction of enzymes involved in the metabolism of the substance.

(e) "Agricultural use" means a use of water for agricultural purposes, including livestock watering, irrigation, and crop spraying.

(f) "Anadromous salmonids" means trout and salmon that ascend streams to spawn.

(g) "Aquatic maximum value (AMV)" means the highest concentration of a material in the ambient water column to which an aquatic community can be exposed briefly without resulting in unacceptable effects, calculated according to the methodology specified in R 323.1057(2). The AMV is equal to 1/2 of the tier I or tier II final acute value (FAV).

(h) "Baseline bioaccumulation factor" means, for organic chemicals, a BAF that is based on the concentration of freely dissolved chemicals in the ambient water and takes into account the partitioning of the chemical within the organism. For inorganic chemicals, the term means a BAF that is based on the wet weight of the tissue.

(i) "Baseline bioconcentration factor" means, for organic chemicals, a BCF that is based on the concentration of freely dissolved chemicals in the ambient water and takes into account the partitioning of the chemical within the organism. For inorganic chemicals, the term means a BCF that is based on the wet weight of the tissue.

(j) "Bioaccumulation" means the net accumulation of a substance by an organism as a result of uptake from all environmental sources.

(k) "Bioaccumulation factor (BAF)" means the ratio, in liters per kilogram, of a substance's concentration in tissue of an aquatic organism to its concentration in the ambient water where both the organism and its food are exposed and the ratio does not change substantially over time.

(l) "Bioaccumulative chemical of concern (BCC)" means a chemical which, upon entering the surface waters, by itself or as its toxic transformation product, accumulates in aquatic organisms by a human health bioaccumulation factor of more than 1000 after considering metabolism and other physiochemical properties that might enhance or inhibit bioaccumulation. The human health bioaccumulation factor shall be derived according to R 323.1057(5). Chemicals with half-lives of less than 8 weeks in the water column, sediment, and biota are not BCCs. The minimum BAF information needed to define an organic chemical as a BCC is either a field-measured BAF or a BAF derived using the biota-sediment accumulation factor (BSAF) methodology. The minimum BAF information needed to define an inorganic chemical as a BCC, including an organometal, is either a field- measured BAF or a laboratory-measured bioconcentration factor (BCF). The BCCs to which these rules apply are identified in table 5 of R 323.1057.

(m) "Bioconcentration" means the net accumulation of a substance by an aquatic organism as a result of uptake directly from the ambient water through gill membranes or other external body surfaces.

(n) "Bioconcentration factor (BCF)" means the ratio, in liters per kilogram, of a substance's concentration in tissue of an aquatic organism to its concentration in the ambient water in situations where the organism is exposed through the water only and the ratio does not change substantially over time.

(o) "Biota-sediment accumulation factor (BSAF)" means the ratio, in kilograms of organic carbon per kilogram of lipid, of a substance's lipid-normalized concentration in tissue of an aquatic organism to its

organic carbon-normalized concentration in surface sediment in situations where the ratio does not change substantially over time, both the organism and its food are exposed, and the surface sediment is representative of average surface sediment in the vicinity of the organism.

(p) "Carcinogen" means a substance which causes an increased incidence of benign or malignant neoplasms in animals or humans or that substantially decreases the time in which neoplasms develop in animals or humans.

(q) "Chronic effect" means an adverse effect that is measured by assessing an acceptable endpoint and results from continual exposure over several generations or at least over a significant part of the test species' projected life span or life stage.

(r) "Coldwater fishery" means waterbodies that contain fish species which thrive in relatively cold water, including any of the following:

(i) Trout.

(ii) Salmon.

(iii) Whitefish.

(iv) Cisco.

(s) "Connecting waters" means any of the following:

(i) The St. Marys river.

(ii) The Keweenaw waterway.

(iii) The Detroit river.

(iv) The St. Clair river.

(v) Lake St. Clair.

(t) "Control document" means any authorization issued by the department to any source of pollutants to surface waters of the state that specifies conditions under which the source is allowed to operate.

(u) "Conversion factor" means the decimal fraction of a metal corresponding to an estimate of the percent total recoverable metal that was dissolved in the aquatic toxicity tests that were most important in the derivation of the tier I or tier II aquatic life value for that metal.

(v) "Department" means the Michigan department of environmental quality.

(w) "Depuration" means the loss of a substance from an organism as a result of any active or passive process.

(x) "Designated use" means a use of the surface waters of the state as established by these rules, including use for any of the following:

(i) Industrial, agricultural, and public water supply.

(ii) Recreation.

(iii) Warmwater and coldwater fisheries, other aquatic life, and wildlife.

(iv) Navigation.

(y) "Discharge-induced mixing" means the mixing of a discharge and receiving water that occurs due to discharge momentum and buoyancy up to the point where mixing is controlled by ambient turbulence.

(z) "Dissolved oxygen" means the amount of oxygen dissolved in water and is commonly expressed as a concentration in terms of milligrams per liter.

(aa) "Dissolved solids" means the amount of materials dissolved in water and is commonly expressed as a concentration in terms of milligrams per liter.

(bb) "EC50" means a statistically or graphically estimated concentration that is expected to cause 1 or more specified effects in 50% of a group of organisms under specified conditions.

(cc) "Effluent" means a wastewater discharge from a point source to the surface waters of the state.

(dd) "Endangered species act (ESA)" means the endangered species act of 1973, as amended, 16 U.S.C. §1531 et seq.

(ee) "Fecal coliform" means a type of coliform bacteria found in the intestinal tract of humans and other warm-blooded animals.

(ff) "Final acute value (FAV)" means the level of a chemical or mixture of chemicals that does not allow the mortality or other specified response of aquatic organisms to exceed 50% when exposed for 96 hours, except where a shorter time period is appropriate for certain species. The FAV shall be calculated under R 323.1057(2) if appropriate for the chemical.

(gg) "Final chronic value (FCV)" means the level of a substance or a mixture of substances that does not

allow injurious or debilitating effects in an aquatic organism resulting from repeated long-term exposure to a substance relative to the organism's lifespan, calculated using the methodology specified in R 323.1057(2).

(hh) "Fisheries, other aquatic life, and wildlife use" means the use of the surface waters of the state by fish, other aquatic life, and wildlife for any life history stage or activity and the protection of fish for human consumption.

(ii) "Food chain multiplier (FCM)" means the ratio of a BAF to an appropriate BCF.

(jj) "Harmonic mean flow" means the number of daily flow measurements divided by the sum of the reciprocals of the flows.

(kk) "Human cancer value (HCV)" means the maximum ambient water concentration of a substance at which a lifetime of exposure from either drinking the water, consuming fish from the water, and conducting water- related recreation activities or consuming fish from the water and conducting water-related recreation activities will represent a plausible upper bound risk of contracting cancer of 1 in 100,000 using the exposure assumptions and methodology specified in R 323.1057(4).

(ll) "Human noncancer value (HNV)" means the maximum ambient water concentration of a substance at which adverse noncancer effects are not likely to occur in the human population from lifetime exposure through either drinking the water, consuming fish from the water, and conducting water-related recreation activities or consuming fish from the water and conducting water-related recreation activities, using the exposure assumptions and methodology specified in R 323.1057(4).

(mm) "Industrial water supply" means a water source intended for use in commercial or industrial applications or for noncontact food processing.

(nn) "Inland lake" means an inland body of standing water of the state situated in a topographic depression other than an artificial agricultural pond that is less than 1 acre, unless otherwise determined by the department. The department may designate a dammed river channel or an impoundment as an inland lake based on aquatic resources to be protected.

(oo) "Keweenaw waterway" means the entire Keweenaw waterway, including Portage lake, Houghton county.

(pp) "Lake Superior basin-bioaccumulative substances of immediate concern (LSB-BSIC)" means substances identified in the September 1991 binational program to restore and protect the Lake Superior basin, including all of the following:

(i) 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-tcdd).

(ii) Octachlorostyrene.

(iii) Hexachlorobenzene.

(iv) Chlordane.

(v) Dichloro-diphenyl-trichloroethane (ddt) and metabolites.

(vi) Dieldrin.

(vii) Toxaphene.

(viii) Polychlorinated biphenyls (pcbs).

(ix) Mercury.

(qq) "LC50" means a statistically or graphically estimated concentration that is expected to be lethal to 50% of a group of organisms under specified conditions.

(rr) "Linearized multistage model" means a conservative mathematical model for cancer risk assessment. The model fits linear dose-response curves to low doses. The model is consistent with a no-threshold model of carcinogenesis.

(ss) "Loading capacity" means the greatest amount of pollutant loading that a water can receive without violating water quality standards.

(tt) "LOAEL" means the lowest tested dose or concentration of a substance that results in an observed adverse effect in exposed test organisms when all higher doses or concentrations result in the same or more severe effects. (uu) "Lotic" means surface waters of the state that exhibit flow.

History: 1954 ACS 77, Eff. Dec. 13, 1973; 1979 AC; 1984 MR 12, Eff. Jan. 18, 1985; 1986 MR 11, Eff. Dec. 2, 1986; 1994 MR 5, Eff. May 20, 1994; 1997 MR 7, Eff. July 28, 1997; 1999 MR 3, Eff. Apr. 2, 1999.

R 323.1044

Source: 1997 AACS.

R 323.1050
Source: 1986 AACS.

R 323.1051
Source: 1984 AACS.

R 323.1053
Source: 1986 AACS.

R 323.1055
Source: 1986 AACS.

R 323.1057
Source: 1997 AACS.

R 323.1058
Source: 1986 AACS.

R 323.1060
Source: 1986 AACS.

R 323.1062
Source: 1994 AACS.

R 323.1064
Source: 1986 AACS.

R 323.1065
Source: 1986 AACS.

R 323.1070
Source: 1986 AACS.

R 323.1074
Source: 1997 AACS.

R 323.1075
Source: 1986 AACS.

R 323.1080
Source: 1997 AACS.

R 323.1082
Source: 1997 AACS.

R 323.1090
Source: 1997 AACS.

R 323.1091
Source: 1997 AACS.

R 323.1092
Source: 1986 AACS.

R 323.1096
Source: 1986 AACS.

R 323.1097
Source: 1986 AACS.

R 323.1098 Antidegradation.

Rule 98. (1) This rule applies to any action or activity pursuant to part 31 of Act No. 451 of the Public Acts of 1994, as amended, being §324.3101 et seq. of the Michigan Compiled Laws, that is anticipated to result in a new or increased loading of pollutants by any source to surface waters of the state and for which independent regulatory authority exists requiring compliance with water quality standards.

(2) For all waters, the level of water quality necessary to protect existing uses shall be maintained and protected. Where designated uses of the water body are not attained, there shall be no lowering of the water quality with respect to the pollutant or pollutants that are causing the nonattainment.

(3) Where, for individual pollutants, the quality of the waters is better than the water quality standards prescribed by these rules, that water shall be considered high quality and that quality shall be maintained and protected unless allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. For high quality waters, no action resulting in the lowering of water quality shall occur unless the provisions of this rule have been complied with.

(4) A person applying for a control document in a high quality water or a Lake Superior basin - outstanding international resource water for a new or increased loading of pollutants shall show how the discharge is exempted under subrule (8) or (9) of this rule or provide a demonstration as follows:

(a) The applicant shall identify the social or economic development and the benefits to the area in which the waters are located that would be foregone if the new or increased loading of pollutants is not allowed. The factors to be addressed may include any of the following:

(i) Employment increases.

(ii) Production level increases.

(iii) Employment reductions avoidance.

(iv) Efficiency increases.

(v) Industrial, commercial, or residential growth.

(vi) Environmental or public health problem corrections.

(vii) Economic or social benefits to the community.

(b) For discharges of BCCs that result from operations at the facility, the applicant shall include an identification of the alternatives evaluated and the alternatives to be implemented to comply with the following requirements:

(i) The discharger shall minimize the new or increased loading of the BCC by implementation of any cost-effective pollution prevention alternatives and techniques which have been adequately demonstrated and which are reasonably available to the discharger that would eliminate or significantly reduce the new or increased loading of the BCC.

(ii) If pollution prevention alternatives implemented under paragraph (i) of this subdivision do not eliminate the new or increased loading of the BCC, then the discharger shall evaluate alternative or enhanced treatment techniques which have been adequately demonstrated and which are reasonably available to the discharger that would eliminate the new or increased loading of the BCC and shall implement the techniques that have a cost that is reasonable relative to the cost of treatment necessary to achieve applicable effluent limitations.

If the new or increased loading is a point source discharge to a Lake Superior basin-outstanding international resource water as defined in subrule (7) of this rule and if the BCC of concern is a LSB-BSIC, then the requirements of paragraph (ii) of this subdivision do not apply. If the pollution prevention alternatives implemented under paragraph (i) of this subdivision do not eliminate the new or increased loading of the LSB-BSIC to a Lake Superior basin-outstanding international resource water, then the discharger shall evaluate and implement the best technology in process and treatment (BTPT) that would eliminate or reduce the new or increased loading of the LSB-BSIC. BTPT shall be the most advanced treatment techniques which have been adequately demonstrated and which are reasonably available to the discharger. However, innovative or experimental technology shall also be considered if proposed by the discharger. Upon demonstration by the permittee, the requirement to implement BTPT may be waived by the department for new or increased loadings of LSB-BSICs that occur as trace contaminants in naturally occurring raw materials at the facility. If the BTPT requirement is waived, then the requirements of paragraph (ii) of this subdivision shall apply.

(5) If the department determines that the antidegradation demonstration information from subrule (4) of

this rule shows that lowering of water quality is necessary to support important social and economic development in the area and that, if applicable, BTPT will be implemented consistent with subrule (4)(b)(iii) of this rule, then the department shall authorize the lowering of water quality through issuance of the control document. In no event may this decision allow water quality to be lowered below the minimum level required to fully support the designated uses. The antidegradation demonstration shall be available to the public for review during any public comment period on the control document.

(6) If high quality water bodies are designated outstanding state resource waters (OSRW) by the department, then controls shall be applied on pollutant sources to the OSRW or tributaries so that the water quality is not lowered in the OSRW. A short-term, temporary, for example, weeks or months, lowering of water quality in the OSRW may be permitted by the department on a case-by-case basis. The following water bodies are designated as OSRWs:

(a) The following water bodies designated as wild rivers pursuant to the Michigan scenic rivers act of 1991, 16 U.S.C. §1271 et seq:

(i) The Carp river (Mackinac county) - the 7.5-mile segment from Michigan state highway 123, T42N, R5W, section 2, to 1/4 of a mile upstream from forest development road 3119, T42N, R4W, section 4.

(ii) The Carp river (Mackinac county) - the 4.9-mile segment from 1/4 of a mile downstream of forest development road 3119, T42N, R4W, section 3, to McDonald rapids.

(iii) The east branch of the Ontonagon river (Houghton and Ontonagon counties) - the 25.5-mile segment from the east branch of the Ontonagon river's confluence with an unnamed stream in T48N, R37W, section 30, to the Ottawa national forest boundary, T50W, R38W, section 33.

(iv) The middle branch of the Ontonagon river (Ontonagon county) - the 17.4-mile segment from Trout creek, T48N, R38W, section 20, to the northern boundary of the Ottawa national forest, T50N, R39W, section 12.

(v) The Sturgeon river (Baraga and Houghton counties) - the 16.5-mile segment from the Sturgeon river's entry into the Ottawa national forest, T48N, R35W, section 12, to Prickett lake.

(vi) The east branch of the Tahquamenon river (Chippewa county) - the 3.2-mile segment from the center of T46N, R6W, section 20, to the boundary of the Hiawatha national forest, T46N, R6W, section 19.

(vii) The Yellow Dog river (Marquette county) - the 4-mile segment from the Yellow Dog river's origin at the outlet of Bulldog lake dam, T50N, R29W, section 31, to the boundary of the Ottawa national forest, T50N, R29W, section 17.

(b) The main, north, south, east, and west branches of the Two-Hearted river and Dawson creek from their headwaters to the mouth of the river at Lake Superior, which are designated as wilderness rivers pursuant to part 305 of Act No. 451 of the Public Acts of 1994, as amended, being §324.30501 et seq. of the Michigan Compiled Laws.

(c) Water bodies within the designated boundaries of the following national parks or national lakeshores:

(i) Sleeping bear dunes national lakeshore.

(ii) Pictured rocks national lakeshore.

(iii) Isle royale national park.

(7) All surface waters of the Lake Superior basin that are not identified as OSRWs are designated as Lake Superior basin - outstanding international resource waters (LSB-OIRW). Under the LSB-OIRW designation, new or increased loadings of any LSB-BSIC from point sources to the surface waters of the Lake Superior basin are prohibited unless the new or increased loading of a LSB-BSIC is consistent with the requirements of this rule.

(8) Except for water bodies designated as OSRWs, or as the department may determine on a case-by-case basis that the application of the procedures in this rule are required to adequately protect water quality, the following do not constitute a lowering of water quality.

(a) The short-term, temporary, for example, weeks or months, lowering of water quality.

(b) Bypasses that are not prohibited by regulations set forth in 40 C.F.R. §122.41(m) (1995).

(c) Response actions undertaken to alleviate a release into the environment of pollutants that may pose an imminent and substantial danger to the public health or welfare under any of the following:

(i) The comprehensive environmental response, compensation and liability act of 1980, (CERCLA), as amended, 42 U.S.C. §9601 et seq.

(ii) The resource conservation and resource recovery act of 1976, as amended, 42 U.S.C. §6901 et seq.

(iii) Part 201 of Act No. 451 of the Public Acts of 1994, as amended, being §§324.20101 to 324.20141 of the

Michigan Compiled Laws.
(iv) Part 213 of Act No. 451 of the Public Acts of 1994, as amended, being §§324.21301 to 324.21331 of the Michigan Compiled Laws.
(v) Part 31 of Act No. 451 of the Public Acts of 1994, as amended, being §§324.3101 to 324.3119 of the Michigan Compiled Laws.
(d) Discharges of pollutant quantities from the intake water at a facility proposing a new or increased loading of a pollutant, if the intake and discharge are on the same body of water.
(e) Increasing the sewered area, connecting new sewers and customers, or accepting trucked-in wastes, such as septage and holding tank wastes, by a publicly owned treatment works, if the increase is within the design flow of the facility, there is no increased loading due to nondomestic wastes from a significant industrial user for BCCs that are not specifically limited in the current permit, and there is no significant change expected in the characteristics of the wastewater collected.
(f) Intermittent increased loadings related to wet-weather conditions.
(g) New or increased loadings due to implementation of department-approved industrial or municipal controls on wet-weather related flows, including combined sewer overflows and industrial storm water.
(h) New or increased loadings authorized by certificates of coverage under NPDES general permits and notices of coverage for storm water from construction activities.
(i) Increased non-BCC loadings within the authorized levels of a limit in an existing control document.
(j) Increased BCC loadings within the authorized levels of a limit in an existing control document, except for those BCC loadings that result from actions by the permittee that would otherwise require submittal of an increased use request.
(k) New or increased loadings at a site where there is a simultaneous enforceable decrease in the allowed loading of the pollutant under consideration from sources contributing to the receiving water body, such that there is no net increase in the loading of the pollutant to the water body at that site consistent with trading rules established by the department.
(9) Except for water bodies designated as OSRWs, the following do not constitute a lowering of water quality:
(a) Increased loadings within the existing capacity and processes that are covered by the existing applicable control document, including the following:
(i) Normal operational variability.
(ii) Changes in intake water pollutants.
(iii) Increasing the production hours of the facility, for example, adding a second shift.
(iv) Increasing the rate of production.
(b) Changes in a control document that are not a result of changes in pollutant loading, but are the result of any of the following:
(i) Improved monitoring data.
(ii) New or improved analytical methods or sensitivity.
(iii) New or modified water quality values.
(c) Increased loadings of a pollutant which do not involve a BCC and which use less than 10% of the unused loading capacity that exists at the time of the request.
History: 1954 ACS 77, Eff. Dec. 13, 1973; 1979 AC; 1986 MR 11, Eff. Dec. 2, 1986; 1997 MR 7, Eff. July 28, 1997; 1999 MR 3, Eff. Apr. 2, 1999.

R 323.1099
Source: 1997 AACS.

R 323.1100 Designated uses.
Rule 100. (1) At a minimum, all surface waters of the state are designated for, and shall be protected for, all of the following uses:
(a) Agriculture.
(b) Navigation.
(c) Industrial water supply.
(d) Public water supply at the point of water intake.
(e) Warmwater fishery.

(f) Other indigenous aquatic life and wildlife.
(g) Partial body contact recreation.
(2)All surface waters of the state are designated for, and shall be protected for, total body contact recreation from May 1 to October 31 in accordance with the provisions of R 323.1062. Total body contact recreation immediately downstream of wastewater discharges, areas of significant urban runoff, combined sewer overflows, and areas influenced by certain agricultural practices is contrary to prudent public health and safety practices, even though water quality standards may be met.
(3) If designated uses are interrupted due to uncontrollable circumstances during or following flood conditions, accidental spillages, or other emergencies, then notice shall be served upon entities affected by the interruption in accordance with procedures established by the department. Prompt corrective action shall be taken by the discharger to restore the designated uses.
(4) All inland lakes identified in the publication entitled "Coldwater Lakes of Michigan," as published in 1976 by the department of natural resources, are designated for, and shall be protected as, coldwater fisheries.
(5) All Great Lakes and their connecting waters, except for the entire Keweenaw waterway, including Portage lake, Houghton county, and Lake St. Clair, are designated for, and shall be protected as, coldwater fisheries.
(6) All lakes listed in the publication entitled "Designated Trout Lakes and Regulations," issued September 14, 1996, by the director of the department of natural resources under the authority of part 411 of Act No. 451 of the Public Acts of 1994, as amended, being §§324.41101 to 324.41105 of the Michigan Compiled Laws, are designated for, and shall be protected as, coldwater fisheries.
(7) All waters listed in the publication entitled "Designated Trout Streams for the State of Michigan," Director's Order No. DFI-101.97, by the director of the department of natural resources under the authority of section 48701(m) of Act No. 451 of the Public Acts of 1994, as amended, being §324.48701(m) of the Michigan Compiled Laws, are designated for, and shall be protected as, coldwater fisheries.
(8) All surface waters of the state that are designated by the department as existing or proposed for use as public water supply sources are protected for such use at the point of water intake and in such contiguous areas as the department may determine necessary for assured protection. In addition, Michigan waters of the Great Lakes and connecting waters and all waters that have been designated for use as public water supply sources shall meet the human cancer and human noncancer values for drinking water established pursuant to R 323.1057(4). The requirement to meet the human cancer and human noncancer values for drinking water shall not apply to pollutant loadings from a tributary in an area where a tributary mixes with the Great Lake, connecting water, or a waterbody that has been designated for use as a public water supply source, unless a water intake was located in this area on the effective date of this rule.
(9) Water quality of all surface waters of the state serving as migratory routes for anadromous salmonids shall be protected as necessary to assure that migration is not adversely affected.
(10) Discharges to wetlands, as defined pursuant to the provisions of part 303 of Act No. 451 of the Public Acts of 1994, as amended, being §§324.30301 to 324.30323 of the Michigan Compiled Laws, that result in water quality that is less than that prescribed by these rules may be permitted after a use attainability analysis shows that designated uses are not and cannot be attained and shows that attainable uses will be protected.
(11) After completion of a comprehensive plan developed under R 323.1064(3), upon petition by a municipality or other person, and in conformance with the requirements of 40 C.F.R. §131.10 (1995), designation of uses, the department may determine that attainment of the dissolved oxygen standards of R 323.1064(1) is not feasible and designate, by amendment to this rule, a limited warmwater fishery use subcategory of the warmwater fishery use or a limited coldwater fishery use subcategory of coldwater fishery use. For waters so designated, the dissolved oxygen standards specified in the provisions of R 323.1064(2) and all other applicable standards of these rules apply. For waters so designated, the dissolved oxygen standards specified in R 323.1064(1) do not apply. Not less than 60 days before a municipality or other person files a petition pursuant to this subrule, a petitioner shall provide written notice to the department and the clerk of the municipalities in which the affected waters are located of the petitioner's intent to file a petition.
History: 1954 ACS 77, Eff. Dec. 13, 1973; 1979 AC; 1986 MR 11, Eff. Dec. 2, 1986; 1994 MR 5, Eff. May

20, 1994; 1996 MR 7, Eff. July 25, 1996; 1997 MR 7, Eff. July 28, 1997; 1999 MR 3, Eff. Apr. 2, 1999.

R 323.1103
Source: 1997 AACS.

R 323.1110
Source: 1997 AACS.

R 323.1115
Source: 1997 AACS.

R 323.1116 Availability of documents.

Rule 116. The following documents referenced in this part are available for inspection at, and may be obtained at no cost from, the Lansing Office of the Department of Environmental Quality, P.O. Box 30273, Lansing, Michigan 48909-7773:

(a) "1996 Michigan Critical Materials Register."

(b) "Designated Trout Lakes and Regulations," September 14, 1996.

(c) "Coldwater Lakes of Michigan," August 1976.

(d) "Designated Trout Streams for the State of Michigan," Director's Order No. DFI-101.97.

History: 1954 ACS 77, Eff. Dec. 13, 1973; 1979 AC; 1984 MR 12, Eff. Jan. 18, 1985; 1986 MR 11, Eff. Dec. 2, 1986; 1994 MR 5, Eff. May 20, 1994; 1996 MR 7, Eff. July 25, 1996; 1997 MR 7, Eff. July 28, 1997; 1999 MR 3, Eff. Apr. 2, 1999.

R 323.1117
Source: 1997 AACS.

PART 8. WATER QUALITY-BASED EFFLUENT LIMIT DEVELOPMENT FOR TOXIC SUBSTANCES

R 323.1201
Source: 1997 AACS.

R 323.1203
Source: 1997 AACS.

R 323.1205
Source: 1997 AACS.

R 323.1207
Source: 1997 AACS.

R 323.1209
Source: 1997 AACS.

R 323.1211
Source: 1997 AACS.

R 323.1213
Source: 1997 AACS.

R 323.1217
Source: 1997 AACS.

R 323.1219
Source: 1997 AACS.

R 323.1221
Source: 1997 AACS.

PART 9. WASTEWATER REPORTING

R 323.1231—R 323.1236
Source: 1997 AACS.

R 323.1237—R 323.1242
Source: 1997 AACS.

PART 11. CONSTRUCTION GRANTS FOR WASTEWATER TREATMENT WORKS

R 323.1271 - 323.1288 Rescinded.
History: 1954 ACS 81, Eff. Oct. 26, 1974; 1979 AC; 1999 MR 12, Eff. Jan. 6, 2000.

PART 13. FLOODPLAINS AND FLOODWAYS

R 323.1311
Source: 1996 AACS.

R 323.1312
Source: 1996 AACS.

R 323.1313
Source: 1984 AACS.

R 323.1314 Determination of floodplain and floodway limits.

Rule 314. (1) If published floodplain delineation reports are approved by the department, the 100-year flood identified in the reports shall be used to define the limits of the floodplain and the floodway for the stream reaches covered by the reports. The following published federal flood insurance studies are approved floodplain delineation reports and are incorporated into the rules by reference:
(a) Alcona county:
Greenbush, township of, February, 1993.
(b) Allegan county:
(i) Allegan, city of, May, 1989.
(ii) Casco, township of, December, 1979.
(iii) Douglas, village of, August, 1979.
(iv) Ganges, township of, June, 1979.
(v) Laketown, township of, December, 1979.
(vi) Saugatuck, township of, August, 1979.
(vii) Saugatuck, village of, August, 1979.
(c) Alpena county:
Alpena, township of, February, 1993.
(d) Antrim county:
Milton, township of, August, 1982.
(e) Arenac county:
(i) AuGres, city of, May, 1989.
(ii) AuGres, township of, May, 1989.
(iii) Sims, township of, February, 1993.
(iv) Standish, township of, April, 1993.
(v) Whitney, township of, December, 1977.
(f) Barry county:
(i) Castleton, township of, May, 1988.

(ii) Hastings, city of, August, 1980.
(iii) Hastings, township of, December, 1980.
(g) Bay county:
(i) Bangor, township of, January, 1979.
(ii) Bay City, city of, March, 1978.
(iii) Essexville, city of, March, 1978.
(iv) Frankenlust, township of, May, 1979.
(v) Fraser, township of, June, 1993.
(vi) Hampton, township of, February, 1978.
(vii) Kawkawlin, township of, April, 1993.
(viii) Merritt, township of, February, 1978.
(ix) Pinconning, city of, February, 1981.
(x) Pinconning, township of, February, 1993.
(xi) Portsmouth, township of, November, 1979
(h) Benzie county:
Frankfort, city of, March, 1991.
(i) Berrien county:
(i) Benton, township of, June, 1977.
(ii) Benton Harbor, city of, November, 1977.
(iii) Bridgman, city of, May, 1979.
(iv) Buchanan, city of, April, 1993.
(v) Chikaming, township of, December, 1977.
(vi) Coloma, township of, August, 1983.
(vii) Grand Beach, village of, February, 1978.
(viii) Hagar, township of, February, 1977.
(ix) Lake, township of, May, 1979.
(x) Lincoln, township of, May, 1977.
(xi) Michiana, village of, November, 1977.
(xii) New Buffalo, city of, June, 1979.
(xiii) New Buffalo, township of, June, 1979.
(xiv) Niles, city of, July, 1987.
(xv) Royalton, township of, February, 1977.
(xvi) St. Joseph, city of, December, 1976.
(xvii) St. Joseph, township of, December, 1979.
(xviii) Sodus, township of, June, 1977.
(xix) Watervliet, city of, May, 1983.
(xx) Watervliet, township of, May, 1983.
(j) Branch county:
(i) Coldwater, city of, June, 1994.
(ii) Coldwater, township of, June, 1994.
(k) Calhoun county:
(i) Albion, city of, December, 1981.
(ii) Albion, township of, April, 1982.
(iii) Battle Creek, city of, October, 1982.
(iv) Bedford, township of, August, 1982.
(v) Emmett, township of, December, 1982.
(vi) Homer, village of, November, 1981.
(vii) Marengo, township of, November, 1981.
(viii) Marshall, city of, October, 1981.
(ix) Pennfield, township of, April, 1982.
(l) Charlevoix county:
(i) Boyne City, city of, January, 1982.
(ii) East Jordan, city of, January, 1982.

(m) Cheboygan county:
(i) Cheboygan, city of, March, 1988.
(ii) Grant, township of, January, 1989.
(n) Chippewa county:
Sault Ste. Marie, city of, May, 1988.
(o) Clare county:
Clare, city of, February, 1992.
(p) Clinton county:
(i) DeWitt, city of, June, 1979.
(ii) DeWitt, township of, December, 1980.
(iii) Ovid, village of, March, 1993.
(iv) Victor, township of, February, 1989.
(v) Watertown, charter township of, November, 1981.
(q) Delta county:
(i) Brampton, township of, October, 1977.
(ii) Escanaba, city of, September, 1977.
(iii) Ford River, township of, June, 1977.
(iv) Gladstone, city of, September, 1977.
(v) Masonville, township of, September, 1978.
(r) Eaton county:
(i) Charlotte, city of, January, 1981.
(ii) Delta, charter township of, September, 1980.
(iii) Dimondale, village of, March, 1980.
(iv) Eaton Rapids, city of, April, 1982.
(v) Eaton Rapids, township of, June, 1983.
(vi) Grand Ledge, city of, July, 1980.
(vii) Oneida, township of, January, 1981.
(viii) Windsor, charter township of, July, 1980.
(s) Emmet county:
Harbor Springs, city of, November, 1976.
(t) Genesee county:
(i) Argentine, township of, July, 1980.
(ii) Atlas, township of, December, 1978.
(iii) Burton, city of, February, 1980.
(iv) Clayton, township of, February, 1980.
(v) Clio, city of, March, 1980.
(vi) Davison, city of, March, 1978.
(vii) Davison, township of, December, 1978.
(viii) Fenton, city of, July, 1980.
(ix) Fenton, township of, July, 1980.
(x) Flint, city of, July, 1980.
(xi) Flint, township of, May, 1979.
(xii) Flushing, city of, December, 1978.
(xiii) Flushing, township of, August, 1980.
(xiv) Gaines, township of, June, 1979.
(xv) Genesee, township of, June, 1980.
(xvi) Goodrich, village of, March, 1978.
(xvii) Grand Blanc, city of, January, 1980.
(xviii) Grand Blanc, township of, February, 1980.
(xix) Linden, village of, May, 1980.
(xx) Montrose, township of, April, 1993.
(xxi) Mundy, township of, May, 1979.
(xxii) Mt. Morris, township of, August, 1980.

(xxiii) Swartz Creek, city of, May, 1979.
(xxiv) Vienna, township of, July, 1980.
(u) Gogebic county:
Ironwood, city of, January, 1978.
(v) Grand Traverse county:
Traverse City, city of, June, 1982.
(w) Gratiot county:
(i) Alma, city of, September, 1981.
(ii) St. Louis, city of, January, 1989.
(x) Hillsdale county:
(i) Hillsdale, city of, January, 1988.
(ii) Litchfield, city of, February, 1987.
(y) Houghton county:
Chassell, township of, December, 1990.
(z) Huron county:
(i) Caseville, township of, February, 1977.
(ii) Lake, township of, June, 1977.
(iii) Sebewaing, village of, December, 1987.
(aa) Ingham county:
(i) Delhi, township of, November, 1990.
(ii) East Lansing, city of, February, 1980.
(iii) Lansing, city of, November, 1990.
(iv) Lansing, township of, August, 1980.
(v) Locke, township of, September, 1981.
(vi) Mason, city of, April, 1982.
(vii) Meridian, charter township of, August, 1976.
(viii) Williamston, city of, October, 1981.
(ix) Williamstown, township of, October, 1981.
(bb) Ionia county:
(i) Ionia, city of, May, 1983.
(ii) Portland, city of, November, 1983.
(cc) Iosco county:
(i) Alabaster, township of, February, 1987.
(ii) AuSable, township of, January, 1988.
(iii) Baldwin, township of, June, 1994.
(iv) East Tawas, city of, June, 1994.
(v) Oscoda, township of, March, 1978.
(vi) Tawas, city of, June, 1994.
(dd) Iron county:
Iron River, city of, March, 1991.
(ee) Isabella county:
Mt. Pleasant, city of, February, 1982.
(ff) Jackson county:
(i) Blackman, township of, June, 1984.
(ii) Brooklyn, village of, December, 1981.
(iii) Concord, village of, September, 1981.
(iv) Jackson, city of, February, 1980.
(v) Summit, township of, April 1982.
(gg) Kalamazoo county:
(i) Augusta, village of, September, 1981.
(ii) Charleston, township of, October, 1981.
(iii) Comstock, township of, May, 1982.
(iv) Galesburg, city of, October, 1981.

(v) Kalamazoo, city of, September, 1992.
(vi) Kalamazoo, township of, June, 1994.
(vii) Portage, city of, November, 1982.
(viii) Ross, township of, September, 1981.
(hh) Kent county:
(i) Ada, township of, April, 1980.
(ii) Algoma, township of, July, 1984.
(iii) Caledonia, township of, January, 1981.
(iv) East Grand Rapids, city of, March, 1980.
(v) Grand Rapids, city of, November, 1982.
(vi) Grandville, city of, March, 1982.
(vii) Kentwood, city of, May, 1981.
(viii) Lowell, city of, November, 1982.
(ix) Plainfield, township of, July, 1980.
(x) Sparta, township of, July, 1984.
(xi) Sparta, village of, August, 1982.
(xii) Walker, city of, December, 1981.
(xiii) Wyoming, city of, February, 1992.
(ii) Lapeer county:
(i) Almont, village of, February, 1981.
(ii) Imlay City, city of, January, 1981.
(iii) Lapeer, city of, January, 1992.
(iv) Lapeer, township of, February, 1990.
(v) Mayfield, township of, February, 1990.
(jj) Leelanau county:
(i) Elmwood, township of, August, 1982.
(ii) Northport, village of, March, 1989.
(kk) Lenawee county:
(i) Adrian, city of, January, 1982.
(ii) Adrain, township of, November, 1990.
(iii) Blissfield, village of, February, 1988.
(iv) Clinton, village of, January, 1982.
(v) Deerfield, village of, October, 1980.
(vi) Hudson, city of, May, 1981.
(vii) Tecumseh, city of, December, 1981.
(ll) Livingston county:
(i) Fowlerville, village of, February, 1987.
(ii) Green Oak, township of, April, 1984.
(iii) Hamburg, township of, February, 1986.
(iv) Putnam, township of, December, 1988.
(mm) Macomb county:
(i) Armada, village of, May, 1990.
(ii) Chesterfield, township of, January, 1978.
(iii) Clinton, township of, January, 1992.
(iv) Fraser, city of, October, 1978.
(v) Harrison, township of, November, 1980.
(vi) Macomb, township of, August, 1980.
(vii) Memphis, city of, May, 1988.
(viii) Mt. Clemens, city of, January, 1980.
(ix) New Baltimore, city of, March, 1978.
(x) New Haven, village of, March, 1980.
(xi) Shelby, township of, January, 1980.
(xii) Sterling Heights, city of, May, 1986.

(xiii) Utica, city of, August, 1980.
(xiv) Washington, township of, December, 1981.
(xv) Warren, city of, May, 1986.
(nn) Manistee county:
(i) Manistee, city of, March, 1987.
(ii) Manistee, township of, November, 1989.
(iii) Onekama, township of, November, 1977.
(oo) Marquette county:
Chocolay, township of, May, 1987.
(pp) Mason county:
(i) Hamlin, township of, December, 1987.
(ii) Summit, township of, December, 1987.
(qq) Menominee county:
(i) Cedarville, township of, March, 1979.
(ii) Ingallston, township of, March, 1979.
(iii) Menominee, city of, February, 1978.
(iv) Menominee, township of, September, 1979.
(v) Stephenson, city of, November, 1976.
(rr) Midland county:
Midland, city of, January, 1989.
(ss) Monroe county:
(i) Ash, township of, May, 1982.
(ii) Bedford, township of, May, 1981.
(iii) Berlin, township of, May, 1982.
(iv) Dundee, village of, January, 1982.
(v) Erie, township of, March, 1978.
(vi) Estral Beach, village of, May, 1983.
(vii) Frenchtown, township of, March, 1977.
(viii) LaSalle, township of, August, 1977.
(ix) Luna Pier, city of, December, 1981.
(x) Milan, city of, February, 1982.
(xi) Milan, township of, June, 1982.
(xii) Monroe, city of, December, 1976.
(xiii) Monroe, township of, June, 1977.
(xiv) Raisinville, township of, February, 1982.
(xv) South Rockwood, village of, November, 1982.
(xvi) Whiteford, township of, October, 1980.
(tt) Montcalm county:
(i) Eureka, township of, May, 1984.
(ii) Greenville, city of, May, 1983.
(uu) Muskegon county:
(i) Laketon, township of, June, 1977.
(ii) Montague, city of, November, 1977.
(iii) Muskegon, city of, December, 1976.
(iv) Muskegon, township of, August, 1977.
(v) Muskegon Heights, city of, August, 1980.
(vi) North Muskegon, city of, January, 1976.
(vii) Norton Shores, city of, September, 1977.
(viii) Ravenna, village of, December, 1981.
(ix) Whitehall, city of, April, 1980.
(x) White River, township of, July, 1980.
(vv) Newaygo county:
(i) Ashland, township of, May, 1989.

(ii) Bridgeton, township of, March, 1990.
(iii) Brooks, township of, November, 1989.
(iv) Garfield, township of, May, 1989.
(v) Lincoln, township of, September, 1991.
(ww) Oakland county:
(i) Auburn Hills, city of, January, 1979.
(ii) Beverly Hills, village of, December, 1978.
(iii) Bingham Farms, village of, July, 1984.
(iv) Birmingham, city of, November, 1979.
(v) Bloomfield, township of, November, 1987.
(vi) Bloomfield Hills, city of, January, 1984.
(vii) Clarkston, village of, September, 1982.
(viii) Commerce, township of, September, 1980.
(ix) Farmington, city of, January, 1980.
(x) Farmington Hills, city of, August, 1979.
(xi) Franklin, village of, June, 1981.
(xii) Highland, township of, July, 1983.
(xiii) Holly, village of, June, 1984.
(xiv) Independence, township of, November, 1982.
(xv) Keego Harbor, city of, June, 1982.
(xvi) Lake Angelus, city of, April, 1986.
(xvii) Lake Orion, village of, March, 1981.
(xviii) Northville, city of, March, 1981.
(xix) Novi, city of, May, 1993.
(xx) Oakland, township of, June, 1982.
(xxi) Pontiac, city of, February, 1979.
(xxii) Rochester, city of, March, 1982.
(xxiii) Rochester Hills, city of, March, 1981.
(xxiv) Southfield, city of, March, 1979.
(xxv) Sylvan, city of, May, 1983.
(xxvi) Troy, city of, September, 1988.
(xxvii) Waterford, township of, August, 1982.
(xxviii) West Bloomfield, township of, September, 1982.
(xxix) White Lake, township of, August, 1984.
(xx) Oceana county:
(i) Pentwater, township of, May, 1977.
(ii) Pentwater, village of, November, 1977.
(yy) Ontonagon county:
Ontonagon, village of, May, 1983.
(zz) Osceola county:
(i) Evart, city of, May, 1993.
(ii) Hersey, village of, September, 1991.
(aaa) Ottawa county:
(i) Allendale, township of, July, 1982.
(ii) Coopersville, city of, September, 1982.
(iii) Ferrysburg, city of, August, 1977.
(iv) Georgetown, township of, February, 1992.
(v) Grand Haven, city of, May, 1977.
(vi) Grand Haven, township of, July, 1980.
(vii) Holland, city of, September, 1990.
(viii) Holland, township of, September, 1990.
(ix) Hudsonville, city of, June, 1984.
(x) Park, township of, November, 1977.

(xi) Port Sheldon, township of, November, 1977.
(xii) Spring Lake, township of, May, 1977.
(xiii) Spring Lake, village of, December, 1977.
(xiv) Tallmadge, township of, September, 1982.
(bbb) Saginaw county:
(i) Bridgeport, township of, September, 1983.
(ii) Buena Vista, township of, July, 1984.
(iii) Carrollton, township of, December, 1982.
(iv) Chesaning, village of, March, 1982.
(v) Frankenmuth, city of, March, 1982.
(vi) James, township of, September, 1991.
(vii) Kochville, township of, July, 1982.
(viii) Saginaw, city of, May, 1983.
(ix) Saginaw, township of, January, 1979.
(x) St. Charles, village of, April, 1983.
(xi) Spaulding, township of, December, 1978.
(xii) Taymouth, township of, December, 1988.
(xiii) Thomas, township of, July, 1982.
(xiv) Zilwaukee, city of, January, 1979.
(xv)Zilwaukee, township of, July, 1978.
(ccc) St. Clair county:
(i) Algonac, city of, April, 1977.
(ii) China, township of, February, 1978.
(iii) Clay, township of, December, 1977.
(iv) Cottrellville, township of, March, 1980.
(v) East China, township of, January, 1978.
(vi) Fort Gratiot, township of, June, 1978.
(vii) Ira, township of, September, 1979.
(viii) Marine City, city of, February, 1979.
(ix) Memphis, city of, May, 1988.
(x) Port Huron, city of, June, 1978.
(xi) Port Huron, township of, September, 1991.
(xii) St. Clair, city of, December, 1977.
(xiii) St. Clair, township of, February, 1978.
(ddd) St. Joseph county:
(i) Colon, township of, September, 1988.
(ii) Colon, village of, September, 1988.
(iii) Lockport, township of, February, 1989.
(iv) Nottawa, township of, March, 1989.
(v) Three Rivers, city of, December, 1990.
(eee) Schoolcraft county:
Manistique, city of, December, 1990.
(fff) Shiawassee county:
(i) Caledonia, township of, November, 1981.
(ii) Corunna, city of, January, 1986.
(iii) Owosso, city of, September, 1981.
(iv) Vernon, village of, May, 1988.
(ggg) Tuscola county:
(i) Vassar, city of, June, 1989.
(ii) Wisner, township of, November, 1977.
(hhh) Van Buren county:
(i) Bangor, city of, May, 1989.
(ii) Covert, township of, June, 1977.

(iii) South Haven, city of, September, 1979.
(iv) South Haven, township of, November, 1979.
(iii) Washtenaw county:
(i) Ann Arbor, city of, January, 1992.
(ii) Ann Arbor, township of, September, 1979.
(iii) Dexter, township of, February, 1987.
(iv) Manchester, village of, December, 1981.
(v) Milan, city of, February, 1982.
(vi) Northfield, township of, November, 1990.
(vii) Pittsfield, township of, May, 1991.
(viii) Saline, city of, July, 1983.
(ix) Scio, township of, August, 1989.
(x) Ypsilanti, city of, September, 1982.
(xi) Ypsilanti, township of, December, 1980.
(jjj) Wayne county:
(i) Allen Park, city of, August, 1981.
(ii) Brownstown, township of, February, 1982.
(iii) Canton, township of, March, 1981.
(iv) Dearborn Heights, city of, November, 1982.
(v) Detroit, city of, April, 1984.
(vi) Ecorse, city of, November, 1977.
(vii) Flat Rock, city of, June, 1981.
(viii) Gibraltar, city of, December, 1978.
(ix) Grosse Ile, township of, February, 1980.
(x) Grosse Pointe Shores, village of, July, 1978.
(xi) Huron, township of, October, 1986.
(xii) Lincoln Park, city of, May, 1982.
(xiii) Livonia, city of, May, 1981.
(xiv) Northville, city of, March, 1981.
(xv) Northville, township of, March, 1981.
(xvi) Plymouth, city of, August, 1980.
(xvii) Plymouth, township of, September, 1980.
(xviii) Redford, township of, September, 1980.
(xix) River Rouge, city of, March, 1977.
(xx) Riverview, city of, March, 1981.
(xxi) Rockwood, city of, December, 1978.
(xxii) Southgate, city of, March, 1978.
(xxiii) Sumpter, township of, November, 1980.
(xxiv) Taylor, city of, October, 1986.
(xxv) Trenton, city of, June, 1985.
(xxvi) Wayne, city of, February, 1980.
(xxvii) Westland, city of, July, 1984.
(xxviii) Woodhaven, city of, February, 1986.
(xxix) Wyandotte, city of, November, 1977.

The documents listed in this subrule are available in limited quantity at no cost from the local unit of government involved or from the Michigan department of environmental quality, land and water management division, P.O. box 30458, Lansing, Michigan 48909-7958. (2) If approved floodplain delineation reports are not available, or if stream reaches are not covered by such reports, the department shall determine the 100-year frequency flood discharge for defining the floodplain and floodway limits.

History: 1954 ACS 72, Eff. June 22, 1972; 1954 ACS 93, Eff. Oct. 21, 1977; 1979 AC; 1984 MR 8, Eff. Aug. 18, 1984; 1998 MR 5, Eff. May 21, 1998.

R 323.1315 Criteria for determining permissibility of encroachments.

Rule 315. (1) An encroachment in the floodway which, acting alone or in combination with existing or future similar works, may cause harmful interference shall not be approved. In making this determination, an analysis shall be made for a range of discharges up to and including the 100-year flood discharge modified to reflect changes in land use and development reasonably anticipated to occur within the watershed up to twenty years from the date of application.
(2) A bridge or culvert, constructed or reconstructed, shall be capable of passing the 100-year flood without causing harmful interference.
(3) An encroachment in the floodplain, landward of the floodway limits, which, acting alone or in combination with existing or future similar works, does not cause harmful interference may be permitted.
History: 1954 ACS 72, Eff. June 22, 1972; 1954 ACS 93, Eff. Oct. 21, 1977; 1979 AC; 1984 MR 8, Eff. Aug. 18, 1984; 1998 MR 5, Eff. May 21, 1998.

R 323.1316
Source: 1996 AACS.

R 323.1329
Source: 1996 AACS.

PART 17. SOIL EROSION AND SEDIMENTATION CONTROL

R 323.1701 Definitions.
Rule 1701. (1) As used in this part:
(a) "Accelerated soil erosion" means the increased loss of the land surface that occurs as a result of human activities.
(b) "Acceptable erosion and sediment control program" means the activities of a county or local enforcing agency or authorized public agency that are conducted in accordance with these rules and part 91 regarding staff training, developing and reviewing plans, issuing permits, conducting inspections, and initiating compliance and enforcement actions to effectively minimize erosion and off-site sedimentation.
(c) "Designated agent" means a person who has written authorization from the landowner to sign the application and secure a permit in the landowner's name.
(d) "Lake" means the Great Lakes and all natural and artificial inland lakes or impoundments that have definite banks, a bed, visible evidence of a continued occurrence of water, and a surface area of water that is equal to, or greater than, 1 acre. "Lake" does not include sediment basins and basins constructed for the sole purpose of storm water retention, cooling water, or treating polluted water.
(e) "Landowner" means the person who owns or holds a recorded easement on the property or who is engaged in construction in a public right-of-way in accordance with sections 13, 14, 15, and 16 of Act No. 368 of the Public Acts of 1925, as amended, being §§247.183, 247.184, 247.185, and 247.186 of the Michigan Compiled Laws.
(f) "Nonerosive velocity" means a speed of water movement that is not conducive to the development of accelerated soil erosion.
(g) "Part 91" means part 91 of Act No. 451 of the Public Acts of 1994, as amended, being §§324.9101 to 324.9123 of the Michigan Compiled Laws.
(h) "Sediment basin" means a naturally occurring or constructed depression used for the sole purpose of capturing sediment during or after an earth change activity.
(i) "Stabilization" means the establishment of vegetation or the proper placement, grading, or covering of soil to ensure its resistance to soil erosion, sliding, or other earth movement.
(j) "Storm water retention basin" means an area which is constructed to capture surface water runoff and which does not discharge directly to a lake or stream through an outlet. Water leaves the basin by infiltration and evaporation.
(k) "Stream" means a river, creek, or other surface watercourse which may or may not be serving as a drain as defined in Act No. 40 of the Public Acts of 1956, as amended, being §280.1 et seq. of the Michigan Compiled Laws, and which has definite banks, a bed, and visible evidence of the continued flow or continued occurrence of water, including the connecting waters of the Great Lakes.

(l) "Temporary soil erosion and sedimentation control measures" means interim control measures which are installed or constructed to control soil erosion and sedimentation and which are not maintained after project completion.
(m) "Permanent soil erosion and sedimentation control measures" means control measures which are installed or constructed to control soil erosion and sedimentation and which are maintained after project completion.
(2) The terms defined in part 91 have the same meanings when used in these rules.
History: 1954 ACS 81, Eff. Jan. 1, 1975; 1979 AC; 1998 MR 7, Eff. July 15, 1998.

R 323.1702 Earth change requirements generally.

Rule 1702. (1) A person shall conduct an earth change in a manner that will effectively reduce accelerated soil erosion and resulting sedimentation.
(2) A person engaged in an earth change identified in R 323.1704 shall plan, implement, and maintain acceptable soil erosion and sedimentation control measures in conformance with part 91, which effectively reduce accelerated soil erosion and off-site sedimentation.
(3) A person shall set forth soil erosion and sedimentation control measures in a plan as prescribed by R 323.1703. A person shall make the plan available for inspection at all times at the site of the earth change. The department, or its designated representative, may require the county or local enforcing agency to file a copy of the plan with the department.
(4) A person shall obtain a permit containing state prescribed information, as required by R 323.1707, and make the permit available for inspection at the site of the earth change.
History: 1954 ACS 81, Eff. Jan. 1, 1975; 1979 AC; 1998 MR 7, Eff. July 15, 1998.

R 323.1703 Soil erosion and sedimentation control plan requirements.

Rule 1703. A person shall prepare a soil erosion and sedimentation control plan for any earth change identified in R 323.1704. A person shall design the plan to effectively reduce accelerated soil erosion and sedimentation and shall identify factors that may contribute to soil erosion or sedimentation, or both. The plan shall include, but not be limited to, all of the following:
(a) A map or maps at a scale of not more than 200 feet to the inch or as otherwise determined by the county or local enforcing agency. A map shall include a legal description and site location sketch that includes the proximity of any proposed earth change to lakes or streams, or both; predominant land features; and contour intervals or slope description.
(b) A soils survey or a written description of the soil types of the exposed land area contemplated for the earth change.
(c) Details for proposed earth changes, including all of the following:
(i) A description and the location of the physical limits of each proposed earth change.
(ii) A description and the location of all existing and proposed on-site drainage and dewatering facilities.
(iii) The timing and sequence of each proposed earth change.
(iv) The location and description for installing and removing all proposed temporary soil erosion and sediment control measures.
(v) A description and the location of all proposed permanent soil erosion and sediment control measures.
(vi) A program proposal for the continued maintenance of all permanent soil erosion and sediment control measures that remain after project completion, including the designation of the person responsible for the maintenance. Maintenance responsibilities shall become a part of any sales or exchange agreement for the land on which the permanent soil erosion control measures are located.
History: 1954 ACS 81, Eff. Jan. 1, 1975; 1979 AC; 1998 MR 7, Eff. July 15, 1998.

R 323.1704 Permit requirements.

Rule 1704. (1) A landowner or designated agent who contracts for,
allows, or engages in, an earth change in this state shall obtain a permit from the appropriate enforcing agency before commencing an earth change which disturbs 1 or more acres of land or which is within 500 feet of the water's edge of a lake or stream, unless exempted in R 323.1705.

(2) An earth change activity that does not require a permit under subrule (1) of this rule is not exempt from enforcement procedures under part 91 or these rules, if the activity exempted by subrule (1) of this rule causes or results in a violation of part 91 or these rules.
History: 1954 ACS 81, Eff. Jan. 1, 1975; 1979 AC; 1998 MR 7, Eff. July 15, 1998.

R 323.1705 Permit exemptions and waivers.

Rule 1705. (1) A permit is not required for any of the following:
(a) A beach nourishment project permitted under part 325 of Act No. 451 of the Public Acts of 1994, as amended, being § 324.32501 et seq. of the Michigan Compiled Laws.
(b) Normal road and driveway maintenance, such as grading or leveling, that does not increase the width or length of the road or driveway and that will not contribute sediment to lakes or streams.
(c) An earth change of a minor nature that is stabilized within 24 hours of the initial earth disturbance and that will not contribute sediment to lakes or streams.
(d) Installation of oil, gas, and mineral wells under permit from the supervisor of wells if the owner-operator is found by the supervisor of wells to be in compliance with the conditions of part 91.
(2) A county or local enforcing agency may grant a permit waiver for an earth change after receiving a signed affidavit from the landowner stating that the earth change will disturb less than 225 square feet and that the earth change will not contribute sediment to lakes or streams.
(3) Exemptions provided in subrules (1) and (2) of this rule shall not be construed as exemptions from enforcement procedures under part 91 or these rules, if the activities exempted by subrules (1) and (2) cause or result in a violation of part 91 or these rules.
History: 1954 ACS 81, Eff. Jan. 1, 1975; 1979 AC; 1998 MR 7, Eff. July 15, 1998.

R 323.1706 Application for permit.

Rule 1706. (1) A landowner or designated agent shall submit an application for a permit to the appropriate enforcing agency.
(2) A landowner or designated agent shall submit, with the application, a soil erosion and sedimentation control plan and any other document that the appropriate enforcing agency may require.
(3) The county or local enforcing agency shall provide an application requiring state prescribed information to an applicant.
(4) An authorized public agency is exempt from obtaining a permit from a county or local enforcing agency, but shall notify the county or local enforcing agency of each proposed earth change.
History: 1954 ACS 81, Eff. Jan. 1, 1975; 1979 AC; 1998 MR 7, Eff. July 15, 1998.

R 323.1707 Application review and permit procedures.

Rule 1707. (1) A person who is designated by the county or local enforcing agency and who is trained in soil erosion and sedimentation control methods and techniques shall review and approve a soil erosion and sedimentation control plan.
(2) The appropriate enforcing agency shall approve, disapprove, or require modification of an application for an earth change permit within 30 calendar days following receipt of the application. The enforcing agency shall notify an applicant of approval by first-class mail. If an application is disapproved, then the enforcing agency shall advise the applicant by certified mail of its reasons for disapproval and conditions required for approval. The enforcing agency need not notify an applicant of approval or disapproval by mail if the applicant is given written approval or disapproval of the application in person. A permit given to the applicant either in person or by first-class mail constitutes approval. (3) If an earth change is under the jurisdiction of 2 or more local or county enforcing agencies, then the department shall act as the enforcing agency.
(4) A permit that contains state-prescribed information shall be used by each county or local enforcing agency and shall include any additional provisions required by the county or local enforcing agency. The permit shall be available at the site of the earth change for inspection.

(5) Upon a determination that a permit applicant has met all of the requirements of these rules, part 91, and the local ordinance, if applicable, the appropriate enforcing agency shall issue a permit for the proposed earth change.
History: 1954 ACS 81, Eff. Jan. 1, 1975; 1979 AC; 1998 MR 7, Eff. July 15, 1998.

R 323.1708 Soil erosion and sedimentation control procedures and measures generally.

Rule 1708. A person who applies for an earth change permit shall incorporate the soil erosion and sedimentation control procedures and measures prescribed by R 323.1709 and R 323.1710 into the soil erosion and sedimentation control plan and shall apply the procedures and measures to all earth changes identified in the plan, unless the person preparing the plan shows, to the satisfaction of the appropriate enforcing agency, that altering the control procedures or measures or including other control procedures or measures will prevent accelerated soil erosion and sedimentation during the earth change.
History: 1954 ACS 81, Eff. Jan. 1, 1975; 1979 AC; 1998 MR 7, Eff. July 15, 1998.

R 323.1709 Earth change requirements: time; sediment removal; design, installation, and removal of temporary or permanent control measures.

Rule 1709. (1) A person shall design, construct, and complete an earth change in a manner that limits the exposed area of any disturbed land for the shortest possible period of time as determined by the county or local enforcing agency.
(2) A person shall remove sediment caused by accelerated soil erosion from runoff water before it leaves the site of the earth change.
(3) A person shall design a temporary or permanent control measure that is designed and constructed for the conveyance of water around, through, or from the earth change area to limit the water flow to a nonerosive velocity.
(4) A person shall install temporary soil erosion and sedimentation control measures before or upon commencement of the earth change activity and shall maintain the measures on a daily basis. A person shall remove temporary soil erosion and sedimentation control measures after permanent soil erosion measures are in place and the area is stabilized. A person shall stabilize the area with permanent soil erosion control measures under approved standards and specifications as prescribed by R 323.1710.
(5) A person shall complete permanent soil erosion control measures for all slopes, channels, ditches, or any disturbed land area within 5 calendar days after final grading or the final earth change has been completed. If it is not possible to permanently stabilize a disturbed area after an earth change has been completed or if significant earth change activity ceases, then a person shall maintain temporary soil erosion and sedimentation control measures until permanent soil erosion control measures are in place and the area is stabilized.
History: 1954 ACS 81, Eff. Jan. 1, 1975; 1979 AC; 1998 MR 7, Eff. July 15, 1998.

R 323.1710 Standards and specifications.

Rule 1710. A person shall complete all temporary and permanent erosion and sedimentation control measures according to the approved plan or operating procedures.
(1) A person shall install and maintain control measures in accordance with the standards and specifications of all of the following:
(a) The product manufacturer.
(b) The local conservation district.
(c) The department.
(d) The Michigan department of transportation.
(e) The enforcing agency, if applicable and formally adopted.
(2) If a conflict exists between the standards and specifications, then the enforcing agency or authorized public agency shall determine which specifications are appropriate for the project.
History: 1954 ACS 81, Eff. Jan. 1, 1975; 1979 AC; 1998 MR 7, Eff. July 15, 1998.

R 323.1711 Building permits.

Rule 1711. (1) A local agency or general law township that issues building permits shall notify the county or local enforcing agency immediately upon receipt of an application for a building permit that requires an earth change which disturbs 1 or more acres or which is located within 500 feet of a lake or stream.
(2) A local agency or general law township shall not issue a building permit to a person engaged in an earth change if the change requires a permit under part 91 or these rules until the county or local enforcing agency has issued the required state-prescribed permit for the earth change.
History: 1954 ACS 81, Eff. Jan. 1, 1975; 1979 AC; 1998 MR 7, Eff. July 15, 1998.

R 323.1712 Enforcement.
Rule 1712. The county or local enforcing agency may issue a cease
and desist order or revoke a permit upon its finding that there is a violation of part 91, these rules, or an approved local ordinance or a finding that there is a violation of a permit or an approved soil erosion and sedimentation control plan.
History: 1954 ACS 81, Eff. Jan. 1, 1975; 1979 AC; 1998 MR 7, Eff. July 15, 1998.

R 323.1713 Periodic review.
Rule 1713. The department shall conduct an ongoing comprehensive review and evaluation of all soil erosion and sedimentation control programs that operate under part 91 and these rules. The department shall notify county and local enforcing agencies and authorized public agencies as to the acceptability of their soil erosion and sedimentation control programs. The department shall make available a report of its findings of the review and evaluation of all enforcing agencies and authorized public agencies.
History: 1954 ACS 81, Eff. Jan. 1, 1975; 1979 AC; 1998 MR 7, Eff. July 15, 1998.

R 323.1714 Availability of documents.
Rule 1714. Copies of the local conservation district standards and specifications for soil erosion and sedimentation control, as referred to in R 323.1710, are available at each local conservation district office at a nominal cost. Copies of the department's standards are available from the surface water quality division's Lansing office. Department of transportation standards are available at the Lansing office for a fee. Information on other standards may be available from product manufacturers and the enforcing agencies.
History: 1954 ACS 81, Eff. Jan. 1, 1975; 1979 AC; 1998 MR 7, Eff. July 15, 1998.

PART 21. WASTEWATER DISCHARGE PERMITS

R 323.2102
Source: 1992 AACS.

R 323.2103
Source: 1992 AACS.

R 323.2104
Source: 1992 AACS.

R 323.2109
Source: 1992 AACS.

R 323.2159
Source: 1985 AACS.

R 323.2161
Source: 1992 AACS.

R 323.2162
Source: 1997 AACS.

R 323.2163—R 323.2170
Source: 1997 AACS.

R 323.2172, R 323.2173
Source: 1997 AACS.

R 323.2174—R 323.2176
Source: 1997 AACS.

R 323.2177—R 323.2179
Source: 1997 AACS.

R 323.2180—R 323.2185
Source: 1997 AACS.

R 323.2186
Source: 1997 AACS.

R 323.2189
Source: 1995 AACS.

R 323.2190
Source: 1992 AACS.

R 323.2191
Source: 1992 AACS.

R 323.2192
Source: 1992 AACS.

R 323.2193 National Permit Clean Corporate Citizen Benefits

Rule 2193. An establishment that has been designated as a clean corporate citizen by the department under R 324.1504 is eligible for the following benefits related to national permits:

(a) A clean corporate citizen applying for reissuance of a national permit may certify that the previous application information, or a portion of the application, is still representative of the discharge, and need not provide new discharge monitoring information, unless there have been changes in state or federal application requirements including, but not limited to, the adoption of or modification to analytical methods under 40 CFR 136, since the previous application was submitted. The department may request additional information as necessary to process the permit.

(b) When applying for a national permit for a new wastewater discharge that is not covered by a federal technology-based treatment standard, a clean corporate citizen may provide its determination of best professional judgment (BPJ) for technology-based effluent limitations for the case-by-case determinations required under section 402(a)(1) of the federal act. The department will review and use the clean corporate citizen's determination of BPJ for purposes of a draft permit, unless the determination is inconsistent with state or federal regulations or is contrary to known technology previously used in setting BPJ permit limitations.

(c) A clean corporate citizen that qualifies for coverage under a general permit as provided in R 323.2191 is not required to obtain an individual national permit solely because it is designated as a major discharge by the United States Environmental Protection Agency.

(d) A nonmunicipal clean corporate citizen may construct and utilize wastewater treatment processes to comply with effluent limitations of a national permit without department approval of the plans and specifications for the wastewater treatment processes.

(e) The department shall not conduct more than 1 comprehensive sampling inspection during the effective period of the national permit for a clean corporate citizen, unless the department has reason to believe that the permittee is not in compliance with any applicable statute, rule, national permit, or enforcement order.

(f) The national permit for a clean corporate citizen shall include a provision allowing the director or his or

her authorized representative to reduce, but not eliminate, the monitoring frequency of parameters specified in the permit. The director or his or her authorized representative may reduce monitoring. Reduced monitoring shall be sufficient to determine compliance and will be conditioned on continued compliance with parameter limitations. If reduced monitoring identifies a violation of a parameter limitation, then the permit shall provide for an increase in monitoring until compliance is regained. A clean corporate citizen shall submit a request for reduced monitoring to the department in writing. Approval of reduced monitoring under this rule is not subject to the requirements in R 323.2159.

(g) Unless otherwise required by the director or the director's authorized representative, or as necessary for a complete application for national permit reissuance, upon request, the director or the director's authorized representative shall authorize a clean corporate citizen to submit discharge monitoring reports on an annual basis. This provision does not abrogate the permittee's responsibility to report instances of noncompliance required to be reported by statute, rule, national permit, or enforcement order.

(h) The department shall expedite its response to a request from a clean corporate citizen to use a water treatment additive.

History: 2000 MR 3, Eff. Mar. 24, 2000.

R 323.2194 State Permit Clean Corporate Citizen Benefits

Rule 2194. An establishment that has been designated as a clean corporate citizen by the department under R 324.1504 is eligible for the following benefits related to state permits:

(a) A clean corporate citizen applying for a new state permit, permit renewal, or permit modification may request the department to accelerate the application review. All of the following provisions apply to the request:

(i) A clean corporate citizen shall request an accelerated review in writing.

(ii) A clean corporate citizen shall submit an administratively complete application under R 323.2108 for the unit to be permitted.

(iii) A clean corporate citizen or its authorized agent shall sign the written request.

(iv) The department shall approve the request for an accelerated permit application review within 15 calendar days after receipt of the request and required information, unless, within the 15-calendar-day period, the request is either denied in writing for cause by the department or an extension of up to 15 additional calendar days is specified in writing by the department. If the department fails to make its decision within the extended time period, then the request for an accelerated permit application review is automatically approved at the end of the extended time period.

(v) If the accelerated permit application review is approved, then the department shall complete a review of the application within 30 calendar days and recommend either that the permit be issued with or without special conditions or that the permit be denied.

(vi) If the department recommends that the permit be issued, then the department shall provide a copy of the draft permit to the applicant and publish the public notice required under R 323.2117. The department shall issue or deny the permit within 15 calendar days after the conclusion of the public comment period, unless substantial new issues are raised during the comment period or hearing.

(vii) If the department recommends that the permit be denied, then the department shall notify the applicant, in writing, of the deficiencies that caused the application to be denied. The department may extend the 30 day accelerated review period if an extension is requested by the applicant within 10 calendar days to address those deficiencies.

(viii) If an extension is granted, an applicant will have 30 days to address the application deficiencies. If the applicant sufficiently addresses the deficiencies, then the department shall proceed with the issuance of the permit. If the applicant does not sufficiently address the deficiencies, then the department may proceed with permit denial or may place the application in lower priority status to afford the clean corporate citizen additional time to address the deficiencies.

(b) The department may authorize a clean corporate citizen to reduce the required frequency of effluent and groundwater monitoring at an existing facility by up to 50%. All of the following provisions apply to reduced monitoring:

(i) The department may reduce the effluent and groundwater monitoring requirements as outlined in the permit if all of the following criteria are met:

(A) The effluent limits set forth in the permit have been consistently met over a period of 1 year or over 12 sampling events.
(B) The groundwater limits set forth in the permit have been consistently met for 4 consecutive sampling events.
(C) The point of compliance for measuring groundwater impact is not more than 150 feet from the discharge point.
(ii) Upon request by a clean corporate citizen, the department shall provide its decision to reduce effluent and groundwater monitoring within 30 days of receipt of documentation that the criteria specified in subparagraphs (A) to (C) of this paragraph have been met.
(iii) The reduced monitoring specified in writing by the department supersedes the monitoring frequency set forth in the permit. However, upon notice from the department that an effluent or groundwater permit limit has been or is being exceeded, the original sampling frequency as specified in the permit shall immediately resume.
(c) After notice to the department, unless disapproved by the department within 30 days, a clean corporate citizen may reduce the monitoring or reporting requirements, or both, for upgradient wells specified in a permit to a frequency of once per year unless or until either of the following occurs:
(i) An effluent or groundwater permit limit is exceeded. If an exceedance of a permit limit in the effluent or the groundwater as a result of monitoring downgradient wells is found, then a clean corporate citizen shall immediately sample and monitor the upgradient well or wells and analyze the sample in accordance with requirements for sampling and analysis set forth in the permit. A clean corporate citizen shall continue the frequency of monitoring and reporting for the upgradient well or wells in accordance with the permit until the clean corporate citizen can demonstrate to the department that the problem that caused the exceedance has been resolved. Once the clean corporate citizen has demonstrated that the problem that caused the exceedance has been resolved, the clean corporate citizen may request the department to authorize reduced monitoring as specified in this subdivision.
(ii) The permit expires.
(d) After notice to the department, unless disapproved by the department within 45 days, a clean corporate citizen may use a product that is not specified in the current permit if an approved toxicologist certifies that the discharge would not violate the discharge standards in R 323.2222 as a result of using the product. All of the following provisions apply to the use of a product that is not specified in the current permit:
(i) The department may approve a toxicologist for certifying a discharge if the toxicologist meets all of the following qualifications and if proof of the qualifications is provided to the department in writing:
(A) The toxicologist possesses, at a minimum, a Master of Science degree in toxicology.
(B) The toxicologist has at least 1 year of experience conducting toxicological reviews.
(C) The toxicologist has a minimum of 1 year of practical experience in evaluating biological and chemical data to determine the potential impact to humans and other living organisms.
(ii) Except for standards developed under R 323.2222(2)(c)(ii) soil treatment) of the Part 22 rules, a toxicologist who meets all of the criteria in paragraph (i)(a), (b), and (c) of this subdivision may review and certify product changes for a clean corporate citizen if both of the following occur:
(A) The toxicologist follows the procedures in R 323.2220 for determining wastewater characteristics.
(B) The toxicologist certifies that the discharge standards for each chemical constituent determined to be in the discharge meet the limits in R 323.2222.
(iii) The notice in this subdivision shall include copies of all documentation and materials used by the toxicologist to certify the product change.
(iv) If, at anytime after the 45-day period specified in this subdivision, the department determines that the use of a product should be discontinued, then, upon written notification by the department, the clean corporate citizen shall either discontinue use of the product within 30 days or reduce the concentrations of the product to meet the applicable standards in R 323.2222. The clean corporate citizen shall notify the department by the end of the 30 day-period of its decision regarding the use of the product. If the concentration is reduced, the clean corporate citizen shall submit documentation to the department which demonstrates that the reduced concentrations are consistent with the discharge standards in R 323.2222.
(e) R 323.2150 notwithstanding, a clean corporate citizen may petition the department to extend the expiration date for an existing permit for a period of up to 5 years if the clean corporate citizen can

demonstrate that its facility has consistently maintained compliance with its permit for the preceding 5 years. All of the following provisions apply to a permit extension:
(i) To receive a permit extension, the clean corporate citizen shall provide all of the following information to the department:
(A) A written request for the permit extension that specifies the duration of the extension. A clean corporate citizen shall submit the extension request to the department not less than 180 days before the expiration date of the current permit.
(B) A summary of reports on monitoring data and other required facility operations which demonstrates that the facility has consistently complied with its permit requirements for the preceding 5 years.
(C) A certification that the current discharges are fully and accurately represented in the most recent permit application.
(ii) The written request for an extension satisfies the requirements for timely application for permit renewal. If the department determines that the criteria in paragraph (i) of this subdivision has been met, then the department shall extend the expiration date for the permit for the period of time requested, but not for more than 5 years.
(iii) If the department determines that the clean corporate citizen meets the necessary criteria to qualify for a permit extension, then within 30 days of making the determination the department shall publish a public notice stating that the department proposes to extend the existing permit. The notice shall also include the proposed new expiration date.
(iv) The department shall extend the permit expiration date at the end of the public notice period unless either of the following occurs:
(A) The department determines that the clean corporate citizen does not meet the criteria in paragraph (i) of this subdivision.
(B) Based on comments received during the public comment period or other information, the department determines that further review of the permit is needed or that changes to the permit may be needed, or both, before extending the expiration date.
(v) The department shall not extend a permit more than 5 additional years.
(f) A nonmunicipal clean corporate citizen qualifies for a reduction in design reviews for industrial treatment processes by the department. This subdivision pertains to design reviews specified by rules or permit, including, but not limited to, the preliminary basis of designs, new technologies, and alternative treatment systems.
(g) A nonmunicipal clean corporate citizen may construct and utilize wastewater treatment processes to comply with permit requirements without department approval of the plans and specifications for the wastewater treatment process if all of the following provisions are satisfied:
(i) All process equipment is the proper size and type for the intended application.
(ii) Proper staffing, operation, and maintenance requirements have been specified for the facility.
(iii) The facility is designed to meet all permit limits when operated and maintained as specified.
History: 2000 MR 3, Eff. Mar. 24, 2000.

R 323.2195 Termination of Benefits.

Rule 2195. Upon termination of a clean corporate citizen designation, the department shall terminate or restrict all benefits provided to a former clean corporate citizen under R 323.2193 and R 323.2194 as provided in this part and as determined by the director.
History: 2000 MR 3, Eff. Mar. 24, 2000.

PART 22. GROUNDWATER QUALITY

R 323.2201 Definitions; A to L.

Rule 2201. As used in these rules:
(a) "Act" means Act No.451 of the Public Acts of 1994, as amended, being §324.101 et seq. of the Michigan Compiled Laws, and known as the natural resources and environmental protection act.

(b) “Additive” means a substance added to water to enhance its effectiveness for uses such as, but not limited to, cleaning, disinfecting, heating, and cooling. A substance may be added to water directly or indirectly by being added to a process in such a way that it becomes a constituent of the wastewater.
(c) “Aquifer” means a geological formation, group of formations, or part of a formation capable of yielding significant quantities of groundwater to wells or springs.
(d) “Background” groundwater quality means the concentration or level of a substance in groundwater within an aquifer and hydraulically connected aquifers at the site receiving a discharge, if the aquifer has not been impacted by a discharge caused by human activity.
(e) “Cluster well” means a grouping of more than 1 well at a single location where the screen for each well in the group is set either at a different depth within the same aquifer or set in different aquifers separated by a confining or semi-confining layer.
(f) “Controlled application” means the noninjurious application of a substance for its intended purpose in accordance with the manufacturer's recommendations or normally accepted or regulated practices.
(g) “Department” means the department of environmental quality or a local health department that has been certified to exercise the pertinent authority under R 323.2209.
(h) ”Designated wellhead protection area” means a specific geographic area which is approved by the department as the surface and subsurface area surrounding a water well or well field that supplies a public water system and through which contaminants are reasonably likely to move toward and reach the water well or well field.
(i) “Discharge” means any direct or indirect discharge of any of the following into the groundwater or on the ground:
(i) Waste.
(ii) Waste effluent.
(iii) Wastewater.
(iv) Pollutant.
(v) Cooling water.
(vi) A combination of the items specified in paragraphs (i) to (v) of this subdivision.
(j) “Discharger” means a person who directly or indirectly discharges any of the following into the groundwater or on the ground:
(i) Waste.
(ii) Waste effluent.
(iii) Wastewater.
(iv) Pollutant.
(v) Cooling water.
(vi) A combination of the items specified in paragraphs (i) to (v) of this subdivision.
For a treatment facility that has been or is being closed, the discharger is the person who formerly discharged at the site while using the facility or is the owner of the facility, or both.
(k) “Domestic activity” means an activity which normally takes place as a result of occupying a household, but which does not include a commercial or industrial activity conducted in a household.
(l) “Domestic equivalent activity” means an activity at a commercial, municipal, or industrial facility, such as lawn watering, that is comparable to a domestic activity.
(m) “Effluent” means waste or wastewater during or subsequent to treatment but before discharge.
(n) “Existing groundwater quality” means the concentration or level of a substance in groundwater within an aquifer and hydraulically connected aquifers at the site receiving the discharge whether or not it is impacted by human activity. A discharge or release by the applicant or a predecessor in interest of the applicant cannot be considered in determining existing groundwater quality.
(o) "General purpose floor drain" means a point source, such as a pipe, conduit, or other conveyance, that originates in a structure and discharges, or is capable of discharging, a release defined by part 201 or waste or wastewater not authorized under these rules either directly or indirectly to the ground or groundwater.
(p) “Groundwater” means water below the land surface in a zone of saturation.
(q) “Hydrogeological report” means a document presenting and interpreting field information or published hydrogeologic information, or both, gathered at a location for the purpose of describing the existing hydrogeologic conditions and predicting the potential impact on waters of the state from a discharge at the

location.
(r) "Influent" means the wastewater received by or generated at a facility before treatment.
(s) "Injurious" means any damage to or change in the condition of background groundwater quality that causes or may cause groundwater to no longer be fit for 1 or more protected uses.
(t) "Local health department" means a county, district, or city health department.

R 323.2202 Definitions; M to P.

Rule 2202. As used in these rules:
(a) "Monitoring well" means a well that is specifically designed and located to allow for the collection of hydrogeologic data and representative samples in order to measure the impact of a discharge on groundwater.
(b) "Noncontact cooling water" means water used for cooling that does not come into direct contact with any of the following:
(i) Raw material.
(ii) Intermediate product.
(iii) By-product.
(iv) Waste product.
(v) Finished product.
(c) "Nuisance conditions" means conditions that cause a substantial unreasonable interference with another person's use or enjoyment of the person's property, including but not limited to, interference caused by any of the following:
(i) Odors.
(ii) Vectors.
(iii) Noise.
(iv) Pathogens.
(v) Changes in aesthetic qualities of groundwater.
(d) "Observation well" means a well that is specifically designed and located to allow for the determination of existing hydrogeological conditions.
(e) "Parameters" means the specific characteristics describing the physical, chemical, biological, and radiological conditions of influent, effluent, or groundwater.
(f) "Part 31" means part 31 of the act, water resources protection, being §§324.3101 to 324.3119 of the Michigan Compiled Laws.
(g) "Part 111" means part 111 of the act, hazardous waste management, being §§324.11101 to 324.11152 of the Michigan Compiled Laws.
(h) "Part 115" means part 115 of the act, solid waste management, being §§324.11501 to 324.11549 of the Michigan Compiled Laws.
(i) "Part 201" means part 201 of the act, environmental remediation, being §§324.20101 to 324.20141 of the Michigan Compiled Laws.
(j) "Part 213" means part 213 of the act, leaking underground storage tanks, being §§324.21301 to 324.21331 of the Michigan Compiled Laws.
(k) "Part 615" means part 615 of the act, supervisor of wells, being §§324.61501 to 324.61527 of the Michigan Compiled Laws.
(l) "Person" means an individual, partnership, corporation, association, governmental entity, or other legal entity.
(m) "Pollutant" means any substance that may adversely affect a protected use of waters of the state.
(n) "Protected uses" means uses of groundwater and interests related to groundwater quality specified in section 3109(1) of the act including all of the following uses:
(i) Public health, safety, and welfare.
(ii) Domestic, commercial, industrial, agricultural, recreational, and other uses that are being made or may be made of groundwater.
(iii) The value or utility of riparian lands.
(iv) Livestock, wild animals, birds, fish, and aquatic life or plants or the growth or propagation of, and the value in, livestock, wild animals, birds, fish, and aquatic life or plants.

R 323.2203 Definitions; R to W.

Rule 2203. As used in these rules:

(a) "Remediation plan" means a remedial action plan approved by the department under part 115, 201, or 615, a corrective action plan prepared by the qualified consultant and certified professional under part 213, or a corrective action plan or closure plan approved by the department under part 111.

(b) "Sanitary sewage" means treated or untreated wastes that contain only human metabolic wastes or wastes generated and discharged as a result of domestic or restaurant activities.

(c) "Secondary containment facility" means a unit, other than the primary container in which polluting material is packaged or held, which is designed and constructed so that the polluting material cannot escape from the unit by gravity through sewers, drains, or other means directly or indirectly into a sewer system or to the waters of the state.

(d) "Solum" means soil from the surface to a maximum depth of 60 inches.

(e) "Standard" means an effluent or groundwater quality standard established under R 323.2222.

(f) "Substance" means any of the following that may be injurious or that can be used as a parameter to determine water quality:

(i) A naturally occurring or human-produced chemical.

(ii) A solid, liquid, semisolid, dissolved solid or gaseous material.

(iii) A virus or biological organism.

(iv) A metabolite, degradation product, or waste product.

(g) "Surface water" means all waters of the state excluding groundwater, but does not include drainageways and ponds used solely for wastewater conveyance, treatment, or control.

(h) "Total inorganic nitrogen" means the total of ammonia plus nitrate plus nitrite expressed as nitrogen.

(i) "Totals analysis" means the concentration of a substance in a medium such as soil or sediments based on the weight of the substance per dry weight of the medium and usually expressed in milligrams of the substance per kilogram dry weight of the medium.

(j) "Unusable aquifer" means an aquifer that is not a usable aquifer.

(k) "Usable aquifer" means an aquifer, or that portion of a formation hydraulically connected to an aquifer, that is capable of providing water in sufficient quantity and of satisfactory quality to serve 1 or more protected uses. Usable aquifers do not include aquifers from which minerals, oil, or gas is extracted or fluids are injected and regulated by part 615 or part 625 of the act, mineral wells, being §§324.62501 to 324.62518 of the Michigan Compiled Laws.

(l) "Venting" means the recharging of surface water by groundwater.

(m) "Unsaturated soil column" means the depth of unconsolidated material from the ground surface to the top of the highest seasonal groundwater table.

(n) "Waste" means any waste, wastewater, waste effluent, or pollutant that is discharged into water, including any of the following:

(i) Industrial, municipal, and agricultural waste.

(ii) Dredged spoil.

(iii) Solid waste.

(iv) Incinerator residue.

(v) Sewage.

(vi) Garbage.

(vii) Sewage sludge.

(viii) Munitions.

(ix) Chemical wastes.

(x) Biological materials.

(xi) Radioactive materials.

(xii) Heat.

(xiii) Wrecked or discarded equipment.

(xiv) Rock.

(xv) Sand.

(xvi) Cellar dirt.

(o) "Wastewater" means liquid waste discharged directly or indirectly into the waters of the state or onto the ground that results from industrial and commercial processes or municipal operations, including liquid or water-carried process waste, cooling and condensing waters, and sanitary sewage.
(p) "Waters of the state" means any of the following:
(i) Groundwater.
(ii) Lakes, including the Great Lakes bordering the state.
(iii) Rivers.
(iv) Streams.
(v) All other water courses and bodies of water within the jurisdiction of the state, including wetlands as defined by part 303 of the act, wetlands protection, being §§324.30301 to 324.30323 of the Michigan Compiled Laws.
(q) "Well" means a properly designed and constructed hydraulic structure that permits the measurement or withdrawal of groundwater from an aquifer.

R 323.2204 Discharge requirements.

Rule 2204.(1) A person may discharge provided the requirements of this rule are met.
(2) To be authorized under this part, a person shall comply with the following discharge requirements unless otherwise specifically provided:
(a) The discharge shall not be, or not be likely to become, injurious.
(b) The discharge shall not cause runoff to, ponding on, or flooding of adjacent property, shall not cause erosion, and shall not cause nuisance conditions.
(c) The point of discharge shall be located not less than 100 feet inside the boundary of the property where the discharge occurs, unless the discharge is authorized in R 323.2210, R 323.2211, or R 323.2213 or unless a lesser distance is specifically approved by the department in the authorization issued under these rules.
(d) Except for a discharge authorized by R 323.2210, the discharge shall be isolated from water supply wells as follows:
(i) For a discharge authorized by R 323.2211, R 323.2213, R 323.2215, or R 323.2216, the discharge shall be a minimum of 200 feet from a type I or type IIa water supply well, 75 feet from a type IIb or III water supply well in accordance with Act No. 399 of the Public Acts 1976, as amended, being §325.1001 et seq. of the Michigan Compiled Laws, and known as the safe drinking water act, and 50 feet from any domestic well in accordance with part 127 of Act No. 368 of the Public Acts of 1978, as amended, being §§333.12701 to 333.12715 of the Michigan Compiled Laws. The department may require a lesser or greater isolation distance in an individual case based on groundwater flow direction, volume, and constituents of contamination of the discharge; geological, surface, and other site conditions; and the degree of threat to the well or wells.
(ii) For a discharge authorized by R 323.2218, the discharge shall be a minimum of 2,000 feet from a type I or type IIa water supply well, 800 feet from a type IIb or III water supply well in accordance with Act No. 399 of the Public Acts 1976, as amended, being §325.1001 et seq. of the Michigan Compiled Laws, and known as the safe drinking water act, and 300 feet from a domestic well in accordance with part 127 of Act No. 368 of the Public Acts of 1978, as amended, being §§333.12701 to 333.12715 of the Michigan Compiled Laws. The department may authorize a lesser or greater isolation distance in an individual case based on groundwater flow direction, volume, and constituents of the discharge; geological, surface, and other site conditions; and the degree of threat to the well or wells.
(e) The discharge shall be consistent with the requirements of R 323.1041 to R 323.1117.
(f) Except for a discharge authorized under R 323.2222(7)(b) or R 323.2224(2), the discharge shall not create a facility as defined in part 201. A discharge authorized under R 323.2218 for which compliance is measured only in groundwater will not be considered a facility under this provision based on a measurement between the point of discharge and a point of compliance determined according to R 323.2224(1).
(3) For a discharge to meet the requirements of section 3112(1) of the act, authorization must be granted in conformance with the applicable procedural requirements of R 323.2208 and a person shall be authorized by 1 or more of the following:
(a) An exemption established by R 323.2210.
(b) A permit by rule established in R 323.2211 or R 323.2213.

(c) A general permit issued under R 323.2215.
(d) A permit issued under R 323.2216 or R 323.2218.

R 323.2205 Discharge prohibitions.

Rule 2205.(1) A person shall not discharge without an authorization under R 323.2204.
(2) A person shall not discharge through a general purpose floor drain unless authorized by R 323.2210(v) or under R 323.2215 or R 323.2218.
(3) A person shall not discharge wastewater originating from a structure within 200 feet of an available public sanitary sewer system, except for a discharge of noncontact cooling water or a discharge from a groundwater remediation activity. For sanitary sewage, an available public sanitary sewer system is defined by section 12751(a) of Act No. 368 of the Public Acts of 1978, as amended, being §333.12751(a) of the Michigan Compiled Laws. For any other discharge, the department shall make a determination of availability based on the ability of the public sanitary sewer system to treat the wastewater and the costs associated with providing the treatment. Except for sanitary sewage, this subrule does not apply to an existing discharge authorized under the provisions of part 31 at the time of adoption of these rules.

R 323.2206 Applicant responsibilities; compliance schedule; standard for municipal wastewater treatment system; renewal, reissuance, or modification of permit establishing effluent or groundwater limitations.

Rule 2206.(1) It is the responsibility of the applicant to provide the information described in these rules as required or necessary for the department to make a decision.
(2) Failure to comply with the terms and conditions of an authorization to discharge granted under this part, failure to comply with an applicable monitoring or reporting requirement, or discharging in excess of an applicable standard is a violation of this part.
(3) The department shall compile and keep on file a central quarterly listing of all dischargers who have exceeded a standard set by these rules for the concentration of a substance in the effluent or groundwater or who have failed to submit a complete compliance monitoring report as required by a permit. The listing shall identify the discharger and the substance or substances that exceeded the effluent or groundwater standard. In addition, the department shall also maintain records describing the actions taken by the department and the discharger in response to an effluent or groundwater standard being exceeded and the time necessary in each case to return the concentration of the substance in the effluent or groundwater to below the standard set by these rules. The listings and records are subject to Act No. 442 of the Public Acts of 1976, as amended, being §15.231 et seq. of the Michigan Compiled Laws, and known as the freedom of information act.
(4) If necessary to secure compliance with this part by a person discharging to groundwater on the effective date of these rules without causing impracticable disruption of the activity causing the discharge, the department may establish a schedule in a permit under which the discharger shall come into compliance with this part during the term of the permit. The department may not authorize a discharge under this subrule unless the discharge meets the requirements of R 323.2204(2)(a).
(5) A wastewater treatment system shall not be subject to a more stringent standard than that contained in a permit during the depreciation or amortization of the facility for the purposes of section 167 or 169, or both, of the tax reform act of 1986, as amended, 26 U.S.C. §167 or §169, or both, but not longer than 10 years from the date of permit issuance, if the treatment system meets all of the following conditions:
(a) The discharge is appropriately characterized as described in R 323.2220.
(b) The treatment system is constructed after the effective date of these rules to meet all applicable standards described in R 323.2222.
(c) The discharge is permitted under R 323.2218.
(d) The discharge does not create a facility as defined in part 201 at any time during the term described in this subrule.
(6) In the case of effluent or groundwater limitations established under a permit issued by the department before the effective date of these rules, a permit may not be reissued or modified on the basis of a standard described in R 323.2222 that is less stringent than the comparable effluent or groundwater limitation in the previous permit. This restriction does not apply to a standard developed under R 323.2222(2)(c). The

department may grant an exception to this subrule, taking into account the state's paramount concern for the protection of its natural resources or the public trust in those resources from pollution, impairment, or destruction, if 1 of the following provisions applies:
(a) A less stringent standard is necessary because of events over which the discharger does not have control and for which there is no available remedy.
(b) The discharger has installed the treatment facilities required to meet the limitation in the previous permit and has properly operated and maintained the facilities, but has been unable to achieve the previous limitation. In this situation, the reissued or modified permit shall contain a standard that reflects the level of pollutant control actually achieved if the standard is not less stringent than would otherwise be required by R 323.2222.
(c) The discharger demonstrates, and the department finds, that the limitation in the prior permit is not economically achievable. In making this demonstration, the discharger shall demonstrate that the cost of maintaining treatment capability and controls in place is not a feasible and prudent alternative to the use of the standard specified in R 323.2222. The department shall specifically solicit public comments on the demonstration in the public notice accompanying the proposed permit reissuance or modification.
(d) The standard specified in R 323.2222 is less stringent than the prior limitation because the risk posed by the substance has been reevaluated based on new scientific information.

R 323.2207 Designated wellhead protection area.

Rule 2207.(1) For a discharge in a designated wellhead protection area, the department shall do both of the following:
(a) Notify a person seeking authorization under R 323.2211 to R 323.2218 that the proposed discharge is in a designated wellhead protection area.
(b) Notify the pertinent public water supply system manager and local health department that a discharge proposed under R 323.2211 to R 323.2218 is in a designated wellhead protection area.
(2) A discharger in a designated wellhead protection area shall do both of the following:
(a) Provide, to the public water supply system manager, a copy of each monitoring report provided to the department under R 323.2225 or R 323.2227.
(b) Notify the pertinent public water supply system manager when a discharge has exceeded an applicable standard. The notification shall be made within 48 hours of a determination by the discharger that an applicable standard has been exceeded.

R 323.2208 Procedural requirements for authorization to discharge.

Rule 2208.(1) The procedural requirements for the issuance of wastewater discharge permits contained in part 21 of the rules implementing part 31 pertaining to a state permit, being R 323.2101 to R 323.2192, apply to an authorization to discharge as specified in this rule.
(2) For an authorization provided under R 323.2210, the requirements pertaining to a state permit contained in R 323.2102 to 323.2105, R 323.2127, R 323.2149, R 323.2155, and R 323.2160 apply unless the requirements are inconsistent with the terms of this part.
(3) For an authorization provided under R 323.2211 and R 323.2213, the requirements pertaining to a state permit contained in R 323.2102 to R 323.2105, R 323.2114, R 323.2127,
R 323.2149, R 323.2151, R 323.2155, and R 323.2169 apply unless the requirements are inconsistent with the terms of this part.
(4) For an authorization provided under R 323.2215, the requirements pertaining to a state permit contained in R 323.2102 to R 323.2105, R 323.2115, R 323.2117 to R 323.2119, R 323.2121, R 323.2122, R 323.2126, R 323.2127, R 323.2130, R 323.2131, R 323.2149, R 323.2150, R 323.2155, R 323.2159, R 323.2160, and R 323.2162 to R 323.2186 and the requirements pertaining to a permit contained in R 323.2191 and R 323.2192 apply unless the requirements are inconsistent with the terms of this part.
(5) For an authorization provided under R 323.2216, requirements pertaining to a state permit contained in R 323.2102 to R 323.2105, R 323.2106, R 323.2108, R 323.2112, R 323.2114, R 323.2115, R 323.2117, R 323.2124, R 323.2126, R 323.2127, R 323.2130, R 323.2131, R 323.2145 to R 323.2147, R 323.2149 to R 323.2151, R 323.2155, R 323.2159, R 323.2160, and R 323.2162 to R 323.2186 apply unless the requirements are inconsistent with the terms of this part.

(6) For an authorization provided under R 323.2218, the requirements pertaining to a state permit contained in R 323.2102 to R 323.2105, R 323.2106, R 323.2108, R 323.2112, R 323.2114, R 323.2115, R323.2117, R 323.2119, R 323.2121, R 323.2122, R 323.2124, R 323.2126, R 323.2127, R 323.2130, R 323.2131, R 323.2145 to R 323.2147, R 323.2149 to R 323.2151, R 323.2155, R 323.2159, R 323.2160, and R 323.2162 to R 323.2186 apply unless the requirements are inconsistent with the terms of this part.

R 323.2209 Department authorization of local health department to conduct certain activities.

Rule 2209.(1) The department may authorize a local health department to conduct the following activities for the department if the conditions in subrule (2) of this rule are met:

(a) Inspect facilities authorized to discharge under this part or facilities discharging in violation of this part and notify the owner or operator of the facility of violations of this part.

(b) Recommend to the department a decision on an authorization described in R323.2215 and R323.2216. Before making the recommendation, the local health department shall follow the procedures described in this part.

(2) To be authorized for the activities described in subrule (1) of this rule, a local health department shall be in compliance with all of the following provisions:

(a) Possess adequate legal authority to conduct the activities authorized.

(b) Possess sufficient funding and adequately trained and experienced staff, as determined by the department, to fully and competently perform the activities to be authorized.

(c) Conduct the activities according to the terms and conditions of this part.

(3) The department shall authorize a local health department to conduct activities under this rule pursuant to all of the following procedures:

(a) To request authorization, a local health department shall provide information determined necessary, and in a manner and at a time specified, by the department. In requesting authorization, the local health department may apply to conduct some or all activities described in subrule (1)(a) of this rule or subrule (1)(b) of this rule, or both.

(b) If the local health department meets the qualifications in subrule (2) of this rule, then the department shall issue a document describing the activities authorized and the terms and conditions of the authorization.

(c) The department shall provide funds, as may be available through monies appropriated for this purpose by the legislature, to assist a local health department in conducting the activities authorized under this rule.

(d) The department may revoke the authority issued under this rule if a local health department fails to meet the conditions described in subrule (2) of this rule.

(e) A local health department may relinquish authority granted by the department under this rule by written notice to the department.

(4) The department may continue to exercise all of its authority granted by the act and this part notwithstanding a grant of authority to a local health department under this rule.

(5) The department shall provide assistance and training to local health departments authorized under this rule in order to ensure effective and consistent implementation of this part.

R 323.2210 Items permitted to be discharged without permit.

Rule 2210. A person may discharge the following without a permit that would otherwise be required by part 31 if the discharge meets the requirements of R 323.2204:

(a) Sanitary sewage in either of the following circumstances if the sanitary sewage is not mixed with other waste:

(i) The discharge is less than 1,000 gallons per day and the disposal system is approved by the county, district, or city health department that has jurisdiction in accordance with either the requirements of the local sanitary code or the provisions of the publication entitled "Michigan Criteria for Subsurface Sewage Disposal," April 1994. Copies of the publication may be obtained without charge at the time of adoption of these rules from the Michigan Department of Environmental Quality, Drinking Water and Radiological Protection Division, P.O. Box 30630, Lansing, Michigan 48909.

(ii) The discharge is less than 6,000 gallons per day, the disposal system is designed and constructed in accordance with the provisions of the publication entitled "Michigan Criteria for Subsurface Sewage

Disposal," April 1994, and the system is approved by the county, district, or city health department that has jurisdiction. Copies of the publication may be obtained without charge at the time of adoption of these rules from the Michigan Department of Environmental Quality, Drinking Water and Radiological Protection Division, P.O. Box 30630, Lansing, Michigan 48909.
(b) Controlled application of any of the following:
(i) An authorized substance to suppress dust. The following are authorized substances:
(A) Water.
(B) Calcium chloride.
(C) Lignosulfate products.
(D) Emulsified asphalt or resin stabilizers.
(E) Vegetable by-products.
(ii) A deicing substance.
(iii) A substance for a natural resource or right-of-way maintenance program.
(iv) A substance for a domestic activity.
(v) A commercially manufactured pesticide or fertilizer for its intended use.
(c) Stormwater, other than from a secondary containment facility, when discharged through surface infiltration.
(d) Stormwater from a secondary containment facility that does not contain leaks or spills if the stormwater is inspected to ensure it meets the standards established in R 323.2222.
(e) Water from a well used temporarily for dewatering at a construction site if the water pumped does not create a site of environmental contamination under part 201.
(f) A discharge from an animal feeding operation that has less than 5,000 animal units if the discharge is determined by the director of the department of agriculture or his or her designated representative, to be in accordance with generally accepted agricultural and management practices, as defined in Act No. 93 of the Public Acts of 1981, as amended, being §§286.471 to 286.474 of the Michigan Compiled Laws, and known as the Michigan right to farm act. For purposes of this rule, 5,000 animal units is equal to 5,000 head of slaughter or feeder cattle, 3,500 mature dairy cattle, 12,500 swine weighing more than 25 kilograms or approximately 55 pounds, 50,000 sheep or lambs, 2,500 horses, 275,000 turkeys, 150,000 laying hens or broilers, or 25,000 ducks. An animal feeding operation is a lot or facility, or series of lots or facilities under 1 ownership which are adjacent to one another or which use a common area or system for the disposal of wastes, that meets both of the following conditions:
(i) Animals, other than aquatic animals, have been, are, or will be stabled or confined and fed or maintained for a total of 45 calendar days or more in any 12-month period.
(ii) Crops, vegetation, forage growth, or postharvest residues are not sustained in the normal growing season over the portion of the lot or facility where animals are confined.
(g) Less than 50 gallons of wastewater per day from a commercial animal care facility.
(h) Observation or monitoring well development or evacuation water.
(i) Potable water used for a domestic or domestic equivalent activities other than sanitary sewage disposal.
(j) Step test or pump test water from any of the following:
(i) A potable well or well used to develop a potable water supply.
(ii) A well producing water that meets state or federal criteria for use as potable water.
(iii) A test well where the quality of the test well discharge water is equal to or better than the background groundwater quality of the aquifer receiving the discharge.
(k) Exfiltration from sanitary sewer collection systems.
(l) Wastewater from a heat pump that has a heat exchange capacity of 300,000 Btu per hour or less if there is no chemical additive to the system.
(m) Wastewater from a portable power washer when used in either of the following circumstances:
(i) By the occupant of a household for washing buildings, vehicles, or other surfaces associated with the domestic occupation of the household.
(ii) By a commercial operator or in a commercial or industrial setting to remove nonpolluting substances from vehicles or surfaces when no additives are used and the washing process does not add significant pollutants to the water.
(n) Swimming pool drainage and backwash water discharged in accordance with sections 12521 to 12534 of

Act No. 368 of the Public Acts of 1978, as amended, being §§333.12521 to 333.12534 of the Michigan Compiled Laws.

(o) Water treatment filter backwash water if disposal is in accordance with plans and specifications approved by the department under Act No. 399 of the Public Acts of 1976, as amended, being §325.1001 et seq. of the Michigan Compiled Laws, and known as the safe drinking water act.

(p) Carpet cleaning wastewater discharged by a noncommercial operator or by a commercial operator at a site receiving wastewater from not more than 1 location where carpet cleaning has occurred.

(q) Less than 10,000 gallons per day of noncontact cooling water that does not contain additives if the source of the cooling water is any of the following:

(i) A municipal water supply.

(ii) A water supply meeting state or federal criteria for use as potable water.

(iii) Another source of water meeting the standards of R 323.2222.

(iv) Another source approved by the department.

(r) Land application of process sludge from a wastewater treatment facility treating sanitary sewage when applied in accordance with applicable state and federal law.

(s) Land application of process sludge from an industrial or commercial wastewater treatment facility when authorized under R 299.4101 to R 299.4922, the administrative rules implementing part 115.

(t) Placement of other solid waste on the ground when authorized under part 115. This provision does not apply to the disposal of wastewater generated through the operation of a facility licensed under part 115.

(u) Wastewater associated with an environmental response activity described in any of the following paragraphs if the discharge is to the plume of groundwater contamination, including an area 100 feet hydraulically upgradient of the edge of the plume, and any additive used in the treatment process that is not part of the contamination plume meets the standards of R 323.2222:

(i) A pump test discharge that does not change the physical dimensions of the plume in groundwater or, if the dimensions are changed, the changes are accounted for in the design of the final groundwater remediation plan.

(ii) A remedial investigation, feasibility study, or remedial action discharge that is at or below the residential criteria authorized by section 20101a(1)(a) of the act, if applicable, or section 21304(a) of the act, if applicable.

(iii) A discharge for a remedial investigation, feasibility study, or remedial action above the residential criteria authorized by section 20101a(1)(a) of the act, if applicable, or section 21304(a) of the act, if applicable, if a remediation investigation, feasibility study, or remediation plan has been approved by the department division that has compliance oversight. The remediation plan shall indicate that the treatment system is designed and will be operated so that contaminated groundwater will eventually meet the appropriate land use-based cleanup criteria authorized by section 20120a(1)(a) to (d) of the act, if applicable, or section 21304(a) of the act, if applicable.

(v) Precipitation and snow melt drainage off vehicles discharged through a general purpose floor drain in a parking structure in which maintenance activities do not occur.

(w) A discharge that has been specifically authorized by the department under a permit if the permit was not issued under this part.

(x) A discharge that occurs as the result of placing waste materials on the ground in compliance with a designation of inertness issued under part 115 or leaving contaminated materials in place in compliance with part 201 or 213.

(y) A discharge that has been determined by the department to have an insignificant potential to be injurious based on volume and constituents. In making the determination, the department shall follow the public notice and comment procedures of R 323.2117 and R 323.2119. The department may establish criteria, limitations, or conditions applicable to the discharge to ensure that it meets the terms of this subdivision.

R 323.2211 Permit by rule; notification.

Rule 2211. A person may discharge any of the following if the requirements of R 323.2204 and R 323.2212 are met:

(a) Sanitary sewage if the volume of the septic tank or tanks is 6,000 gallons or more or if the flow is more

than 6,000 gallons per day, but less than 10,000 gallons per day if the following provisions are complied with, if applicable:
(i) The sanitary sewage is not mixed with other wastes.
(ii) The disposal system is designed and constructed in accordance with the provisions of the publication entitled "Michigan Criteria for Subsurface Sewage Disposal," April 1994, and the system is approved by the county, district, or city health department that has jurisdiction. Copies of the publication may be obtained without charge at the time of adoption of these rules from the Michigan Department of Environmental Quality, Drinking Water and Radiological Protection Division, P.O Box 30630, Lansing, Michigan 48909.
(iii) For a disposal system constructed, reconstructed, or expanded after adoption of these rules, the discharge is monitored by a flow measurement device. The discharger shall record the average daily flow on a weekly basis and the total flow annually in a log that shall be available for review upon request by the department or the county, district, or city health department that has jurisdiction. A report of the average daily flows and annual total flow shall be submitted to the department by January 31 of each year for the preceding calendar year.
(b) Less than 500 gallons per day of wastewater from a laundromat which is open to the general public and which does not contain a dry cleaning operation if all of the following requirements are met:
(i) The wastewater is discharged from a system that has a minimum of 2 1,000-gallon septic tanks in series followed by disposal to a tile field.
(ii) The tanks are pumped when the sludge level reaches 25% of the tank volume.
(iii) An operational lint filter is maintained on the laundry wastewater discharge line to the system.
(iv) The tile field has been designed and constructed in accordance with the provisions of the publication entitled "Michigan Criteria for Subsurface Sewage Disposal," April 1994, and is approved by the local county, district, or city health department that has jurisdiction or the department. Copies of the publication may be obtained without charge at the time of adoption of these rules from the Michigan Department of Environmental Quality, Drinking Water and Radiological Protection Division, P.O. Box 30630, Lansing, Michigan 48909.
(v) The sanitary sewage generated at the facility is routed to the same septic tank as the laundry waste.
(vi) The septic tank is equipped with an effluent filter.
(c) More than 10,000 gallons per day of noncontact cooling water if it does not contain an additive and the source of the cooling water is any of the following:
(i) A municipal water supply.
(ii) A water supply meeting state or federal criteria for use as potable water.
(iii) Another source of water meeting the standards of R 323.2222.
(iv) Another source of water approved by the department as meeting the conditions of R 323.2204.
(d) Less than 50,000 gallons per day of fruit and vegetable washwater if the following provisions are met, if applicable:
(i) The source of the water is any of the following:
(A) A municipal water supply.
(B) A water supply meeting state or federal criteria for use as potable water.
(C) Another source of water meeting the standards of R 323.2222.
(D) Another source of water approved by the department as meeting the conditions of R 323.2204.
(ii) If the wastewater contains an additive, the department is notified of the additive in the notification required in R 323.2212 and the discharge does not cause the groundwater to exceed the standard of R 323.2222 for the additive.
(e) Wastewater from a portable power washer used by a commercial operator or in a commercial or industrial setting whether or not occurring within 100 feet of the property boundary if the following requirements are met, as applicable:
(i) The source of the water is any of the following:
(A) A municipal water supply.
(B) A water supply meeting state or federal criteria for use as potable water.
(C) Another source of water meeting the standards of R 323.2222.
(D) Another source of water approved by the department as meeting the conditions of R 323.2204.
(ii) If other than a household soap or detergent readily available to the consumer is used as an additive, the

additive is used for its intended purpose and according to manufacturer's recommendations and label directions.
(iii) Washing is limited to the removal of dirt and grime from the exterior of a vehicle, equipment, or stationary source. A vehicle's exterior does not include its undercarriage. Dirt and grime does not include a substance that was contained or transported in the vehicle as product or waste material.
(iv) The discharge does not cause runoff of wastewater or the deposition of waste materials onto adjacent properties.
(v) The discharge does not cause the groundwater to exceed a standard specified in R 323.2222.
(vi) The discharge is limited to 1,000 gallons of wastewater per month per acre of area in which the discharge occurs.
(vii) If the discharger is a commercial operator who discharges at various locations, a log is kept of discharges for a period of 3 years from the date of the discharge. The log shall include the date, location, and additive used for each discharge and the item washed. The log shall be readily available for inspection and copying at any reasonable time by a peace officer or, upon presentation of credentials, an authorized representative of the department or city, county, or district health department that has jurisdiction.
(f) Pump test water associated with environmental remediation that is discharged outside the plume of contamination if the discharge meets the standards of R 323.2222.
(g) Water that results from the hydrostatic testing or flushing of a new pipeline or pressure testing of a new tank if both of the following provisions have been met:
(i) An additive has not been used.
(ii) The source of the washwater is any of the following:
(A) A municipal water supply.
(B) Another water supply that meets state or federal criteria for use as potable water.
(C) Another source of water meeting the standards of R 323.2222.
(D) Another source of water approved by the department as meeting the conditions of R 323.2204.
(h) More than 50, but less than 1,000, gallons per day of wastewater from a commercial animal care facility if all of the following provisions have been met:
(i) The source of the water is any of the following:
(A) A municipal water supply.
(B) Another water supply that meets state or federal criteria for use as potable water.
(C) A source of water meeting the standards of R 323.2222.
(D) Another source of water approved by the department as meeting the conditions of R 323.2204.
(ii) The department is notified of any additive in the notification required by R 323.2212 and the discharge does not cause the groundwater to exceed the standard established by R 323.2222 for the additive.
(iii) The discharge does not occur within 200 feet of a surface water body.

R 323.2212 Discharge notification.

Rule 2212.(1) A person is authorized to discharge under R 323.2211 if the department is notified of the discharge under this rule.
(2) A person shall notify the department under this rule at the following times:
(a) Before the discharge.
(b) When there is a change in the information required in the notification form described in subrule (3) of this rule.
(c) Five years from the date of the previous notification if the discharge is continuing.
(3) A person shall provide notice on a form approved by the department. At a minimum, the notice shall contain all of the following information:
(a) Date of the notification.
(b) Facility name and address.
(c) The discharge address, if different from the facility, and the location identified by county, section, township, and range.
(d) Authorized contact person's name, address, and telephone number.
(e) The permit or exemption number and issuance date for any groundwater discharge permit or exemption previously issued to the discharger.

(f) The type of wastewater discharged and a description of the discharge.
(g) For discharges authorized by R 323.2211(f) and R 323.2213(5), a description of the treatment system designed to meet the standards of R 323.2222.
(h) Standard industrial classification (SIC) code.
(i) Method of wastewater disposal, such as irrigation or seepage lagoon.
(j) Any additive and the amount used.
(k) Discharge volume or application rate in appropriate units.
(l) Dates of discharge and schedule of discharge, as appropriate.
(m) Two legible site maps drawn to scale that have a north orientation arrow. Site map 1 shall indicate the discharge location in relation to property boundaries on a topographic map. The township and county name in which the discharge area is located shall be included on site map 1. Site map 2 shall indicate the discharge area and the distance from property boundaries. Major roads and streets shall be included on all site maps.
(n) Name, address, and telephone number of the owner of the property where the discharge is to occur if the owner is other than the discharger.
(o) If the discharge is to property owned by a person other than the discharger, a written authorization to discharge signed by the property owner.
(p) A determination of whether the discharge will occur within 1/4 mile of a known site of groundwater contamination, other than for a remedial action for which the notification form is being submitted, and an evaluation of whether the discharge will impact the existing plume of contamination at the site.
(q) Signature and certification by the discharger or a person authorized to act for the discharger, as described in R 323.2114, that the discharger has identified and considered steps to avoid or minimize the use and discharge of pollutants, that all information submitted is true, accurate, and complete, and that the discharge meets the requirements of this part.

R 323.2213 Permit by rule authorizing discharge upon department certification.

Rule 2213.(1) Wastewater described in this rule may be discharged if the requirements of R 323.2204 and R 323.2214 are met.
(2) A person may discharge less than 10,000 gallons per day of noncontact cooling water that contains an additive if the department is notified of the additive in the notification required by R 323.2212 and the discharge does not cause the groundwater to exceed the standard of R 323.2222 for the additive.
(3) A person may discharge less than 10,000 gallons per day of egg-washing facility wastewater if all of the following provisions are satisfied:
(a) The source of the water is any of the following:
(i) A municipal water supply.
(ii) A water supply meeting state or federal criteria for use as potable water.
(iii) Another source of water meeting the standards of R 323.2222.
(iv) Another source of water approved by the department.
(b) If the wastewater contains an additive, the department is notified of the additive in the notification required by R 323.2212 and the discharge does not cause the groundwater to exceed the standard established by R 323.2222 for the additive.
(c) The discharger minimizes the discharge of proteinaceous matter, such as egg yolks, and other wastes to the groundwater to control odors and prevent nuisance conditions.
(4) A person may discharge cooling water if all of the following provisions are satisfied:
(a) The discharge is less than 5,000 gallons per day.
(b) If the wastewater contains an additive, the department is notified of the additive in the notification required by R 323.2212 and the discharge does not cause the groundwater to exceed the standard established by R 323.2222 for the additive.
(c) The discharger submits, as part of the notification required by R 323.2212, wastewater characterization which demonstrates that the discharge will not exceed standards of R 323.2222.
(d) The material cooled does not vary substantially from that used in providing the wastewater characterization required by subdivision (c) of this subrule.
(e) The discharger characterizes the wastewater annually and submits records of that annual

characterization in the notification required by R 323.2212(2)(c).
(5) A person may discharge wastewater which is associated with a department-approved groundwater remediation and which is discharged outside the plume of contamination if all of the following provisions are satisfied:
(a) If the discharge is associated with the investigative phase of a remediation or active groundwater remediation, the discharge is conducted in compliance with all applicable parts of the act.
(b) The discharge is treated to meet the standards of R 323.2222. The discharger shall submit to the department a description of how the proposed treatment system will achieve the standards of R 323.2222.
(c) The remedial action shall include a groundwater extraction system designed and operated to prevent any portion of the plume above approved cleanup criteria from migrating beyond an approved zone of influence. The approval for the location of the zone of influence is the responsibility of the department division that has compliance oversight.
(d) The discharger provides an accurate and complete verification at the time of notification, as required in R 323.2214, that the discharge meets the requirements of part 31, this part, and part 111, 115, 201, 213, or 615, as applicable. Verification shall be provided in the form of a memorandum from the chief, or his or her designated representative, of the department division responsible for compliance oversight of the remediation.
(e) A performance monitoring plan shall be included in the remediation plan submitted to the department division responsible for compliance oversight at the facility. The plan shall include the following:
(i) Groundwater monitoring to verify that the standards of R 323.2222 are being met in groundwater. The monitoring shall meet the requirement of R 323.2224(1)(c).
(ii) At least twice weekly remediation system effluent monitoring capable of verifying that the treatment system can comply with the standards of R 323.2222. After demonstrating for not less than 90 days that the treatment system is capable of meeting the standards of R 323.2222, the discharger may apply to the department division responsible for compliance oversight for a reduced frequency of effluent monitoring until the remediation is completed according to the act.
(f) Effluent and groundwater sampling required to verify compliance with this subrule shall be collected and analyzed at a frequency indicated in the performance monitoring plan. The frequency of monitoring and reporting must be approved by the department division responsible
for compliance oversight, but shall not be less than once per year.
(g) Performance monitoring data shall be submitted to the department division responsible for compliance oversight.
(h) The discharger shall, at all times, maintain in good working order all treatment or control facilities or systems installed or used by the discharger to achieve compliance with the terms and conditions of this rule. If the discharger is unable to maintain compliance with the terms and conditions of this rule, then the discharger shall provide the notification and conduct the compliance activities described in R 323.2227.

R 323.2214 Conditions for department certification.

Rule 2214.(1) A discharge is authorized under R 323.2213 if the department is notified of the discharge under R 323.2212.
(2) For a discharge authorized by R 323.2213(5), the following information, in addition to the information required by subrule (1) of this rule, shall be provided:
(a) Site map 1, required in R 323.2212(3)(m), shall include a description of the location of drinking water wells that is adequate to identify each water supply formation within ½ mile of the discharge. A copy of the well logs for each drinking water well included on the map shall also be provided with the notification.
(b) Site map 2 required in R 323.2212(3)(m) shall include all of the following information:
(i) Groundwater flow direction.
(ii) Extent of contamination plume.
(iii) Calculated capture zone.
(iv) Location of the groundwater extraction and interception system.
(v) Location of all observation and monitoring wells.
(vi) A description of the treatment system indicating how it will produce an effluent that will meet the standards of R 323.2222.

(3) In order to discharge, a person must receive a certification from the department which verifies that the discharge is authorized under this part. Within 60 calendar days of receiving a complete notification form required by this rule, the department shall issue a certification or indicate why the discharger is not authorized to discharge under this rule.

R 323.2215 General permit.

Rule 2215.(1) Upon a determination by the department that a certain category of discharges is appropriately and adequately controlled by a general permit, the department may issue a general permit under this rule.

(2) A discharge covered by a general permit issued under this rule shall meet all of the following conditions:

(a) Meet the conditions in R 323.2204(2).

(b) Involve the same or substantially similar types of operations.

(c) Be of the same type of wastes.

(d) Require the same effluent limitations or operating conditions.

(e) Require the same or similar monitoring and reporting.

(3) To qualify for a certificate of coverage for a general permit issued pursuant to this rule, an applicant shall certify that the applicant has identified and considered steps to minimize the use and discharge of pollutants authorized to be discharged by the general permit.

(4) The department shall periodically publish the names of persons who have received a certificate of coverage for a general permit issued under this rule.

R 323.2216 Permits for specific discharges.

Rule 2216.(1) A wastewater described in this rule may be discharged under a permit issued by the department in compliance with R 323.2217 if the conditions of R 323.2204 are met.

(2) A person may discharge less than 20,000 gallons per day of sanitary sewage that has been treated by a system described in subdivision (a) or (b) of this subrule if the treatment system is operated to achieve optimum treatment efficiencies for the specified design as follows:

(a) The discharge receives treatment by a constructed wetland and associated treatment system that meets all of the following requirements:

(i) A minimum of 2 septic tanks installed in series precedes the constructed wetland. The septic tanks shall have a minimum combined volume of 2 times the daily design flow. The outfall to the constructed wetland shall be equipped with a septic tank effluent filter.

(ii) The system shall have a treatment process to enhance nitrification prior to discharge to the constructed wetland.

(iii) If the discharge is expected to have high concentrations of oil and grease, such as sanitary sewage from a food service establishment, then the discharge shall be treated to remove oil and grease.

(iv) The system shall have a minimum of 2 wetland cells to allow for isolation or maintenance of individual cells.

(v) Each wetland cell shall have an aspect ratio, which is length to width ratio, of between 2:1 and 4:1.

(vi) The constructed wetland shall have a composite bottom liner in compliance with R 323.2237. The bottom of the wetland cell shall be constructed to be level.

(vii) The wetland cell filter media shall consist of ½-inch to 1-inch washed gravel with 100% passing the 1.0-inch sieve and a maximum of 3% passing the ½-inch sieve.

(viii) The filter media shall not be less than 18 inches or more than 30 inches in depth.

(ix) The effective water depth in the wetland cell shall be maintained between a range of 2 to 6 inches below the filter media surface.

(x) The constructed wetland shall be insulated with at least 6 inches of mulch or other comparable substitute and designed to protect against freezing.

(xi) The filter surface area hydraulic loading rate is not more than 1.2 gallons per square foot per day.

(xii) The design retention time shall not be less than 7 calendar days.

(xiii) Indigenous or sterile wetland vegetation, such as bulrushes, common reeds, and cattails, shall be planted on a 1-foot grid across each wetland cell.

(xiv) Wetland vegetation shall be cultivated to maximize the rooted depth throughout the gravel filter

media.
(xv) The system shall have the capability to recirculate effluent back into the influent end of the system when additional flow is needed into the system.
(xvi) The wetland cell shall discharge to a tile field designed and constructed in accordance with the provisions of the publication entitled "Michigan Criteria for Subsurface Sewage Disposal," April 1994, and approved by the county, district, or city health department that has jurisdiction. Copies of the criteria may be obtained without charge at the time of adoption of these rules from the Michigan Department of Environmental Quality, Drinking Water and Radiological Protection Division, P.O. Box 30630, Lansing, Michigan 48909. If the county, district, or city health department that has jurisdiction chooses not to review the tile field design, then the department shall review and approve the system under this subrule.
(b) The discharge is treated by an alternative treatment system or combination of systems that is determined by the department to provide a similar quality effluent to the treatment system specified in subdivision (a) of this subrule.
(c) For a treatment system described in subdivision (a) or (b) of this subrule, if flow is more than 10,000 gallons per day, then the effluent shall be monitored in accordance with R 323.2232(a),(b),(e), and (f).
(3) A person may discharge less than 50,000 gallons per day of sanitary sewage if all of the following provisions are satisfied:
(a) The sanitary sewage is not mixed with other waste.
(b) The discharge meets the isolation distance requirements specified in R 323.2204(2)(d)(ii).
(c) The sanitary sewage is treated by a treatment system in accordance with R 323.2230 and R 323.2231.
(d) The discharge is limited and monitored in accordance with the requirements of R 323.2232.
(4) A person may discharge less than 20,000 gallons per day of laundromat wastewater if the laundromat is open to the general public, does not contain a dry cleaning operation, and all of the following requirements are met:
(a) The discharge is treated by a lagoon treatment system that meets the requirements of R 323.2231(1)(a) to (e).
(b) The wastewater treatment system is operated in accordance with R 323.2231(1)(g) to (j) and maintained in accordance with R 323.2231(k).
(c) Disposal is by means of low-rate application in accordance with R 323.2233 and utilizing spray irrigation under pressure to enhance volatilization of organic constituents in the discharge.
(d) The discharge limitations and monitoring requirements are as follows:
(i) Flow shall be measured on a daily basis.
(ii) The discharge will be monitored on a annual basis for all of the following:
(A) The pH.
(B) Chemical oxygen demand (COD).
(C) Conductivity.
(D) Volatile organics using environmental protection agency (EPA) test method 8260 or other method approved by the department for this purpose.
(E) Aluminum.
(F) Arsenic.
(G) Cadmium.
(H) Total chromium.
(I) Hexavalent chromium.
(J) Copper.
(K) Lead.
(L) Nickel.
(M) Zinc.
(N) Total phosphorus.
(O) Ammonia nitrogen.
(P) Nitrate nitrogen.
(Q) Nitrite nitrogen.
(R) Sodium.
(S) Chloride.

(T) Potassium.
EPA test method 8260 is adopted by reference in these rules and is contained in the EPA document entitled "Test Methods for the Evaluation of Solid Waste, Physical-Chemical Methods," SW-846, 3rd Edition, September 1986, as updated through the effective date of these rules. SW-846 is available for inspection at the Lansing office of the department of environmental quality, waste management division. The document and updates may be purchased from the United States Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, Pennsylvania 15250-7954, or the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at a cost at the time of adoption of these rules of $319.00, plus shipping and handling.
(iii) The application rate shall be measured in inches per day and in inches per week and recorded twice per month. The application rate shall not be more than 1 inch per day or 3 inches per week.
(e) The discharger shall report monitoring results in compliance with R 323.2225.

R 323.2217 Procedures applicable to permit issued under R 323.2216.

Rule 2217.(1) The department shall issue a permit for a discharge described in R 323.2216 under the terms of R 323.2208 and this rule.
(2) An application for a discharge permit to be issued under this rule shall be made on a form determined by the department. An application under this rule shall be administratively complete before it is considered by the department for decision. An administratively complete application shall consist of all of the following:
(a) Sufficient information for the department to determine whether the requirements of R 323.2216 are met.
(b) A demonstration that the applicant has provided notice of the proposed discharge consisting of a copy of the notice which contains, at a minimum, all of the following information:
(i) The name and address of the applicant.
(ii) A concise description of the applicant's activities and operations that result in the discharge identified in the application.
(iii) The location of the proposed or existing discharge identified in the application.
(iv) The date upon which the applicant will apply to the department for a permit under this part. The date shall not be later than 30 calendar days after the date of the notice.
(v) A statement that interested parties can provide comments on the application to the department by sending material to the address, and in the manner, indicated in the form described in this subrule. The statement will further provide that information received by the department within 20 calendar days of the indicated application date will be considered by the department in deciding upon the application.
(c) A certification that the applicant has identified and considered steps to avoid or minimize the use and discharge of pollutants authorized to be discharged by the permit issued under R 323.2216.
(3) The department shall make a decision on the application within 60 calendar days of the date on which the administratively complete application is received by the department or the date which is indicated in the public notice as the submission date, whichever is later.

R 323.2218 Discharge permits.

Rule 2218.(1) The department shall issue a permit for a discharge other than a discharge meeting the requirements of R 323.2210 to R 323.2217, but meeting the requirements of R 323.2204, under the terms of R 323.2208 and this rule.
(2) To be permitted under this rule, a discharge shall meet the requirements of R 323.2204, R 323.2220 to R 323.2222, and, if applicable, R 323.2233 and R 323.2237. In addition, the proposed system for treating the wastewater to be discharged shall have sufficient hydraulic capacity and detention time to adequately treat the anticipated organic and inorganic pollutant loading. To demonstrate that these requirements are met, at the time of application a permit applicant shall submit a basis of design for the treatment system. The basis of design shall include all of the following information:
(a) The volume of wastewater to be treated per unit of time.
(b) An analysis of the influent, or a description of the anticipated influent, including the substances to be treated to meet the requirements of R 323.2222 and the concentrations of the substances.
(c) A description of the existing or proposed treatment, or both, including, where applicable, the following:
(i) The treatment methods before discharge, based on treatment classifications for certified operators

developed under R 323.1251 to R 323.1258 and implementing part 31 for an industrial or commercial entity or developed under R 299.2911 to R 299.2927 and implementing part 41 of the act for a sewage treatment works operated by a municipality.
(ii) To the extent applicable, engineering plans depicting all of the following:
(A) A schematic flow diagram.
(B) Information on unit processes.
(C) Flow rates.
(D) Design hydraulic capacity.
(E) Pollutant loading.
(F) Detention times.
(G) Sizing of treatment units.
(H) Design calculations for major treatment units.
(I) A description of sludge management.
(iii) A discharge management plan that includes, where applicable, all of the following information:
(A) Maximum daily and annual discharge volumes.
(B) The total discharge area.
(C) Scheduled maintenance.
(D) Vegetative cover control and removal.
(E) Load and rest cycles.
(F) Application rates.
(G) Means for even distribution of waste or wastewater.
(H) Strategies for periods of adverse weather.
(I) Monitoring procedures.
(J) Other pertinent information.
(d) For a discharge of sanitary sewage, unless these rules provide otherwise, the treatment system shall be consistent with the standards in chapter 10 of the publication entitled "Engineering Reports and Facility Plans of the Recommended Standards for Wastewater Facilities," 1997 edition. The standards in chapter 10 are adopted by reference in these rules. The standards may be purchased from Health Education Services, P.O. Box 7126, Albany, New York 12224, or from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at a cost at the time of adoption of these rules of $12.00, plus shipping and handling.
(3) An application for a discharge permit to be issued under this rule shall be made on a form determined by the department. An application under this rule shall be administratively complete before it is considered by the department for decision. Administrative completeness is determined as follows:
(a) An application for a discharge that has not been previously permitted shall include all of the following information:
(i) The basis of design as required by subrule (2) of this rule.
(ii) An evaluation of the feasibility of alternatives to discharge to the groundwater in accordance with R 323.2219.
(iii) The wastewater characterization as required by R 323.2220.
(iv) The hydrogeological report as required by R 323.2221.
(v) If a standard applicable to the discharge is to be determined under R 323.2222(5), the information necessary to determine that standard, including whether a substance is a hazardous substance under part 201.
(vi) If applicable, the monitoring plan as specified by R 323.2223.
(vii) If applicable, a description of the discharge methods and information that demonstrate that the requirements of R 323.2233 will be met.
(viii) If applicable, information that demonstrates that the requirements of R 323.2237 will be met.
(b) An application for the renewal of a permit where the discharge is proposed to be modified in quantity, effluent characterization, or treatment process from that previously permitted shall include all of the following:
(i) The request for reissuance specified in R 323.2151.
(ii) An updated submission of the items listed in subdivision (a) of this subrule corresponding to the

differences between the proposed discharge and the discharge previously permitted.
(iii) All of the following information:
(A) A narrative description of the facility's history of compliance with effluent and groundwater permit limits and sampling frequency.
(B) If permit limits were exceeded, the steps taken to bring the facility into compliance.
(C) An evaluation of whether there are general trends in the effluent or groundwater sampling data indicating that the discharge is approaching permit limits.
(D) An updated site map.
(E) A current groundwater contour map and a narrative evaluation of whether changes to the existing groundwater monitoring system are warranted and the rationale for any proposed change.
(F) The most recent groundwater quality results from all wells on site.
(G) The most recent effluent quality results.
(H) The most recent static water levels and groundwater elevations from all wells on site.
(c) An application for the renewal of a permit where the discharge will consist of the same quantity, effluent characterization, and treatment process as previously permitted shall include all of the following:
(i) The request for reissuance specified in R 323.2151.
(ii) A certification by the discharger that the discharge will consist of the same quantity, effluent characterization, and treatment process as previously permitted.
(iii) The information required by subdivision (b)(iii) of this subrule.
(d) A discharger who proposes to modify the quantity or effluent characteristics of a discharge shall notify the department of the proposed modification before it occurs. If the department determines the proposed modification is minor based on the quantity or quality of the discharge, then the department may modify the permit as requested and include new terms or conditions that may be necessary to ensure that the terms of R 323.2204 are met. If the department determines that the proposed modification is significant based on the quantity or quality of the discharge, then the discharger shall submit an application for reissuance under the terms of subdivision (b) of this rule.
(e) A discharger who proposes to modify the treatment process of a discharge shall notify the department of the proposed modification before it occurs. Unless the department notifies the discharger within 30 calendar days that the proposed modification may affect compliance with limitations on the quality or quantity of the discharge, the discharger may make the modification. If the department notifies the discharger and determines that the proposed modification is minor based on the quantity or quality of the discharge, then the department may modify the permit as requested and include new terms or conditions that may be necessary to ensure that terms of R 323.2204 are met. If the department notifies the discharger and determines that the proposed modification is significant based on the quantity or quality of the discharge, then the discharger shall submit an application for reissuance under the terms of subdivision (b) of this subrule.
(4) A discharge authorized under this rule shall meet the conditions of this subrule. The department may waive the conditions of subdivision (a) or (b) of this subrule, individually or collectively, if the department determines that the purpose of the subdivision to be waived has been met.
(a) Within 30 calendar days of completion of construction of treatment facilities, a discharger shall provide, to the department, certification by an engineer licensed under Act No. 299 of the Public Acts of 1980, as amended, being §339.101 et seq. of the Michigan Compiled Laws, and known as the occupation code, that a quality control and quality assurance program was utilized and that the facilities constructed were built consistent with standard construction practices to comply with the permit and this part.
(b) A discharger shall have an operation and maintenance manual for the wastewater treatment facility. The manual shall be used by the certified operator of the facility as a guide for facility operation and maintenance. The operation and maintenance manual shall include all of the following information:
(i) The function, start-up, shutdown, and periodic maintenance procedures for each unit process and item of mechanical and electrical equipment.
(ii) A description of the appropriate response or facility adjustment to minimize the impact of emergency situations with the potential to affect the discharge or compliance with the permit so as to facilitate rapid implementation of a correct response during an emergency.
(iii) A monitoring program to monitor process efficiency.

(iv) The details of how inspections will be conducted and a schedule for the inspection of collection system and pump stations, where applicable.
(v) The periodic maintenance procedures for the collection system and pump stations, where applicable.
(vi) Procedures for routine maintenance and inspection of lagoons and equipment used for irrigation, where applicable, and the documentation of maintenance and inspection.
(vii) A listing of environmental regulations, other than this part, that apply to operation of the wastewater treatment facility.
(c) A discharger shall monitor the discharge and its effect as specified in R 323.2223.
(d) A discharger shall report monitoring results as specified in R 323.2225.
(e) A discharger shall close the wastewater treatment and discharge area as specified in R 323.2226.

R 323.2219 Evaluation of feasibility of alternatives to discharge to groundwater.

Rule 2219.(1) An evaluation of the feasibility of alternatives to discharge to the groundwater required by R 323.2218(3)(a)(ii) shall contain, at a minimum, an analysis of the feasibility of items contained in this rule. Feasibility includes the practical ability to implement the alternative and a comparison of the cost of the alternative to its benefits.
(2) At a minimum, alternatives to the discharge that shall be considered are minimizing the volume and toxicity of the wastewater, recycling wastewater, connecting to a municipal sanitary sewer system, and discharging to surface water. Alternatives for minimizing the volume and toxicity of wastewater include pollution prevention opportunities, including the following:
(a) Equipment or technology modifications.
(b) Process or procedure modifications.
(c) Reformulation or redesign of products.
(d) Substitution of raw materials.
(e) Improvements in housekeeping, maintenance, training, or inventory control.
(3) At a minimum, the following treatment systems shall be considered for substances determined to be in the discharge by the characterization required by R 323.2220:
(a) For a metal, the following:
(i) Flocculation.
(ii) Settling.
(iii) Oxidation.
(iv) Filtration.
(v) Ion exchange
(vi) Reverse osmosis.
(vii) Electrolytic recovery.
(b) For a volatile substance, the following:
(i) Carbon adsorption.
(ii) Air stripping.
(iii) Aeration.
(c) For a nonvolatile substance, the following:
(i) Sorption.
(ii) Settling.
(iii) Filtration.
(d) For a substance that degrades biologically, biological treatment in a lagoon, tank, or biological reactor or through controlled land treatment.

R 323.2220 Characterization of waste or wastewater to be discharged.

Rule 2220.(1) Before a permit can be issued under R 323.2218, an applicant shall properly characterize the waste or wastewater to be discharged. To properly characterize the waste or wastewater, the applicant shall determine the pollutants that may be present in the waste or wastewater in light of the process by which it is generated. The applicant shall use the methods described in this rule to make the determination.
(2) Samples of effluent collected to determine the presence of inorganic substances shall be unfiltered.
(3) For a substance for which there is an analytical method approved by the department for purposes of

monitoring under this part, the waste or wastewater shall be representatively sampled using sampling procedures specified in the EPA document entitled "Test Methods for the Evaluation of Solid Waste, Physical-Chemical Methods," SW-846, 3rd Edition, September 1986, as updated through the effective date of these rules and analyzed using analytical procedures specified in either SW-846 or the publication entitled "Guidelines Establishing Test Procedures for the Analysis of Pollutants," 40 C.F.R. Part 136, or other methods approved by the department for purposes of monitoring under this part. SW-846 and updates and the guidelines are adopted by reference in these rules and are available for inspection at the Lansing office of the department of environmental quality, waste management division. The documents may be purchased from the United States Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, Pennsylvania 15250-7954, or the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at a cost at the time of adoption of these rules of $319.00 and $36.00, respectively, plus shipping and handling.
(4) Reporting levels shall be those approved by the department as the lowest level routinely quantifiable with acceptable precision and accuracy by standard laboratory methods. Not less than 4 discrete samples are necessary to be considered representative, unless a lesser number is approved by the department.
(5) For any other substance that may be present, an estimate of the substance concentration in the discharge shall be made with a mass balance calculation or other estimate approved by the department. The estimate shall use the annual average use rate for the substance and annual average discharge volume, except when an alternative is approved by the department.
(6) For a facility not yet operating, the discharger shall characterize the anticipated discharge using the best available information. The discharger shall identify the source of the information in the application.
(7) The department may require the characterization of sludge generated by the wastewater treatment process as it relates to the ability of the discharge to meet the standards of R 323.2222 as a condition of authorizing a discharge under these rules. The characterization shall be done according to the procedures described in subrule (3) of this rule.
(8) The department may require the characterization of other environmental media affected in the treatment of wastewater as a condition of authorizing a discharge under these rules. The characterization shall be done according to the procedures described in subrule (3) of this rule.
(9) The department may waive the requirements of this rule if the nature of the material to be characterized is sufficiently well understood to ensure that the conditions of R 323.2204(2)(a) will be met.

R 323.2221 Hydrogeological report.

Rule 2221.(1) Before obtaining a permit authorized under R 323.2218, an applicant shall provide a hydrogeologic report that meets the requirements of this rule.
(2) Except as provided in subrule (6) of this rule, a hydrogeological report shall be in compliance with all of the following provisions:
(a) Describe the regional hydrogeologic conditions, including regional and local geology and surface and groundwater conditions, over an area sufficient to allow the department to determine the acceptability of discharging at the site under part 31 and this part as described in subrule (4) of this rule.
(b) Define the areal and vertical extent and physical properties of the site earth materials that assimilate and transmit the discharge.
(c) Determine whether the discharge is to a usable aquifer, an unusable aquifer, or groundwater not in an aquifer. For an aquifer, determine the groundwater flow direction, groundwater velocity, 3-dimensional flow path of the discharge within the aquifer, interconnection between aquifers, and background and existing groundwater quality. For groundwater not in an aquifer, determine that the hydraulic or other physical properties, or both, are such that the formation would not be considered an aquifer.
(d) Identify whether the discharge will occur within an established designated wellhead protection area or may occur within a proposed wellhead protection area.
(e) If the discharge is to be monitored under R 323.2223(2), provide sufficient information for the department to determine the acceptability of a proposed monitoring program.
(3) Before initiating a hydrogeologic report required by subrule (1) of this rule, the applicant may submit to the department a work plan for the development of the hydrogeologic report.
(a) The department shall approve, or recommend modifications to, the work plan within 45 calendar days of

its receipt. If the applicant does not receive a written approval or recommendation within 45 calendar days of receipt by the department, then the work plan shall be considered approved.

(b) A work plan shall contain all of the following information:

(i) A map indicating the surface geology of the area with the discharge location identified.

(ii) A map indicating the topography of the area with the discharge location identified.

(iii) Logs of domestic wells adequate to characterize each water supply formation within ½ mile in all directions from the discharge. A map shall be provided that correlates each well log to a specific map location.

(iv) A map delineating an established or proposed designated wellhead protection area that may be affected by the discharge.

(v) For all proposed observation wells to be drilled on-site, all of the following information:

(A) Number of wells.

(B) Location.

(C) Depth.

(D) Drilling method.

(E) Well construction materials.

(F) Well development method.

(vi) For all proposed soil borings on-site, all of the following information:

(A) Number of soil borings.

(B) Location.

(C) Depth.

(D) Drilling and plugging method.

(vii) A description of all physical testing to be done to identify soil properties and aquifer characteristics and locations where testing is to occur.

(viii) A groundwater sampling and analysis plan meeting the requirements of R 323.2223(2)(a).

If a map is required, it shall be drawn to scale and have a north orientation arrow.

(c) If conditions not anticipated in an approved work plan are encountered in the field while collecting information for the hydrogeologic report, then the person collecting the information may contact the department to obtain approval of the changes necessary to the original work plan. Modifications may be approved verbally by the department. Written confirmation of all changes shall be provided by the discharger within 10 working days of verbal approval by the department.

(4) All of the following are specific elements of a hydrogeologic report necessary to allow the determination required of the department by subrule (1) of this rule:

(a) Soil borings or other test methods to determine the composition of subsurface materials, locate usable aquifers, and determine the thickness of the usable aquifer. Soil boring logs shall contain all of the following information:

(i) Soil and rock descriptions.

(ii) Method of sampling.

(iii) Sample depth.

(iv) Date of boring.

(v) Water level measurements.

(vi) United States geological survey ground elevation.

(vii) Soil test data.

(viii) Standard penetration number calculated in accordance with the method specified in the standard penetration test, ASTM D1586-84, which is adopted by reference in R 323.2238.

(b) Testing of the unsaturated zone sufficient to determine both of the following:

(i) The ability of site earth materials to percolate and transmit the volume of liquids resulting from the discharge.

(ii) The vertical and horizontal extent of mounding resulting from the discharge.

(c) Well and field testing data sufficient to determine all of the following:

(i) Based on not less than 3 wells in the aquifer receiving the discharge, the groundwater flow direction, depth to groundwater, and existing groundwater quality of the aquifer receiving the discharge.

(ii) Interconnections between the aquifers receiving the discharge and other aquifers in the vicinity of the

discharge location.
(iii) Horizontal hydraulic conductivity of the aquifer receiving the discharge to allow calculation of groundwater flow velocity.
(iv) The vertical gradients within the aquifer if the discharge is to be monitored under R 323.2223(2).
(d) Data indicating both of the following groundwater quality parameters at the site:
(i) Specific conductance as an indication of dissolved solids.
(ii) Concentration of all of the following substances for inorganic groundwater chemistry comparison of water quality:
(A) Cations of calcium, sodium, magnesium, potassium, and iron.
(B) Anions of chloride, sulfate, and bicarbonate.
(C) The pH.
(D) Any additional substances present or likely to be present in the proposed discharge.
(e) If groundwater on the site or adjacent to the site is contaminated so that either property is a facility as defined by part 201, and if the extent or magnitude of the contamination could be affected by the discharge, information as described in this subrule. If the contamination is on the site, then the hydrogeologic report shall contain a delineation of the portion of the aquifer contaminated and a description of each substance that exceeds regulatory criteria. If contamination is on an adjacent property, then the hydrogeologic report shall include notice that the contamination is known to exist. The department may require further information on the nature of contamination on the adjacent property if, as a result of other information in the hydrogeological report, the department determines there is a significant likelihood that the extent or magnitude of that contamination could be affected by the discharge.
(f) For dischargers proposing land treatment under R 323.2233 to meet the standards contained in R 323.2222, an evaluation of site earth material and intended crop sufficient to support the application under R 323.2233.
(g) Supporting information, including all of the following information:
(i) A general description of the geology of the surrounding area and how it relates to the geology and hydrogeology of the discharge location, including formations used as water supplies in the area.
(ii) A narrative description of the hydrogeologic data collected and interpretation of the data as it relates to satisfying the requirements of this rule.
(iii) Cross sections showing a 2-dimensional representation of the geology of the site sufficient to reflect the site geology and hydrogeology.
(iv) A map of the site, drawn to scale with a north arrow, which indicates the surveyed locations of soil borings, observation and monitor wells, and test pits and other areas of physical testing and which has a groundwater contour overlay that indicates groundwater flow direction with a maximum contour interval of 1 foot. The top of well casings shall be surveyed and referenced to United States geological survey data accurate to 0.01 foot by a land surveyor licensed under Act No. 299 of the Public Acts of 1980, as amended, being §339.101 et seq. of the Michigan Compiled Laws, and known as the occupational code.
(v) A map of the surrounding area that shows the direction of surface drainage and all of the following within ½ mile of the discharge:
(A) Representative private water supply wells.
(B) All municipal water supply wells.
(C) Irrigation and disposal wells.
(D) Lakes.
(E) Ponds.
(F) Streams.
(G) Springs.
(H) Wetlands.
(vi) Information describing all pertinent current and historical land use practices at the site of discharge and at properties adjacent to the site of discharge. Land use is pertinent for purposes of this subdivision if it could be impacted by the discharge or could impact the discharge.
(vii) If groundwater monitoring is required under R 323.2223(2), a proposed groundwater monitoring system which includes at least 1 cluster well located hydraulically downgradient of the discharge and which meets the conditions of R 323.2223(2).

(viii) All data collected during the field investigation and calculations and test results used to determine aquifer properties.

(5) All test wells that are not included as part of the permanent groundwater monitoring program for the discharge, as required by R 323.2223, shall be removed and plugged according to approved procedures provided in part 127 of Act No. 368 of the Public Acts of 1978, as amended, being §§323.12701 to 323.12715 of the Michigan Compiled Laws, or part 625 of the act, mineral wells, being §§324.62501 to 324.62518 of the Michigan Compiled Laws.

(6) The department may waive all or portions of the requirements of this rule if the applicant demonstrates, to the department's satisfaction, that the purposes of this part can be met without submittal of all hydrogeologic information described in this rule.

R 323.2222 Discharge standards.

Rule 2222.(1) Except as provided in R 323.2206(4), a discharge authorized by a permit issued under R 323.2218 shall not exceed the standards contained in this rule when measured as indicated. For purposes of this rule, compliance with the standards in this rule when measured in the groundwater shall be determined as described in R 323.2224.

(2) A discharge that contains a substance that is capable of being treated by the actions of soil, soil microorganisms, or plants shall be limited as follows:

(a) A discharge that contains ammonia, nitrate, or nitrite shall be at a concentration that is less than either of the following standards:

(i) Five thousand micrograms per liter (ug/l) of total inorganic nitrogen, and not more than 500 ug/l nitrite, as measured in the effluent and groundwater.

(ii) Five thousand micrograms per liter (ug/l) of total inorganic nitrogen, and not more than 500 ug/l nitrite, as measured in the groundwater and an effluent standard indicated in the permit that can be reasonably shown by the applicant to result in meeting the groundwater standard.

(b) A discharge that contains phosphorous shall be at a concentration that is less than 5,000 ug/l as measured in the effluent, unless the department determines that either of the following alternative concentrations is appropriate:

(i) If a body of surface water is within 1,000 feet hydraulically downgradient of the discharge, then the concentration shall be less than 1 of the following standards:

(A) One thousand ug/l as measured in the effluent.

(B) One thousand ug/l as measured in the groundwater and an effluent standard that can be reasonably shown by the applicant to result in meeting the groundwater standard.

(C) A groundwater or effluent standard indicated in the permit that is determined by the department as necessary to protect surface waters as required by R 323.1041 to R 323.1117.

(ii) If a body of surface water is not less than 1,000 feet downgradient of the discharge, a concentration measured in the effluent or groundwater, or both, that has been demonstrated by the applicant to protect surface waters as required by R 323.1041 to R 323.1117.

(c) A substance other than ammonia, nitrate, nitrite and phosphorus that can be demonstrated by the applicant to qualify under this subrule shall be at a concentration less than either of the following standards:

(i) The standard established for the substance in subrules (3) to (7) of this rule as measured in the effluent and groundwater.

(ii) The standard established for the substance in subrules (3) to (7) of this rule as measured in the groundwater and an effluent standard indicated in the permit which can be reasonably shown by the applicant to result in the groundwater standard being met.

(3) A discharge containing a substance indicated in the following subdivisions shall be at a concentration that is less than the standard indicated:

(a) Aluminum, 150 ug/l.

(b) Chloride, 250,000 ug/l.

(c) Sodium, 150,000 ug/l.

(d) Sulfate, 250,000 ug/l.

(e) Iron, 300 ug/l.

(f) Manganese, 50 ug/l.
Compliance with this standard shall be determined in the effluent or groundwater, as selected by the applicant and specified in the permit.
(4) The allowable concentration for total trihalomethanes shall be 20% of the concentration at which a facility as defined by part 201 would be created. The allowable concentration shall be measured in the effluent and groundwater. To determine total trihalomethanes, a discharge shall be assessed by summing the concentrations of the following substances if found to be present:
(a) Chloroform.
(b) Bromodichloromethane.
(c) Dibromochloromethane.
(d) Bromoform.
(5) A discharge containing a substance not described in subrule (2)(a) or (b), (3), or (4) of this rule shall be limited as follows:
(a) If the substance is an inorganic substance not described in subrule (2)(a) or (b) or (3) of this rule, then the concentration of the substance in the groundwater shall not exceed a concentration ½ way between the background groundwater quality and the concentration at which the site would be a facility as defined by part 201. Background groundwater quality for this purpose shall be determined by upgradient wells located pursuant to the hydrogeological report described in R 323.2221. The discharger shall notify the department if the concentration of the inorganic substance in groundwater exceeds the background groundwater quality determined under R 323.2221. An initial notification at the time when the condition first exists fulfills the discharger's obligation of notifying the department. The department will notify the discharger of the excessive concentration of the inorganic substance if the department becomes aware of it before notice from the discharger.
(b) If the substance is an organic parameter for which a treatment technology standard is established for the substance under R 323.2229, then the following provisions apply, as applicable:
(i) If the concentration of the substance in the effluent exceeds the treatment technology standard, then the discharger shall take initial response as required by R 323.2228. The initial response concentration established in this paragraph may be modified under R 323.2222(2)(c)(ii) based on the concentration in the groundwater established in paragraph (ii) of this subdivision.
(ii) The concentration of the substance in groundwater shall not exceed the treatment technology standard. Measurement for this purpose shall be according to R 323.2224, except that R 323.2224(2) shall not apply.
(c) If the substance is an organic parameter for which there is a standardized or EPA-approved analytical method and if a treatment technology based standard has not been determined under R 323.2229, then the following provisions apply, as applicable:
(i) The concentration of the substance in the effluent shall not exceed that concentration, if it occurred in the groundwater, a facility as defined by part 201 would exist.
(ii) If the substance is detected in groundwater, then the discharger shall take initial response as required by R 323.2228. Measurement for this purpose shall be according to R 323.2224, except that R323.2224(2) shall not apply.
(d) If the substance is an organic parameter for which there is no standardized or EPA-approved analytical method, then the discharge shall be controlled by limiting the volume of the substance used by the discharger. The volume shall result in a discharge that has a concentration of the substance, as determined by use of a mass balance equation, which does not exceed the concentration at which a facility as defined by part 201 would be created.
(e) If there is insufficient information concerning the substance to determine the criteria described in subdivision (a), (c), or (d) of this subrule, then the substance shall not be discharged, except pursuant to subrule (7) of this rule.
(6) If the standard determined under subrule (5) of this rule is below the detection limit as determined by the department for this part, then the department may take 1 of the following actions:
(a) Deny the application if the risks associated with the inability to detect the substance at concentrations below the detection limit are determined by the department to be unacceptable.
(b) Require the discharger to demonstrate that the concentration in the discharge is not above, and cannot be above, the standard by estimating the concentration of the substance in the discharge as described in

R 323.2220(5) or by monitoring the internal processes for the substance.
(c) Establish a standard in the permit at the detection limit as determined by the department for the purposes of compliance with this subrule.
(7) The department may approve a standard different from the standards established in subrules (2) to (6) of this rule under any of the following circumstances:
(a) The discharge is to groundwater in an unusable aquifer or not in an aquifer.
(b) The groundwater affected by the discharge vents to surface water and all of the following conditions are met:
(i) Venting of groundwater affected by the discharge to surface water is demonstrated by a hydrogeologic report meeting the requirements of R 323.2221.
(ii) Uses of the surface water are protected in accordance with R 323.1041 to R 323.1117.
(iii) Except as provided in paragraph (v) of this subdivision, the distance between the point of discharge and the point of venting to surface water is less than 1,000 feet.
(iv) Deed restrictions, on a form approved by the department, preventing the withdrawal and use of the groundwater for all protected uses that would be impacted by the discharge have been recorded with the register of deeds for all property, including the property of the discharger, downgradient from the discharge to the point of venting.
(v) A discharge otherwise meeting the conditions in this subrule that occurs at more than 1,000 feet from the point of venting to surface water may be authorized if the discharger owns all property between the point of discharge and the point of venting and if the department determines that alternative methods of wastewater disposal are not economically or technically feasible, that a prudent alternative does not exist, and that the discharge promotes the public health, safety, and welfare in light of the state's paramount concern for the protection of its natural resources.
(c) The department may issue a permit that has a limit that is higher than the standard established by subrules (2) to (6) of this rule, if all other conditions of this part are met and if the applicant demonstrates either of the following:
(i) Background groundwater quality exceeds the standard established in this rule for any substance and the discharge does not increase the concentration of the substance in the groundwater. A permit issued under this subdivision may limit a substance in the discharge in order to reflect changes in background groundwater quality or municipal water supply quality.
(ii) The source of the water is a municipal water supply delivered in compliance with Act No. 399 of the Public Acts of 1976, as amended, being §325.1001 et seq. of the Michigan Compiled Laws, and known as the safe drinking water act, the water exceeds the standard established in this rule for the substance, and the discharge does not increase the concentration of the substance in the groundwater above the concentration of the municipal water supply. A permit issued under this subdivision may limit a substance in the discharge in order to reflect changes in background groundwater quality or municipal water supply quality.
(d) If an applicant demonstrates that existing groundwater quality exceeds the standard established in this rule for total inorganic nitrogen, then a permit may be issued by the department that has a higher limit than the standard established in this rule if the limit is not more than the state drinking water standard established under Act No. 399 of the Public Acts of 1976, as amended, being §325.1001 et seq. of the Michigan Compiled Laws, and known as the safe drinking water act, the concentration of total inorganic nitrogen in the discharge does not increase the concentration of total inorganic nitrogen in the groundwater, and all other pertinent conditions of this part are met. A permit issued under this rule may include a limit on total inorganic nitrogen in order to reflect improvement in existing groundwater quality.
(e) A standard that has a limit that is higher than the limit set in subrules (2) and (4) to (7) of this rule may be established by the department in an individual case if the department determines that the standard set in subrules (2) and (4) to (7) of this rule is not economically or technically feasible, that a prudent alternative does not exist, and that establishing a higher limit is consistent with the promotion of the public health, safety, and welfare in light of the state's paramount concern for the protection of its natural resources. In approving a permit with a limit established under this subdivision, the department may prescribe criteria, limitations, or conditions as the department deems necessary to ensure that the conditions of R 323.2204 are met.
(f) A standard that is more stringent than the standards described in this rule may be established in an

individual case if the department determines that readily available and cost-effective treatment technology allows a more stringent standard to be met.
(g) A standard that is more stringent than the standards described in this rule may be established for the protection of other environmental media, where applicable, if consistent with the requirements of all of the following:
(i) R 323.1041 to R 323.1117.
(ii) Protection of soil by preventing the creation of a facility as defined by part 201 or the violation of cleanup criteria established in section 21304(a) of the act, being §324.21304(a) of the Michigan Compiled Laws, if applicable.
(iii) R 336.1901, air contaminant and water vapor prohibitions.
(h) If 2 or more substances are present and known to result in toxicological interaction, the interactive effects shall be considered in establishing standards for those substances.

R 323.2223 Discharge monitoring.

Rule 2223.(1) Monitoring required by an authorization under this part shall be conducted in a manner, at a frequency, and for a substance the department specifies, under rule or permit, is necessary to assess compliance with these rules. Analytical methods used in the monitoring shall be in compliance with R 323.2220(3). Monitoring of an indicator parameter may be used in monitoring if the technique accurately reflects the effect of the discharge. An indicator parameter shall be representative of the environmental fate of a substance or substances in the discharge and shall be 1 of the following:
(a) A substance in the discharge.
(b) A decomposition material of a substance.
(c) A sampling parameter that can be directly correlated to the concentration of another substance in the discharge.
(2) Groundwater monitoring shall include the collection of water quality and water level data from a well or group of wells that are specifically designed to adequately assess the impact of the discharge on groundwater as described in R 323.2224. The design of the groundwater monitoring system shall be based on all of the following:
(a) The hydrogeologic report.
(b) Considerations of the local geology.
(c) Groundwater conditions specific to each site.
(d) The type of discharge.
(3) At the time of application for a permit under R 323.2218, an applicant shall propose, for department approval, a groundwater sampling and analysis plan that establishes criteria for collecting representative samples of groundwater. The plan shall contain all of the following information:
(a) The number and location of wells to be included in the groundwater monitoring system.
(b) For each well, the depth and screened interval for each monitor well. The screened interval shall be referenced to United States geological survey data.
(c) Well construction materials and installation techniques.
(d) Sampling frequency.
(e) A list of substances to be sampled.
(f) Sampling procedure, including all of the following:
(i) The method and volume of water removed from each well during sampling.
(ii) Steps taken to prevent cross contamination between wells.
(iii) Sample handling and preservation methods.
(iv) Laboratory analysis method.
(v) Laboratory method detection level.
(vi) Quality assurance and quality control program.
(g) A description of the techniques used to present and evaluate groundwater quality monitoring data.
(h) A description of the method used to collect static water levels and present groundwater flow data. Static water level precision shall be to 0.01 foot.
(4) A discharger shall design, construct, and abandon a monitoring well as follows:
(a) A monitoring well shall be located at a depth where the screened interval will intercept the path of any

discharge from the site in the groundwater as required by the department as specified by these rules.
(b) If the thickness of the aquifer receiving the discharge is more than 20 feet, then at least 1 hydraulically downgradient monitor well location shall contain a cluster well. The separation and length of the screens shall be such that discrete groundwater potentiometric surface data can be collected to determine vertical gradients within the aquifer.
(c) Monitor well construction and sampling equipment materials shall not influence the sampling results for the substances sampled.
(d) A monitor well shall be designed to collect an adequate volume of water to allow analysis for the complete set of substances determined by the department as indicative of the discharge.
(e) Annular space between the bore hole and the well shall be grouted from the ground surface to 2 feet above the well screen so as to prevent vertical leakage of the fluids between the casing and the drill hole. When drilling through confining layers, a discharger shall install double-cased wells to prevent the hydraulic connection of fluids between formations above and below the confining layer.
(f) A well shall be protected against the introduction of contaminants by means of a locking device or by another method approved by the department.
(g) Either a well shall be vented so that accurate static water levels may be collected or else well caps shall be removed a sufficient amount of time before measurement so that representative static water levels can be measured. Care shall be taken to prevent the introduction of contaminants through vents.
(h) The well casing shall be protected against accidental damage and shall be adequately marked to prevent accidental damage.
(i) A well shall be labeled so that the discharger's name, and address and the well number can be determined through the life of the permit.
(j) If a monitoring well is to be permanently abandoned, a discharger shall follow the plugging procedures in part 127 of Act No. 368 of the Public Acts of 1978, as amended, being §§323.12701 to 323.12715 of the Michigan Compiled Laws.
(k) A discharger shall receive department approval before installing, replacing, redeveloping, or abandoning a monitoring well that is part of the discharge monitoring program.
(5) If necessary to measure compliance with a standard established under R 323.2222(7)(g), the department may specify, by rule or permit, the monitoring of media in addition to groundwater.
(6) A monitoring program under this rule shall be evaluated by the department on the basis of the threat the discharge poses to protected uses given all of the following factors:
(a) The substances in the discharge.
(b) The volume of the discharge.
(c) The amount of information related to predicting the impacts of a discharge developed through the hydrogeological report prepared under R 323.2221.

R 323.2224 Groundwater monitoring location; approval by department.

Rule 2224.(1) Except as provided in subrule (2) of this rule, the department shall approve, under R 323.2223(2), a groundwater monitoring location for determining compliance with the standards of R 323.2222 if the location meets all of the following criteria:
(a) It provides a practicable and effective point of measurement.
(b) It is located on property owned or leased by the discharger and under the discharger's control.
(c) It is not more than 150 feet from the point of discharge.
(2) The department may approve, under R 323.2223(2), an alternative groundwater monitoring location to determine compliance with R 323.2222 if all of the following requirements are met:
(a) The location is less than 1,000 feet from the point of discharge.
(b) The alternative location provides a practicable and effective point of measuring compliance with R 323.2222.
(c) The substance to be measured in the groundwater is either of the following:
(i) A metal or other inorganic substance.
(ii) A substance that the applicant demonstrates can be treated by the actions of soil, soil microorganisms, or plants.
(d) The discharger has not previously met the standard for the same discharge at a closer point of

compliance.
(e) The discharger demonstrates all of the following:
(i) Meeting the standard at a closer point of compliance is economically burdensome or technically impractical.
(ii) The concentration of the substance in the groundwater between the point of compliance that would be determined under subrule 1 of this rule and the point of compliance determined under this subrule shall not exceed that which would require remedial action pursuant to part 201 for the land use classification of the property on which the discharge is located.
(iii) The discharger demonstrates that the adoption of an alternative or alternatives described in R 323.2219(1) to (3) is not prudent given the state's paramount concern for the protection of its natural resources or public trust in the resources from pollution, impairment, or destruction. In determining whether the discharger has successfully demonstrated that the adoption of an alternative or alternatives is not prudent, the department shall specifically solicit and consider public comment on the issue and make the determination in writing.
(f) The discharger has in place and implements all of the following:
(i) A written pollution prevention policy that promotes the elimination of waste or reduction of waste at the source of generation.
(ii) A pollution prevention policy that is signed by a responsible official and available to the department upon request.
(iii) Periodic pollution prevention assessments that identify opportunities for eliminating waste at the source.
(iv) Pollution prevention goals that specify the environmental media types of pollution prevention to be prevented or reduced, implementation activities, and projected time frames.
(v) The recording of progress in achieving pollution prevention goals.
(g) The point of compliance and all land surface area over groundwater from the point of discharge hydraulically downgradient to the point of compliance that does not meet the standards in R 323.2222 are located on property under the ownership and control of the discharger. For purposes of this subrule, a public or private transportation or utility right-of-way may be considered under the ownership and control of the discharger if the right-of-way owner gives written consent.
(h) Groundwater affected by the discharge that exceeds the standards of R 323.2222 is located outside of a designated wellhead protection zone or, if a wellhead protection zone has not been designated, not less than 2,000 feet from an existing type I water supply well as defined in Act No. 399 of the Public Acts of 1976, as amended, being §325.1001 et seq. of the Michigan Compiled Laws, and known as the safe drinking water act, not less than 300 feet laterally from adjacent property that has a land use classification of residential, and not less than 800 feet laterally from adjacent property that has a land use classification of commercial or industrial. The department may authorize a lesser distance if, based upon hydrogeologic information contained in the report required under R 323.2221, there is no potential for impact to a wellhead protection zone or the use of groundwater on affected property.
(i) A discharger may not use groundwater for human consumption if the groundwater does not meet state or federal standards for use as a potable water supply. A discharger shall record a restrictive covenant or other similar legal instrument describing this restriction against using groundwater for human consumption. Upon approval of the department, a discharger or subsequent owner of the property may modify the restrictive covenant or similar legal instrument to allow use of the groundwater for drinking if all groundwater affected by the discharge meets state or federal standards for use as a potable water supply.
(3) If the department grants an alternative point of compliance in accordance with this rule, then the department shall provide copies of hydrogeologic information upon which the decision is based to the county, district, or city health department that has jurisdiction.

R 323.2225 Monitoring reports.

Rule 2225. A discharger is required to provide monitoring reports to the department under this part at a time and in a manner specified by the department in a permit or other applicable authorization. The department shall provide a copy of a monitoring report upon request by any interested party.

R 323.2226 Cessation of discharge-related activities.

Rule 2226.(1) A discharger who has eliminated all or any portion of a discharge area or treatment system or intends to eliminate a discharge area or treatment system shall comply with subrules (2) to (4) of this rule. The department may waive the requirements of subrules (2) and (4) of this rule upon written request by a discharger who intends to temporarily cease the use of a discharge area or treatment system for longer than 9 months.

(2) A discharger shall eliminate all physical threats associated with discharge-related facilities not later than 5 calendar days after use of the facility has ceased.

(3) A discharger shall comply with part 201, if applicable, or part 213, if applicable.

(4) If a discharge is authorized under R 323.2218 or involves the use of a lagoon, including a discharge authorized before the effective date of these rules, then a discharger shall close the facility as follows, unless otherwise authorized by the department:

(a) Not less than 75 calendar days before the cessation of discharge-related activities, a discharger shall representatively characterize the wastewater, soils, sediments, and sludges in the following manner:

(i) A discharger shall representatively characterize the wastewater according to R 323.2220.

(ii) A discharger shall conduct a totals analysis for substances that may be present, given the nature of the discharge, on representative samples of soils affected by the discharge and representative samples of sediment and sludges associated with the discharge. The totals analysis shall be according to procedures described in R 323.2220(3). Samples shall be selected using procedures determined by the department.

(iii) If the totals analysis for a substance is more than 20 times the toxicity characteristic regulatory level under part 111, then a discharger shall conduct a toxicity characteristic leaching procedure according to EPA method 1311 on representative samples of the soils, sediments, and sludges, as appropriate. EPA method 1311 is found in the EPA document entitled "Test Methods for the Evaluation of Solid Waste, Physical-Chemical Methods," SW-846, 3rd Edition, September 1986, as updated through the effective date of these rules. EPA method 1311 is adopted in these rules by reference and is available for inspection at the Lansing office of the department of environmental quality, waste management division. EPA document SW-846 and updates may be purchased from the United States Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, Pennsylvania 15250-7954, or the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at a cost at the time of adoption of these rules of $319.00, plus shipping and handling.

(b) Within 30 days of completing the characterization, a discharger shall submit a closure plan meeting the requirements of subdivision (c) of this subrule to the department for review and approval. The closure plan shall include a schedule for implementation of closure activities as follows:

(i) Within 45 calendar days of receipt, the department shall approve the closure plan, approve the plan with modifications, or deny the plan. If a plan is denied by the department, then a discharger shall resubmit the plan within 30 days.

(ii) Implementation of the closure plan shall be initiated within 30 calendar days of approval and shall be completed within 1 year.

(c) Closure activities shall comply with the following provisions, as applicable:

(i) If the level of a contaminant in the groundwater qualifies the site as a facility as defined by part 201, then the discharger shall comply with the requirements of part 201 with respect to the groundwater.

(ii) If the groundwater exceeds a standard established for criteria by the department under section 21304(a) of the act, then a discharger shall comply with the requirement of part 213 with respect to the groundwater.

(iii) If the characterization of wastewater remaining at the cessation of the discharge indicates that wastewater concentrations exceed a standard of R 323.2222, then a discharger shall treat and dispose of the wastewater as authorized by this part or remove the wastewater from the site to an approved wastewater treatment plant for treatment and disposal.

(iv) Any sediments and sludges shall be managed in accordance with part 111 or part 115, as appropriate.

(v) Soils associated with the discharge shall be managed in accordance with part 111, part 115, or part 201, as appropriate.

(d) The department may require postclosure monitoring activities to evaluate the effectiveness of closure activities.

(e) A discharger shall notify the department before implementing activities described in the approved

closure plan and certify completion of the approved closure plan. One of the following shall certify completion of the plan:
(i) An engineer licensed under Act No. 299 of the Public Acts of 1980, as amended, being §339.101 et seq. of the Michigan Compiled Laws, and known as the occupational code.
(ii) A professional geologist certified by the American Institute of Professional Geologists, 7828 Vance Drive, Suite 103, Arvada, Colorado 80003.
(iii) A professional hydrologist certified by the American Institute of Hydrology, 2499 Rice Street, Suite 135, St. Paul, Minnesota 55113.
(iv) A groundwater professional certified by the National Ground Water Association, Association of Groundwater Scientists and Engineers Division, 601 Dempsey Road, Westerville, Ohio 43081.
(v) Another groundwater professional certified by an organization approved by the department.

R 323.2227 Discharger compliance responsibilities.

Rule 2227.(1) If, during the term of an authorization to discharge granted under this part, monitoring data indicate that a limit on the concentration of a substance in groundwater or effluent has been exceeded, then a discharger shall do all of the following:
(a) Notify the department, by written instrument within 7 calendar days of making the determination, that a limit has been exceeded. The notification shall include all of the following information:
(i) The name of any substance for which a limit was exceeded.
(ii) The concentration at which the substance was found.
(iii) The location or locations at which the limit was exceeded.
(b) Within 14 days of making the determination that a limit has been exceeded, resample the monitoring location at which the limit was exceeded as specified in a permit issued under these rules.
(c) Within 60 calendar days of making the determination that a limit has been exceeded, submit a report that includes all of the following information:
(i) Results of the confirmation sampling.
(ii) An evaluation of the cause for the limit being exceeded and the impact of that event to groundwater.
(iii) A proposal detailing steps taken or to be taken to prevent recurrences.
(d) Take actions as may be required by the department under subrule (2) of this rule.
(2) If the department determines that a limit on the concentration of a substance in effluent or groundwater has been exceeded, then the department may require the discharger to undertake 1 or more of the following activities:
(a) Change the monitoring program, including increasing the frequency of effluent monitoring or groundwater sampling, or both.
(b) Develop and implement a groundwater monitoring program if one is not in place. A groundwater monitoring program established under this provision shall comply with R 323.2223(2).
(c) If the discharge is in a designated wellhead protection area**,** assess the affects of the discharge on the public water supply system.
(d) Review the operational or treatment procedures, or both, at the facility.
(e) Define the extent to which groundwater quality exceeds the applicable criteria established by the department under section 20120a(1)(a) of the act, if applicable, or under section 21304(a) of the act, if applicable.
(f) Revise the operational procedures at the facility.
(g) Change the design or construction of the wastewater operations at the facility.
(h) Initiate an alternative method of waste treatment or disposal.
(i) If the standard for the substance is established by R 323.2222(5), reduce or eliminate use of the substance.
(j) Close the facility or end the discharge that resulted in the applicable standard being exceeded.
(k) Remediate contamination to comply with the terms of section 20120a and b of the act, if applicable, or section 21304(a) of the act, if applicable.
(3) If the department determines there is a change in groundwater quality from a normal operating baseline that indicates the concentration of a substance in groundwater may exceed an applicable limit, then the discharger shall take the following actions if required by the department:

(a) Change the monitoring program, including increasing the frequency of effluent sampling or groundwater sampling, or both.
(b) Review the operational or treatment procedures, or both, at the facility.

R 323.2228 Initial response.

Rule 2228.(1) A discharger who is required by R 323.2222(5)(b)(i) or (c)(ii) to take initial response shall do all of the following:
(a) Confirm the initial sampling result and notify the department as described in R 323.2227(1)(a) and (b).
(b) Within 60 calendar days of determining that initial response is required, submit a report that includes all of the following:
(i) Results of confirmation sampling.
(ii) An evaluation of the cause for the need for initial response.
(iii) A plan detailing steps to be taken to reduce the concentration of the substance in the effluent or groundwater below the concentration necessary for initial response. The plan shall include a schedule that is the shortest time practicable, but not more than 1 year, for achieving the reduction. If, based on groundwater velocity, the effect of actions to be taken in the plan will not be measurable in groundwater within 1 year, then the plan shall correlate groundwater concentrations of the substance of concern with effluent concentrations and be designed to achieve necessary reductions in effluent concentrations within as short a time as practical, but not more than 1 year.
(c) Within 15 calendar days of submitting the plan required in subdivision (b)(iii) of this subrule, implement the plan taking into account any comments by the department.
(d) Complete the plan described in subdivision (b)(iii) of this subrule, in the time described in that subdivision, unless either of the following occurs:
(i) The discharger demonstrates, to the satisfaction of the department, that the concentration of the substance has fallen and will remain below the level necessary for initial response because of steps already taken. If the demonstration satisfies the department, then the discharger need not take any additional steps identified in the plan to reduce concentrations of the substance.
(ii) The concentration of the substance exceeds the limit described in R 323.2222(5)(b)(ii) or (c)(i), in which case the discharger shall comply with R 323.2227.
(e) If initial response is still necessary at the completion of the plan described in subdivision (b)(iii) of this subrule, describe in a second plan further steps to reduce the concentration of the substance below the level at which initial response is necessary. Development and implementation of the plan shall conform with subdivisions (b)(iii), (c), and (d) of this subrule.
(f) If the initial response is not successful as specified in subrule (2) of this rule, undertake the following activities as required by the department:
(i) If the discharge is in a designated wellhead protection area, assess the effects of the discharge on the public water supply system.
(ii) Review the operational or treatment procedures, or both, at the facility.
(iii) Revise the operational procedures at the facility.
(iv) Change the design or construction of the wastewater operations at the facility.
(v) Initiate an alternative method of waste treatment or disposal.
(vi) Reduce or eliminate use of the substance.
(2) An initial response is not successful if the concentration of the substance is above the concentration described in R 323.2222(5)(b)(i) or (c)(ii) at the earlier of the following events:
(a) When the plan described in subrule (1)(e) of this rule has been fully implemented.
(b) Two years from the date the report described in subrule (1)(b) of this rule was due to be submitted to the department.
(3) A discharger who is in compliance with initial response requirements described in this rule is not subject to the civil fine described in section 3115(1) of the act, if the substance does not exceed the limit described in R 323.2222(5)(b)(ii) or (c)(i).

R 323.2229 Treatment technology-based standards.

Rule 2229.(1) The treatment technology-based standard described in R 323.2222(5)(b) for a substance

listed in table 101 shall be the concentration specified in table 101.
(2) The department may specify a treatment technology-based standard for an organic substance in a permit issued under R 323.2218 if the applicant, using published documentation or verified field testing, demonstrates that the treatment technology achieves the lowest concentration possible in the discharge.
(3) The department shall update table 101 on a periodic basis, but at least once every 3 years.

R 323.2230 Treatment system requirements.

Rule 2230. A treatment system described in R 323.2216(3) shall be in compliance with all of the following requirements:
(a) The treatment system shall have sufficient hydraulic capacity to treat organic or inorganic loading so that the discharge receives physical, chemical, biological treatment or a combination of treatments to meet the standards of R 323.2222. Subsequent to construction of treatment facilities built under this rule, a discharger shall obtain certification by an engineer licensed under Act No. 299 of the Public Acts of 1980, as amended, being §339.101 et seq. of the Michigan Compiled Laws, and known as the occupational code, that the treatment system complies with this requirement. The certification shall be available for inspection by the department.
(b) Wastewater sludge shall be disposed of in accordance with part 115 or land applied in accordance with applicable state and federal law.
(c) Operation of the treatment system shall be under the supervision of an operator certified pursuant to section 3110(1) of the act for an industrial or commercial entity or section 4104 of the act for a sewage treatment works operated by a municipality.
(d) A discharger shall maintain all treatment or control facilities or systems installed or used by the discharger to achieve compliance with this rule in good working order and operate the facilities or systems as efficiently as possible.
(e) A discharger shall have an operation and maintenance manual for the wastewater treatment facility. The manual shall be used by the certified operator of the facility as a guide for facility operation and maintenance. The operation and maintenance manual shall include all of the following information:
(i) The function, start-up, shutdown, and periodic maintenance procedures for each unit process and item of mechanical and electrical equipment.
(ii) The appropriate response or facility adjustment to minimize the impact of an emergency situation so as to facilitate rapid implementation of a correct response during emergencies.
(iii) A monitoring program to monitor process efficiency.
(iv) The details of how inspections will be conducted and a schedule for the inspection of collection system and pump stations, where applicable.
(v) The periodic maintenance procedures for the collection system and pump stations, where applicable.
(vi) Procedures for the routine maintenance and inspection of lagoons and equipment used for irrigation, where applicable.

R 323.2231 Certain treatment systems; design, operation, maintenance, limitation, and monitoring.

Rule 2231.(1) A treatment system described in R 323.2216(3) that involves lagoon storage and land treatment shall be designed, operated, maintained, limited, and monitored in accordance with all of the following provisions:
(a) The lagoon liner shall meet the requirements of R 323.2237.
(b) The minimum storage volume of the lagoon system shall be ½ of the annual influent flow.
(c) The lagoon system shall be a minimum of 2 cells as follows:
(i) Cell 1 shall not exceed a maximum depth of 6 feet.
(ii) Cell 2 shall not exceed a maximum depth of 8 feet.
(iii) Subsequent cells shall not exceed a maximum depth of 10 feet.
(d) A lagoon system that has mechanical aerators shall meet all of the following criteria:
(i) The lagoon system shall be a minimum of 2 cells.
(ii) A minimum of 2 mg/l dissolved oxygen shall be maintained in the primary cell.
(iii) The maximum depth of secondary cells shall not exceed 10 feet.

(e) A lagoon shall have security fencing and warning signs.
(f) Wastewater disposal shall be by means of land application to a suitable crop in accordance with R 323.2233.
(g) Effluent may be discharged from May 1 through October 15, unless alternative dates are approved by the department.
(h) A discharge shall occur only from an isolated cell. An isolated cell is one that has not received untreated wastewater at least 30 calendar days before a discharge.
(i) A discharger shall inspect the lagoon facilities weekly and maintain an inspection log unless otherwise authorized by the department.
(j) A discharger shall meet all of the following requirements when drawing down a cell for transfer or discharge unless otherwise authorized by the department:
(i) Water discharged or transferred shall be removed from the surface 2 feet of the cell at a rate of less than 1 foot per day.
(ii) A discharger shall maintain a minimum of 2 feet of freeboard in all cells at all times.
(iii) A discharger shall maintain a minimum of 2 feet of water in all cells at all times.
(k) A discharger shall implement a facility maintenance program that, at a minimum, incorporates all of the following management practices unless otherwise authorized by the department:
(i) Vegetation shall be maintained at a height not more than 6 inches above the ground on lagoon dikes.
(ii) Not more than 10% of the water surface shall be covered by floating vegetation and not more than 10% of the water perimeter may have emergent rooted aquatic plants.
(iii) Dikes shall be inspected for evidence of erosion and animal burrowing. Damage due to erosion or animal burrowing shall be corrected immediately and steps taken to prevent occurrences in the future.
(iv) The occurrence of any of the following shall be minimized and immediate steps shall be taken to eliminate each occurrence:
(A) Scum.
(B) Floating sludge.
(C) Offensive odors.
(D) Insect infestations.
(E) Septic conditions.
(2) A treatment system which is described in R 323.2116(3) and which does not involve land treatment, such as a sequencing batch reactor, oxidation ditch, or activated sludge with denitrification capabilities, shall meet the following requirements, as applicable:
(a) A system that does not have a minimum storage volume of ½ the annual influent flow shall comply with both of the following provisions:
(i) Meet the requirements of R 323.2222 in the effluent.
(ii) Have a contingency plan to deal with periods of upset, mechanical malfunctions, and routine maintenance while maintaining compliance with this part.
(b) A sequencing batch reactor system shall have a minimum of 2 treatment tanks.

R 323.2232 Monitoring and limiting certain discharges.

Rule 2232. A discharge authorized under R 323.2216(2) or (3) shall be limited and monitored by the discharger as follows:
(a) Flow shall be measured.
(b) Unless otherwise approved by the department under subdivision (d) of this rule, grab samples shall be collected and analyzed twice each month for the following parameters:
(i) Ammonia-nitrogen.
(ii) Nitrate-nitrogen.
(iii) Nitrite-nitrogen.
(iv) Sodium.
(v) Chloride.
(vi) Phosphorus.
(vii) The pH.
(viii) Dissolved oxygen for a primary cell described in R 323.2231(1)(d)(ii).

(c) For a discharge authorized under R 323.2216(3), the effluent limitations are as follows:
(i) Total inorganic nitrogen is limited to 20 mg/l in the effluent if the discharge is done under R 323.2233 and R 323.2234 or R 323.2235.
(ii) Total inorganic nitrogen is limited to 5 mg/l in the effluent if the discharge is done under R 323.2233 and R 323.2236.
(iii) Sodium is limited to 150 mg/l in the effluent.
(iv) Chloride is limited to 250 mg/l in the effluent.
(v) Total phosphorus is limited to 5 mg/l in the effluent if the discharge is done under R 323.2233 and either R 323.2234 or R 323.2235.
(vi) Total phosphorus is limited to 2 mg/l in the effluent if the discharge is done under R 323.2233 and R 323.2236.
(vii) The pH of the effluent shall be between 5.5 and 10.0 standard units.
(d) The application rate of the discharge shall be determined by direct measurement or calculation. If the discharge in done in accordance with R 323.2233 and R 323.2234 or R 323.2235, then the flow volume shall be reported in gallons per day and the application rate of the discharge shall be reported both in units of inches per day and inches per week. If the discharge is done in accordance with R 323.2233 and R 323.2236, then the flow volume shall be reported in gallons per day.
(e) Alternative measurement frequencies may be approved by the department if the discharger demonstrates that results are representative of the discharge.
(f) Monitoring reports shall be submitted in accordance with R 323.2225.

R 323.2233 Land treatment of wastewater; requirements.

Rule 2233.(1) For the purposes of this rule, the land treatment of wastewater shall be categorized into 1 of 3 of the following general processes:
(a) Slow rate.
(b) Overland flow.
(c) Rapid infiltration.
(2) If land application is considered part of the overall treatment to meet the standards of R 323.2222, then a discharger shall incorporate the use of slow rate or overland flow processes in the design.
(3) A land treatment system shall comply with the general requirements for land treatment systems as described in subrule (4) of this rule as well as the specific requirements applicable to the type of land treatment system provided in R 323.2234 to R 323.2236. If a land treatment system includes a combination of 1 or more of the processes, then the overall system shall comply with the general requirements in subrule (4) of this rule and its individual component processes shall comply with the applicable requirements provided in R 323.2234 to R 323.2236. A discharger shall provide detailed design data, as described in this rule, to the department upon request.
(4) A land treatment system shall meet all of the following requirements:
(a) The system shall be designed, constructed, and operated as follows:
(i) The system shall be designed and constructed to prevent surface runoff from either entering or exiting the system.
(ii) The system shall be designed and constructed to provide even distribution of wastewater during application. A header ditch, where used, shall be designed and constructed to allow for complete drainage after each wastewater loading or shall be lined to prevent seepage.
(iii) If vegetative cover is utilized and is considered part of the overall treatment system, then the design and construction of the system shall allow for the mechanical harvesting of vegetative cover.
(iv) The system shall be designed, constructed, and operated to allow an appropriate loading cycle. An appropriate loading cycle allows time between loadings for all of the following:
(A) Soil organisms to biologically decompose organic constituents in the wastewater.
(B) Organic solids on the soil surface to decompose.
(C) The soil to become aerated.
(D) Vegetative cover to utilize available nutrients provided through the application of the wastewater.
(E) Soil conditions to become unsaturated and aerobic.
(F) Harvesting operations to occur at appropriate times.

(v) The design hydraulic loading or application rate, whether daily, monthly, or annual, shall not be more than 7% of the permeability of the most restrictive soil layer within the solum over the area of the discharge as determined by the saturated hydraulic conductivity method or 12% of the permeability as determined by the basin infiltration method. The design annual hydraulic loading rate shall not be more than 3% of the permeability of the solum when determined by either the cylinder infiltration method or air entry permeameter test method. The methods referenced in this paragraph for determining soil permeability are adopted by reference in these rules and are contained in the publication entitled "Methods of Soil Analysis, Part 1, Physical and Mineralogical Properties," Second Edition, American Society of Agronomy, 1986. The publication may be purchased from the American Society of Agronomy, 677 South Segoe Road, Madison, Wisconsin 53711-1086, or the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at a cost at the time of adoption of these rules of $65.00, plus shipping and handling. A discharger, if utilizing published information, shall determine the methodology used to measure the reported hydraulic conductivity. If published information is utilized and if it is given as a range of expected values, then a discharger shall use the minimum value given the most restrictive soil layer within the solum when calculating the hydraulic loading or application rate.

(vi) The system shall be designed, constructed, and operated so as to prevent the development of sodic conditions within the solum of the discharge area. Sodic conditions are considered to exist in the solum when the exchangeable sodium percentage, which is the percentage of the cation exchange capacity of a soil occupied by sodium, is more than 15%. The exchangeable sodium percentage shall be calculated by dividing the quantity of exchangeable sodium in the solum, in milliequivalents per 100 grams of soil, by the cation exchange capacity, also in milliequivalents per 100 grams of soil, multiplied by 100.

(b) If phosphorus adsorption within the solum or unsaturated soil column is part of the overall treatment process, then the system shall be designed as follows:

(i) The available phosphorus adsorptive capacity of the solum or unsaturated soil column from within the discharge area shall be sufficient to provide the necessary treatment to ensure that the applicable limit established in the permit is not exceeded for the duration of the permit.

(ii) The loading cycle shall be designed so as to provide the necessary contact time within the solum or unsaturated soil column required for phosphorus to be removed from the applied wastewater through adsorption processes.

(iii) The available phosphorus adsorptive capacity of the discharge area shall be determined through either of the following methods:

(A) By subtracting phosphorus levels of the unsaturated soil column, determined through on-site Bray-P1 analysis, from published phosphorus adsorption capacity data for the solum found within the discharge area. The method and procedure for the Bray-P1 analysis referenced in this subparagraph are contained in the publication entitled "Methods of Soil Analysis, Part 3 - Chemical Methods," American Society of Agronomy, 1996. The publication is adopted by reference in these rules and may be purchased from the American Society of Agronomy, 677 South Segoe Road, Madison, Wisconsin 53711-1086, or the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at a cost at the time of adoption of these rules of $65.00, plus shipping and handling.

(B) By subtracting phosphorus levels of the unsaturated soil column, as determined through on-site Bray-P1 analysis, from the phosphorus adsorption maximum as determined through Langmuir isotherm analysis of on site soils, after adjustments for the concentration of phosphorus in the effluent and fraction of utilization within the solum are made. The method and procedure for determining phosphorus adsorption maximum through Langmuir isotherm analysis referenced in this subparagraph are contained in the publication entitled "Phosphate Sorption Isotherms for Evaluating Phosphorus Requirements of Soils," Soil Science Society of America Journal, Volume 34, American Society of Agronomy, 1970. The publication is adopted by reference in these rules and may be purchased from the American Society of Agronomy, 677 South Segoe Road, Madison, Wisconsin 53711-1086, or the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at a cost at the time of adoption of these rules of $65.00, plus shipping and handling.

(iv) Unless otherwise specified in a permit issued under R 323.2216 or R 323.2218, each individual discharge area shall be annually sampled in accordance with the publication entitled "Michigan State University Extension Bulletin E-498" or other method approved by the department, and the samples shall be

analyzed for cation exchange capacity, available Bray-P1 phosphorus, pH, and sodium. Bulletin E-498 is available from Michigan State University Bulletin Office, 10-B Agriculture Hall, Michigan State University, East Lansing, Michigan 48824, at a cost of 25 cents per copy at the time of adoption of these rules. A single copy is free to Michigan residents. A copy of bulletin E-498 may also be obtained from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at a cost at the time of adoption of these rules of 25 cents, plus shipping and handling.

(c) All of the following operation and maintenance requirements shall be met:

(i) Portions of the wastewater distribution system shall be capable of being taken out of service for maintenance and other operational activities and to provide rest to portions of the irrigation area without disrupting applications to other areas of the system.

(ii) All areas within a system shall be accessible for maintenance equipment.

(iii) For slow rate and overland flow treatment systems, the pH of the plow layer within the discharge area shall be maintained between 6.0 and 7.5 standard units.

(iv) The discharge to a land treatment system shall be limited so that the discharge volume combined with the precipitation from a 10-year frequency, 24-hour duration rainfall event does not overflow the designed discharge area.

(d) For the purposes of the issuance of a permit under R 323.2218, in determining discharge limitations, the department shall consider all of the following:

(i) Past operating performance.

(ii) The ability of the solum or the unsaturated soil column to treat the pollutants of concern in the discharge.

(iii) Hydrogeologic characteristics of the site.

(iv) Other pertinent information.

R 323.2234 Slow rate land treatment.

Rule 2234.(1) Slow rate land treatment is the application of wastewater to a vegetated land surface with the applied wastewater being treated as it flows through the plant and soil matrix. A portion of the flow is expected to percolate to the groundwater while the remainder is utilized by plants or lost through evaporation. A facility utilizing a slow rate system for the land treatment of wastewater shall design and construct the system under this rule.

(2) The wastewater loading volume shall be designed so that the wastewater will be absorbed and held within the effective rooting zone of the vegetative cover established on the site receiving the wastewater.

(3) The daily application rate, in inches per day of the wastewater, shall not exceed the permeability as determined by R 323.2233(2)(a)(v) multiplied by 24.

(4) The header ditch drainage and the grading of the furrows, where utilized, shall be tested for equal liquid distribution before seeding.

(5) The system shall be seeded with a mixture of perennial vegetative cover, which are grasses such as reed canary grass, tall fescue, and orchard grass, alone or in combination with legumes, such as clover, alfalfa, and birdsfoot trefoil, suited to the climate and the soil moisture conditions created as a result of the application of wastewater in accordance with the designed loading cycle. The department may approve alternative vegetative cover on a case-by-case basis, but may impose restrictions based upon the characteristics of the proposed alternative.

(6) All furrow side slopes, where present, shall be designed and constructed to allow for periodic maintenance and or mechanical harvesting of vegetative cover.

(7) The depth of the furrows of a ridge and furrow system, when utilized, shall be adequate to contain the highest proposed furrow stream. The furrow stream is the volume, in gallons per unit time, usually per minute, of wastewater discharged into the furrow.

R 323.2235 Overland flow treatment.

Rule 2235.(1) Overland flow treatment of wastewater is the application of wastewater to the upper reaches of grass-covered slopes with excess wastewater collected at the end of the slopes for reapplication. A facility utilizing an overland flow system for the land treatment of wastewater shall design and construct the system under this rule.

(2) A system may be constructed on a site that has slowly permeable soil, which is soil that has 50% or more of the soil particles pass through a no. 200 sieve, except that more permeable or coarser textured soil may be approved on a case-by-case basis depending on system design and wastewater strength. Suitable soil shall extend not less than 3 feet below the soil surface.
(3) The system shall consist of an adequate number of cells that can be alternately loaded and rested, unless there is adequate storage or pretreatment, to allow loading and resting of a single cell.
(4) The shape of each cell within the system shall be designed to minimize soil disturbance when constructing the system.
(5) For a system utilizing more than 1 cell, the wastewater distribution system shall be designed and constructed so that individual cells within the system can be taken out of service for resting or other purposes without disruption to the remaining cells.
(6) The header ditch drainage and the grading of the furrows, where utilized, shall be tested for equal liquid distribution before seeding.
(7) All embankments and dikes shall be properly seeded in order to establish appropriate vegetative cover for the purpose of erosion prevention.
(8) All furrow side slopes, where present, shall be designed and constructed to allow for the periodic maintenance and mechanical harvesting of vegetative cover.
(9) The depth of the furrows of a ridge and furrow system, when utilized, shall be adequate to contain the highest proposed furrow stream. The furrow stream is the volume, in gallons per unit time, usually per minute, of wastewater discharged into the furrow.
(10) The system shall be seeded with perennial grass, or other vegetation approved by the department as capable of high nutrient uptake, and be suited to the climate and soil moisture conditions created by the operation of the system. Vegetative cover, not less than 2 inches in length and capable of preventing significant erosion to furrows or embankments, shall be established before the system is used for wastewater treatment.

R 323.2236 Rapid infiltration.

Rule 2236.(1) Rapid infiltration is the application of wastewater to areas of moderately to highly permeable soil. The majority of applied wastewater percolates through the soil, and the treated effluent drains naturally to groundwater. The effluent is minimally treated as it travels through the soil matrix. Vegetation is not typically a part of the overall treatment process. The utilization of vegetation or its presence within a discharge area typically does not interfere with system performance. A facility utilizing rapid infiltration systems for the land treatment of wastewater shall design and construct the system under this rule.
(2) The system shall consist of 2 or more cells or absorption areas that can be alternately loaded and rested or consist of 1 cell or absorption area preceded by an effluent storage or stabilization pond system. If only 1 cell or absorption area is provided, then the storage or stabilization pond shall be operated on a fill and draw basis and have sufficient capacity to allow intermittent loading of the cell or absorption area.
(3) For a system that has more than 1 cell or absorption area, an individual cell or absorption area of the system shall be capable of being taken out of service without disrupting application to other cells or absorption areas of the system.
(4) An appropriate hydraulic loading cycle shall be developed and implemented to maximize long-term infiltration rates and allow for periodic maintenance.

R 323.2237 Wastewater treatment or storage lagoons.

Rule 2237.(1) Except as provided in subrule (4) of this rule, wastewater treatment or storage lagoons associated with a discharge shall consist of a composite liner with a base that meets the requirements of subrule (2) of this rule and a liner as described in subrule (3) of this rule.
(2) The base of the composite liner required by this rule shall be a natural soil barrier that meets the criteria of subdivision (a) of this subrule, a compacted soil barrier that meets the criteria of subdivision (b) of this subrule, or a geocomposite clay liner that meets the criteria of subdivision (c) of this subrule as follows:
(a) A natural soil barrier used as a base in a composite liner system shall meet all of the following requirements:

(i) The natural soil shall be free of sand lenses and not less than 10 feet thick.
(ii) The soil shall have a saturated vertical hydraulic conductivity of not more than 1×10^{-7} centimeters per second. The hydraulic conductivity of the soil shall be determined using ASTM method D5084-90, which is adopted by reference in R 323.2238, as modified by the department in R 299.4920. If flexible wall permeameters are used, then confining pressures shall be equivalent to the minimum pressure expected after the lagoon is placed in service.
(iii) For abovegrade construction or if the lagoon liner base does not extend to the ground surface, perimeter dike walls shall be constructed using a soil that meets the criteria of subdivision (b)(ii) and (iii) of this subrule and keyed into the natural soil base.
The natural soil liner surface shall be prepared for placement of the flexible membrane liner (FML) to remove the potential for failures to the FML.
(v) Alternative test and investigative methods may be approved by the department.
(vi) An engineer licensed under Act No. 299 of the Public Acts of 1980, as amended, being §339.101 et seq. of the Michigan Compiled Laws, and known as the occupational code, shall certify to the department, through spatially random testing and measurements, that the requirements of this rule were met during installation of the natural soil base of the composite liner. At least 1 soil test shall be conducted and an additional test shall be conducted for every 5,000 cubic yards placed and when the texture of the soil changes.
(b) A compacted soil liner used as a segment of the composite liner system shall meet all of the following requirements:
(i) The compacted soil liner shall have a minimum thickness of 2 feet.
(ii) The relationship between hydraulic conductivity, moisture, and density shall be established with laboratory testing for the source of clay that will serve as the compacted clay portion of the composite liner. The relationship shall be determined using either the modified proctor test, ASTM D1557-91, which is adopted by reference in R 323.2238, or the standard proctor test, ASTM D698-91, which is adopted by reference in R 323.2238.
(iii) Each lift shall be thoroughly and uniformly compacted to achieve a hydraulic conductivity of not more than 1×10^{-7} centimeters per second based upon the density and moisture content determined under subdivision(b)(ii) of this subrule. The hydraulic conductivity of the soil shall be determined using ASTM method D5084-90, which is adopted by reference in R 323.2238, as modified by the department in R 299.4920. If flexible wall permeameters are used, then confining pressures shall be equivalent to the minimum pressure expected after the lagoon is placed in service. Soil shall not be compacted at a moisture content that is less than optimum and shall not be compacted to less than either of the following densities:
(A) Ninety percent of the maximum dry density, as determined by the modified proctor test, ASTM D1557-91, which is adopted by reference in R 323.2238.
(B) Ninety-five percent of the maximum dry density, as determined by the standard proctor test, ASTM D698-91, which is adopted by reference in R 323.2238.
(iv) The soil shall be placed so that each lift shall not be more than 6 inches after compaction.
(v) For abovegrade construction or if the lagoon liner base does not extend to the ground surface, perimeter dike walls shall be constructed using a soil that meets the criteria of paragraphs (ii) and (iii) of this subdivision and keyed into the compacted soil base.
(vi) The compacted soil liner surface shall be prepared for placement of the FML to remove the potential for failures of the FML.
(vii) Alternative test and investigative methods may be approved by the department.
(viii) An engineer licensed under Act No. 299 of the Public Acts of 1980, as amended, being §339.101 et seq. of the Michigan Compiled Laws, and known as the occupational code, shall certify to the department, through spatially random testing and measurements, that the requirements of this rule were met during installation of the compacted soil base of the composite liner. At least 1 soil test of the compacted soil shall be conducted and an additional test shall be conducted for every 5,000 cubic yards placed and when the texture of the soil changes.
(c) A geocomposite clay liner (GCL) used as a segment of a composite liner shall meet all of the following requirements:
(i) The GCL shall be a factory-manufactured hydraulic barrier consisting of sodium betonite clay supported by geotextiles that are held together by needling, stitching, or adhesives.

(ii) The GCL shall be seamed according to the manufacturer's specifications to prevent leakage at the seams.
(iii) The GCL shall not be laid during a precipitation event and shall be covered immediately by a flexible membrane liner or by another protective cover until the flexible membrane liner can be laid directly over the GCL.
(iv) The GCL shall be installed according to the manufacturer's specifications and quality assurance and quality control plans and shall be certified by an engineer licensed under Act No. 299 of the Public Acts of 1980, as amended, being §339.101 et seq. of the Michigan Compiled Laws, and known as the occupational code, overseeing the installation of the composite liner.
(3) An FML required by this rule shall be placed directly over a liner described in subrule (2) of this rule to form the composite liner. The FML and its installation shall comply with all of the following requirements:
(a) The liner shall be a minimum of 40 mils thick polyvinyl chloride (PVC) or 60 mils thick high-density polyethylene (HDPE). The discharger may utilize other materials and thickness if the department determines before installation, that the proposed material and thickness are sufficient to ensure that the integrity of the liner is not compromised due to contact with the soil base, wastewater, climatic conditions, or the stress of installation or daily operation.
(b) An FML shall be covered immediately after placement by an adequate thickness of soil or other material approved by the department to prevent puncture by equipment and to protect the exposed portion of the FML from degradation by ultraviolet light.
(c) The FML shall be placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent slope failure and failure of the liner due to settlement, compression, or uplift.
(d) The FML shall be installed to cover the entire area of earth material that would be in contact with the treated or stored effluent.
(e) An FML shall be placed on slopes that are not more than 25%, unless the owner and operator can demonstrate slope stability for greater slopes.
(f) The field seams of an FML shall meet all of the following requirements:
(i) Seaming shall be done in accordance with the minimum industry standards. The shear strength and peel strength of the seams must be adeqaute to maintain the ingetrity of the seam under all operating conditions.
(ii) Horizontal seams shall not occur on side slopes.
(iii) Horizontal seams shall be located not less than 5 feet from the toe of the slope.
(iv) Field seams shall be installed parallel to the line of maximum slope.
(v) The seam area shall be free of moisture, dust, dirt, debris, and foreign material of any kind before seaming.
(vi) Field seaming shall not be done in weather conditions that would adversely affect the integrity of the seam.
(g) An engineer licensed under Act No. 299 of the Public Acts of 1980, as amended, being §339.101 et seq. of the Michigan Compiled Laws, and known as the occupational code, shall certify to the department that all necessary quality assurance testing was conducted to ensure that the FML was installed to meet the conditions of these rules.
(4) The department may approve a storage or treatment lagoon liner that does not meet 1 or more of the requirements of this rule if the applicant demonstrates that the requirements of either of the following provisions are met:
(a) The lagoon holds only wastewater that meets the standards of R 323.2222.
(b) The existing system or the proposed design provides equal or greater environmental protection to protection provided by a lagoon liner constructed according to this rule. For an existing system, the demonstration can be made by either of the following:
(i) Through an exfiltration test that demonstrates, to the department's satisfaction, that the lagoon is not leaking at a rate likely to impact groundwater above the standards described in R 323.2222.
(ii) Through monitoring of the groundwater and a demonstration approved by the department that the lagoon has not impacted, and is not likely to impact, groundwater above the standards described in R 323.2222.

R 323.2238 ASTM standards; adoption by reference.

Rule 2238.(1) The following ASTM standards are adopted by reference in these rules:

(a) D698-91E1, test method for laboratory compaction characteristics of soil using standard effort.

(b) D1557-91E1, test method for laboratory compaction characteristics of soil using modified effort.

(c) D1586-84(92)E1, standard method for penetration test and split-barrel sampling of soils.

(d) D5084-90, standard test method for hydraulic conductivity of saturated porous materials using a flexible wall permeameter.

(2) The standards listed in subrule (1) of this rule may be purchased from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428, at a cost at the time of adoption of these rules of $18.00 each. The standards listed may also be obtained from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at a cost at the time of adoption of these rules of $18.00 each, plus shipping and handling.

R 323.2240 Table 101; treatment technology standards for certain organic substances.

Rule 2240. Table 101 reads as follows:

Table 101 Substance	**Treatment Technology Standard (ug/l)**
1,1,1-trichloroethane	15
1,2,4-trichlorobenzene	15
1,2-dichlorobenzene	25
1,3-dichlorobenzene	25
1,4-dichlorobenzene	15
2,4,6-trichlorophenol	15
2,4-dichlorophenol	20
2,4-dimethylphenol	80
2-butanone (MEK)	450
2-chloronaphthalene	40
2-chlorophenol	5
2-methylphenol (o-cresol)	20
4-methylphenol (p-cresol)	10
Acenaphthene	40
Acrolein	15
Aniline	60
Anthracene	40
Benzoic acid	400
Butyl benzyl phthalate	40
Chlorobenzene	15
Chrysene	20
Di-n-butyl phthalate	35
Di-n-octyl phthalate	25
Dichlorodifluoromethane	40
Diethyl phthalate	35
Dimethyl phthalate	35
Ethylbenzene	25

Hexachloroethane	25
Naphthalene	15
Phenol	35
Pyrene	30
Styrene	20
C-1,2-dichloroethylene	5
T-1,2-dichloroethylene	5
Toluene	35
Xylene (o,m,p)	35

PART 23. PRETREATMENT

R 323.2301
Source: 1995 AACS.

R 323.2302
Source: 1995 AACS.

R 323.2303
Source: 1995 AACS.

R 323.2304
Source: 1995 AACS.

R 323.2305
Source: 1995 AACS.

R 323.2306
Source: 1995 AACS.

R 323.2307
Source: 1995 AACS.

R 323.2308
Source: 1995 AACS.

R 323.2309
Source: 1995 AACS.

R 323.2310
Source: 1995 AACS.

R 323.2311
Source: 1995 AACS.

R 323.2312
Source: 1995 AACS.

R 323.2313
Source: 1995 AACS.

R 323.2314
Source: 1995 AACS.

R 323.2315
Source: 1995 AACS.

R 323.2316
Source: 1995 AACS.

R 323.2317
Source: 1995 AACS.

DEPARTMENT OF ENVIRONMENTAL QUALITY

SURFACE WATER QUALITY DIVISION

WATER RESOURCES PROTECTION

PART 24. LAND APPLICATION OF BIOSOLIDS

R 323.2401 Purpose and applicability.

Rule 2401. (1) These rules establish standards for the land application and beneficial recycling of biosolids originating from domestic sewage treatment systems and sanitary sewage treatment systems. The standards consist of general requirements, notification, recordkeeping, pollutant limits, management practices, and operational standards.

(2)These rules apply to all of the following:

(a) Any person who prepares or applies biosolids to the land.

(b) Biosolids applied to the land.

(c)The land where biosolids are applied.

History: 1999 MR 10, Eff. Nov. 2, 1999.

R 323.2402 Definitions.

Rule 2402. (1) As used in these rules:

(a) "Act" means Act No. 451 of the Public Acts of 1994, as amended, being §324.101 et seq. of the Michigan Compiled Laws.

(b) "Aerobic digestion" means the biochemical decomposition of organic matter in biosolids into carbon dioxide and water by microorganisms in the presence of air.

(c) "Agricultural land" means land on which a food crop, a feed crop, or a fiber crop is grown. The term includes range land and land used as pasture.

(d) "Agronomic rate" means the calculated biosolids application rate (dry weight basis) which provides the amount of plant-available nitrogen (PAN) needed by the crop or vegetation grown on the land; which minimizes the amount of nitrogen that passes below the root zone of the crop or vegetation grown; and which considers the amounts of phosphate (P_2O_5) and potash (K_2O) added by the biosolids as part of the total nutrient management plan.

(e) "Anaerobic digestion" means the biochemical decomposition of organic matter in biosolids into methane gas and carbon dioxide by microorganisms in the absence of air.

(f) "Annual pollutant loading rate" means the maximum amount of a pollutant in biosolids that can be applied to a unit area of land during a 365-day period.

(g) "Annual whole biosolids application rate" means the maximum amount of biosolids (dry weight basis) that can be applied to a unit area of land during a 365-day period.

(h) "Biosolids" means solid, semisolid, or liquid residues generated during the treatment of sanitary sewage or domestic sewage in a treatment works. The term "biosolids" includes, but is not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment processes and a derivative of the removed scum or solids.

(i) "Bulk biosolids" means biosolids that are not sold or given away in a bag or other container for application to a lawn or home garden.

(j) "Class A" means biosolids that meet the requirement in R 323.2414(2)(b) and the requirements in R 323.2414(2)(c), (d), (e), (f), (g), or (h) with respect to pathogens.

(k) "Class B" means biosolids that meet the requirements in R 323.2414(3)(c), (d), or (e) with respect to

pathogens.
(l) "Cumulative pollutant loading rate" means the maximum amount of an inorganic pollutant that can be applied to an area of land.
(m) "Department" means the director of the department of environmental quality or his or her designee.
(n) "Derivative" means a product for land application derived from biosolids that does not include solid waste or other waste regulated under the act. A derivative does not include materials or treatment chemicals, that is, lime or ferric chloride, integral to wastewater treatment and biosolids unit processes.
(o) "Detroit consumer price index" means the most comprehensive index of consumer prices available for the Detroit area from the United States department of labor, bureau of labor statistics.
(p) "Distributor" means a person who applies, markets, or distributes, except at retail, a derivative.
(q) "Domestic sewage" means waste and wastewater from humans or household operations that is discharged to, or otherwise enters, a treatment works.
(r) "Dry weight basis" means calculated on the basis of having been dried at 105 degrees Celsius until reaching a constant mass that is essentially 100% solids content.
(s) "EPA" means the United States environmental protection agency.
(t) "Exceptional quality" or "EQ" means biosolids or a derivative that meets all of the following criteria:
(i) Pollutant ceiling concentrations in R 323.2409(5)(a).
(ii) Pollutant concentrations in R 323.2409(5)(c).
(iii) One of the vector attraction reduction options in R 323.2415(4)(a) to (h) and 1 of the class A pathogen reduction alternatives in R 323.2414(2)(a).
(u) "Feed crops" means crops produced primarily for consumption by animals.
(v) "Fiber crops" means crops such as flax and cotton.
(w) "Food crops" means crops consumed by humans. The term includes, but is not limited to, fruits, vegetables, and tobacco.
(x) "Forest" means a tract of land that is thick with trees and underbrush.
(y) "Generator" means a person who generates biosolids that are applied to land.
(z) "Groundwater" means water below the land surface in the saturated zone.
(aa) "Incorporation" means the blending of surface-applied biosolids into the soil so that a significant amount of the biosolids is not present on the land surface within 1 hour after blending.
(bb) "Injection" means the placement of biosolids below the land surface so that a significant amount of the biosolids is not present on the land surface within 1 hour after land application.
(cc) "Land application" means spraying or spreading biosolids onto the land surface, injecting biosolids below the land surface, or incorporating biosolids into the soil so that the biosolids can either condition the soil or fertilize crops or vegetation grown in the soil.
(dd) "Land application plan" means the process a generator uses to identify and select land application sites that are not included in a land application site list. At a minimum a plan shall include all of the following:
(i) A description of the geographical area covered by the plan.
(ii) Identification of the criteria used for site selection.
(iii) A description of how the sites are managed.
(ee) "Land with a low potential for public exposure means land that the public uses infrequently. The term includes, but is not limited to, agricultural land, a forest, and a reclamation site located in an unpopulated area, for example, a strip mine located in a rural area.
(ff) "Land with a high potential for public exposure" means land that the public uses frequently. The term includes, but is not limited to, a public contact site and a reclamation site located in a populated area, for example, a construction site located in a city.
(gg) "Listed land application site" means a site which has been approved by the department and is used for biosolids land application by a generator.
(hh) "Local unit" means a county, city, village, or township or an agency or instrumentality of these entities.
(ii) "Other container" means either an open or closed receptacle. The term includes, but is not limited to, a bucket, a box, a carton, and a vehicle or trailer that has a load capacity of 1 metric ton or less.
(jj) "Pasture" means land on which animals feed directly on feed crops such as legumes, grasses, grain stubble, or stover.
(kk) "Pathogenic organisms" means disease-causing organisms. The term includes, but is not limited to,

certain bacteria, protozoa, viruses, and viable helminth ova.
(ll) "Permit" means 1 of the following:
(i) A national pollutant discharge elimination system (NPDES) permit that is issued by the department under section 3112(1) of the act to control wastewater discharges to the surface waters and to manage biosolids.
(ii) A permit that is issued by the department under section 3112(1) of the act to control wastewater discharges to the groundwaters and to manage biosolids.
(iii) A biosolids permit issued by the department.
(mm) "Permitting authority" means the department.
(nn) "Person" means an individual, association, partnership, corporation, local unit, state or federal agency, or an agent or employee of any of the entities specified in this definition.
(oo) Person who prepares biosolids" means either the person who generates biosolids during the treatment of domestic sewage or sanitary sewage in a treatment works or the person who derives a material from biosolids.
(pp) "pH" means the logarithm of the reciprocal of the hydrogen ion concentration measured at 25 degrees Celsius or measured at another temperature and then converted to an equivalent value at 25 degrees Celsius.
(qq) "Pollutant" means an organic substance, an inorganic substance, a combination of organic and inorganic substances, or a pathogenic organism that, after discharge and upon exposure, ingestion, inhalation, or assimilation into an organism either directly from the environment or indirectly by ingestion through the food chain, could, on the basis of information available to the administrator of EPA or the department, cause any of the following in either organisms or offspring of the organisms:
(i) Death.
(ii) Disease.
(iii) Behavioral abnormalities.
(iv) Cancer.
(v) Genetic mutations.
(vi) Physiological malfunctions, including malfunction in reproduction.
(vii) Physical deformations.
(rr) "Pollutant limit" means a numerical value that describes the amount of a pollutant allowed per unit amount of biosolids, for example milligrams per kilogram of total solids; the amount of a pollutant that can be applied to a unit area of land, for example, kilograms per hectare or pounds per acre; or the volume of a material that can be applied to a unit area of land, for example, gallons per acre.
(ss) "Public contact site" means land that has a high potential for contact by the public. The term includes, but is not limited to, any of the following:
(i) Public parks.
(ii) Ball fields.
(iii) Cemeteries.
(iv) Plant nurseries.
(v) Turf farms.
(vi) Golf courses.
(tt) "Range land" means open land that has indigenous vegetation.
(uu) "Reclamation site" means drastically disturbed land that is reclaimed using biosolids. The term includes, but is not limited to, strip mines and construction sites.
(vv) "Residuals management program" means a program which is required by a generator's permit and which is developed in accordance with R 323.2403(3)(a) to (d).
(ww) "Retail" means EQ biosolids or an EQ derivative sold directly to the consumer or through retail establishments in bags or other containers that have a load capacity of 1 metric ton (2200 pounds) or less of biosolids.
(xx) "Sanitary sewage" means waste and wastewater from humans, households, or industrial or commercial operations that is discharged to, or otherwise enters, a treatment works.
(yy) "Saturated" or "saturated zone" means the soil pores, that is, spaces between the soil particles or rock are completely filled with water.

(zz) "Septage" means either liquid or solid material that is removed from any of the following that receive only domestic sewage.
(i) A septic tank.
(ii) A cesspool.
(iii) A portable toilet.
(iv) A type III marine sanitation device.
(v) A similar treatment works.
(aaa) "Site" means a contiguous tract of land to which biosolids or a derivative is land-applied in accordance with the requirements in these rules.
(bbb) "Specific oxygen uptake rate" or "SOUR" means the mass of oxygen consumed per unit time per unit mass of total solids (dry weight basis) in biosolids.
(ccc) "Surface application" means the spraying or spreading of biosolids or derivatives onto the land surface for use as a soil conditioner or as a nutrient source for plant growth.
(ddd) "Surface disposal" means the placement of biosolids on an area of land for final disposal as defined in 40 C.F.R. part 503, subpart C.
(eee) "Surface water" means any of the following:
(i) Lakes.
(ii) Rivers.
(iii) Streams.
(iv) Wetlands.
(v) All other watercourses.
(vi) Waters within the jurisdiction of this state.
(vii) The Great Lakes bordering this state.
(fff) "Treatment of" or "to treat," with respect to biosolids, means the preparation of biosolids for final use or disposal. The term includes, but is not limited to, the thickening, stabilization, and dewatering of biosolids. The term does not include the storage of biosolids.
(ggg) "Treatment works" means either a federally owned, publicly owned, or privately owned device or system used to treat, including recycling and reclaiming, either domestic sewage or sanitary sewage.
(hhh) "Total solids" means the materials in biosolids that remain as residue when biosolids are dried at 103 to 105 degrees Celsius.
(iii) "Unstabilized solids" means organic materials in biosolids that have not been treated in either an aerobic or anaerobic treatment process.
(jjj) "Vector attraction" means the characteristic of biosolids that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.
(kkk) "Volatile solids" means the amount of the total solids in biosolids lost when biosolids are combusted at 550 degrees Celsius in the presence of excess air.
(lll) "Wetlands" means areas that are inundated or saturated by surface water or groundwater at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.
History: 1999 MR 10, Eff. Nov. 2, 1999.

R 323.2403 Land application permit.

Rule 2403. (1) A generator or distributor shall have a valid permit before commencing any biosolids land application or distribution activity in the state of Michigan.
(2) A generator or distributor shall submit a permit application on a form provided by the department not less than 180 days before expiration of an existing permit, commencement of biosolids land application, or distribution of a biosolids derivative, except at retail.
(3) All of the following provisions apply to a residuals management program:
(a) A generator shall submit a residuals management program for approval by the department as required by its permit.
(b) A residuals management program submitted to the department shall include all of the following information:

(i) Size and type of generating facility.
(ii) One year of records representing the volume and concentrations of pollutants in the biosolids.
(iii) Treatment process origin, for example, primary or secondary treatment and the volume of biosolids generated from each process.
(iv) A description of the treatment processes.
(v) Storage volume.
(vi) Transportation methods and spill prevention plan.
(vii) Land application method.
(viii) Land application site list.
(ix) Land application plan.
(x) Pathogen reduction method.
(xi) Vector attraction reduction method.
(xii) Monitoring program.
(c) Upon approval by the department, the generating facility shall implement the approved residuals management program.
(d) A generating facility may modify the approved residuals management program by submitting a proposed modification to the department for approval. The modification shall become effective upon approval by the department.
(4) A person shall land apply biosolids or prepare biosolids for land application in accordance with the requirements established in these rules.
History: 1999 MR 10, Eff. Nov. 2, 1999.

R 323.2404 Imposition of more stringent requirements; proof of payment of costs and fees required; local ordinances.

Rule 2404. (1) On a case-by-case basis, the permitting authority may impose requirements for the use of biosolids in addition to, or more stringent than, the requirements in these rules if necessary to protect the public health and the environment from any adverse effect of a pollutant in the biosolids.
(2) A person who land applies biosolids in the state from an out-of-state source shall demonstrate proof of payment of the annual biosolids fee and proof of payment of costs for unreasonable adverse effects on the environment or public health caused by the land application of biosolids from an out-of-state source.
(3) A local unit may enact, maintain, and enforce an ordinance that prohibits the land application of biosolids or a derivative if monitoring indicates a pollutant concentration in excess of that provided in table 1 of R 323.2409(5)(a) until subsequent monitoring indicates that pollutant concentrations do not exceed the concentration provided in table 1 of R 323.2409(5)(a).
(4) A local unit may enact an ordinance prescribing standards in addition to, or more stringent than, the standards contained in section 3132 of the act or in these rules under either or both of the following circumstances:
(a) The operation of a biosolids or derivative land application site within the local unit will result in unreasonable adverse effects on the environment or public health within the local unit. The determination that unreasonable adverse effects on the environment or public health will exist shall take into consideration specific populations whose health may be adversely affected within the local unit.
(b) The operation of a biosolids or derivative land application site within the local unit has resulted or will result in the local unit being in violation of other existing state laws or federal laws.
(5) Except as otherwise provided in section 3133 of the act, sections 3131 and 3132 of the act preempt a local ordinance, regulation, or resolution of a local unit that would duplicate, extend, revise, or conflict with section 3131 or 3132 of the act. Except as otherwise provided for in section 3133 of the act, a local unit shall not enact, maintain, or enforce an ordinance, regulation, or resolution that duplicates, extends, revises, or conflicts with section 3131 or 3132 of the act.
(6) The department may contract with a local unit to act as its agent for the purpose of enforcing sections 3131, 3132, and 3133 of the act. The department has the sole authority to assess fees. If a local unit is under contract with the department of environmental quality to act as its agent or if the local unit has received prior written authorization from the department, then the local unit may pass an ordinance that is identical to section 3132 of the act and these rules, except as prohibited in subrule (7) of this rule.

(7) An ordinance enacted under subrule (4) or (6) of this rule shall not conflict with existing state laws or federal laws. An ordinance enacted pursuant to subrule (4)(a) or (b) of this rule shall not be enforced by a local unit until approved or conditionally approved by the director of the department under subrule (8) of this rule. The local unit shall comply with any conditions of approval.
(8) If the legislative body of a local unit submits to the department a resolution identifying how the requirements of subrule (4)(a) or (b) of this rule are met, then the department shall hold a public meeting in the local unit within 60 days after the submission of the resolution to assist the department in determining whether the requirements of subrule (4)(a) or (b) of this rule are met. Within 45 days after the public meeting, the department shall issue a detailed opinion on whether the requirements of subrule (4)(a) or (b) of this rule are met as identified by the resolution of the local unit and shall approve, conditionally approve, or disapprove the ordinance accordingly. If the department fails to satisfy the requirements of this subrule, then the ordinance is considered to be approved.
History: 1999 MR 10, Eff. Nov. 2, 1999.

R 323.2405 Scope.

Rule 2405. (1) This rule does not establish requirements for any of the following:
(a) The use or disposal of septage.
(b) The surface disposal of biosolids.
(c) The incineration of biosolids fired or co-fired in an incinerator, the incinerator in which biosolids are fired or co-fired, or the use or disposal of ash generated during the firing or co-firing of biosolids.
(d) Processes used to treat biosolids or processes used to treat biosolids before final use or disposal, except as provided in R 323.2414 and R 323.2415.
(e) The use or disposal of sludge generated at an industrial facility during the treatment of industrial wastewater, including sewage sludge generated during the treatment of industrial wastewater combined with domestic sewage.
(f) The use or disposal of sewage sludge determined to be hazardous in accordance with part 111 of the act.
(g) The use or disposal of sewage sludge that has a concentration of polychlorinated biphenyls (PCBs) equal to or greater than 50 milligrams per kilogram of total solids (dry weight basis).
(h) The use or disposal of grit, for example, sand, gravel, cinders, or other materials that have a high specific gravity or the use or disposal of screenings, for example, relatively large materials such as rags, generated during preliminary treatment of domestic sewage or sanitary sewage in a treatment works.
(i) The use or disposal of sludge generated during the treatment of either surface water or groundwater used for drinking water.
(2) This part does not require the selection of a biosolids use or disposal practice. The determination of the manner in which biosolids is used or disposed of is a local determination.
History: 1999 MR 10, Eff. Nov. 2, 1999.

R 323.2406 Sampling and analysis; adoption of standards by reference.

Rule 2406. (1) A person shall collect and analyze representative samples of both biosolids that are applied to the land and soils that receive biosolids.
(2) All of the following publications are adopted by reference in these rules. The publications may be inspected at, and are available from, the Department of Environmental Quality, Surface Water Quality Division, Knapps Centre-Second Floor, 300 South Washington Square, P.O. Box 30273, Lansing, Michigan 48909-7773, or may be obtained from the standard producer or publisher at the following costs as of the time of adoption of these rules:
(a) For enteric viruses, ASTM standard D 4994-89 entitled "Standard Practice for Recovery of Viruses From Wastewater Sludges," 1992 annual book of ASTM standards, section 11, entitled “Water and Environmental Technology,” American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103-1187. Price: $18.00.
(b) For fecal coliform, part 9221 E or part 9222 D of the publication entitled "Standard Methods for the Examination of Water and Wastewater," 18th edition, 1992, American Public Health Association, 1015 15th Street, NW, Washington, DC 20005. Price: $200.00.
(c) For Helminth ova, the publication entitled "Environmental Regulations and Technology - Control of

Pathogens and Vector Attraction in Sewage Sludge, (Appendix I, Yanko, W.A., 1987)," 1992, EPA-625/R-92/013, United States Environmental Protection Agency, National Center for Environmental Publications and Information, 11029 Kenwood Road, Cincinnati, Ohio 45242. Price: $34.50. There is no charge for copies obtained from the Department of Environmental Quality, Surface Water Quality Division, Knapps Centre-Second Floor, 300 South Washington Square, P.O. Box 30273, Lansing, Michigan 48909-7773.

(d) For inorganic pollutants, the publication entitled "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA publication SW-846, second edition (1982) with updates I and II and third edition (1986) with revision I. The second edition, publication number 87-120-291, is available from National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161. Price: $239.00. The third edition, publication number 955-001-00000-1, is available from the Superintendent of Documents, United States Government Printing Office, Washington DC 20402, price: $319.00, or over the internet at http://www.epa.gov/epaoswer/hazwaste/test/main.htm.

(e) For salmonella sp. bacteria, part 9260 D of the publication entitled "Standard Methods for the Examination of Water and Wastewater," 18th edition, 1992, American Public Health Association, 1015 15th Street, NW, Washington, DC 20005, price: $200.00, or the publication entitled "Environmental Regulations and Technology - Control of Pathogens and Vector Attraction in Sewage Sludge, (Appendix G, Kenner, B.A. and Clark, J.,1974)," 1992, EPA-625/R-92/013, United States Environmental Protection Agency, National Center for Environmental Publications and Information, 11029 Kenwood Road, Cincinnati, Ohio 45242. Price: $34.50. There is no charge for copies obtained from the Department of Environmental Quality, Surface Water Quality Division, Knapps Centre-Second Floor, 300 South Washington Square, P.O. Box 30273, Lansing, Michigan 48909-7773.

(f) For the specific oxygen uptake rate, part 2710 B of the publication entitled "Standard Methods for the Examination of Water and Wastewater," 18th edition, 1992, American Public Health Association, 1015 15th Street, NW, Washington, DC 20005. Price: $200.00.

(g) For total, fixed, and volatile solids, part 2540 G of the publication entitled "Standard Methods for the Examination of Water and Wastewater," 18th edition, 1992, American Public Health Association, 1015 15th Street, NW, Washington, DC 20005. Price: $200.00.

(h) For percent volatile solids reduction calculation, the publication entitled "Environmental Regulations and Technology - Control of Pathogens and Vector Attraction in Sewage Sludge," 1992 EPA-625/R-92/013, United States Environmental Protection Agency, National Center for Environmental Publications and Information, 11029 Kenwood Road, Cincinnati, Ohio 45242. Price: $34.50.

(i) Nutrient analysis of biosolids for the following parameters shall comply with the POTW sludge sampling and analysis guidance document, EPA 833-B-89-100, August 1989, unless alternative methods are approved by the department based upon an equivalency demonstration:

(i) Total nitrogen (TN) or total Kjeldahl nitrogen (TKN).

(ii) Ammonium nitrogen (NH_4-N).

(iii) Nitrate nitrogen (NO_3-N).

(iv) Total phosphorus (P).

(v) Total potassium (K).

(vi) Total solids (%).

The document may be purchased from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161, at a cost as of the time of adoption of these rules of $34.00. There is no charge for copies obtained from the Department of Environmental Quality, Surface Water Quality Division, Knapps Centre-Second Floor, 300 South Washington Square, P.O. Box 30273, Lansing, Michigan 48909-7773.

All nutrients shall be reported in milligrams per kilogram dry weight.

(3) A person shall use the calculation procedures in the publications listed in subrule (2) of this rule to calculate the percent volatile solids reduction for biosolids. A person shall use the methods in the publications listed in subrule (2) of this rule or the United States environmental protection agency technical support document to analyze samples of biosolids.

(4) Soil fertility test procedures used to analyze soils for pH, lime requirement, and extractable phosphorus (P), potassium (K), calcium (Ca), and magnesium (Mg) shall comply with the procedures described in the publication entitled “Recommended Chemical Soil Test Procedures for the North Central Region.” The procedures are adopted by reference in these rules and may be purchased by ordering publication number

221, January 1998, from the Agricultural Experiment Station SB 1001, University of Missouri, Columbia, MO 65211. Price: No cost. Copies may also be obtained at no cost from the Department of Environmental Quality, Surface Water Quality Division, Knapps Centre-Second Floor, 300 South Washington Square, P.O. Box 30273, Lansing, Michigan 48909-7773.

(5) For soils, a Bray P1 (Bray and Kurtz P1) test or Mehlich 3 test for phosphorus (P) shall comply with the procedures described in the publication entitled "Recommended Chemical Soil Test Procedures for the North Central Region," as referenced in subrule (4) of this rule.

(6) Alternate methods for the procedures specified in subrules (4) and (5) of this rule may be used if approved by the department based upon an equivalency demonstration.

History: 1999 MR 10, Eff. Nov. 2, 1999.

R 323.2407 Applicability of R 323.2408(1) and (4) and R 323.2410(3), (4), and (6).

Rule 2407. (1) The requirements specified in R 323.2408(1) and (4) and the management practices required in R 323.2410(3), (4), and (6) do not apply when bulk biosolids or a bulk derivative is applied to the land if the bulk biosolids or bulk derivative meets the criteria for exceptional quality.

(2) The requirements specified in R 323.2408 and the management practices in R 323.2410 do not apply when non-bulk biosolids or a non-bulk derivative is sold or given away in a bag or other container for application to the land if biosolids or a derivative meets the criteria for exceptional quality.

(3) The department may apply any or all of the requirements specified in R 323.2408 and the management practices in R 323.2410 to biosolids or a derivative as specified in R 323.2407(1) and (2) on a case-by-case basis after determining that the general requirements or management practices are needed to protect the public health and the environment from any reasonably anticipated adverse effect that may occur from any pollutant in the biosolids.

History: 1999 MR 10, Eff. Nov. 2, 1999.

R 323.2408 Application of certain biosolids to certain areas prohibited; application of biosolids from more than 1 source or septage prohibited; applicators duty to obtain information; generator notification duty.

Rule 2408. (1) A person shall not apply bulk biosolids subject to the cumulative pollutant loading rates specified in R 323.2409(5)(b) to agricultural land, a forest, a public contact site, or a reclamation site if any of the cumulative pollutant loading rates specified in R 323.2409(5)(b) have been reached.

(2) A person shall not knowingly apply biosolids from more than 1 source or septage to the same land application site within the same crop year.

(3) A person who applies biosolids to the land shall obtain information needed to comply with all of the following requirements:

(a) Before a person applies bulk biosolids subject to the cumulative pollutant loading rates in R 323.2409(5)(b) to the land, the person shall contact the state to determine whether bulk biosolids subject to the cumulative pollutant loading rates in R 323.2409(5)(b) have been applied to the site since July 20, 1993, except when the land has been owned by the generator since July 20, 1993, and the cumulative loading rate is known. The notification requirements in subrule (4) of this rule still apply.

(b) If bulk biosolids subject to the cumulative pollutant loading rates in R 323.2409(5)(b) have not been applied to the site since July 20, 1993, then a person may apply the cumulative amount for each pollutant listed in table 2 in R 323.2409(5)(b) to the site in accordance with R 323.2409(2)(a).

(c) If bulk biosolids subject to the cumulative pollutant loading rates in R 323.2409(5)(b) have been applied to the site since July 20, 1993, and if the cumulative amount of each pollutant applied to the site in the bulk biosolids since that date is known, then a person shall use the cumulative amount of each pollutant applied to the site to determine the additional amount of each pollutant that can be applied to the site in accordance with R 323.2409(2)(a).

(d) If bulk biosolids subject to the cumulative pollutant loading rates in R 323.2409(5)(b) have been applied to the site since July 20, 1993, and if the cumulative amount of each pollutant applied to the site in the bulk biosolids since that date is not known, then a person shall not apply an additional amount of each pollutant to the site in accordance with R 323.2409(2)(a).

(4) All of the following provisions apply to notification of land application activity:

(a) A generator or distributor shall provide written notification not less than 10 days before the initial land application activity at a site. A generator or distributor shall provide the notification to the surface water quality division district office, the county health department, and the city, village, or township clerk in the jurisdiction where land application sites are identified. The notification shall include a cover letter that sets forth all of the following information:
(i) The proposed land application activity.
(ii) The site location by latitude and longitude.
(iii) A plat map identifying the site.
(iv) The name and address of the property owner.
(v) The name and address of the farm operator if different than the owner.
(vi) A record of biosolids monitoring information on a standard form or an acceptable summary containing all of the following:
(A) The most current monitoring results for all of the following:
(1) Arsenic.
(2) Cadmium.
(3) Copper.
(4) Lead.
(5) Mercury.
(6) Molybdenum.
(7) Nickel.
(8) Selenium.
(9) Zinc.
(B) Applicable limitations.
(C) The name, address, and phone number of the generator or distributor.
(b) A generator or distributor shall promptly provide a copy of any record required to be created under these rules to the appropriate county health department and the city, village, or township clerk when biosolids subject to sections 3101, 3131, 3132, and 3133 of the act are applied to land in that local unit. The copy shall be delivered free of charge.
(c) A person who prepares bulk biosolids that are applied to agricultural land, a forest, a public contact site, or a reclamation site shall provide the person who applies the bulk biosolids with written notification of the concentration of the total nutrients, on a dry weight basis, in the bulk biosolids required to be monitored in R 323.2412(1).
(d) If a person who prepares bulk biosolids provides the bulk biosolids to a person who applies the bulk biosolids to the land, then the person who prepares the bulk biosolids shall provide the person who applies the biosolids notice and necessary information to comply with the requirements this part.
(e) If a person who prepares biosolids provides the biosolids to another person who prepares the biosolids, then the person who provides the biosolids shall provide the person who receives the biosolids notice and necessary information to comply with the requirements in this part.
(f) A person who applies bulk biosolids to the land shall provide the owner or leaseholder of the land on which the bulk biosolids are applied notice and necessary information to comply with the requirements in this part.
(g) A person who land applies bulk biosolids subject to the cumulative pollutant loading rates in R 323.2409(5)(b) shall provide written notice, before the initial application of bulk biosolids to a land application site by the applier, to the permitting authority for the state in which the bulk biosolids will be applied. The permitting authority shall retain, and provide access to, the notice. The notice shall include the following information:
(i) The location, by latitude and longitude, of the land application site.
(ii) The name, address, telephone number, and national pollutant discharge elimination system (NPDES) permit number, if appropriate, of the person who will apply the bulk biosolids.
History: 1999 MR 10, Eff. Nov. 2, 1999.

R 323.2409 Application of limitations.

Rule 2409. (1) A person shall not apply bulk biosolids or biosolids sold or given away in a bag or other

container to the land if the concentration of any pollutant in the biosolids exceeds the ceiling concentration for the pollutant in table 1 of this rule.
(2) If bulk biosolids are applied to agricultural land, a forest, a public contact site, or a reclamation site, then the applicator shall comply with either of the following provisions:
(a) The cumulative loading rate for each pollutant shall not exceed the cumulative pollutant-loading rate for the pollutant in table 2 of this rule.
(b) The concentration of each pollutant in the biosolids shall not exceed the concentration for the pollutant in table 3 of this rule.
(3) If bulk biosolids are applied to a lawn or a home garden, then the concentration of each pollutant in the biosolids shall not exceed the concentration for the pollutant in table 3 of this rule.
(4) If biosolids are sold or given away in a bag or other container for application to the land, then the distributor shall comply with either of the following provisions:
(a) The concentration of each pollutant in the biosolids shall not exceed the concentration for the pollutant in table 3 of this rule.
(b) The product of the concentration of each pollutant in the biosolids and the annual whole biosolids application rate for the biosolids shall not cause the annual pollutant-loading rate for the pollutant in table 4 of this rule to be exceeded. The procedure used to determine the annual whole biosolids application rate is specified in
R 323.2417.
(5) The following tables specify pollutant concentrations, loading rates, and nutrient parameters:

(a) TABLE 1 -- Ceiling Pollutant Concentrations

Pollutant	Ceiling Concentration milligrams per kilogram (on a dry weight basis)
Arsenic	75
Cadmium	85
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7500

(b) TABLE 2 -- Cumulative Pollutant Loading Rates

Pollutant	Cumulative Pollutant Loading Rate kilograms per hectare	pounds per acre
Arsenic	41	37
Cadmium	39	35
Copper	1500	1335
Lead	300	267
Mercury	17	15
Nickel	420	374
Selenium	100	89
Zinc	2800	2492

(c) TABLE 3 -- Pollutant Concentrations

Pollutant	Concentration Milligrams per kilogram (on a dry weight basis)
Arsenic	41
Cadmium	39
Copper	1500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2800

(d) TABLE 4 -- Annual Pollutant Loading Rates

Pollutant	Annual Pollutant Loading Rate[1] Kilograms per hectare	pounds per acre
Arsenic	2.0	1.8
Cadmium	1.9	1.7
Copper	75	67
Lead	15	13
Mercury	0.85	0.76
Nickel	21	19
Selenium	5.0	4.5
Zinc	140	125

[1] per 365-day period.

History: 1999 MR 10, Eff. Nov. 2, 1999.

R 323.2410 Management practices.

Rule 2410. (1) A person shall not apply bulk biosolids to the land if it is likely to adversely affect a threatened or endangered species listed under section 36503 of the act or its designated critical habitat.

(2) A person shall not apply bulk biosolids to agricultural land, a forest, a public contact site, or a reclamation site that is flooded, saturated with water, frozen, or snow-covered so that the bulk biosolids enter a wetland or other waters of the state.

(3) A person may subsurface inject bulk biosolids on frozen or snow-covered ground as long as there is substantial soil coverage of the applied biosolids. A person shall not surface apply bulk biosolids, other than exceptional quality biosolids, on frozen or snow-covered ground, unless otherwise approved by the department.

(4) A person shall not apply bulk biosolids on lands having a slope of more than 6% for surface application or more than 12% for subsurface injected biosolids, unless the person uses the bulk biosolids in accordance with a department-approved site management plan.

(5) A person shall apply bulk biosolids to agricultural land, a forest, a public contact site, or a reclamation site at an application rate that is equal to, or less than, the agronomic rate, unless the person that applies

bulk biosolids in accordance with a department-approved site management plan.
(6) A generator or distributor shall affix a label to the bag or other container in which biosolids are sold or given away for application to the land or the generator or distributor shall provide an information sheet to the person who receives biosolids sold or given away in another container for application to the land. The label or information sheet shall contain all of the following information:
(a) The name and address of the person who prepared the biosolids that are sold or given away in a bag or other container for application to the land.
(b) A statement that the application of the biosolids to the land is prohibited unless applied according to the instructions on the label or information sheet.
(c) The annual whole biosolids application rate for biosolids that do not cause any of the annual pollutant loading rates in table 4 of R 323.2409(5)(d) to be exceeded.
(7) A person that applies biosolids shall perform soil fertility tests on soils sampled from each application site before initial biosolids application. The person shall resample and test on a regular basis so that the last soil fertility test is not more than 2 years old at the time of the next biosolids application.
(8) For agricultural land, a person shall apply biosolids in accordance with agronomic rates. If the Bray P1 soil test level exceeds 300 pounds (P) per acre (150 ppm), or if the Mehlich 3 soil test level exceeds 340 pounds (P) per acre (170 ppm) in site soils, then the person shall not apply biosolids until the soil P test level decreases to less than 1 of these values.
(9) For silvicultural land, such as forestland and tree farms, a person shall base the agronomic rate for silvicultural land on the quantity of plant-available nitrogen (PAN) that growing trees will take up annually. A person may reapply biosolids at rates that will provide PAN additions up to a maximum of 5 years, using the annual PAN additions listed in table 5 to calculate total PAN additions for 1 year up to a 5-year maximum for the particular tree species and age of the stand receiving biosolids. A person may reapply biosolids after the time interval selected for the previous application expires, as long as the trees are still growing. If the Bray P1 soil test level exceeds 200 pounds (P) per acre (100 ppm) or the Mehlich 3 soil test level exceeds 220 pounds (P) per acre (110ppm), then a person shall not apply biosolids until the soil P test level decreases to less than 1 of these values.
(10) The rates for wastewater biosolids application in Michigan forests (Brockway, 1988) are as follows:

TABLE 5

PAN Applied from Biosolids[1]			
Forest Type	Age of Tree Stand in Years	Annual Use	Total Used in 5 Years
Aspen	0 to 5	50	250
Aspen	6 to 20	100	500
Aspen	over 20	50	250
Northern Hardwoods	0 to 10	40	200
Northern Hardwoods	11 to 30	80	400
Northern Hardwoods	over 20	40	200
Oak-Hickory	0 to 10	50	250
Oak-Hickory	11 to 30	100	500
Oak-Hickory	over 30	50	250
Elm-Ash-Cottonwood	0 to 5	50	250
Elm-ash-Cottonwood	6 to 20	100	500
Elm-Ash-Cottonwood	over 20	50	250

Scrub oak	0 to 20	20	100
Scrub oak	over 20	40	200
Red, White, Jack Pine	0 to 10	50	250
Red, White, Jack Pine	11 to 30	40	200
Red, White, Jack Pine	over 30	20	100
Spruce-Fir	0 to 10	40	200
Spruce-Fir	11 to 30	30	150
Spruce-Fir	over 30	20	100
Northern White-cedar	0 to 20	40	200
Northern White-cedar	over 20	20	100

[1] PAN = Plant-available nitrogen, or the amount of nitrogen that will be available for trees to utilize (pounds per acre per year).

(11) The following isolation distances shall be observed when land applying bulk biosolids:

TABLE 6

Isolation Distance Requirements		
Isolation from existing:	Distance (feet)	
	Injection or surface application with incorporation*	Surface application without incorporation
Municipal well (type I or type IIA)**	2000	2000
Noncommunity public Water supply (type IIB or type III)	800	800
Domestic well	100	150
Homes	100	150
Commercial Buildings	100	150
Surface waters***	50	150

* Incorporation must be within 48 hours, unless a shorter time period is specified in these rules.
** As defined and specified in Act No. 399 of the Public Acts of 1976, as amended, being §325.1001 et seq. of the Michigan Compiled Laws, and known as the safe drinking water act. As specified in Act No. 399 of the Public Acts of 1976, as amended, the term includes water supplies such as schools, restaurants, industries, campgrounds, parks, and hotels.
*** Surface waters do not include grassed drainage ways or drainage ways that are tilled and planted.
(12) A person shall apply biosolids in a manner that would maintain, at a minimum, a 30-inch separation distance between the soil surface and the groundwater at the time of biosolids application.
History: 1999 MR 10, Eff. Nov. 2, 1999.

R 323.2411 Operational standards; pathogens and vector attraction reduction.

Rule 2411. (1) All of the following provisions apply to pathogens:
(a) A person shall meet the class A pathogen requirements in
R 323.2414(2)(a) or the class B pathogen requirements and site restrictions in R 323.2414(3)(a) when bulk biosolids are applied to agricultural land, a forest, a public contact site, or a reclamation site.
(b) A person shall meet the class A pathogen requirements in R 323.2414(2)(a) when bulk biosolids are applied to a lawn or a home garden.

A person shall meet the class A pathogen requirements in R 323.2414(2)(a) when biosolids are sold or given away in a bag or other container for application to the land.
(2) All of the following provisions apply to vector attraction:
A person shall meet 1 of the vector attraction reduction requirements in R 323.2415(4)(a) through (h) or the vector attraction reduction requirements in R 323.2415(4)(i) or (j) when bulk biosolids are applied to agricultural land, a forest, a public contact site, or a reclamation site. A person shall meet 1 of the vector attraction reduction requirements in R 323.2415(4)(a) through (h) when bulk biosolids are applied to a lawn or a home garden. A person shall meet 1 of the vector attraction reduction requirements in R 323.2415(4)(a) through (h) when biosolids are sold or given away in a bag or other container for application to the land.
History: 1999 MR 10, Eff. Nov. 2, 1999.

R 323.2412 Frequency of monitoring.

Rule 2412. (1) A person shall comply with the frequency of monitoring for all of the following as specified in table 7:
(a) Total nitrogen (TN) or total Kjeldahl nitrogen (TKN).
(b) Ammonium nitrogen (NH4-N).
(c) Nitrate nitrogen (NO3-N).
(d) Total phosphorus (P).
(e) Total potassium (K).
(f) Total solids.
(g) Arsenic.
(h) Cadmium.
(i) Copper.
(j) Lead.
(k) Mercury.
(l) Molybdenum.
(m) Nickel.
(n) Selenium.
(o) Zinc.
The pathogen density requirements in R 323.2414(2)(a) and in R 323.2414(3)(c).
(q) The vector attraction reduction requirements in R 323.2415(4)(a) through (d) and R 323.2415(4)(f) through (h).
(2) Table 7 reads as follows:

TABLE 7 -- Frequency of Monitoring - Land Application Amount of Biosolids Produced (per 365-day period)

English Dry Tons	Metric Dry Tons	Frequency
Greater than zero, But less than 320	Greater than zero, but less than 290	Once per year
Equal to or greater than 320, but Less than 1,650	Equal to or greater than 290, but less than 1,500	Once per quarter (4 times per year)
Equal to or greater Than 1,650, but Less than 16,500	Equal to or greater than 1,500, but less than 15,000	Once per 60 days (6 times per year)
Equal to or greater Than 16,500	Equal to or greater than 15,000	Once per month (12 times per year)

(3) After the biosolids have been monitored for 2 years at the frequency in table 7 of this rule, the permitting authority may reduce the frequency of monitoring for pollutant concentrations and for the pathogen density requirements in R 323.2414(2)(e)(ii) and (iii), but the frequency of monitoring shall be not less than once per year when biosolids are applied to the land.
(4) If biosolids are accumulated before removal, the monitoring frequency, at a minimum, is that specified in this rule. If monitoring of biosolids or a derivative indicates a pollutant concentration in excess of that provided in table 3 of R 323.2409(5)(c), then the monitoring frequency shall be increased to not less than twice that provided for in table 7 until pollutant concentrations are at or below the concentrations provided in table 3 of R 323.2409(5)(c). In the case of biosolids accumulating for periods of more than 1 year, biosolids must be monitored at the frequency determined in table 7 only in the year the biosolids are used. For a generator who removes biosolids monthly or more frequently, monitoring is required at least once per month each month that the biosolids are removed, unless more frequent monitoring is required in subrule(1) of this rule.
History: 1999 MR 10, Eff. Nov. 2, 1999.

R 323.2413 Recordkeeping.

Rule 2413. (1) A generator shall keep records for a minimum of 5 years unless a longer period is specified by the permitting authority.
(2) A person who generates bulk biosolids or bulk derivatives, including a generator from out of state, shall keep all of the following records and make the records available for inspection and copying:
(a) Site information of each application site, which includes all of the following information:
(i) A plat map.
(ii) A soil survey map, if available.
(iii) The name and address of the property owner and farm operator if different than the owner.
(iv) The latitude and longitude.
(b) Written consent to apply biosolids from the property owner and farm operator if different than the property owner.
(c) A written agreement between the generator and the farmer not to apply biosolids from other sources or septage to a listed land application site. Biosolids from other sources may be land-applied to a site only after that site is relinquished in writing to another generating facility.
(d) Biosolids analysis parameters listed in table 1 of R 323.2409(5)(a) at the frequency of analysis stated in table 7 of R 323.2412.
(e) Soil fertility test results for each site.
(f) For each biosolids-applied site, a summary of the application activity shall include all of the following information:
(i) Site identification.
(ii) Biosolids analysis.
(iii) Total acres in the site.
(iv) Acres used.
(v) Application rate in dry tons per acre.
(vi) Each nutrient required to be monitored in R 323.2412 in pounds per acre.
(vii) Each pollutant listed in table 3 of R 323.2409(5)(c), in pounds per acre, if the site has received biosolids that exceed the concentrations specified in table 3 of R 323.2409(5)(c).
(g) The information in R 323.2408(4)(g) before applying biosolids to the land that exceed the concentrations specified in table 3 of R 323.2409(5)(c). If biosolids that exceed table 3 pollutant concentrations for any pollutant have been applied, then the generator shall keep records documenting the cumulative loading for the life of the site.
An annual summary, including all of the following information:
(i) Biosolids volume generated.
(ii) Total dry tons applied to the land or distributed.
(iii) Total dry tons disposed of by other methods.
(iv) Total acres used.
Sites that received biosolids application subject to table 2 of R 323.2409(5)(b).

(i) A person who generates biosolids shall provide all application rate information from the monitoring of pollutant concentrations specified in R 323.2409(5)(c) and nutrients specified in R 323.2412 and agronomic information specified in R 323.2410(7) to the property owner or farm operator, or both, upon completion of any biosolids activity on a site.
(j) All certification statements relating to management practices, pathogen reduction, and vector attraction.
(k) The information specified in subrule 7(b) of this rule, on October 30 of each year when 90% or more of any of the cumulative pollutant loading rates in table 2 of R 323.2409(5)(b) is reached at a site.
(3) A person who prepares biosolids subject to these rules shall develop the following information and shall retain the information for 5 years, unless a longer period is specified:
(a) The annual average, annual minimum, and annual maximum concentration of each pollutant in the biosolids listed in table 3 of R 323.2409(5)(c).
(b) The following certification statement:
"I certify, under penalty of law, that information that will be used to determine compliance with the class A pathogen requirements in R 323.2414(2) and the vector attraction reduction requirement in [insert 1 of the vector attraction reduction requirements in R 323.2415(4)(a) to (h)] has been prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."
(c) A description of how the class A pathogen requirements in R 323.2414(2) are met.
(d) A description of how 1 of the vector attraction reduction requirements in R 323.2415(4)(a) to (h) is met.
(4) A person who derives a material subject to these rules shall develop the following information and shall retain the information for 5 years:
(a) The annual average, annual minimum, and annual maximum concentration of each pollutant in the material listed in table 3 of R 323.2409(5)(c).
(b) The following certification statement:
"I certify, under penalty of law, that information that will be used to determine compliance with the class A pathogen requirements in R 323.2414(2) and the vector
attraction reduction requirement in [insert 1 of the vector attraction reduction requirements in R 323.2415(4)(a) to (h)] has been prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."
(c) A description of how the class A pathogen requirements in R 323.2414(2) are met.
(d) A description of how 1 of the vector attraction reduction requirements in R 323.2415(4)(a) to (h) is met.
(5) If the pollutant concentrations in R 323.2409(5)(c), the class A pathogen requirements in R 323.2414(2), and the vector attraction reduction requirements in R 323.2415(4)(i) or (j) are met when bulk biosolids are applied to agricultural land, a forest, a public contact site, or a reclamation site, then both of the following provisions shall be complied with:
(a) The person who prepares the bulk biosolids shall develop all of the following information and shall retain the information for 5 years:
(i) A concentration of each pollutant in the bulk biosolids listed in R 323.2409(5)(c), table 3.
(ii) The following certification statement:
"I certify, under penalty of law, that information that will be used to determine compliance with the pathogen requirements in R 323.2414(2) has been prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."
(iii) A description of how the pathogen requirements in R 323.2414(2) are met.
(b) The person who applies the bulk biosolids shall develop all of the following information and shall retain the information for 5 years:
(i) The following certification statement:
"I certify, under penalty of law, that the information that will be used to determine compliance with the management practices in R 323.2410 and the vector attraction reduction requirement in [insert R 323.2415(4)(i) or (j)] has been prepared under my direction and supervision in accordance with the system

designed to ensure that qualified personnel properly gather and evaluate the information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(ii) A description of how the management practices in R 323.2410 are met for each site on which bulk biosolids are applied.

(iii) A description of how the vector attraction reduction requirements in either R 323.2415(4)(i) or (j) are met for each site on which bulk biosolids are applied.

(6) If the pollutant concentrations in R 323.2409(5)(c) and the class B pathogen requirements in R 323.2414(3) are met when bulk biosolids are applied to agricultural land, a forest, a public contact site, or a reclamation site, then both of the following provisions shall be complied with:

(a) The person who prepares the bulk biosolids shall develop the following information and shall retain the information for 5 years:

(i) The annual average, annual minimum, and annual maximum concentration of each pollutant in the bulk biosolids listed in table 3 of R 323.2409(5)(c).

(ii) The following certification statement:

"I certify under, penalty of law, that the information that will be used to determine compliance with the class B pathogen requirements in R 323.2414(3) and the vector attraction reduction requirement in [insert 1 of the vector attraction reduction requirements in R 323.2415(4)(a) to (h) if one of those requirements is met] has been prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(iii) A description of how the class B pathogen requirements in R 323.2414(3)(f) are met.

(iv) When 1 of the vector attraction reduction requirements in R 323.2415(4)(a) to (h) is met, a description of how the vector attraction reduction requirement is met.

(b) The person who applies the bulk biosolids shall develop all of the following information and shall retain the information for 5 years:

(i) The following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the management practices in R 323.2410, the site restrictions in R 323.2414(3)(f), and the vector attraction reduction requirements in [insert either R 323.2415(4)(i) or (j), if one of the requirements is met] has been prepared for each site on which bulk biosolids are applied under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(ii) A description of how the management practices in R 323.2410 are met for each site on which bulk biosolids are applied.

(iii) A description of how the site restrictions in R 323.2414(3)(f) are met for each site on which bulk biosolids are applied.

(iv) When the vector attraction reduction requirement in R 323.2415(4)(i) or (j) is met, a description of how the vector attraction reduction requirement is met.

(v) The date bulk biosolids are applied to each site.

(7) If the requirements in R 323.2409(2)(a) are met when bulk biosolids are applied to agricultural land, a forest, a public contact site, or a reclamation site, then both of the following provisions shall be complied with:

(a) The person who prepares the bulk biosolids shall develop all of the following information and shall retain the information for 5 years:

(i) The annual average, annual minimum, and annual maximum concentration of each pollutant listed in table 1 of R 323.2409(5)(a) in the bulk biosolids.

(ii) The following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the pathogen requirements in [insert either R 323.2414(2) or (3)] and the vector attraction reduction requirement in [insert 1 of the vector attraction reduction requirements in R 323.2415(4)(a) to (h) if one of the requirements is met] has been prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information. I am

aware that there are significant penalties for false certification including the possibility of fine and imprisonment."
(iii) A description of how the pathogen requirements in R 323.2414(2) or (3) are met.
(iv) When 1 of the vector attraction requirements in R 323.2415(4)(a) to (h) is met, a description of how the vector attraction requirement is met.
(b) The person who applies the bulk biosolids shall develop all of the following information, retain the information in paragraphs (i) to (vii) of this subdivision indefinitely, and retain the information in paragraphs (viii) to (xiii) of this subdivision for 5 years:
(i) The location, by latitude and longitude, of each site on which bulk biosolids are applied.
(ii) The number of hectares in each site on which bulk biosolids are applied.
(iii) The date bulk biosolids are applied to each site.
(iv) The cumulative amount of each pollutant listed in table 2 of R 323.2409(5)(b) in the bulk biosolids applied to each site, including the amount in R 323.2408(3)(b).
(v) The amount of biosolids applied to each site.
(vi) The following certification statement:
"I certify, under penalty of law, that the information that will be used to determine compliance with the requirements to obtain information in R 323.2408(3)(a) has been prepared for each site on which bulk biosolids are applied under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."
(vii) A description of how the requirements to obtain information in R 323.2408(3)(a) are met.
(viii) The following certification statement:
"I certify, under penalty of law, that the information that will be used to determine compliance with the management practices in R 323.2410 have been prepared for each site on which bulk biosolids are applied under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."
(ix) A description of how the management practices in R 323.2410 are met for each site on which bulk biosolids are applied.
(x) The following certification statement when the bulk biosolids meet the class B pathogen requirements in R 323.2414(3):
"I certify, under penalty of law, that the information that will be used to determine compliance with the site restrictions in R 323.2414(3)(f) has been prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."
(xi) A description of how the site restrictions in R 323.2414(3)(f) are met for each site on which class B bulk biosolids are applied.
(xii) The following certification statement when the vector attraction reduction requirement in R 323.2415(4)(i) or (j) is met:
"I certify, under penalty of law, that the information that will be used to determine compliance with the vector attraction reduction requirement in [insert either R 323.2415(4)(i) or (j)] has been prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."
(xiii) If the vector attraction reduction requirements in R 323.2415(4)(i) or (j) are met, a description of how the requirements are met.
(8) If the requirements in R 323.2409(4)(b) are met when biosolids are sold or given away in a bag or other container for application to the land, then the person who prepares the biosolids that are sold or given away in a bag or other container shall develop all of the following information and shall retain the information for 5 years:
(a) The annual whole biosolids application rate for the biosolids that do not cause the annual pollutant loading rates in table 4 of R 323.2409(5)(d) to be exceeded.

The concentration of each pollutant in the biosolids listed in table 4 of R 323.2409(5)(d).
(c) The following certification statement:
"I certify, under penalty of law, that the information that will be used to determine compliance with the management practice in R 323.2410(7), the class A pathogen requirement in R 323.2414(2), and the vector attraction reduction requirement in [insert 1 of the vector attraction reduction requirements in R 323.2415(4)(a) to (h)] has been prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."
(d) A description of how the class A pathogen requirements in R 323.2414(2) are met.
A description of how 1 of the vector attraction requirements in R 323.2415(4)(a) to (h) is met.
History: 1999 MR 10, Eff. Nov. 2, 1999.

R 323.2414 Pathogens.

Rule 2414. (1) This rule contains both of the following:
(a) The requirements for biosolids to be classified either class A or class B with respect to pathogens.
(b) The site restrictions for land on which a class B biosolid is applied.
(2) All of the following requirements apply to class A biosolids:
(a) The requirement in subdivision (b) of this subrule and the requirements in subdivision (c), (d), (e), (f), or (g) of this subrule shall be met for biosolids to be classified class A with respect to pathogens.
(b) The class A pathogen requirements in subdivisions (c) to (g) of this subrule shall be met either before meeting the vector attraction reduction requirements in R 323.2415 or at the same time that the vector attraction reduction requirements in R 323.2415 are met, except when the vector attraction reduction requirements in R 323.2415(4)(f) to (h) are met.
(c) Both of the following provisions apply to class A alternative 1, which is not applicable for composting:
(i) Either the density of fecal coliform in the biosolids shall be less than 1000 most probable number per gram of total solids (dry weight basis) or the density of salmonella sp. bacteria in the biosolids shall be less than 3 most probable number per 4 grams of total solids (dry weight basis) at the time the biosolids are used, at the time the biosolids are prepared for sale or given away in a bag or other container for application to the land, or at the time the biosolids or material derived from biosolids is prepared to meet the requirements in R 323.2407(1) or (2).
(ii) The temperature of the biosolids that are used shall be maintained at a specific value for a period of time as follows:
(A) If the percent solids of the biosolids is 7% or higher, then the temperature of the biosolids shall be 50 degrees Celsius or higher; the time period shall be 20 minutes or longer; and the temperature and time period shall be determined using equation (3), except when small particles of biosolids are heated by either warmed gases or an immiscible liquid.

equation (3) $$D = \frac{131{,}700{,}000}{10^{0.1400t}}$$

Where, D = time in days.
t = temperature in degrees Celsius.
(B) If the percent solids of the biosolids is 7% or higher and small particles of biosolids are heated by either warmed gases or an immiscible liquid, then the temperature of the biosolids shall be 50 degrees Celsius or higher; the time period shall be 15 seconds or longer; and the temperature and time period shall be determined using equation (3).
(C) If the percent solids of the biosolids is less than 7% and the time period is at least 15 seconds, but less than 30 minutes, then the temperature and time period shall be determined using equation (3).
(D) If the percent solids of the biosolids is less than 7%; the temperature of the biosolids is 50 degrees Celsius or higher; and the time period is 30 minutes or longer, then the temperature and time period shall be determined using equation (4).

equation (4) $$D = \frac{50{,}070{,}000}{}$$

$10^{0.1400t}$

Where, D = time in days.
t = temperature in degrees Celsius.
(d) Both of the following provisions apply to class A alternative 2:
(i) Either the density of fecal coliform in the biosolids shall be less than 1000 most probable number per gram of total solids (dry weight basis) or the density of salmonella sp. bacteria in the biosolids shall be less than 3 most probable number per 4 grams of total solids (dry weight basis) at the time the biosolids is used, at the time the biosolids are prepared for sale or given away in a bag or other container for application to the land, or at the time the biosolids or material derived from biosolids are prepared to meet the requirements in R 323.2407(1) or (2).
(ii) The pH of the biosolids that are used or disposed of shall be raised to above 12 and shall remain above 12 for 72 hours. The temperature of the biosolids shall be above 52 degrees Celsius for 12 hours or longer during the period that the pH of the biosolids is above 12. At the end of the 72-hour period that the pH of the biosolids is above 12, the biosolids shall be air-dried to achieve a percent solids in the biosolids of more than 50%.
(e) All of the following provisions apply to class A alternative 3:
(i) Either the density of fecal coliform in the biosolids shall be less than 1000 most probable number per gram of total solids (dry weight basis) or the density of salmonella sp. bacteria in biosolids shall be less than 3 most probable number per 4 grams of total solids (dry weight basis) at the time the biosolids are used or disposed of, at the time the biosolids are prepared for sale or given away in a bag or other container for application to the land, or at the time the biosolids or material derived from biosolids is prepared to meet the requirements in R 323.2407(1) or (2).
(ii) All of the following provisions apply to biosolids analysis for enteric viruses:
(A) The biosolids shall be analyzed before pathogen treatment to determine whether the biosolids contain enteric viruses.
(B) If the density of enteric viruses in the biosolids before pathogen treatment is less than 1 plaque-forming unit per 4 grams of total solids (dry weight basis), then the biosolids are class A with respect to enteric viruses until the next monitoring episode for the biosolids.
(C) If the density of enteric viruses in the biosolids before pathogen treatment is equal to or greater than 1 plaque-forming unit per 4 grams of total solids (dry weight basis), then the biosolids are class A with respect to enteric viruses if the density of enteric viruses in the biosolids after pathogen treatment is less than 1 plaque-forming unit per 4 grams of total solids (dry weight basis) and if the values or ranges of values for the operating parameters for the pathogen treatment process that produces the biosolids that meets the enteric virus density requirement are documented.
(D) After the enteric virus reduction in subparagraph (C) of this paragraph is demonstrated for the pathogen treatment process, the biosolids continue to be class A with respect to enteric viruses if the values for the pathogen treatment process operating parameters are consistent with the values or ranges of values documented in subparagraph(C) of this paragraph.
(iii) All of the following provisions apply to biosolids analysis for viable helminth ova:
(A) The biosolids shall be analyzed before pathogen treatment to determine whether the biosolids contain viable helminth ova.
(B) If the density of viable helminth ova in the biosolids before pathogen treatment is less than 1 per 4 grams of total solids (dry weight basis), then the biosolids are class A with respect to viable helminth ova until the next monitoring episode for the biosolids.
(C) If the density of viable helminth ova in the biosolids before pathogen treatment is equal to or greater than 1 per 4 grams of total solids (dry weight basis), then the biosolids are class A with respect to viable helminth ova if the density of viable helminth ova in the biosolids after pathogen treatment is less than 1 per 4 grams of total solids (dry weight basis) and if the values or ranges of values for the operating parameters for the pathogen treatment process that produces the biosolids that meet the viable helminth ova density requirement are documented.
(D) After the viable helminth ova reduction in subparagraph (C) of this paragraph is demonstrated for the pathogen treatment process, the biosolids continue to be class A with respect to viable helminth ova if the

values for the pathogen treatment process operating parameters are consistent with the values or ranges of values documented in subparagraph (C) of this paragraph.
(f) All of the following provisions apply to class A alternative 4:
(i) Either the density of fecal coliform in the biosolids shall be less than 1000 most probable number per gram of total solids (dry weight basis) or the density of salmonella sp. bacteria in the biosolids shall be less than 3 most probable number per 4 grams of total solids (dry weight basis) at the time the biosolids are used or disposed of, at the time the biosolids are prepared for sale or given away in a bag or other container for application to the land, or at the time the biosolids or material derived from biosolids is prepared to meet the requirements in R 323.2407(1) or (2).
(ii) The density of enteric viruses in the biosolids shall be less than 1 plaque-forming unit per 4 grams of total solids (dry weight basis) at the time the biosolids are used or disposed of, at the time the biosolids are prepared for sale or given away in a bag or other container for application to the land, or at the time the biosolids or material derived from biosolids is prepared to meet the requirements in R 323.2407(1) or (2), unless otherwise specified by the permitting authority.
(iii) The density of viable helminth ova in the biosolids shall be less than 1 per 4 grams of total solids (dry weight basis) at the time the biosolids are used or disposed of, at the time the biosolids are prepared for sale or given away in a bag or other container for application to the land, or at the time the biosolids or material derived from biosolids is prepared to meet the requirements in R 323.2407(1) or (2), unless otherwise specified by the permitting authority.
(g) Both of the following provisions apply to class A alternative 5:
(i) Either the density of fecal coliform in the biosolids shall be less than 1000 most probable number per gram of total solids (dry weight basis) or the density of salmonella, sp. bacteria in the biosolids shall be less than 3 most probable number per 4 grams of total solids (dry weight basis) at the time the biosolids are used or disposed of, at the time the biosolids is prepared for sale or given away in a bag or other container for application to the land, or at the time the biosolids or material derived from biosolids is prepared to meet the requirements in R 323.2407(1) or (2).
(ii) Biosolids that are used or disposed of shall be treated in 1 of the processes to further reduce pathogens described in R 323.2418(2).
(h) Both of the following provisions apply to class A alternative 6:
(i) Either the density of fecal coliform in the biosolids shall be less than 1000 most probable number per gram of total solids (dry weight basis) or the density of salmonella, sp. bacteria in the biosolids shall be less than 3 most probable number per 4 grams of total solids (dry weight basis) at the time the biosolids are used or disposed of, at the time the biosolids are prepared for sale or given away in a bag or other container for application to the land, or at the time the biosolids or material derived from biosolids is prepared to meet the requirements in R 323.2407(1) or (2).
(ii) Biosolids that are used or disposed of shall be treated in a process that is equivalent to a process to further reduce pathogens, as determined by the permitting authority.
(3) All of the following provisions apply to class B biosolids:
(a) The requirements in subdivision (c), (d), or (e) of this subrule shall be met for biosolids to be classified class B with respect to pathogens.
(b) The site restrictions in subdivision (f) of this subrule shall be met if biosolids that meet the class B pathogen requirements in subdivision (c), (d), or (e) of this subrule are applied to the land.
(c) Both of the following provision apply to class B alternative 1:
(i) Seven representative samples of the biosolids that are used shall be collected.
(ii) The geometric mean of the density of fecal coliform in the samples collected in subdivision (c)(i) of this subrule shall be less than either 2,000,000 most probable number per gram of total solids (dry weight basis) or 2,000,000 colony-forming units per gram of total solids (dry weight basis).
(d)With respect to class B alternative 2, biosolids that are used or disposed of shall be treated in 1 of the processes to significantly reduce pathogens described in R 323.2418(1).
(e) With respect to class B alternative 3, biosolids that are used or disposed of shall be treated in a process that is equivalent to a process to significantly reduce pathogens, as determined by the permitting authority.
(f) All of the following provisions apply to site restrictions:
(i) A landowner shall not harvest food crops that have harvested parts which touch the biosolids/soil mixture

and which are totally above the land surface for 14 months after biosolids are applied.
(ii) A landowner shall not harvest food crops that have harvested parts below the surface of the land for 20 months after biosolids are applied if the biosolids remain on the land surface for 4 months or longer before incorporation into the soil.
(iii) A landowner shall not harvest food crops that have harvested parts below the surface of the land for 38 months after biosolids are applied if the biosolids remain on the land surface for less than 4 months before incorporation into the soil.
(iv) A landowner shall not harvest food crops, feed crops, and fiber crops for 30 days after biosolids are applied.
(v) A landowner shall not graze animals on the land for 30 days after biosolids are applied.
(vi) A land owner shall not harvest turf grown on land where biosolids are applied for 1 year after biosolids are applied if the harvested turf is placed on either land that has a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority.
(vii) A landowner shall restrict public access to land that has a high potential for public exposure for 1 year after biosolids are applied.
(viii) A landowner shall restrict public access to land with a low potential for public exposure for 30 days after biosolids are applied.
History: 1999 MR 10, Eff. Nov. 2, 1999.

R 323.2415 Vector attraction reduction.

Rule 2415. (1) A person who prepares bulk biosolids for application to agricultural land, a forest, a public contact site, or a reclamation site shall meet 1 of the vector attraction reduction requirements in subrule (4)(a) to (h) of this rule or shall meet the vector attraction reduction requirements of subrule (4)(i) or (j) of this rule.
(2) A person who prepares bulk biosolids for application to a lawn or a home garden shall meet 1 of the vector attraction reduction requirements in subrule (4)(a) to (h) of this rule.
(3) A person who prepares bulk biosolids that is sold or given away in a bag or other container for application to the land shall meet 1 of the vector attraction reduction requirements in subrule (4)(a) to (h) of this rule.
(4) All of the following provisions apply to vector attraction reduction processes:
(a) A generator shall reduce the mass of volatile solids in the biosolids by a minimum of 38%.
(b) If the 38% volatile solids reduction requirement in subdivision (a) of this subrule cannot be met for an anaerobically digested biosolids, then a generator may demonstrate vector attraction reduction by digesting a portion of the previously digested biosolids anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. When, at the end of the 40 days, the volatile solids in the biosolids at the beginning of the 40-day period are reduced by less than 17%, vector attraction reduction is achieved.
(c) If the 38% volatile solids reduction requirement in subdivision (a) of this subrule cannot be met for aerobically digested biosolids, then a generator may demonstrate vector attraction reduction by digesting a portion of the previously digested biosolids that have a percent solids of 2% or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. When, at the end of the 30 days, the volatile solids in the biosolids at the beginning of the 30-day period is reduced by less than 15%, vector attraction reduction is achieved.
(d) A generator shall ensure that the specific oxygen uptake rate (SOUR) for biosolids treated in an aerobic process is equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius.
(e) A generator shall treat biosolids in an aerobic process for 14 days or longer. During that time, a generator the temperature of the biosolids shall be higher than 40 degrees Celsius and the average temperature of the biosolids shall be higher than 45 degrees Celsius.
(f) A generator shall ensure that the pH of biosolids is raised to 12 or higher by alkali addition and, without the addition of more alkali, remains at 12 or higher for 2 hours and then at 11.5 or higher for an additional 22 hours.
(g) A generator shall ensure that the percent solids of biosolids that do not contain unstabilized solids generated in a primary wastewater treatment process is equal to or greater than 75% based on the moisture

content and total solids before mixing with other materials, at the time the biosolids are prepared for sale or given away in a bag or other container for application to the land, or at the time the biosolids are prepared to meet the requirements in R 323.2407(1) or (2).
(h) A generator shall ensure that the percent solids of biosolids that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90% based on the moisture content and total solids before mixing with other materials, at the time the biosolids are prepared for sale or given away in a bag or other container for application to the land, or at the time the biosolids are prepared to meet the requirements in R 323.2407(1) or (2).
(i) All of the following provisions apply to biosolids that are injected:
(i) A person who applies biosolids shall inject below the surface of the land.
(ii) A person who applies biosolids shall ensure that a significant amount of the biosolids is not present on the land surface within 1 hour after the biosolids are injected.
(iii) If the biosolids that are injected below the surface of the land are class A with respect to pathogens, then a person who applies the biosolids shall ensure that the biosolids are injected below the land surface within 8 hours after the biosolids have been discharged from the pathogen treatment process.
(j) A person who applies biosolids to the land surface shall ensure that the biosolids are incorporated into the soil within 6 hours after application to or placement on the land, unless otherwise specified by the permitting authority. If biosolids that are incorporated into the soil are class A with respect to pathogens, then the person shall apply the biosolids to, or place the biosolids on, the land within 8 hours after the biosolids have been discharged from the pathogen treatment process.
History: 1999 MR 10, Eff. Nov. 2, 1999.

R 323.2416 Reporting; fees; biosolids land application fund; creation.

Rule 2416. (1) Beginning in state fiscal year 1998, an annual biosolids land application fee is imposed upon biosolids generators and biosolids distributors. The biosolids land application fee is an amount equal to the sum of an administrative fee and a generation fee. The administrative fee is $400.00 for each biosolids generator or distributor that land applies. The department shall set the generation fee as provided by subrule (2) of this rule. The department shall set the generation fee so that the annual cumulative total of the biosolids land application fee to be paid in a state fiscal year is, as near as possible, $650,000.00 minus the amount in the fund created under subrule (5) of this rule carried forward from the immediately preceding state fiscal year. Starting with fees to be paid in state fiscal year 1999, the department shall adjust the $650,000.00 amount annually for inflation using the Detroit consumer price index.
(2) Each biosolids generator and biosolids distributor shall annually report to the department for each state fiscal year, beginning with the 1997 state fiscal year, the number of dry tons of biosolids it generated or the number of dry tons of biosolids in derivatives it distributed that were applied to land in the state of Michigan in the state fiscal year. A biosolids generator that does not land apply shall report zero. A biosolids generator located in the state of Michigan that land applies outside the state of Michigan will be assessed only an administrative fee and a fee for biosolids that are land applied in the state of Michigan. The report is due 30 days after the end of the state fiscal year. By December 15 of each state fiscal year, the department shall determine the generation fee on a per dry ton basis by dividing the cumulative generation fee by the number of dry tons of biosolids applied to land or in derivatives applied to land in the state of Michigan in the immediately preceding state fiscal year. The department shall notify each biosolids generator and biosolids distributor of the generation fee on a per dry ton basis.
(3) A generator or distributor that land-applied biosolids or a derivative to land within the state at any time during the previous state fiscal year shall report to the department the information required in R 323.2413(3) to (8), except R 323.2413(6)(b), (7)(b), and (8)(b), on or before October 30.
(4) By January 31 of each state fiscal year, each biosolids generator or biosolids distributor shall pay its biosolids land application fee. The biosolids generator or biosolids distributor shall determine the amount of its biosolids land application fee by multiplying the number of dry tons of biosolids that it reported under subrule (2) of this rule by the generation fee and adding the administrative fee.
(5) The department of environmental quality shall assess interest on all fee payments submitted under this rule after the due date. The permittee shall pay an additional amount equal to 0.75% of the payment due for each month or portion of a month that the payment remains past due. The failure by a person to pay a fee

imposed by this rule in a timely manner is a violation of this part.
(6) The biosolids land application fund is created in the state department of treasury. The department of environmental quality shall forward all fees collected under this rule to the state treasurer for deposit into the fund. The state treasurer may receive money or other assets from any source for deposit into the fund. The state treasurer shall direct the investment of the fund. The state treasurer shall credit to the fund interest and earnings from fund investments. The department of environmental quality shall carry an unexpended balance within the fund at the close of the state fiscal year forward to the following state fiscal year. The department of environmental quality shall ensure that the fund is allocated solely for the administration of this rule and sections 3131 and 3133 of the act, including, but not limited to, education of the farmers, biosolids generators, biosolids distributors, and the general public about land application of biosolids and derivatives and the requirements of this rule and sections 3131 and 3133 of the act. The director of the department may contract with a nonprofit educational organization to administer the educational components of this rule. The state department of treasury shall allocate 10% of the fund to the department of agriculture to provide persons involved in or affected by land application of biosolids or derivatives with education and technical assistance relating to land application of biosolids or derivatives.
History: 1999 MR 10, Eff. Nov. 2, 1999.

R 323.2417 Procedure to determine annual whole biosolids application rate.

Rule 2417. (1) A person who applies biosolids to the land shall use the following formula to determine the loading rate:
Loading Rate Formula
AP = PC x 0.002 x AR
Where: AP = applied pollutant in pounds per acre.
PC = pollutant concentration in milligrams per kilogram dry weight.
0.002 = the factor to convert pollutant concentration to pounds per dry ton.
AR = the biosolids application rate in dry tons per acre.
(2) R 323.2409(4)(b) requires that the product of the concentration for each pollutant listed in table 4 of R 323.2409(5)(d) in biosolids sold or given away in a bag or other container for application to the land and the annual whole biosolids application rate (AWBAR) for the biosolids not cause the annual pollutant loading rate for the pollutant in table 4 to be exceeded. This rule contains the procedure used to determine the AWBAR for biosolids that do not cause the annual pollutant loading rates in table 4 to be exceeded. The relationship between the annual pollutant-loading rate (APLR) for a pollutant and the annual whole biosolids application rate (AWBAR) for a biosolids is shown in the following equation:
APLR = C x AWBAR X 0.001 equation (1)
Where: APLR = annual pollutant loading rate in kilograms per hectare per 365-day period.
C = pollutant concentration in milligrams per kilogram of total solids (dry weight basis).
AWBAR = annual whole biosolids application rate in metric tons per hectare per 365-day period (dry weight basis).
0.001 = a conversion factor.
(3) To determine the AWBAR, equation (1) is rearranged into the following equation:

$$AWBAR = \frac{APLR}{C \times 0.001} \quad \text{equation (2)}$$

(4) The procedure used to determine the AWBAR for biosolids is as follows:
(a) Analyze a sample of the biosolids to determine the concentration for each of the pollutants in the biosolids listed in table 4 of R 323.2409(5)(d).
(b) Using the pollutant concentrations from subdivision (a) of this subrule and the APLRs from table 4 of R 323.2409(5)(d), calculate an AWBAR for each pollutant using equation (2) in subrule (3) of this rule.
(c) The AWBAR for the biosolids is the lowest AWBAR calculated in subdivision (b) of the subrule.
History: 1999 MR 10, Eff. Nov. 2, 1999.

R 323.2418 Pathogen treatment processes.

Rule 2418. (1) The process to significantly reduce pathogens (PSRP) is as follows:

(a) Biosolids are agitated with air or oxygen to maintain aerobic conditions for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature shall be between 40 days at 20 degrees Celsius and 60 days at 15 degrees Celsius.
(b) Biosolids are dried on sand beds or on paved or unpaved basins. The biosolids dry for a minimum of 3 months. During 2 of the 3 months, the ambient average daily temperature is above 0 degrees Celsius.
(c) Biosolids are treated in the absence of air for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature shall be between 15 days at 35 to 55 degrees Celsius and 60 days at 20 degrees Celsius.
(d) Using the within-vessel, static aerated pile, or windrow composting method, the temperature of the biosolids is raised to 40 degrees Celsius or higher and remains at 40 degrees Celsius or higher for 5 days. For 4 hours during the 5 days, the temperature in the compost pile exceeds 55 degrees Celsius.
(e) Sufficient lime is added to the biosolids to raise the pH of the biosolids to 12 after 2 hours of contact.
(2) The processes to further reduce pathogens (PFRP) are as follows:
(a) Using either the within-vessel composting method or the static aerated pile composting method, the temperature of the biosolids is maintained at 55 degrees Celsius or higher for 3 days. Using the windrow composting method, the temperature of the biosolids is maintained at 55 degrees or higher for 15 days or longer. During the period when the compost is maintained at 55 degrees or higher, there shall be a minimum of 5 turnings of the windrow.
(b) Biosolids are dried by direct or indirect contact with hot gases to reduce the moisture content of the biosolids to 10% or lower. Either the temperature of the biosolids particles is more than 80 degrees Celsius or the wet bulb temperature of the gas in contact with the biosolids as the biosolids leaves the dryer is more than 80 degrees Celsius.
(c) Liquid biosolids are heated to a temperature of 180 degrees Celsius or higher for 30 minutes.
(d) Liquid biosolids are agitated with air or oxygen to maintain aerobic conditions and the mean cell residence time of the biosolids is 10 days at 55 to 60 degrees Celsius.
(e) Biosolids are irradiated with beta rays from an accelerator at dosages of at least 1.0 megarad at room temperature (approximately 20 degrees Celsius).
(f) Biosolids are irradiated with gamma rays from certain isotopes, such as ^{60}Cobalt and ^{137}Cesium, at dosages of at least 1.0 megarad at room temperature (approximately 20 degrees Celsius).
(g) The temperature of the biosolids is maintained at 70 degrees Celsius or higher for 30 minutes or longer.
History: 1999 MR 10, Eff. Nov. 2, 1999.

GEOLOGICAL SURVEY DIVISION

OIL AND GAS OPERATIONS

PART 1. GENERAL PROVISIONS

R 324.101
Source: 1996 AACS.

R 324.102
Source: 1996 AACS.

R 324.103
Source: 1996 AACS.

R 324.104
Source: 1996 AACS.

R 324.199
Source: 1996 AACS.

PART 2. PERMITS TO DRILL AND OPERATE

R 324.201
Source: 1996 AACS.

R 324.202
Source: 1996 AACS.

R 324.203
Source: 1996 AACS.

R 324.204
Source: 1996 AACS.

R 324.205
Source: 1996 AACS.

R 324.206
Source: 1996 AACS.

R 324.207
Source: 1996 AACS.

R 324.208
Source: 1996 AACS.

R 324.209
Source: 1996 AACS.

R 324.210
Source: 1996 AACS.

R 324.211
Source: 1996 AACS.

R 324.212
Source: 1996 AACS.

R 324.213
Source: 1996 AACS.

R 324.214
Source: 1996 AACS.

R 324.215
Source: 1996 AACS.

R 324.216
Source: 1996 AACS.

PART 3. SPACING AND LOCATION OF WELLS

R 324.301
Source: 1996 AACS.

R 324.302
Source: 1996 AACS.

R 324.303
Source: 1996 AACS.

R 324.304
Source: 1996 AACS.

PART 4. DRILLING AND WELL CONSTRUCTION

R 324.401
Source: 1996 AACS.

R 324.402
Source: 1996 AACS.

R 324.403
Source: 1996 AACS.

R 324.404
Source: 1996 AACS.

R 324.405
Source: 1996 AACS.

R 324.406
Source: 1996 AACS.

R 324.407
Source: 1996 AACS.

R 324.408
Source: 1996 AACS.

R 324.409
Source: 1996 AACS.

R 324.410
Source: 1996 AACS.

R 324.411
Source: 1996 AACS.

R 324.412
Source: 1996 AACS.

R 324.413
Source: 1996 AACS.

R 324.414
Source: 1996 AACS.

R 324.415
Source: 1996 AACS.

R 324.416
Source: 1996 AACS.

R 324.417
Source: 1996 AACS.

R 324.418
Source: 1996 AACS.

R 324.419
Source: 1996 AACS.

R 324.420
Source: 1996 AACS.

R 324.421
Source: 1996 AACS.

R 324.422
Source: 1996 AACS.

PART 5. COMPLETION AND OPERATION

R 324.501
Source: 1996 AACS.

R 324.502
Source: 1996 AACS.

R 324.503
Source: 1996 AACS.

R 324.504
Source: 1996 AACS.

R 324.505
Source: 1996 AACS.

R 324.506
Source: 1996 AACS.

R 324.507
Source: 1996 AACS.

R 324.508
Source: 1996 AACS.

R 324.509
Source: 1996 AACS.

R 324.510
Source: 1996 AACS.

R 324.511
Source: 1996 AACS.

PART 6. PRODUCTION AND PRORATION

R 324.601
Source: 1996 AACS.

R 324.602
Source: 1996 AACS.

R 324.603
Source: 1996 AACS.

R 324.604
Source: 1996 AACS.

R 324.605
Source: 1996 AACS.

R 324.606
Source: 1996 AACS.

R 324.607
Source: 1996 AACS.

R 324.608
Source: 1996 AACS.

R 324.609
Source: 1996 AACS.

R 324.610
Source: 1996 AACS.

R 324.611
Source: 1996 AACS.

R 324.612
Source: 1996 AACS.

R 324.613
Source: 1996 AACS.

PART 7. DISPOSAL OF OIL OR GAS FIELD WASTE, OR BOTH

R 324.701
Source: 1996 AACS.

R 324.702
Source: 1996 AACS.

R 324.703
Source: 1996 AACS.

R 324.704
Source: 1996 AACS.

R 324.705
Source: 1996 AACS.

PART 8. INJECTION WELLS

R 324.801
Source: 1996 AACS.

R 324.802
Source: 1996 AACS.

R 324.803
Source: 1996 AACS.

R 324.804
Source: 1996 AACS.

R 324.805
Source: 1996 AACS.

R 324.806
Source: 1996 AACS.

R 324.807
Source: 1996 AACS.

R 324.808
Source: 1996 AACS.

PART 9. PLUGGING

R 324.901
Source: 1996 AACS.

R 324.902
Source: 1996 AACS.

R 324.903
Source: 1996 AACS.

R 324.904
Source: 1996 AACS.

PART 10. WELL SITES AND SURFACE FACILITIES; PREVENTION OF FIRES, POLLUTION, AND DANGER TO, OR DESTRUCTION OF, PROPERTY OR LIFE

R 324.1001
Source: 1996 AACS.

R 324.1002
Source: 1996 AACS.

R 324.1003
Source: 1996 AACS.

R 324.1004
Source: 1996 AACS.

R 324.1005
Source: 1996 AACS.

R 324.1006
Source: 1996 AACS.

R 324.1007
Source: 1996 AACS.

R 324.1008
Source: 1996 AACS.

R 324.1009
Source: 1996 AACS.

R 324.1010
Source: 1996 AACS.

R 324.1011
Source: 1996 AACS.

R 324.1012
Source: 1996 AACS.

R 324.1013
Source: 1996 AACS.

R 324.1014
Source: 1996 AACS.

R 324.1015
Source: 1996 AACS.

R 324.1016
Source: 1996 AACS.

PART 11. HYDROGEN SULFIDE MANAGEMENT

R 324.1101
Source: 1996 AACS.

R 324.1102
Source: 1996 AACS.

R 324.1103
Source: 1996 AACS.

R 324.1104
Source: 1996 AACS.

R 324.1105
Source: 1996 AACS.

R 324.1106
Source: 1996 AACS.

R 324.1107
Source: 1996 AACS.

R 324.1108
Source: 1996 AACS.

R 324.1109
Source: 1996 AACS.

R 324.1110
Source: 1996 AACS.

R 324.1111
Source: 1996 AACS.

R 324.1112
Source: 1996 AACS.

R 324.1113
Source: 1996 AACS.

R 324.1114
Source: 1996 AACS.

R 324.1115
Source: 1996 AACS.

R 324.1116
Source: 1996 AACS.

R 324.1117
Source: 1996 AACS.

R 324.1118
Source: 1996 AACS.

R 324.1119
Source: 1996 AACS.

R 324.1120
Source: 1996 AACS.

R 324.1121
Source: 1996 AACS.

R 324.1122
Source: 1996 AACS.

R 324.1123
Source: 1996 AACS.

R 324.1124
Source: 1996 AACS.

R 324.1125
Source: 1996 AACS.

R 324.1126
Source: 1996 AACS.

R 324.1127
Source: 1996 AACS.

R 324.1128
Source: 1996 AACS.

R 324.1129
Source: 1996 AACS.

PART 12. HEARINGS

R 324.1201
Source: 1996 AACS.

R 324.1202
Source: 1996 AACS.

R 324.1203
Source: 1996 AACS.

R 324.1204
Source: 1996 AACS.

R 324.1205
Source: 1996 AACS.

R 324.1206
Source: 1996 AACS.

R 324.1207
Source: 1996 AACS.

R 324.1208
Source: 1996 AACS.

R 324.1209
Source: 1996 AACS.

R 324.1210
Source: 1996 AACS.

R 324.1211
Source: 1996 AACS.

R 324.1212
Source: 1996 AACS.

PART 13. ENFORCEMENT

R 324.1301
Source: 1996 AACS.

DEPARTMENT OF ENVIRONMENTAL QUALITY

ENVIRONMENTAL ASSISTANCE DIVISION

CLEAN CORPORATE CITIZEN PROGRAM

R 324.1501 Definitions.

Rule 1501. As used in this part:

(a) "Applicable environmental requirements" means article II and chapters 1 and 3 of article III of Act No. 451 of the Public Acts of 1994, as amended, being §§324.3101 to 324.21551, 324.30101 to 324.36507, and 324.60101 to 324.64111 of the Michigan Compiled Laws, and Act No. 399 of the Public Acts of 1976, as amended, being §§325.1001 to 325.1023 of the Michigan Compiled Laws, and Parts 135 and 138 of Act No. 368 of the Public Acts of 1978, as amended, being §§333.13501 to 333.13536 and 333.13801 to 333.13831 of the Michigan Compiled Laws and the administrative rules promulgated under article II and chapters 1 and 3 of article III of Act No. 451 of the Public Acts of 1994, Act No. 399 of the Public Acts of 1976, and Parts 135 and 138 of Act No. 368 of the Public Acts of 1978, as amended, and permits, orders, and other legally binding documents issued under article II and chapters 1 and 3 of article III, Act No. 399 of the Public Acts of 1976, and Parts 135 and 138 of Act No. 368 of the Public Acts of 1978.

(b) "Clean corporate citizen" means a person who operates an establishment that has demonstrated environmental stewardship and a strong environmental ethic by voluntarily meeting the criteria set forth in

this part and who has been designated a clean corporate citizen by the department.
(c) "Department" means the department of environmental quality.
(d) "Director" means the director of the department of environmental quality or his or her designee.
(e) "Environmental management system" means the part of an overall management system that addresses environmental concerns through the allocation of resources, assignment of responsibilities, and ongoing evaluation of practices, procedures, and processes to achieve sound environmental performance.
(f) "Environmental media" means the air, water, or land medium that is impacted, or would have been impacted, by a waste.
(g) "Establishment" means any of the following that operates in accordance with or under the jurisdiction of applicable environmental requirements:
(i) A stationary source.
(ii) A location.
(iii) A public institution.
(iv) A municipal, commercial, industrial, or other business facility.
(h) "ISO 14001" means a standard adopted by the international organization for standardization to prescribe uniform requirements for the purpose of certification or registration of an environmental management system.
(i) "Pollution prevention" means eliminating or minimizing the initial generation of waste at the source or utilizing environmentally sound on-site and off-site reuse or recycling. Waste treatment, release, or disposal is not considered pollution prevention.
(j) "Responsible official" means an individual, as defined in R 336.1118(h)(i) to (iv), who has the authority to sign and certify to, on behalf of an applicant for a clean corporate citizen designation, the truth, accuracy, and completeness of the application.
(k) "Violation notice" means any written notice or formal enforcement action by the department in response to a violation of an applicable environmental requirement. Voluntary disclosures made under Part 148 of Act No. 451 of the Public Acts of 1994, as amended, do not constitute a violation notice.
(l) "Waste" means any material, energy, or other resource that is not incorporated into product, such as surplus, obsolete, off-specification, contaminated, or unused material, and includes any of the following:
(i) air emissions
(ii) water discharges
(iii) hazardous waste
(iv) solid waste
History: 2000 MR 3, Eff. Mar. 24, 2000.

R 324.1502 Purpose.

Rule 1502. The purpose of this part is to establish the Michigan clean corporate citizen program, including the criteria to be met and the procedures to be followed for a person to be designated a clean corporate citizen and the benefits available to a designated clean corporate citizen. Nothing in this rule authorizes any violation of state or federal law, rule, or regulation.
History: 2000 MR 3, Eff. Mar. 24, 2000.

R 324.1503 Applicability.

Rule 1503. (1) This part applies to a person who operates an establishment in Michigan and who voluntarily seeks a clean corporate citizen designation.
(2) This part does not apply to an establishment that:
(a) Has been convicted of a criminal violation of applicable environmental requirements within a 10-year period before filing the initial clean corporate citizen application.
(b) Has been assessed by a court of appropriate jurisdiction a civil fine, penalty, or damages of $10,000.00 or more for violation of applicable environmental requirements within a 3-year period before filing the initial clean corporate citizen application.
(c) Has been found, by a court of appropriate jurisdiction, to have been responsible for an illegal action that caused substantial endangerment to the public health, safety, or welfare or to the environment within a 10-year period before filing the initial clean corporate citizen application.

(d) Has been assessed by final department action an administrative penalty of $25,000.00 or more for a violation of applicable environmental requirements that occurred within a 3-year period before filing the initial clean corporate citizen application.
History: 2000 MR 3, Eff. Mar. 24, 2000.

R 324.1504 Clean corporate citizen criteria.

Rule 1504. To qualify for and maintain a designation as a clean corporate citizen for a single establishment, a person shall operate the establishment in Michigan and meet the criteria set forth in R 324.1503, R 324.1505, R 324.1506, and R 324.1507 at the establishment.
History: 2000 MR 3, Eff. Mar. 24, 2000.

R 324.1505 Environmental management system.

Rule 1505. (1) A clean corporate citizen shall have in place, and operate the clean corporate citizen's establishment in accordance with, an environmental management system which systematically addresses environmental concerns, environmental improvements, and which is integrated into the clean corporate citizen's overall management structure as specified in this rule.
(2) A clean corporate citizen meets the environmental management system requirements by complying with any of the following provisions:
(a) Registration or certification under an environmental management standard, such as ISO 14001, that is approved by the director.
(b) Development and maintenance of a written environmental management system which is appropriate to the nature, scale, and potential environmental impact of the operation and which requires the clean corporate citizen to do all of the following:
(i) Adopt an environmental policy approved by the responsible official or operate under an adopted corporate environmental policy. The environmental policy shall demonstrate a high level of commitment to environmental management through the establishment of guiding principles. The environmental policy shall do all of the following:
(A) Articulate the clean corporate citizen's mission and values.
(B) Emphasize continuous improvement.
(C) Promote pollution prevention.
(D) Acknowledge the importance of communication with the public.
(E) Emphasize compliance with relevant environmental laws and regulations.
(F) Recognize that every individual at the establishment can contribute to environmental improvement.
(ii) Establish and maintain an environmental program and procedures that do both of the following:
(A) Identify the environmental aspects of the clean corporate citizen's activities, products, and services over which the clean corporate citizen can be expected to have an influence to determine the activities, products, or services that have or can have significant impacts on the environment, and ensure that the impacts and opportunities for environmental improvement are considered in setting the clean corporate citizen's environmental objectives.
(B) Develop and implement environmental objectives and targets within each organizational level of the clean corporate citizen.
(iii) Establish a procedure to provide for regular voluntary environmental self-audits and assure that there is an effective mechanism in place to promptly and adequately respond to and address any violations of applicable environmental requirements that are found.
(iv) Identify specific organizational operations and activities that have significant environmental impact or the potential for significant environmental impact, and have procedures in place that do all of the following:
(A) Monitor the operations and activities.
(B) Assure that the operations and activities remain within acceptable parameters.
(C) Include provisions to implement prompt correction if a deviation occurs.
(D) Systematically review records and report on environmentally related actions relative to the operations and activities.
(v) Establish necessary reporting and recordkeeping that document the environmental status of all operations and activities.

(vi) Establish and maintain procedures to identify and track the environmental training needs of all personnel who have responsibility or authority over activities that have significant environmental impact or the potential for significant environmental impact.
(vii) Establish and maintain procedures to respond to and report, as appropriate, accidents, malfunctions, spills, upsets, and other emergency situations and to mitigate any associated environmental impacts, and provide for a review of the procedures after the occurrence of an accident or emergency.
(viii) Define the authority, responsibility, and methods for auditing and correcting nonconformance with the procedures set forth in the environmental management system.
(ix) Develop and maintain procedures for internal communication of the environmental management system and environmental issues between personnel across functional and organizational levels.
(x) Establish and maintain an effective public communication process and procedures for communicating information on environmental issues and the environmental management system with the public, including the local community and environmental interest groups, that facilitate and encourage public understanding and dialogue on environmental issues.
(c) Adoption and maintenance of an environmental management system, approved by the director, applicable to a specific group or classification of establishments. An environmental management system developed in accordance with this rule shall, at a minimum, include all of the requirements of subrule (2)(B) of this rule.
History: 2000 MR 3, Eff. Mar. 24, 2000.

R 324.1506 Pollution prevention.

Rule 1506. (1) A clean corporate citizen shall develop and implement an effective pollution prevention program as specified in this rule.
(2) A clean corporate citizen meets the pollution prevention program requirements by complying with both of the following provisions:
(a) Adopting, in the form of a written policy, the clean corporate citizen's philosophy of pollution prevention that promotes all of the following:
(i) The elimination or reduction of waste at the source of generation.
(ii) The reuse of waste, including the purchasing of recycled materials.
(iii) Environmentally sound on-site and off-site recycling.
(b) Establishing and maintaining an establishment-specific pollution prevention program under which the clean corporate citizen shall do all of the following:
(i) Adopt and post a pollution prevention policy, as required in subdivision (a) of this subrule that is signed by a responsible official.
(ii) Conduct periodic pollution prevention assessments that identify opportunities for eliminating waste at the source, reuse, and recycling.
(iii) Establish pollution prevention goals that specify the environmental media and types of pollution to be prevented or reduced, implementation activities, and projected time frames.
(iv) Record and maintain reports to demonstrate progress on pollution prevention goal implementation.
(v) Encourage efforts to exchange pollution prevention technologies, such as any of the following:
(A) Attending or sponsoring workshops.
(B) Developing case studies.
(C) Establishing pollution prevention supplier networks.
(D) Providing the department with pollution prevention information for possible publication and dissemination.
(3) A clean corporate citizen may satisfy the provisions of subrule (2)(b) of this rule through formal participation and by being a member in good standing in a recognized department pollution prevention program.
History: 2000 MR 3, Eff. Mar. 24, 2000.

R 324.1507 Environmental compliance.

Rule 1507. (1) A clean corporate citizen shall comply with the applicable environmental requirements specified in this rule.

(2) To meet the environmental compliance requirement, a clean corporate citizen shall satisfy all of the following requirements:
(a) Provide to the department, as part of the clean corporate citizen application, a statement signed by a responsible official that he or she has reviewed the clean corporate citizen's compliance record and that, to the best of his or her knowledge, the clean corporate citizen is in compliance with all applicable environmental requirements and has no outstanding unresolved past or current violations that have not been corrected or, in the case of renewal, resolved by the clean corporate citizen's adherence to a binding compliance schedule to abate the violations.
(b) Have addressed any violation cited in a violation notice by resolving the violation, making a showing to the director that the violation did not occur, or in the case of renewal, being in compliance with a binding schedule, agreed to by the director, to correct any violation specified in a violation notice issued by the director.
(c) Not have been found by the director to be in significant violation of environmental requirements established by a local unit of government.
(3) If a clean corporate citizen does not meet the requirements of subrule (2) of this rule, then the director may consider an application for clean corporate citizen designation if the application includes a binding and significant reduction in wastes below what would otherwise by required by applicable environmental requirements or includes a significant and permanent retirement of air emission reduction credits in accordance with R 336.2201 to R 336.2218.
(4) In the case of a change of ownership, the director may consider the environmental record of the new owner in determining whether the criteria in this rule are met.
History: 2000 MR 3, Eff. Mar. 24, 2000.

R 324.1508 Procedures for application.

Rule 1508. (1) A person operating an establishment in Michigan may apply for a clean corporate citizen designation. An applicant for a clean corporate citizen designation shall follow the procedures set forth in this rule.
(2) Before submitting an application to the department, the applicant shall provide for a public review of the application and related documentation for a period of not less than 30 days. Public review shall, at a minimum, include posting a notice in a local newspaper of the applicant's intent to file the clean corporate citizen application and of the availability of the application and related documentation for public review. The application and related documentation shall be made available at a local public library or other public building for not less than 30 days. The public notice shall allow for comments to be made to the applicant or the department. The documentation provided for public review shall include all of the following information:
(a) A detailed summary for each element of the environmental management system that demonstrates achievement of the criteria set forth in R 324.1505.
(b) A copy of the applicant's pollution prevention policy and supporting information that demonstrates achievement of the pollution prevention criteria set forth in R 324.1506.
(c) A copy of the signed statement of compliance as set forth in R 324.1507(2)(a).
(3) The applicant shall notify the department of its intention to submit an application for clean corporate citizen designation not less than 30 days before the end of the public review period.
(4) After the 30-day public review period, an applicant shall submit the application for a clean corporate citizen designation to the department, on a form provided by the department, together with the supporting documentation that meets the requirements of this rule.
(5) The application and supporting documentation shall include all of the following:
(a) A checklist of the documentation that has been assembled and made available for public review.
(b) A signed statement by the responsible official that the applicant meets the criteria set forth in R 324.1503, R 324.1504, R 324.1505, R 324.1506, and R 324.1507.
(c) A detailed summary for each element of the environmental management system and demonstration of achievement of the environmental management system requirements set forth in R 324.1505 and the environmental policy as required in R 324.1505(2)(b)(i).
(d) The pollution prevention policy and supporting information to demonstrate achievement of the pollution prevention requirements under R 324.1506.

(e) A combined list of the significant goals, objectives, and targets that are set in the environmental management system and the pollution prevention program.
(f) The certification of compliance as required by R 324.1507(2)(a).
(g) A summary of public comment received by the applicant and the department during the public review period and the applicant's response to the public comments received.
(6) The department shall complete its initial review of the clean corporate citizen's application within 14 days of receipt of the application.
(7) The department shall publish, in the department calendar, a notice of receipt of the application and related documentation and of the availability of the application and related documentation for public review and comment not less than 30 days before the department makes a decision on the application.
(8) Within 60 days of receipt of a complete application, unless an extension of time is requested by the applicant, the department will consider public comments, determine whether the criteria of these rules have been met, and notify the applicant, in writing, of the clean corporate citizen designation approval or disapproval.
(9) There is no formal appeal of the director's designation decision.
(10) A person operating an establishment in Michigan may reapply for clean corporate citizen designation at any time.
History: 2000 MR 3, Eff. Mar. 24, 2000.

R 324.1509. Procedures for retaining or terminating clean corporate citizen designation.

Rule 1509. (1) To retain a clean corporate citizen designation, a clean corporate citizen shall annually, at least 30 days before the anniversary date of the current clean corporate citizen designation, submit a renewal request, supporting information, and a certification that the clean corporate citizen is currently achieving the criteria set forth in R 324.1505, R 324.1506, and R 324.1507.
(2) The supporting information specified in subrule (1) of this rule shall include an annual report summarizing the activities undertaken to do all of the following and describing the status of the activities:
(a) Maintain and implement the environmental management system consistent with R 324.1505.
(b) Identify and implement pollution prevention activities consistent with R 324.1506.
(c) Set, revise, and implement goals, objectives, and targets, and the strategy the clean corporate citizen is employing to resolve any unmet goals, objectives, and targets in its environmental management system and pollution prevention program.
(3) A renewal request shall include a statement by the responsible official that the clean corporate citizen is in compliance with all applicable environmental requirements and has no outstanding unresolved violations, or is in compliance with a binding schedule to correct any outstanding violations.
(4) The director shall terminate the clean corporate citizen designation if the director determines that any of the following provisions apply to the clean corporate citizen:
(a) The clean corporate citizen failed to maintain and implement an environmental management system as required under R 324.1505.
(b) The clean corporate citizen failed to maintain and implement a pollution prevention policy and program consistent with the provisions of R 324.1506.
(c) The clean corporate citizen failed to meet the environmental compliance criteria of R 324.1507.
(d) After the effective date of the current designation the clean corporate citizen:
(i) Has been convicted of a criminal violation of applicable environmental requirements.
(ii) Has been assessed by a court of appropriate jurisdiction a civil fine, penalty, or damages of $10,000.00 or more for violation of applicable environmental requirements.
(iii) Has been found by a court of appropriate jurisdiction to have been responsible for an illegal action that caused substantial endangerment to the public health, safety, or welfare or to the environment.
(iv) Was found by the director to have failed to promptly and adequately correct and resolve a serious violation of applicable environmental requirements.
(5) The director shall advise a facility of his or her intent to terminate the clean corporate citizen designation not less than 30 days before terminating the designation.
(6) There is no formal appeal of the director's termination decision.
(7) A person operating an establishment in Michigan may reapply for clean corporate citizen designation at

any time.
History: 2000 MR 3, Eff. Mar. 24, 2000.

R 324.1510 Clean corporate citizen benefits.

Rule 1510. A designated clean corporate citizen qualifies for clean corporate citizen benefits set forth in rules promulgated under Act No. 399 of the Public Acts of 1976, as amended, being §§325.1001 to 325.1023 of the Michigan Compiled Laws, Act No. 368 of the Public Acts of 1978, as amended, being §§333.13501 to 333.13536 and 333.13801 to 333.13831 of the Michigan Compiled Laws, and Act No. 451 of the Public Acts of 1994, as amended, being §324.101 et seq. of the Michigan Compiled Laws.
History: 2000 MR 3, Eff. Mar. 24, 2000.

R 324.1511 Impact on benefits from termination of clean corporate citizen designation.

Rule 1511. Upon termination of a clean corporate citizen designation, all benefits provided to a former clean corporate citizen under R 324.1510 shall be terminated or restricted as provided in this part and as determined by the director.
History: 2000 MR 3, Eff. Mar. 24, 2000.

DEPARTMENT OF ENVIRONMENTAL QUALITY

SURFACE WATER QUALITY DIVISION

CLEAN MICHIGAN INITIATIVE NONPOINT SOURCE POLLUTION CONTROL GRANTS

R 324.8801 Purpose.

Rule 1. These rules establish a program of nonpoint source pollution prevention and control grants using funds available under the clean Michigan initiative. These rules establish requirements for all of the following:
(a) Approvable watershed plans.
(b) Eligible applicants.
Selection criteria.
Project design and maintenance.
Reporting.

R 324.8802 Definitions.

Rule 2. As used in these rules:
(a) "Approved watershed management plan" means either of the following:
A watershed management plan that meets the criteria established in R 324.8810 and approved by the director.
Remedial Action Plans and Lakewide Management Plans.
(b) "Best management practices" means structural, vegetative, or managerial practices that reduce or prevent the detachment, transport, and delivery of nonpoint source pollutants to the surface waters of the state or groundwater.
(c) "Department" means the department of environmental quality.
(d) "Designated use" or "designated uses" means a use or uses of the surface waters of the state as established by part 4 of 1994 PA 451, MCL 324.401 et seq.
(e) "Director" means the director of the department or his or her designee.
(f) "Environmental sample" means the collection or analysis of information about any of the following:
(i) Vegetation.
(ii) Soils.
(iii) Fish.
(iv) Biota.
(v) Water

(vi) Habitat.
(g) "Grant" means a nonpoint source pollution prevention and control project grant funded by the clean Michigan initiative bond.
(h) "In-kind services" means services provided by the grant applicant or its partners including any of the following:
(i) Salaries and wages of project staff and others working on the project, including engineering services and volunteers.
(ii) Rent paid for office space, meeting rooms, or other indirect costs associated with the project.
(iii) The cost of renting or purchasing of equipment, materials, or supplies in excess of the costs paid for by the grant.
(iv) The costs of collecting and analyzing environmental samples or other environmental quality measurements to document improvement in water quality.
(v) The costs of installing best management practices or materials donated for the implementation of best management practices.
(vi) Other resources acceptable by the department.
(i) "Lakewide Management Plan" means a plan developed under the Great Lakes water quality agreement between Canada and the United States, as amended in 1987.
(j) "Local unit of government" means any of the following entities:
(i) A county, city, village, or township or an agency of a county, city, village, or township.
(ii) The office of a county drain commissioner.
(iii) A soil conservation district established under part 93 of 1994 PA 451, MCL 324.9301 et seq.
(iv) A watershed council.
(v) A local health department as defined in section 1105 of 1978 PA 368, MCL 333.1105.
(vi) An authority or any other public body created by or under state law.
(k) "Match" means the portion of the total project cost that is to be paid by the applicant or its partners from public or private funding sources, excluding clean Michigan initiative funds and federal clean water act funds awarded as grants by the state.
(l) "Nonpoint source pollution" means water pollution from diffuse sources, including any of the following:
(i) Runoff from precipitation or snowmelt contaminated through contact with pollutants in the soil or on other surfaces and either infiltrating into the groundwater or being discharged to surface waters of the State.
(ii) Runoff or wind that causes the erosion of soil into surface waters of the State.
(iii) Stream bank erosion resulting from unstable hydrologic flows.
(m) "Not-for-profit entity" means an entity that is exempt from taxation under section 501©(3) of the internal revenue code.
(n) "Physical improvements" means structural or vegetative best management practices used to control nonpoint source pollution.
(o) "Project contract" means the legally binding agreement between the department and a recipient of a grant that establishes the terms and conditions of the work to be conducted.
(p) "Remedial action plan" means a plan developed under the Great Lakes water quality agreement between Canada and the United States, as amended in 1987.
(q) "Request for proposals" means the document used by the department to solicit proposals for grant funding.
(r) "Site" means a block or contiguous blocks of land that constitute a viable management unit.
(s) "Surface waters of the state" means all of the following, but does not include drainageways and ponds used solely for wastewater conveyance, treatment, or control:
(i) The Great Lakes and their connecting waters.
(ii) All inland lakes.
(iii) Rivers.
(iv) Streams.
(v) Impoundments.
(vi) Open drains.
(vii) Other surface bodies of water within the confines of the state.

"Water quality standards" means the part 4 water quality standards developed under part 31 of 1994 PA 451, MCL 324.3101 et seq.
(u) "Watershed" means a topographic area of the land that drains to a common point, such as a lake, pond, river, or stream.
(v) "Watershed management plan" means a water resource plan that sets forth management strategies for improving or protecting water quality or achieving water quality standards and designated uses in a watershed.

R 324.8803 Nonpoint source pollution prevention and control grants.

Rule 3. The director may award grants and enter into project contracts for either or both of the following purposes:
(a) To implement the physical improvement portion of an approved watershed management plan.
(b) To reduce nonpoint source pollution from sources as identified by the department.

R 324.8804 Application.

Rule 4. (1) The department shall seek applications for grants from local units of government and not-for-profit entities using a request for proposals. The request for proposals shall include all of the following information:
(a) The types of proposals being solicited.
(b) The application due date.
(c) Instructions and forms needed by the applicant.
(2) An applicant shall submit a grant application to the department in the format prescribed by the department and on forms provided by the department.
(3) A grant application shall include all of the following:
(a) Information about the applicant, including all of the following:
(i) The applicant's name, address, telephone number, and other pertinent information.
(ii) The qualifications of the applicant's key project staff.
(iii) A statement from a certified public accountant as to when an audit was last conducted, the scope and date of the audit, and a general statement as to the results of the audit.
(b) A description of the project, including, but not limited to all of the following information:
(i) The nature of the water quality concern to be addressed.
(ii) The project goals and objectives.
(iii) For projects implementing the physical improvement portion of an approved watershed management plan, a statement identifying the associated approved watershed management plan, a statement verifying that the plan is current, and a description of how the project is consistent with the tasks in R 324.8810(2)(g).
(c) Identification of the partners participating in the project and their roles.
(d) A work plan that identifies the tasks to be completed and the group or agency responsible for completing each task.
(e) A description of the measures the grantee has taken to identify potential land use conflicts with the proposed project.
(f) A timetable of significant milestones and deliverables.
(g) Steps to be taken to assure the long-term sustainability of the project, including both of the following:
(i) Steps to institutionalize the practices implemented in the project.
(ii) Commitments by appropriate partners to maintain the practices and the period of time over which the commitments are applicable.
(h) Budget information, including anticipated expenditures, local match and the sources of match, and the amount of the grant being applied for.
(i) An 8½-inch by 11-inch project location map.
(j) A statement that the proposed project is in compliance with all applicable state laws and rules or will result in compliance with state laws and rules.
(k) An evaluation component that describes how success in achieving the goals and objectives will be determined.

(l) For an application that proposes to implement physical improvements on sites where plans have been developed, an applicant shall submit all of the following information, unless the applicant demonstrates, in writing, that the information does not apply:
(i) Engineered drawings.
(ii) The basis of design.
(iii) A statement indicating the specifications that were used.
(iv) A statement verifying that all applicable permits will be obtained before implementation.
(v) A maintenance plan.
(m) For an application that proposes to implement physical improvements on sites where plans have not been developed, an applicant shall submit both of the following:
(i) An 8½-inch by 11-inch conceptual site plan showing the location of natural features and the proposed best management practices.
(ii) A statement indicating that final plans will be submitted to the department consistent with subrule (l) of this rule prior to construction. The department shall incorporate the commitment into the project contract.
(4) Plans and specifications submitted under subrule (l) of this rule for the project shall bear 1 or more seals of a registered professional engineer or registered landscape architect or equivalent, as appropriate for the proposed project and approved by the Department.
(5) The department reserves the right to review, request modifications of, approve, or reject a site plan submitted for grant funding.

R 324.8805 Eligible applicants.

Rule 5. (1) Only local units of government and not-for-profit entities are eligible to apply for grants.
(2) An applicant shall demonstrate the capability to carry out the proposed project.
(3) An applicant shall demonstrate that there is an identifiable source of funds for future maintenance and operation of the proposed project, if appropriate.
(4) An applicant shall have undergone a successful financial audit within the 24-month period immediately preceding the application for the grant.
(5) Within the 24-month period immediately preceding the application for the grant, an applicant shall not have demonstrated an inability to either manage a grant or meet the obligations in a project contract with the department.
(6) An applicant shall not have had a grant from any program within the department revoked or terminated within the 24-month period immediately preceding the application for the grant.
(7) An applicant shall submit all information included in the application requirements in R 324.8804 by the deadline identified in the request for proposals. The department shall not accept an application postmarked later than the deadline in the request for proposals. Eligible applicants may submit applications for more than 1 project.
(8) To be eligible for a grant under R 324.8803(a), an applicant shall have an approved watershed management plan. An applicant shall submit a watershed management plan to the department for approval not less than 90 days before the deadline identified in the request for proposals.

R 324.8806 Project selection factors.

Rule 6. In selecting projects for grant award, the department shall consider all of the following factors as they relate to a project:
(a) The anticipated water quality benefits of the project in relation to the costs.
(b) The ability of the applicant and the partners to carry out the project.
(c) A commitment on the part of the applicant to conduct an evaluation of the effectiveness of the project, including a commitment to provide monitoring data or other information that documents improvement in water quality or the reduction of pollutant loads.
(d) The expectation for long-term water quality improvement.
(e) The expectation for long-term protection of high-quality waters.
(f) The consistency of the project with remedial action plans and other regional water quality or watershed management plans approved by the department.
(g) The list of impaired waters under section 303(d) of title III of the federal water pollution control act, 33

U.S.C. §1313.
(h) Commitments for financial and technical assistance from the partners in the project.
(i) Financial and other resource contributions, including in-kind services, by project partners in excess of the contributions required in section 8802(4) of 1994 PA 451, MCL 324.8802(4).
(j) The length of time the applicant has committed to maintain the physical improvements.
(k) Whether the project provides benefits to sources of drinking water.
(l) Letters of support for the proposed project from affected stakeholders and local units of government.
(m) Other information the department considers relevant.

R 324.8807 Reporting and reimbursement.

Rule 7. (1) During the period of the grant, a grantee shall submit status reports to the department at least quarterly. The reports shall include all of the following information:
(a) A narrative description of the progress, including all of the following information:
(i) The project name, the grantee name, and the reporting period.
(ii) The value of the match earned during the quarter.
(iii) The progress made during the reporting period for each task in the work plan.
(iv) Accomplishments not anticipated in the work plan.
(v) Products generated during the reporting period, if applicable.
(vi) Barriers to progress that have caused delays.
(vii) Activities scheduled for the following reporting period.
(b) A financial status report in a format consistent with the form provided by the department.
(c) A summary of the environmental benefits of the project, including the number of best management practices implemented and pollutant reduction information, if applicable.
(d) Other appropriate information requested by the department.
(2) The department shall reimburse expenditures incurred during the reporting period upon department approval of the status report.
(3) A grantee shall submit a final project report. The final project report shall include both of the following:
(a) A narrative description of the project, including all of the following information:
(i) The project name and the grantee name.
(ii) The project goals and objectives.
(iii) An analysis of the extent to which the project achieved the goals and objectives.
(iv) A description of the environmental benefits of the project, including the best management practices implemented, pollutant reduction information, if applicable, and before and after pictures.
(v) A list of partners in the project and their individual contributions.
(vi) An analysis of which portions of the project were successful, which were not successful, and the barriers to success.
(b) A financial report in a format consistent with the form provided by the department.
(4) The department reserves the right to conduct site inspections to ensure consistency with the approved site plan.
(5) The department may withhold from reimbursement an amount equal to 10% of the grant until the grantee's final project report has been received and approved. If the department does not receive an approvable final project report within 12 months of the end of the project contract, then the grantee is in default of the contract and forfeits any claim to the unpaid balance of the grant. Forfeited funds are available only for commitment to future nonpoint source grants awarded consistent with these rules.
(6) All grants are subject to a postaudit.
(7) The department may revoke a grant made with money from the fund or withhold payment if the recipient fails to comply with the terms and conditions of the grant. If a grant is revoked, then the department may recover all funds awarded.
(8) If a grantee has committed to continuing maintenance of practices as the grantee's match, then the grantee or partner shall submit, in a format prescribed by the department, a report consistent with the maintenance schedule identified in the maintenance plan.

R 324.8808 Schedule of grants.

Rule 8. (1) The department shall issue the request for proposals each fiscal year in which clean Michigan initiative funding is available for grants.
(2) Following project selection, the department and a grantee shall enter into a project contract that establishes the work to be conducted and the commitment of funds.
(3) If a grantee satisfies the match requirement with a commitment to maintain the practices as allowed in R 324.8809, then the grantee shall enter into a separate contract that includes a maintenance plan describing the maintenance activities that will be accomplished and a schedule for each activity.

R 324.8809 Grantee contribution.

Rule 9. (1) Each grantee shall contribute not less than 25% of the project's total cost as match.
(2) The department may accept in-kind services to provide all or a portion of the required match.
(3) The department may accept as the match requirement a commitment, under terms acceptable to the department, that provides for the maintenance of the project or practices funded by the grant.
(a) The commitment shall be in the form of a contract between the grantee or a partner and the department. The department and the grantee shall sign the contract before the end of the grantee's project contract.
(b) The maintenance contract shall require the maintenance of the project or the practices for a minimum of 20 years after completion of the project.
(c) If a grantee fails to comply with the terms of the maintenance contract throughout the contract period, then the department may seek reimbursement of up to 25% of the project cost, plus interest, in an amount that is not more than 0.75% per month. Funds recovered under this rule are available only for commitment to future nonpoint source grants awarded consistent with these rules.

R 324.8810 Approvable watershed management plans.

Rule 10. (1) A local unit of government or a not-for-profit entity may submit a watershed management plan to the department for approval under these rules.
(2) A watershed management plan submitted to the department for approval under this section shall contain current information, be detailed, and identify all of the following:
(a) The geographic scope of the watershed.
(b) The designated uses and desired uses of the watershed.
(c) The water quality threats or impairments in the watershed.
(d) The causes of the impairments or threats, including pollutants.
(e) A clear statement of the water quality improvement or protection goals of the watershed management plan.
(f) The sources of the pollutants causing the impairments or threats and the sources that are critical to control in order to meet water quality standards or other water quality goals.
(g) The tasks that need to be completed to prevent or control the critical sources of pollution or address causes of impairment, including, as appropriate, all of the following:
(i) The best management practices needed.
(ii) Revisions needed or proposed to local zoning ordinances and other land use management tools.
(iii) Informational and educational activities.
(iv) Activities needed to institutionalize watershed protection.
(h) The estimated cost of implementing the best management practices needed.
(i) A summary of the public participation process, including the opportunity for public comment, during watershed management plan development and the partners that were involved in the development of the watershed management plan.
(j) The estimated periods of time needed to complete each task and the proposed sequence of task completion.
(k) A description of the process that will be used to evaluate the effectiveness of implementing the plan and achieving its goals.
(3) The department shall accept and review watershed management plans submitted for approval under this rule at any time throughout the year.
(4) The department reserves 90 days to review and comment on watershed management plans submitted for approval.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

SURFACE WATER QUALITY DIVISION

CLEAN WATER FUND

R 324.8901 Purpose.

Rule 1. These rules govern the establishment of contracts for the expenditure of money in the clean water fund to implement the programs described in the department's document entitled "A Strategic Environmental Quality Monitoring Program for Michigan's Surface Waters," dated January 1997; for water pollution control activities; for wellhead protection activities; for storm water treatment projects and activities; and to serve the purpose of section 8808 of 1994 PA 451, MCL 324.8808.
History: 2000 MR 11, Eff. Jul. 6, 2000.

R 324.8902 Definitions; A to C.

Rule 2. As used in these rules:
(a) "Abandoned well" means any of the following which presents a threat to the groundwater resource and which no longer serves the purpose for which it was intended or has been taken out of service:
(i) A water well.
(ii) A monitoring well.
(iii) A drainage well.
(iv) A recharge well.
(v) A test well.
(vi) Other unplugged borings.
(b) "Abandoned well management grant" means a grant to protect community public water supplies by plugging abandoned wells within wellhead protection areas.
(c) "Abandoned well management team" means the wellhead protection team established under R 325.12804 or a team comprised of not less than 3 persons which includes a representative of the community public water supply, a representative of the municipality, village or township, and at least 1 of the following local entities:
(i) County or district health department.
(ii) Fire department.
(iii) Business and industry.
(iv) Agricultural sector.
(v) Educational institution.
(vi) Planning or zoning officials.
(vii) Environmental groups.
(viii) The general public.
(ix) A representative of an adjoining community into which the wellhead protection area extends.
(d) "Applicant" means a nonprofit entity or local unit of government applying for grant funds awarded through the RFP process.
(e) "Approved watershed management plan" means either of the following:
(i) A watershed management plan that meets the criteria established in R 324.8913 and is approved by the department.
(ii) LaMPs and RAPs.
(f) "Best management practices" means structural, vegetative, or managerial practices that reduce or prevent the detachment, transport, and delivery of pollutants to surface waters or groundwater.
(g) "Clean water fund" or "fund" means the fund created in section 8807 of 1994 PA 451, MCL 324.8807.
(h) "Community public water supply" means a community supply as defined in section 2 of 1976 PA 399, MCL 325.1002.
(i) "Conservation reserve program (CRP)" means the program authorized by the food security act of 1985, as

amended, P.L. 99-198, as amended, 7 U.S.C. 1281 et seq., administered by the United States department of agriculture farm service agency, under which the commodity credit corporation will enter into contracts with eligible participants to convert eligible agricultural land to a conserving use for a period of time of not less than 10 years nor more than 15 years in return for financial and technical assistance.
(j) "Conservation reserve enhancement program" means the program
authorized under the food security act of 1985, as amended, P.L. 99-198, as amended, 7 U.S.C. 1281 et seq., under which a state may enter into agreement with the commodity credit corporation, to use the CRP to promote specific agricultural conservation and environmental objectives of Michigan and the nation.
(k) "Contract" means a legally binding agreement between the department and another entity, public or private, that establishes the terms and conditions of the work to be conducted, or the goods or services to be provided, whether acquired through a grant or through procurement.
(l) "Connecting waters" means any of the following:
(i) The St. Marys River.
(ii) The Keweenaw Waterway.
(iii) The Detroit River.
(iv) The St. Clair River.
(v) Lake St. Clair.
History: 2000 MR 11, Eff. Jul. 6, 2000.

R 324.8903 Definitions; D to G.
Rule 3. As used in these rules:
(a) "Department" means the director of the department of environmental quality or his or her designee to whom the director delegates a power or duty by written instrument.
(b) "Designated uses" means a use of the waters of the state as established by part 4 of 1994 PA 451, MCL 323.1041 et seq., including use for any of the following:
(i) Industrial, agricultural, and public water supply.
(ii) Recreation.
(iii) Warmwater and coldwater fisheries, other aquatic life and wildlife.
(iv) Navigation.
(c) "Detroit consumer price index" means the most comprehensive index of consumer prices available for the Detroit area from the United States department of labor, bureau of labor statistics.
(d) "For-profit entity" means any entity that is subject to taxation in accordance with the internal revenue code.
(e) "Grant" means a grant awarded through the RFP process and funded by the clean water fund, being either an abandoned well management grant or a surface water grant.
(f) "Grantee" means the recipient of a grant.
(g) "Groundwater" means water beneath the surface of the earth that saturates the pore spaces associated with sand and gravel, rock fractures, and other subsurface geologic material.
History: 2000 MR 11, Eff. Jul. 6, 2000.

R 324.8904 Definitions; H to N.
Rule 4. As used in these rules:
(a) "High quality waters" means any of the following:
(i) Wild and scenic rivers designated under the federal wild and scenic rivers act of 1991, Public Law 102-249, 16 U.S.C. 1271 et seq.
(ii) River reaches designated under part 305 of Act No. 451 of the Public Acts of 1994, as amended, MCL 324.30501 et seq.
(iii) All inland lakes identified in the publication entitled, "Coldwater Lakes of Michigan," as published in August 1976 by the department of natural resources, under the authority of part 411 of 1994 PA 451, MCL 324.41101 et seq., and which are designated for, and protected as, coldwater fisheries.
(iv) All lakes which have public access, which are greater than or equal to 40 acres in size, which are identified in the publication entitled, "Designated Trout Lakes and Regulations," dated September 10, 1998, by the director of the department of natural resources under the authority of part 411 of 1994 PA 451, MCL

324.41101 et seq., and which are designated, and protected as, coldwater fisheries.
(v) All streams identified in the publication entitled, "Designated Trout Streams for the State of Michigan," director's order no. DFI-101.97, by the director of the department of natural resources under the authority of section 48701(m) of 1994 PA 451, MCL 324.48701(m),and which are designated for, and protected as, coldwater fisheries.
(vi) Great lakes and connecting waters.
(vii) Other waterbodies that the applicant can demonstrate to the department contain an abundance, diversity and widespread distribution of members from each of the order plecoptera (stoneflies), ephemeroptera (mayflies), and trichoptera (caddisflies), which are indicators of high quality waters.
(b) "In-kind services" means direct services which are related to the project and which are provided by the applicant or its partner, including any of the following:
(i) Salaries and wages of project staff and others working on the project.
(ii) Time donated to the project, including media time related to the project.
(iii) Cost of rental or purchase of equipment, materials, or supplies.
(iv) Costs of collecting and analyzing water samples to document improvement in water quality.
(v) Costs of installing best management practices or materials donated for the implementation of best management practices.
(vi) Other resources acceptable to the department.
(c) "LaMP" means a lakewide management plan developed under the Great Lakes water quality agreement between Canada and the United States, as amended in 1987.
(d) "Local unit of government" means any of the following entities:
(i) A county, city, village, or township or an agency of a county, city, village, or township.
(ii) The office of a county drain commissioner.
(iii) A soil conservation district established under part 93, entitled "Soil Conservation Districts," of 1994 PA 451, MCL 324.9301 et seq.
(iv) A watershed council.
(v) A local health department as defined in section 1105 of 1978 PA 368, MCL 333.1105.
(vi) An authority or any other public body created by or under state law.
(e) "Low tritium public water supply" means a community supply that has had its well water sampled for tritium and had sample results of not more than 1.0 tritium unit.
(f) "Maintenance contract" means a contract for the long-term maintenance of best management practices.
(g) "Match" means that portion of the total project cost that is to be provided by the applicant or its partners from public or private funding sources other than clean Michigan initiative funds and federal clean water act funds awarded as grants by the state.
(h) "Monitoring activity or activities" means any activity or activities carried out to implement the surface water monitoring strategy or provide data to demonstrate water quality improvements as part of the clean water fund grant activities in R 324.8907(1)(c)to(h), including any of the following:
(i) Measuring the chemical character of surface waters of the state, including sediments, fish and wildlife, and measuring stream flow.
(ii) Monitoring the health and condition of associated aquatic communities and physical habitats of surface waters of the state.
(iii) Analyzing and reporting any associated environmental data.
(i) "Nonprofit entity" means an entity that is exempt from taxation under section 501(c)(3) of the internal revenue code.
(10) "NPDES" means the national pollutant discharge elimination system.
History: 2000 MR 11, Eff. Jul. 6, 2000.

R 324.8905 Definitions; P to S.

Rule 5. As used in these rules:
(a) "Partner" means any individual or entity that participates in a project.
(b) "Procurement" means the acquisition of goods, services, or both by the department in accordance with procurement guidelines established by the state of Michigan, department of management and budget, and the office of purchasing.

(c) "Project" means work carried out under a grant.
(d) "QAPP" means a quality assurance project plan, which provides a framework for how environmental data will be collected to achieve specific project objectives, and which describes the procedures that will be implemented to obtain data of known and adequate quality.
(e) "RAP" means a remedial action plan developed under the Great Lakes water quality agreement between Canada and the United States, as amended in 1987.
(f) "Request for proposals" or "RFP" means the process used by the department to solicit proposals for grant funding and the document issued in conjunction with the process.
(g) "Site" is a defined area of land that constitutes a viable management unit.
(h) "Site plan" is an overall view of the site and includes all of the following:
(i) The construction proposed.
(ii) The best management practices proposed.
(iii) Existing structures and natural features.
(i) "The surface water monitoring strategy" means the report entitled "A Strategic Environmental Quality Monitoring Program for Michigan's Surface Waters", (January 1997), as prepared by the department.
(j) "Surface waters of the state" means all of the following, but does not include drainageways and ponds used solely for wastewater conveyance, treatment, or control:
(i) The Great Lakes and their connecting waters.
(ii) All inland lakes.
(iii) Rivers.
(iv) Streams.
(v) Impoundments.
(vi) Open drains.
(vii) Other surface bodies of water within the confines of the state.
(k) "Surface water grant" means a grant to protect or improve surface waters of the state.
History: 2000 MR 11, Eff. Jul. 6, 2000.

R 324.8906 Definitions; U to Z.

Rule 6. As used in these rules:
(a) "USDA" means the United States department of agriculture.
(b) "US EPA" means the United States environmental protection agency.
(c) "Vendor" means the recipient of funds made available by the department through procurement
(d) "Water quality standards" means the part 4 water quality standards developed under part 31 of 1994 PA 451, MCL 324.3101 to 324.3119.
(e) "Watershed" means a topographic area of land that drains to a common point, such as a lake, pond, river, or stream, including the surface waters within that topographic area.
(f) "Watershed management plan" means a water resource plan that sets forth management strategies for improving water quality or achieving water quality standards and designated uses in a watershed.
(g) "Wellhead protection area" means an area which has been approved by the department under the state of Michigan wellhead protection program, which represents the surface and subsurface area surrounding a water well or well field, which supplies a community public water supply, and through which contaminants are reasonably likely to move toward and reach the water well or well field within a 10-year time of travel or means a designated source water protection area surrounding a low-tritium public water supply well.
History: 2000 MR 11, Eff. Jul. 6, 2000.

R 324.8907 Clean water fund activities.

Rule 7. (1) The director may award grants in accordance with
R 324.8909 and enter into contracts for any of the following activities:
(a) Implementing portions of the surface water monitoring strategy.
(b) Providing state match to establish and implement the conservation reserve enhancement program in Michigan.
(c) Implementing water quality protection or improvement activities in approved watershed management plans that are required under a NPDES wastewater discharge permit for stormwater discharges from

separate stormwater drainage systems and that are not otherwise required by federal law.
(d) Implementing water quality protection or improvement recommendations in approved watershed management plans that place a strong emphasis on protecting high quality waters.
(e) Implementing recommendations in LaMPs and RAPs that will directly protect or improve water quality, other than the recommendations that involve remediation of contaminated sediments.
(f) Implementing programs to identify and require the correction of illicit connections to separate storm sewer systems.
(g) Implementing programs to do one or both of the following:
(i) Identifying failing on-site septic systems, determining the extent of failing on-site systems, and determining the impact of failing on-site systems on designated uses.
(ii) Implementing corrective measures in areas where failing on-site septic systems have been determined to be threatening or impairing designated uses.
(h) Locating and plugging abandoned wells within wellhead protection areas.
(2) The activity identified under subrule (1)(b) of this rule shall be carried out in accordance with R 324.8915.
(3) The department shall implement the activity identified under subrule (1)(g) of this rule in accordance with R 324.8918.
(4) The department shall implement the activities identified under subrule (1)(h) of this rule, locating and plugging abandoned wells within wellhead protection areas, by implementing R 324.8909(1), (2), (3), (4)(a), (b)(i and ii),(c) to (g), (j) and R 324.8910(a) to (b), and R 324.8911(7), R 324.8912, R 324.8916, and R 324.8917.
(5) Contracts shall be established with all recipients of money from the fund.
(6) The department shall not expend funds for removing inflow or infiltration from sanitary sewers.
History: 2000 MR 11, Eff. Jul. 6, 2000.

R 324.8908 Eligibility for funds.

Rule 8. (1) For-profit entities, local units of government, and nonprofit entities are eligible to be selected as vendors.
(2) Only local units of government and nonprofit entities are eligible for grants.
(3) In addition to the requirement of subrule (2) of this rule, an applicant shall meet all of the following requirements to be eligible for a grant:
(a) The applicant shall demonstrate the capability to carry out the proposed project.
(b) The applicant shall demonstrate that there is an identifiable source of funds for future maintenance and operation of the proposed project, if appropriate.
(c) The applicant shall have undergone a successful financial audit within the 24-month period immediately preceding the application for a grant.
(d) Within the 24 months immediately preceding the application for a grant, the applicant shall not have demonstrated an inability to either manage a grant or meet the obligations in a contract with the department.
(e) Within the 24-month period immediately preceding the application for the grant, the applicant shall not have had a grant from any program within the department revoked or terminated due to the applicant's inability to meet the terms or condition of a grant.
(4) In addition to the requirements of subrules (2) and (3) of this rule, to be eligible for a grant, the applicant shall meet the application requirements set forth in R 324.8909(4) by the deadline identified in the request for proposals. The department shall not accept applications postmarked or hand delivered later than the deadline in the request for proposals. Eligible applicants may submit more than 1 application.
(5) Community public water supplies owned by the state or federal government are not eligible for abandoned well management grant assistance.
History: 2000 MR 11, Eff. Jul. 6, 2000.

R 324.8909 Application and process for grants.

Rule 9. (1) The department shall issue a request for proposals each fiscal year in which clean water fund funding is available for grants.

(2) Requests for proposals shall include all of the following information:
(a) Instructions and forms needed by the applicant.
(b) The types of proposals being solicited.
(c) The application due date.
(3) An applicant shall submit an application to the department in the format prescribed by the department and on forms provided by the department.
(4) Applications for grants shall include all of the following information:
(a) Information about the applicant, including all of the following information:
(i) The applicant's name, address, telephone number, and other pertinent information.
(ii) The qualifications of the applicant's key project staff.
(iii) A statement from a certified public accountant as to when an audit was last conducted, the scope and date of the audit, and a general statement as to the results of the audit.
(b) A description of the project, including all of the following information:
(i) The nature of the surface water quality concern to be addressed, the abandoned well management project to be conducted, or the monitoring activity to be undertaken.
(ii) The project goals and objectives.
(iii) For projects implementing a portion of an approved watershed management plan, all of the following information:
(A) A statement identifying the associated approved watershed management plan.
(B) A statement verifying that the plan is current.
(C) A description of how the project is consistent with the tasks in
R 324.8913(2)(g).
(c) Identification of the partners participating in the project and their roles.
(d) A work plan that includes all of the following information:
(i) Tasks to be completed.
(ii) The entity or individual responsible for completing each task.
(iii) A timetable of significant milestones and deliverables.
(e) Identification of any information and education activities.
(f) Budget information, including all of the following information:
(i) Anticipated expenditures.
(ii) Local match and the sources of match.
(iii) The amount of the grant being applied for.
(g) A statement that the proposed project is in compliance with state laws and rules or will result in compliance with state laws and rules.
(h) A statement verifying that all monitoring activities to be undertaken will be carried out in accordance with R 324.8914.
(i) A description of the steps to be taken to assure the long-term sustainability of the project, where appropriate, including both of the following:
(i) Steps to institutionalize the best management practices implemented in the project.
(ii) Commitments by appropriate entities or individuals to maintain the best management practices and the period of time over which the commitments are applicable.
(j) An 8½ inch by 11 inch project location map.
(k) In addition, applicants for abandoned well management grants under R 324.8907(1)(h), shall provide all of the following:
(i) A list of members of an abandoned well management team.
(ii) Verification that a representative of the county or district health department was requested by the applicant to participate in the abandoned well management team.
(iii) A description of the methods to be used to identify the owners of abandoned or temporarily abandoned wells.
(iv) A description of the methods to be used to locate abandoned wells, including identification of the persons responsible for conducting the abandoned well search activity.
(v) A description of the methods to be used to administer the abandoned well plugging activity.
(l) Applicants for abandoned well management grants under R 324.8907(1)(h) are exempt from subdivisions

(h) to (i) and (m) to (q) of this subrule.
(m) For applications that propose to implement projects under R 324.8907(1)(c) to (e), an evaluation component that describes how success in achieving the goals and objectives will be determined.
(n) For applications that propose to implement structural best management practices under R 324.8907(1)(c) to (e), on sites where site plans have been developed, an applicant shall submit all of the following unless the applicant demonstrates, in writing, that the following do not apply:
(i) Engineered plans.
(ii) The basis of design.
(iii) A statement indicating the specifications that were used.
(iv) A statement verifying that all applicable permits will be obtained before implementation.
(v) A maintenance plan.
(o) For applications that propose to implement structural best management practices under R 324.8907(1)(c) to (e), on sites where site plans have not been developed, an applicant shall submit both of the following:
(i) An 8½ inch by 11 inch conceptual site plan showing the location of natural features and the proposed best management practices.
(ii) A statement indicating that final plans consistent with subdivision (n) of this subrule will be submitted to the department and approved by the department before construction. The department shall incorporate the commitment into the project contract.
(p) Plans and specifications submitted shall bear 1 or more seals of a registered professional engineer or registered landscape architect or equivalent as appropriate for the proposed project and approved by the department.
(q) The department reserves the right to review, require modification of, and approve all site plans submitted for grant funding.
History: 2000 MR 11, Eff. Jul. 6, 2000.

R 324.8910 Project selection.

Rule 10. In selecting projects for grants awarded through a request for proposals process, the department shall consider all of the following as they relate to a project:
(a) The anticipated benefits of the project in relation to the costs.
(b) The ability of the applicant and the partners to carry out the project.
(c) A commitment on the part of the applicant to conduct an evaluation of the effectiveness of the project, including a commitment to document improvements in water quality or the reduction of pollutant loads, and document the success of proactive efforts such as pollution prevention controls and information and education activities.
(d) The expectation for long-term water quality improvement.
(e) The expectation for long-term protection of high quality waters.
(f) The consistency of the project with remedial action plans and other regional water quality or watershed management plans approved by the department.
(g) Waters that do not attain applicable water quality standards, or waters that presently attain water quality standards but are threatened, respectively, as identified in the publication "Clean Water Act Section 303(d) List Michigan Submittal for 1998," revised annually by the department, as directed by Public Law 92-500, as amended, 33 U.S.C. 1251 et seq.
(h) Commitments for financial and technical assistance from the partners in the project.
(i) Financial and other resource contributions by project participants in excess of that required in section 8802(4) of 1994 PA 451,
MCL 324.8802(4).
(j) The commitment by the applicant and partners to institutionalize and enforce practices, using tools such as ordinances, to ensure water quality improves or is protected after the project ends.
(k) The length of time the applicant and partners have committed to maintain any structural best management practices.
(l) Whether the project provides benefits to sources of drinking water.
(m) Other information the department considers relevant.
History: 2000 MR 11, Eff. Jul. 6, 2000.

R 324.8911 Grant reporting and reimbursement.

Rule 11. (1) During the period of the grant, surface water grantees shall submit status reports to the department at a frequency consistent with their contract and in a format specified by the department. A status report shall include all of the following information, as appropriate:

(a) A narrative description of the progress, including all of the following information:

(i) The project name, the grantee name, and the reporting period.

(ii) The value of the match earned during the reporting period.

(iii) The accomplishments achieved during the reporting period for each task in the work plan.

(iv) Other accomplishments not anticipated in the work plan.

(v) Products generated during the reporting period.

(vi) Barriers to progress that have caused delays.

(vii) Activities scheduled for the next reporting period.

(viii)In addition, for grantees implementing an abandoned well management grant under R 324.8907(1)(h), both of the following shall be submitted:

A listing of locations of each abandoned well that was plugged during the reporting period.

Copies of abandoned well plugging records.

(b) A financial status report in a format consistent with the form provided by the department.

(c) A summary of the environmental benefits of the project, including pollutant reduction information and the number and types of best management practices implemented.

(d) Other appropriate information requested by the department in the grant or contract.

(2) The department shall make reimbursement of expenditures incurred during the reporting period upon approval of the status report.

(3) A grantee shall submit a final project report. A grantee shall ensure that the final project report is consistent with the format provided by the department and includes all of the following information, as appropriate:

(a) A brief narrative description of the project, including all of the following information, as appropriate:

(i) The project name and the grantee name.

(ii) The project goals and objectives.

(iii) An analysis of the extent to which the project achieved the goals and objectives.

(iv) A description of environmental benefits of the project, including all of the following:

The number and types of best management practices implemented.

Pollutant reduction information.

Before and after pictures.

A list of partners in the project and their contributions.

(vi) A list of products resulting from the project.

A summary of the water quality data collected.

(viii)An analysis of which portions of the project were successful, which were not successful, and the barriers to success.

A financial report in a format consistent with the form provided by the department.

In addition, recipients of grants to implement the surface water monitoring strategy under R 324.8907(1)(a) shall submit a compilation of data collected.

In addition, recipients of abandoned well management grants under R 324.8907(1)(h), shall submit both of the following:

The number and location of all abandoned wells and temporarily abandoned wells located during the project.

A list of locations of all oil, gas, and mineral wells identified during grant-eligible search activities.

Other appropriate information requested by the department in the grant or contract.

(4) For grantees implementing structural best management practices, the department may conduct site inspections to ensure consistency with the approved plan.

(5) The department may withhold from reimbursement an amount up to 10% of the grant until the grantee's final project report has been received and approved, and the financial records on file with the department have been audited by the department and any issues resolved. If the department does not receive an approvable final project report within 12 months of the end of the project contract, then the grantee is in

default of the contract and forfeits claim to the unpaid balance of the grant. The recovered funds are available only for commitment to future grants awarded under these rules.
(6) All grants may be subject to a postaudit.
(7) The department may revoke a grant made with money from the fund or withhold payment if the recipient fails to comply with the terms and conditions of the grant. If a grant is revoked, then the department may recover all funds awarded.
(8) If the grantee satisfies the match requirement with a commitment to maintain the practices as allowed in R 324.8912(3), then the grantee's contract shall include a maintenance plan describing the maintenance activities that will be accomplished and a schedule for each activity. As part of the contract, the grantee shall submit, in a format prescribed by the department, a report consistent with the maintenance schedule identified in the maintenance plan. The plan shall describe the maintenance activities that will be accomplished and include a schedule for each activity.
History: 2000 MR 11, Eff. Jul. 6, 2000.

R 324.8912 Match requirements for grants.

Rule 12. (1) A grantee shall contribute match funds according to the following:
A grantee who receives grant funds under any of the following activities shall contribute not less than 25% of the project's total cost as match:
R 324.8907(1)(a), implementing portions of the surface water monitoring strategy.
(ii) R 324.8907(1)(d), implementing water quality protection or improvement recommendations in approved watershed management plans that place a strong emphasis on protecting high quality waters.
(iii) R 324.8907(1)(e), implementing recommendations in LaMPs and RAPs that will directly protect or improve water quality, other than the recommendations that involve remediation of contaminated sediments.
(iv) R 324.8907(1)(f), implementing programs to identify and require the correction of illicit connections to separate storm sewer systems.
(v) R 324.8907(1)(g)(i), identifying failing septic systems, determining the extent of failing on-site systems, and determining the impact of failing on-site systems on designated uses.
(vi) R 324.8907(1)(h), locating and plugging abandoned wells within wellhead protection areas.
(b) A grantee who receives funding under R 324.8907(1)(c), implementing water quality protection or improvement activities in approved watershed management plans that are required under a NPDES wastewater discharge permit for stormwater discharges from separate stormwater drainage systems and that are not otherwise required by law, shall contribute not less than 50% of the project's total cost as match.
(c) A grantee who receives funding under R 324.8907(g)(ii), implementing corrective measures in areas where failing on-site septic systems have been determined to be threatening or impairing designated uses, shall contribute 66% of the project's total cost as match.
(2) The department may accept in-kind services to provide all or a portion of the required match.
(3) For all grants except those awarded under R 324.8907(1)(g)and (h), the department may accept as the match requirement a commitment, under terms acceptable to the department, that provides for the maintenance of the project or practices funded by the grant.
(a) The commitment shall be incorporated into the contract between the grantee and the department.
(b) Any maintenance contracts between the grantee and a third party shall be subject to approval by the department.
(c) The maintenance of the project or the practices shall be for a minimum of 20 years after the completion of the project.
(d) If the grantee fails to comply with the maintenance terms of the contract throughout the 20-year period, then the department may seek reimbursement of funds equivalent to a proportional amount of the grant funding for which the defaulted maintenance activities were to be provided as match, plus interest in an amount not to exceed 0.75% per month from the date on which the department requests repayment. Funds recovered under this subrule shall be available only for commitment to future contracts awarded under these rules.
(4) A grantee implementing an abandoned well management grant under
R 324.8907(1)(h) shall provide documentation of a local match to the grant assistance through 1 or more of

the following:
(a) Identification of an item within a local budget dedicated to conducting abandoned well, temporarily abandoned well, or active well management activities in an amount not less than the local match. Activities acceptable as match may include any of the following:
(i) Implementation of ordinances that reduce or eliminate the creation of unplugged abandoned wells by any of the following:
(A) Promoting the plugging of abandoned wells when community public water service is provided.
(B) Requiring the plugging of abandoned wells before demolition of buildings.
(C) Requiring the plugging of abandoned wells before modifications of land use zoning classifications are granted.
(D) Other similar strategies.
(ii) Implementation of partnership agreements between townships, municipalities, villages, or local agencies for the purpose of abandoned well management.
(iii) Mapping the locations of active wells within a wellhead protection area using global positioning system/geographic information system technology.
(iv) Creation of geographic information system databases and the purchase of computer software to track the status of active wells inside wellhead protection areas.
(v) Grant-eligible activities defined in R 324.8916.
(b) A written agreement committing the applicant to an expenditure of funds in an amount not less than the local match.
(c) Evidence of previous local expenditures on abandoned well, temporarily abandoned well, and active well management and plugging activities within a wellhead protection area under 1978 PA 368, MCL 333.12701 et seq., that were completed after October 1, 1998.
(d) A combination of any of the items specified in subdivisions (a) to (c) of this subrule.
History: 2000 MR 11, Eff. Jul. 6, 2000.

R 324.8913 Approvable watershed management plans.

Rule 13. (1) A local unit of government or a nonprofit entity may submit a watershed management plan to the department for approval under these rules.
(2) A watershed plan submitted to the department for approval under this rule shall be detailed, current, and identify all of the following:
(a) The geographic scope of the watershed.
(b) The designated uses and desired uses of the watershed.
(c) The water quality threats or impairments in the watershed.
(d) The causes of the impairments or threats, including pollutants.
(e) A clear statement of the water quality improvement or protection goals of the watershed plan.
(f) The sources of the pollutants causing the impairments or threats of impairments.
(g) The sources of the pollutants that are critical to control in order to meet water quality standards or other water quality goals.
(h) The tasks and their estimated costs that need to be completed to prevent or control the critical sources of pollution or address causes of impairment, including, as appropriate, all of the following:
(i) The best management practices needed.
(ii) Revisions needed or proposed to local zoning ordinances and other land use management tools.
(iii) Informational and educational activities needed.
(iv) Activities needed to institutionalize watershed protection.
(i) A summary of the public participation process, including the opportunity for public comment during watershed plan development and the partners that were involved in the development of the watershed plan.
(j) The estimated periods of time needed to complete each task and the proposed sequence of task completion.
(k) A description of the process that will be used to evaluate the effectiveness of implementing the plan and achieving its goals.
(3) The department shall accept and review watershed plans submitted for approval under this rule any time throughout the year.

(4) The department shall have 90 days to take action on watershed plans submitted for approval. Taking action may include approving, rejecting, or commenting.
History: 2000 MR 11, Eff. Jul. 6, 2000.

R 324.8914 Quality assurance for monitoring activities.

Rule 14. (1) Before carrying out any monitoring activities, the grantee or vendor shall submit a QAPP for departmental approval.
(2) The QAPP shall address applicable objectives for environmental data accuracy, precision, completeness, representativeness, and comparability through coverage of the following elements, depending upon the monitoring activity or activities to be carried out:
(a) A description of the elements that make up the project and the person or persons responsible for carrying out the project.
(b) Quality assurance objectives for measurement data.
(c) Sampling procedures.
(d) Sample custody procedures.
(e) Equipment calibration procedures and frequency.
(f) Analytical procedures.
(g) Internal quality control checks.
(h) Data reduction, validation, and reporting.
(i) Performance and systems audits to verify adherence to quality assurance/quality control programs.
(j) Preventive maintenance on equipment and instrumentation.
(k) Data quality assessment.
(l) Corrective action for analytical and field equipment problems and quality assurance/quality control noncompliance problems.
(3) The grantee or vendor shall carry out monitoring activities in accordance with procedures outlined in 40 C.F.R. Section 136 (1998), or in accordance with other procedures approved by the department.
History: 2000 MR 11, Eff. Jul. 6, 2000.

R 324.8915 Conservation reserve enhancement program.

Rule 15. (1) The department shall not use more than $5,000,000.00 from the fund to provide state contribution for the establishment and implementation of the conservation reserve enhancement program.
(2) Money from the fund can be used for any of the following:
(a) Establishment of riparian buffer strips.
(b) Filter strips.
(c) Field windbreaks.
(d) Grassed waterways.
(e) Wetland restoration.
(f) Wetland creation.
Fund money shall be used for one-time payment for voluntary permanent easements for the eligible practices. The department shall not use funds for rental incentive payments or for easements other than permanent easements.
History: 2000 MR 11, Eff. Jul. 6, 2000.

R 324.8916 Activities eligible for abandoned well management grants.

Rule 16. (1) The following abandoned well management activities are eligible for funding:
(a) Preparation of proposals, narratives, financial statements, and reports related to abandoned well management, as requested by the department.
(b) Conducting the following activities within wellhead protection areas:
(i) Identification of well and property owners.
(ii) On-site surveys, inspections, or other activities for finding abandoned wells.
(iii) A search for, and review of, records to identify abandoned well locations.
(iv) Creation of databases and the purchase of computer software to track the status of abandoned wells.
(v) The purchase or rental of magnetometers, metal detectors, or other appropriate geophysical

instrumentation, and the excavation costs associated with locating buried abandoned wells.
(vi) The mapping of abandoned well locations, at a cost not to exceed 5% of the total grant amount.
(vii) Plugging of abandoned wells by water well drilling contractors registered under section 12704 of 1978 PA 368, MCL 333.12704.
(A) Where groundwater contamination problems have been identified inside the wellhead protection area, priority shall be given to plugging abandoned wells in the area of known contamination.
(viii) Well plugging verification activities.
(2) The following community public waterline extension activities conducted within wellhead protection areas are eligible for funding:
(a) Identification of abandoned wells at structures where water service connection has been made.
(b) Plugging wells that have been taken out of service when new public water service connections are made.
(c) Wells that are required to be plugged under parts 201, 211, 213, or 615 of this act are not eligible for funding under this part.
(3) The applicant shall focus eligible public education and outreach activities on promoting wellhead protection concepts and the importance of plugging abandoned wells. Eligible activities include the following:
(a) Development and dissemination of brochures, pamphlets, billing statement attachments, news releases, videos, or similar materials through newspapers, radio, television, or other public communication media acceptable to the department.
History: 2000 MR 11, Eff. Jul. 6, 2000.

R 324.8917 Abandoned well management grants.

Rule 17. (1) Each grant applicant is eligible for the following grant assistance to conduct activities within wellhead protection areas:
(a) Not more than the following amounts for conducting record searches and site surveys to locate abandoned or temporarily abandoned wells, conducting public outreach, and other related administrative activities approved by the department:
(i) $4,500 for the first square mile of wellhead protection area.
(ii) $2,500 for each additional square mile of wellhead protection area.
(b) Not more than the following amounts for plugging abandoned wells:
(i) A standard rate of $400 per well identified during the search activities.
(ii) Plugging costs that exceed $400 per well, if an itemized job estimate from 3 registered water well drilling contractors is provided, and if the amount is approved in writing by the department.
(iii) After locating abandoned wells in a wellhead protection area, to be eligible to receive grant assistance for plugging the identified abandoned wells, the grant applicant shall submit a listing of abandoned well locations to the department.
(2) A grant applicant shall not receive more than $100,000 for plugging abandoned wells in one fiscal year.
(3) A grantee that has received wellhead protection grant assistance authorized in section 12816 of 1976 PA 399, MCL 325.12816, shall not obtain funds under part 88 of 1994 PA 451, MCL 324.8808 et seq., for the same well location activity.
(4) The department shall annually assess grant amounts defined in R 324.8917 and shall increase the amounts by applying a percentage adjustment using the Detroit consumer price index.
History: 2000 MR 11, Eff. Jul. 6, 2000.

R 324.8918 On-site septic systems grants.

Corrective measures eligible for funding under R 324.8907(1)(g)(ii) include regional treatment alternatives or community treatment systems that provide adequate long-term protection of water quality.
The department shall not award grants under R 324.8907(1)(g)(ii) to install individual septic systems.
The department shall not award grants under R 324.8907(1)(g)(ii) to install conventional septic tank systems.
All applications for projects under R 324.8907(1)(g)(ii) shall include verification that failing on-site septic systems are threatening or impairing designated uses.
Grants awarded for projects under R 324.8907(1)(g)(i) shall not be more than $25,000.

Grants awarded for projects under R 324.8907(1)(g)(ii) shall not be more than $1 million.
The department shall give priority in awarding grants under
R 324.8907(1)(g) to projects that provide alternatives to failed septic systems in small rural communities.
History: 2000 MR 11, Eff. Jul. 6, 2000.

R 324.8919 Availability of documents.

Rule 19. The following documents are available for inspection electronically, and a single copy may be obtained at no cost, at the Lansing office of the department of environmental quality, P.O. Box 30273, Lansing, Michigan 48909-7773:
"A Strategic Environmental Quality Monitoring Program for Michigan's Surface Waters," January 1997.
"Michigan Natural Rivers Program, Designated Rivers and Tributaries."
"Michigan Scenic Rivers Act of 1991."
"Coldwater Lakes of Michigan," August 1976.
"Designated Trout Lakes and Regulations," September 10, 1998.
(f) "Designated Trout Streams for the state of Michigan," January 8, 1997.
(g) "Clean Water Act Section 303(d) List, Michigan Submittal for 1998, revised May 1998."
History: 2000 MR 11, Eff. Jul. 6, 2000.

R 324.8920 Adoption of standards by reference.

Rule 20. The following standards are adopted by reference in these rules and are available for inspection electronically, and at the Lansing office of the department of environmental quality, where they may be obtained as indicated:
(a) "Guidelines for Establishing Test Procedures for Analysis of Pollutants," 40 C.F.R. section 136 (1998). Copies may be obtained from the Department of Environmental Quality, P.O. Box 30273, Lansing, Michigan 48909-7773, at a cost, as of the time of adoption of these rules of 5 cents per page at a labor rate of $18.10 per hour, or from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, at a cost as of the time of adoption of these rules of $41.00.
History: 2000 MR 11, Eff. Jul. 6, 2000.

DEPARTMENT OF ENVIRONMENTAL QUALITY

ENVIRONMENTAL ASSISTANCE DIVISION

SMALL BUSINESS POLLUTION PREVENTION ASSISTANCE LOAN

R 324.14501 Definitions.

Rule 1. As used in these rules:
(a)"Applicant" means a business that applies for a small business pollution prevention loan.
(b) "Department" means the department of environmental quality.
(c) "Director" means the director of the department or his or her designated representative.
(d) "Eligible pollution prevention project" means a pollution prevention project that meets the criteria set forth in these rules.
(e) "Energy usage" means the use of nonrenewable resources to support business operations, including electricity, water, and natural gas.
(f) "Environmental waste" means environmental pollutants, wastes, and releases, regardless of how they are regulated and regardless of whether they are released to the general environment or the workplace environment.
(g) "Fixed asset" means a permanent asset that is not consumed or converted into cash or its equivalent during a 12-month period.
(h) "Fund," as defined in part 145 of 1994 PA 451, MCL 324.14513 et seq., means the small business pollution prevention assistance revolving loan fund.
(i) "Lender agreement" means a binding agreement between a lending institution and the department that

sets forth the terms and conditions for a lending institution to make loans and otherwise participate in the small business pollution prevention loan program.
(j) "Lending institution" means a bank, out-of-state bank, or national bank, foreign bank branch, association, savings bank, or credit union organized under the laws of this state, another state, the District of Columbia, the United States, or a territory or protectorate of the United States that has entered into a lender agreement with the department.
(k) "Loan agreement" means a written contract or agreement between a lending institution and a loan recipient that describes the terms of the small business pollution prevention loan.
(l) "Loan recipient" means a small business that has been approved for and issued a small business pollution prevention loan.
(m) "Pollution prevention" means source reduction and environmentally sound on-site or off-site reuse or recycling. Waste treatment, control, management, and disposal are not considered pollution prevention.
(n) "RETAP audit" means an environmental waste assessment conducted by engineers, scientists, and other qualified professionals participating in the retired engineer technical assistance program established under part 145 of 1994 PA 451, MCL 324.14501 et seq.
(o) "Small business," as defined in part 145 of 1994 PA 451, MCL 324.14513 et seq., means a business located in Michigan that is all of the following:
(i) Employs 100 or fewer people.
(ii) Is independently owned or operated.
(iii) Is not dominant in its field.
(p) "Small business pollution prevention loan" means a low-interest loan to a small business to finance an eligible pollution prevention project as provided for under these rules and part 145 of 1994 PA 451, MCL 324.14513 et seq.
(q) "Small business pollution prevention loan program" means the program the department administers to provide small business pollution prevention loans under these rules.
(r) "Source reduction" means any practice that reduces both of the following:
(i) The amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment, including fugitive emissions, before recycling, treatment, or disposal.
(ii) Hazards to public health and the environment associated with the release of the substances, pollutants, or contaminants.
History: 1999 MR 12, Eff. Jan. 5, 2000.

R 324.14502 Purpose.

Rule 2. The purpose of these rules is to establish requirements for participation in the Michigan small business pollution prevention loan program, including applicability, eligibility, binding agreements, obligations, and procedures.
History: 1999 MR 12, Eff. Jan. 5, 2000.

R 324.14503 Applicant eligibility.

Rule 3. An applicant for a small business pollution prevention loan must meet all of the following requirements:
(a) Qualify as a small business as defined in these rules.
(b) Apply for a small business pollution prevention loan from a lending institution in accordance with these rules.
(c) Propose to utilize the small business pollution prevention loan to undertake an eligible pollution prevention project in Michigan.
(d) Commence the proposed pollution prevention project within 180 days of receipt of a loan.
(e) Not have received a loan as described in these rules within the prior 3-year period.
History: 1999 MR 12, Eff. Jan. 5, 2000.

R 324.14504 Eligible pollution prevention project.

Rule 4. (1) An eligible pollution prevention project shall directly result in the reduction or elimination of

environmental waste generated, energy used, or hazards to public health associated with environmental waste at the small business and shall be 1 or more of the following:
(a) A pollution prevention recommendation made in a RETAP audit.
(b) A pollution prevention expenditure at the small business, including an expenditure for any of the following:
(i) Equipment or technology modifications.
(ii) Process or procedure modifications.
(iii) Reformulation, reclamation, or redesign of products.
(iv) Substitution of raw materials.
(v) Improvements in housekeeping, maintenance, or inventory control.
(vi) Pollution prevention training of employees.
(vii) Energy conservation studies or specifications.
(viii) On-site water conservation projects.
(2) The following projects or expenditures are not eligible pollution prevention projects:
(a) Costs incurred before the effective date of the loan agreement.
(b) Refinancing existing obligations or debt.
(c) Financing building or construction costs that are not integral to the project.
(d) Financing salaries, wages, benefits, travel, or operating costs of the applicant business.
(e) Taxes, attorney fees, permits or licenses, or land acquisition.
(f) Projects or expenditures to increase process output or production.
History: 1999 MR 12, Eff. Jan. 5, 2000.

R 324.14505 Loan application process.

Rule 5. (1) A small business shall file an application for a small business pollution prevention loan with a lending institution on an application form provided by the department.
(2) The application shall include all of the following information:
(a) A description of the pollution prevention project, which provides sufficient detail to properly evaluate the proposed project and determine whether it meets the criteria of R 324.14504 or is based on a RETAP audit recommendation signed by a RETAP auditor.
(b) The expected reduction in environmental waste or energy used, quantified on worksheets provided by the department.
(c) A project schedule.
(d) Certification that all necessary construction permits and operating licenses have been obtained, or will be obtained, in accordance with applicable laws and regulations.
(3) The lending institution shall submit the completed loan application and supporting documentation to the department for approval.
(4) A small business, or a lending institution on behalf of a small business, may seek a written eligibility determination on the proposed pollution prevention project from the department before submitting a complete loan application.
(5) A lending institution shall not award a small business pollution prevention loan until it receives a notice from the department that the project described in the application is an eligible pollution prevention project.
(6) A lending institution shall execute a small business pollution prevention loan in accordance with terms set forth in the loan agreement and the lender agreement.
History: 1999 MR 12, Eff. Jan. 5, 2000.

R 324.14506 Lending institution responsibilities.

Rule 6. (1) A lending institution shall enter into a lender agreement with the department.
(2) A lender agreement shall provide for all of the following:
(a) A lending institution may make a small business pollution prevention loan to a loan recipient of up to $100,000.00, with participation from the fund not to exceed $50,000.00.
(b) The total amount of the loan shall be shared equally by the lending institution and the fund, unless the director increases the fund's share of the loan to insure that the fund's interest rate of return is not less than 0%.

(c) The lending institution shall notify the department of the effective interest rate being assessed to the applicant, including the interest rate assessed as part of the fund's share and the interest rate assessed as part of the lending institution's share.
(d) The effective interest rate that the loan recipient pays on the full amount of the loan under the loan agreement shall not exceed 5%.
(e) The lending institution shall provide an executed copy of the loan agreement to the department.
(f) Only appropriate and reasonable costs or fees associated with processing the loan are eligible for reimbursement as part of the loan.
(g) The lending institution will remit principal and interest payments not less frequently than on a quarterly basis to the fund until the loan is repaid in full.
(h) The lending institution will pursue the collection of all defaulted loans until brought current, collected in full, reduced to a judgment, or settled with the concurrence of the department.
(i) The lending institution will consider loan recipients who fail to complete the project to be in default of the loan.
History: 1999 MR 12, Eff. Jan. 5, 2000.

R 324.14507 Project review and approval process.

Rule 7. (1) The department shall process loan applications on an as-received basis.
(2) The department shall determine whether the application and supporting documentation meet the requirements of these rules within 30 days of receipt of a complete application.
(3) The department shall notify the lending institution and the applicant, in writing, within 14 days of making its determinations.
(4) A loan recipient shall not proceed with the pollution prevention project until it is notified in writing by the lending institution to proceed.
(5) The department's determination of project eligibility is valid for 90 days from the date of notification.
(6) The lending institution or the loan recipient shall promptly notify the department, in writing, of any substantive change to an eligible pollution prevention project before expenditure or encumbrance of any loan funds.
(7) The department will remit payment for its share of the loan from the fund to the lending institution within 30 days from the date of receipt of the executed loan agreement.
(8) In the case of an ineligibility determination, the department shall provide the applicant with written notice of the reason for the determination. There is no formal appeal of the department's loan decision.
(9) A small business can reapply for a loan at any time.
History: 1999 MR 12, Eff. Jan. 5, 2000.

R 324.14508 Small business loan recipient responsibilities.

Rule 8. (1) In addition to any financial provisions required by the lending institution, within 90 days of the project eligibility determination, the small business loan recipient shall enter into a loan agreement with the lending institution that requires the loan recipient to do all of the following:
(a) Initiate the pollution prevention project within 180 days of signing the loan documents or agreement.
(b) Secure qualified personnel or contractors, or both, to complete the pollution prevention activities specified in the loan application.
(c) Within 90 days of project completion, submit to the department a final report upon project completion describing the pollution prevention benefits attained, including a demonstration of the expected reduction in environmental waste or energy usage.
(d) Obtain written department approval of any amendments to the proposed project, before making the change.
(e) Maintain project records and documentation in accordance with generally accepted accounting principles and practices for a minimum of 3 years after the project is completed.
(f) Maintain all of the following documentation at the recipient's business:
(i) Copies of invoices and evidence of payment of invoiced expenditures.
(ii) Information pertinent to the project implementation as agreed to in the loan application.

(iii) Evidence that the project was implemented in compliance with applicable rules and regulations.
(2) Upon reasonable notice, the department or its duly authorized representatives shall be allowed access to the records or documents maintained by the small business under these rules.
History: 1999 MR 12, Eff. Jan. 5, 2000.

DEPARTMENT OF ENVIRONMENTAL QUALITY

STORAGE TANK DIVISION

MICHIGAN UNDERGROUND STORAGE TANK QUALIFIED CONSULTANTS AND CERTIFIED PROFESSIONALS

R 324.21501 Definitions.

Rule 1. As used in these rules:
(a) "Act" means Act No. 451 of the Public Acts of 1994, as amended, being §324.101 et seq. of the Michigan Compiled Laws, and known as the natural resources and environmental protection act.
(b) "Certified professional" means an individual certified by the department as meeting the requirements of a certified underground storage tank professional as defined under section 21543 of the act.
(c) "Corrective action" means and includes, but is not limited to, the actions specified in sections 21307 to 21313 of the act, the investigation, risk assessment, cleanup, removal, containment, isolation, treatment, or monitoring of regulated substances released into the environment, or the taking of other action as may be necessary to prevent, minimize, or mitigate injury to the public health, safety, or welfare, the environment, or natural resources.
(d) "Department" means the department of environmental quality.
(e) "Design" means development of a corrective action plan for soil and groundwater remediation utilizing scientifically accepted practices, procedures, and technologies which are proven effective based on industry standards and which comport with statutory requirements and these rules.
(f) "Environmental quality analyst" means a person employed in this job classification series by the department and who possesses specific education and experience requirements established for this classification by the department of civil service.
(g) "Feasibility" means and includes, but is not limited to, the development and evaluation of alternative remedial technologies based on results obtained from site investigation activities. The term also includes the analysis of alternative technologies for remediating impacted soil and groundwater, for the treatment, disposal, and reduction of contaminants, and for recycling or destroying contaminants at an on-site or off-site facility.
(h) "Other cause" under sections 21542 and 21543 of the act, for which the department may suspend or revoke a qualified consultant or certified professional certification, means and includes, but is not limited to, the acts set forth in sections 21324 and 21548 of the act and all of the following acts: (i) Conducting sampling, testing, monitoring, or excavation that is not justified by the site condition pursuant to the proper use and application of the RBCA process as set forth in part 213 of the act.
(ii) Failing to identify the most cost-effective corrective action measures to the owner/operator of the facility. As used in these rules, "cost-effective" includes a consideration of timeliness of implementation of the corrective action measures and use of methodology that is necessary and appropriate considering conditions at the site. The RBCA process shall be utilized in determining the most cost-effective corrective action measures to be implemented.
(iii) Failure to conduct corrective action activities in accordance with the RBCA process and in a manner that is protective of the public health, safety, and welfare and the environment.
(iv) Failure to comply with parts 213 and 215 of the act and written directives issued by the department in conformance with parts 211, 213, and 215 of the act, including, but not limited to, any of the following:
(A) Operational and informational memoranda.
(B) Procedures.
(C) Guidance documents.
(D) Orders.

(E) Written correspondence from department staff requesting information about a facility or site.
(v) Conducting work that is unnecessary or inappropriate, or both, considering conditions at a site, including, but not limited to, consideration by the department of whether the work performed is technically adequate. Necessary, appropriate, and adequate work is based on department guidance documents and industry standards applicable at the time the work is conducted.
(vi) Failure to supply the department with requested information whether the request is informal or a formal information request was issued under section 20117 of the act. All information requests made by the department shall be made in writing.
(vii) Failure to provide written notification to the department within 10 business days following a change in the person's operations or organizational status that materially affects the qualified consultant's status or qualifications as set forth in these rules. As used in these rules, "change" includes any of the following:
(A) Failure to actively maintain an approved certified professional on staff.
(B) A change in corporate name or corporate structure.
(C) A staffing change that may affect the qualified consultant's ability to meet experience requirements, such as the loss of a certified professional or other persons whose experience was used to meet the qualified consultant's experience qualification requirements necessary for qualified consultant certification.
(D) A change in the required insurance, including policy cancellation.
(E) Revocation of professional licenses or certificates, such as certified professional geologist or physical engineer.
(F) A change in compliance with the occupational safety and health act or the Michigan occupational safety and health act requirements, including submission of notices of violation issued pursuant to the occupational safety
and health act or the Michigan occupational safety and health act.
(viii) Failure to submit or annually update, or both, information required in the application requesting inclusion on the list.
(ix) Failure to attend the risk-based corrective action training entitled "RBCA Applied At Petroleum Release Sites" provided by the American society for testing and materials and other training as may be required by the department.
(x) Failure to comply with all applicable, relevant, and appropriate state and federal laws.
(xi) Failure to acquire and maintain any required insurance.
(i) "Qualified consultant" means a firm or individual certified by the department as meeting the requirements of a qualified underground storage tank consultant defined under section 21542 of the act.
(j) "RBCA" means the risk-based corrective action process as established by the American society for testing and materials and adopted in section 21303 of the act.
(k) "Relevant environmental assessment" means site assessment activities as defined in subdivision (r) of this rule and conducted for both soil and groundwater media. Environmental assessment is relevant if the corrective action activity involves soils and groundwater that are contaminated with regulated or hazardous substances.
(l) "Relevant environmental work" means activities, including site assessment and corrective actions, involving soil and groundwater contaminated with regulated substances as defined in part 213 of the act or hazardous substances as defined in part 201 of the act.
(m) "Relevant soil corrective action" means corrective actions that include all of the activities described in subdivision (c) of this rule as applied to the investigation and remediation of soils and groundwater contaminated with regulated substances, including the proper disposal of contaminated soils and groundwater.
(n) "Remedial system installation" means the implementation of a corrective action plan utilizing a properly designed system for remediation of contaminated media to achieve a final remedy. The system shall comport with generally accepted industry standards, statutory requirements, and these rules.
(o) "Remediation management activities" means the supervision or management of corrective actions conducted at sites of environmental contamination. The term includes direct oversight of response personnel and activities associated with site assessment, remedial system installation and operation effectiveness, and overseeing site closure.
(p) "Removal" means the permanent removal of qualified underground storage tank consultants from the

department's list.
(q) "Respondent" means the qualified consultant or certified professional relevant to suspension and revocation proceedings.
(r) "Revoked" or "revocation" means having certification as a qualified consultant or certified professional, or both, permanently withdrawn.
(s) "Site assessment" means corrective actions listed in sections 21307 to 21313 of the act. Selected methodology shall comport with generally accepted industry standards, statutory requirements, and these rules. Site assessment and environmental assessment are synonymous terms.
(t) "Site closure" means that a final remedy at a site of environmental contamination has been completed in accordance with section 21312 of the act and that either 6 months has elapsed since submittal of the closure report and the department has not conducted an audit, or the Department has provided approval of the closure report.
(u) "Soil removal" means soil excavation at a site of environmental contamination. The term includes, but is not limited to, utilizing proper staging and containment procedures and properly characterizing and disposing of excavated soils.
(v) "Suspension" means the immediate withdrawal of the certification of a qualified consultant or certified professional, or both, under the summary suspension provisions of section 92 of Act No. 306 of the Public Acts of 1969, as amended, being section 24.292 of the Michigan Compiled Laws.
(w) "Tank removal oversight" means on-site supervision of all stages of underground storage tank system removal, including soil excavation, tank and piping removal from the ground, and documentation of proper disposal of the tank, piping, and contents.
History: 1999 MR 8, Eff. Sept. 2, 1999

R 324.21502 Review committee; notification; review process; departmental review.

Rule 2. (1) The department will accept initial applications for qualified consultant and certified professional any 1 time during a calendar year. Subsequent applications will be accepted any 1 time during a calendar year. In order to facilitate annual publication of the qualified consultant list, an applicant will not be included on the list until publication the following year if the application is submitted after November 1. An applicant will not be included on the list until publication the following year if the applicant receives a written notice of deficiencies and the application was submitted after October 1. If a certification was voluntarily withdrawn under R 324.21514(6), then applications to reinstate qualified consultants or certified professional certifications may be submitted any 1 time during a 12-month period. The department shall review applications for qualified consultant and certified professional using a staff committee comprised of at least 1 geologist, 1 engineer, and 1 environmental quality analyst.
(2) Each review committee member shall review each qualified consultant and certified professional application submitted. The review committee shall make recommendations to the division chief for certification of applicants based upon unanimous agreement of the review committee members.
(3) An applicant who is certified by the department for inclusion on the qualified consultant list shall receive written notification. An applicant who is certified for certified professional status shall receive written notification.
(4) Absent unanimous agreement for recommendation of certification by the review committee, an applicant may be notified of all deficiencies in writing by certified mail. If it is apparent from the review of documents originally submitted with the application that the applicant is unable to meet the requirements for the certification requested, then the committee may reject the application by sending a notice of rejection. An applicant who receives a notice of deficiency shall submit additional information for review, based upon the deficiencies indicated by the department, within 30 days of receipt of the notice of deficiency letter. If additional documentation is not provided within 30 days, the applicant shall be sent a notice of rejection. A rejected applicant shall be notified by certified letter that states the specific reasons for rejection.
(5) An applicant who receives a notice of rejection from the review committee may request a division review of the qualifications that were declared deficient by the review committee.
(6) An applicant shall request a division review not later than 30 days from receipt of the notice of rejection or the division review is waived. Within the 30-day time period, the applicant shall submit a written request for the review along with all documentation specific to the deficiencies identified in the notice of rejection to

support his or her eligibility for certification as either a qualified consultant or a certified professional. The notice of rejection received from the review committee serves as final agency action for which no further department review will occur if a request for a division review is not received within 30 days.
(7) The supporting documentation from the applicant shall clearly and concisely demonstrate why the applicant meets the requirements noted in the notice of rejection.
(8) The chief of the division delegated to oversee the qualified consultant and certified professional review program shall designate a division review officer. Following review of an applicant's documentation, the review officer shall submit his or her recommendations for certifying or denying the application to the division chief. The review officer shall submit the recommendation within a reasonable time from receipt of the applicant's supporting documentation.
(9) The division chief shall determine if an applicant's qualifications meet the requirements for certification as a qualified consultant or certified professional based upon a review of the supporting documentation from the applicant, the recommendation from the division review officer, and any information available from the review committee. The division chief shall notify an applicant of the determination by certified letter. The decision of the division chief shall serve as a final agency action.
History: 1999 MR 8, Eff. Sept. 2, 1999

R 324.21503 Denial of certification.

Rule 3. A person who is denied certification as a qualified underground storage tank consultant or denied certification as a certified professional may appeal the final agency action issued under R 324.21502 to the circuit court having appropriate jurisdiction within 21 days of the date of receipt of the final agency action under section 631 of Act No. 236 of the Public Acts of 1961, as amended, being §600.631 of the Michigan Compiled Laws.
History: 1999 MR 8, Eff. Sept. 2, 1999

R 324.21504 Qualified consultant qualifications.

Rule 4. (1) A successful qualified consultant applicant shall have performed all the following activities:
(a) Underground storage tank work, including tank removal oversight.
(b) Site assessment.
(c) Soil removal.
(d) Feasibility.
(e) A minimum of 2 different types of remediation system design.
(f) Remedial system installation.
(g) Remediation management.
(h) Site closure.
(2) An application shall include all of the following information:
(a) The location.
(b) Site name.
(c) State project manager or contact person.
(d) Client contact.
(e) Names of individuals in the company who worked on the site and their responsibilities.
(f) A detailed narrative describing the corrective actions conducted.
(g) The names of contact persons and telephone numbers of not less than 5 clients that employed the applicant to conduct any or all of the required tasks stated in subrule (1) of this rule. Each of the required tasks shall be documented at not less than 3 sites.
(3) An applicant shall include a letter certifying that the applicant employs at least 1 full-time certified professional, as defined in R 324.21501(b), who has an active operational role in the daily activities of the applicant. Full-time is defined as 40 hours per week. An applicant shall provide the letter in the initial application package and, upon approval, shall update the letter annually under R 324.21513, unless a change occurs which would require notification within 10 days under R 324.21501(h)(vii). A certified professional shall provide a letter declaring that he or she is employed full-time by the applicant and has an active operational role in the daily activities of the applicant. An applicant shall include the letter from all certified professionals in the initial application package and, upon approval, shall update the letter annually

under R 324.21513, unless a change occurs which would require notification within 10 days under R 324.21501(h)(vii). The phrase "active operational role" means direct involvement and oversight of corrective actions, including, but not limited to, tasks defined in subrule (1) of this rule. If the experience of a certified professional is used to meet the experience requirements for the applicant, then the qualified consultant shall notify the department within 10 days from the termination of employment of the certified professional even if the qualified consultant employs another certified professional. The department may require the qualified consultant to demonstrate that it still possesses the minimum qualifications for certification. A qualified consultant may use the experience of its certified professional to fulfill the requirements under section 21542(2)(a) of the act. However, the certified professional whose experience is used to qualify the qualified consultant shall meet the employment requirements of this subrule.

(4) An applicant shall submit certificates of insurance or certify that it will obtain all of the required insurance under section 21542 of the act within 30 days from application approval. Failure to submit the requisite proof of insurance by the 30-day deadline may result in immediate suspension of the qualified consultant certification under R 324.21514. An applicant shall annually update all required insurance certificates as required by R 324.21513 unless a change occurs which would require notification within 10 days under R 324.21501(h)(vii). A qualified consultant shall include language in its insurance policies stating that the insurance company shall notify the department within 10 days after a policy expires, lapses, or otherwise becomes void. The department shall be listed as the certificate holder on the insurance binder. The insurance required under section 21542 of the act include all of the following:

(a) Michigan workers' compensation.

(b) Errors and omissions coverage which shall include coverage for claims resulting from acts of forbearance that cause or exacerbate pollution and claims of bodily injury and property damage in the amount of, $1,000,000.00 minimum coverage per occurrence. The insurance is required of all qualified consultants who conduct professional environmental services including, but not limited to, any of the following services:

(i) Remedial system design.

(ii) Remediation management.

(iii) Feasibility development and implementation.

(iv) Hydrogeological evaluation.

(v) Media testing and analysis.

(vi) Subsurface and geophysical investigation.

(vii) Other related activities as determined by the department.

(c) Contractor pollution liability in the amount of $1,000,000.00 per occurrence is required if the consultant also performs contracting work including, but not limited to, tank removal, soil excavation, soil borings, well installation, or related construction activities; unless the coverage is included under the consultant's errors and omissions policy or under a general commercial liability policy that contains completed products and operations coverage with pollution coverage of $1,000,000.00 per occurrence and $2,000,000.00 aggregate. Contractor pollution coverage is not required if the consultant does not perform contracting work. If an independent contractor is employed directly by the owner/operator to perform any of the corrective actions which a qualified consultant is required to perform under part 213 of the act, then the contractor shall also be a qualified consultant and employ a full-time certified professional who oversees the corrective actions and certifies that the work comports with applicable statutory requirements. A contractor shall carry contractor pollution coverage. A contractor does not need error and omissions coverage unless performing professional consulting
functions as described in subdivision (b) of this subrule.

(d) Commercial general liability coverage not less than $1,000,000.00 per occurrence and $2,000,000.00 aggregate.

(e) Automobile coverage of not less than $1,000,000.00 per occurrence.

History: 1999 MR 8, Eff. Sept. 2, 1999

R 324.21505 High deductibles; self-insurance; insurance rating.

Rule 5. (1) If an insurance policy of a qualified consultant has a deductible that is in excess of 10% of the insurance amount requirements, then an applicant shall prove that it has the financial ability to pay

potential claims against it by documenting a tangible net worth, not including goodwill value or stockholder equity, of not less than $1,000,000.00 or 5 times the deductible amount, whichever is higher. An applicant shall include documentation of financial ability to pay claims in the initial application package and, upon approval of the applicant, shall update the documentation annually under R 324.21513 unless a change occurs which would require notification within 10 days under R 324.21501(h)(vii).
(2) If an applicant claims self-insurance, then the applicant shall demonstrate a tangible net worth, discounting goodwill value and stockholder equity, of not less than $5,000,000.00. The applicant shall demonstrate, to the department's satisfaction, a financial capability to pay a $1,000,000.00 claim and remain viable by the establishment of an escrow, letter of credit, or other mechanism approved by the department. The applicant shall provide documentation to the department showing that the firm has an approved dedicated program in place for administering claims against it. The mechanism shall include an amount available for paying claims of not less than $1,000,000.00. An applicant shall provide the documentation in the initial application package and, upon approval of the applicant, shall update the documentation annually under R 324.21513, unless a change occurs which would require notification within 10 days under R 324.21501(h)(vii). A qualified consultant shall notify the department within 10 days from the date that it no longer meets the requirements for self-insurance.
(3) An insurance company that provides policies required under part 215 of the act and under this rule shall possess a minimum rating from the A.M. Best Company of B+ VII. An insurer shall meet the minimum level in both categories of B+ or higher and VII or higher.
History: 1999 MR 8, Eff. Sept. 2, 1999

R 324.21506 OSHA and MIOSHA compliance.

Rule 6. An applicant shall submit a declaration that states it has complied with all occupational safety and health act (OSHA) and Michigan occupational safety and health act (MIOSHA) requirements, as set forth in section 21542 of the act, while performing all previous corrective action work.
In addition, an applicant shall provide 40-hour or 24-hour certificates and current annual updates demonstrating that the applicant's workers have received hazardous waste operation training under sections 21542 and 21543 of the act. Failure of an applicant to comply with OSHA or MIOSHA requirements may result in denial of the application. An applicant shall include the declaration of OSHA compliance in the initial application package and, upon approval of the applicant, shall update the declaration annually under R 324.21513 unless a change occurs which would require notification within 10 days under R 324.21501(h)(vii).
History: 1999 MR 8, Eff. Sept. 2, 1999

R 324.21507 Corporate annual report.

Rule 7. If an applicant is a corporation, it shall submit a recent annual report. If the applicant is not a corporation, it shall submit the name of the registered business in the form of a D.B.A. (doing business as) certificate indicating the assumed name under which the applicant is conducting business and resubmit the D.B.A. certificate upon making any changes to the business name or business status.
History: 1999 MR 8, Eff. Sept. 2, 1999

R 324.21508 Certified professional qualifications.

Rule 8. (1) An applicant shall provide documentation, as required by the department, to verify that he or she meets any of the following requirements:
(a) The applicant is a licensed professional engineer in the state of Michigan and has 3 or more years of relevant soil corrective action experience, preferably involving underground storage tanks.
(b) The applicant is a certified professional geologist (CPG), or holds a similar approved designation, including registered or certified professional hydrologist (CPH) or certified groundwater professional (CGWP), and has 3 or more years of relevant soil corrective action experience, preferably involving underground storage tanks. As referred to in this subdivision, a CPG holds a certification issued by the American institute of professional geologists (AIPG). The department may accept professional geology certifications from other organizations if the department determines that the requirements for granting certification by the organization are equal to or greater than the requirements established by AIPG. As

referred to in this rule, a CPH holds a certification issued by the American institute of hydrology (AIH). The department may accept a professional hydrology or hydrogeology certification from other organizations if the department determines that the requirements for granting certification by the organization are equal to or greater than the requirements established by AIH. As referred to in this rule, a CGWP holds a certification issued by the association of groundwater scientists and engineers (AGWSE). The department may accept professional groundwater certifications from other organizations if the department determines that the requirements for granting certification by the organization are equal to or greater than the requirements established by AGWSE. Other certification programs may be accepted by the department as a similar approved designation if the department determines that the certification program is equal to or greater than the requirements of the organizations stated in this subdivision, is exclusive to geologists, hydrogeologists, or hydrologists, and is directly related to conducting corrective actions under part 213 of the act.

(c) The individual is able to demonstrate, in detailed narrative form, that he or she possesses 3 or more years of relevant environmental assessment and corrective action experience and 10 or more years of specific experience in relevant environmental work demonstrating increasing responsibilities. The applicant shall document how his or her experience consists of all relevant corrective action activities set forth in R 324.21501(c). Relevant environmental assessment includes site assessment activities involving contaminated soils and groundwater. The term "increasing responsibilities," as used in this subrule, means the applicant must demonstrate that the experience was acquired while employed by a person who has experience in all types of the corrective actions as set forth in R 324.21501(c). Each type of experience claimed by the applicant shall have been performed in a satisfactory manner and in accordance with the statutory requirements and rules in effect at the time the experience was acquired. The department may disapprove any experience that it determines was not performed in a satisfactory manner, does not meet the specific corrective action definition in R 324.21501, or was not performed in accordance with state and federal law.

(2) The application shall include the location, site name, state project manager or contact, client contact, dates of involvement, and a detailed narrative of the applicant's specific duties describing the environmental assessment and corrective action activities conducted. The demonstrated experience shall be documented with a minimum of 5 professional and personal references and with past employment references and histories. Licenses or certificates required in subrule (1)(a) or (b) of this rule shall be provided in the initial application package and, upon approval of the applicant, shall be updated annually under R 324.21513, unless a change occurs which would require notification within 10 days under R 324.21501(h)(vii).

History: 1999 MR 8, Eff. Sept. 2, 1999

R 324.21509 OSHA and MIOSHA compliance.

Rule 9. An applicant for certified professional certification shall submit copies of certificates documenting compliance with OSHA and MIOSHA regulations as set forth in section 21543 of the act, including 40-hour or 24-hour training, and a current annual hazardous waste operations training certificate update. An applicant who cannot provide documentation of compliance with OSHA training requirements for the period of time being documented as meeting the experience requirements of R 324.21508 shall not be approved as a certified professional. Upon approval of the applicant, a current OSHA certificate of training shall be provided annually upon expiration of the previous certificate under R 324.21513 unless a change occurs which would require notification within 10 days under R 324.21501(h)(vii).

History: 1999 MR 8, Eff. Sept. 2, 1999

R 324.21510 Certified professional employment.

Rule 10. An applicant for certified professional certification may not work for more than 1 qualified consultant in the capacity of a certified professional unless it can be demonstrated to the department's satisfaction that the certified professional meets the requirements of R 324.21504(3). The certified professional shall be employed on a full-time basis by the qualified consultant and shall directly oversee corrective actions at each site. The certified professional shall provide a letter declaring the qualified consultant or consultants that he or she is employed by, if any, and that he or she has a full-time, active operational role in the daily activities of the qualified consultant or consultants unless a change occurs which would require notification within 10 days under R 324.21501(h)(vii).

History: 1999 MR 8, Eff. Sept. 2, 1999

R 324.21511 Risk-based corrective action (RBCA) training.

Rule 11. An applicant for certified professional certification shall submit a copy of a certificate documenting that he or she has obtained the training entitled "RBCA Applied at Petroleum Release Sites" from an American society for testing and materials (ASTM) certified trainer.
History: 1999 MR 8, Eff. Sept. 2, 1999

R 324.21512 Department consideration of other information.

Rule 12. When evaluating an application, the department may consider other information received from department staff or other sources concerning corrective actions or related activities performed by the applicant.
History: 1999 MR 8, Eff. Sept. 2, 1999

R 324.21513 Information required to be updated annually; time for submittal; effect of failure to update information.

Rule 13. Information required to be updated annually under these rules shall be submitted during the month of February of each year. Failure to update the required information during the month of February of each year may result in a notice of revocation of certification.
History: 1999 MR 8, Eff. Sept. 2, 1999

R 324.21514 Suspension and revocation of qualified underground storage tank consultant, certified underground storage tank professional certification.

Rule 14. (1) If the department determines that a qualified consultant has failed to maintain, or otherwise no longer meets, the requirements for certification under part 215 of the act or these rules, then the department shall give the qualified consultant written notice, by certified mail, of its intent to revoke certification. The notice of intent to revoke shall clearly state the reasons why the qualified consultant no longer meets the requirements for certification, and shall inform the qualified consultant of the opportunity to voluntarily discontinue the certification under subrule (6) of this rule. A qualified consultant may avoid revocation of its certification by submitting documentation to the department that demonstrates, to the department's satisfaction, compliance with all of the requirements set forth in these rules. The documentation to demonstrate compliance with the certification requirements shall be submitted within 30 days from the receipt of a notice of intent to revoke. Alternatively, a qualified consultant may request in writing to voluntarily discontinue its certification under subrule (6) of this rule. If a qualified consultant fails to provide the required documentation or to request discontinuance of certification within 30 days from receipt of a notice of intent to revoke, then the department shall provide a written notice of revocation. Written notice of revocation shall be by certified mail. If the review committee determines that the documentation submitted is not adequate to remedy the deficiencies, the qualified consultant shall be given written notice, by certified mail, of the determination. The notice shall inform the qualified consultant of the opportunity to voluntarily discontinue their certification pursuant to subsection (6) of this rule within 30 days of receipt of notice.
(2) If the department determines that a certified professional has failed to maintain, or otherwise no longer meets, the requirements for certification under these rules, then the department shall provide a written notice of intent to revoke to the certified professional by certified mail. The notice of intent to revoke shall clearly state the reasons why the department believes the certified professional no longer meets the requirements for certification, and shall inform the certified professional of the opportunity to voluntarily discontinue his or her certification under subrule (6) of this rule. A person may avoid revocation of his or her certified professional certification by submitting documentation to the department that demonstrates, to the department's satisfaction, compliance with all requirements set forth in these rules. The documentation to demonstrate compliance with the certification requirements shall be submitted within 30 days from the receipt of a notice of intent to revoke. Alternatively, the person may request in writing to voluntarily discontinue his or her certification pursuant to subrule (6) of this rule. If a person fails to provide the required documentation or to request discontinuance of certification within 30 days from receipt of notice of

intent to revoke, then the department shall provide a written notice of revocation. Written notice of revocation shall be by certified mail. If the review committee determines that the documentation submitted is not adequate to remedy the deficiencies, the certified professional shall be given written notice, by certified mail, of the determination. The notice shall inform the certified professional of the opportunity to voluntarily discontinue their certification pursuant to subsection (6) of this rule within 30 days of receipt of notice. If a certified professional fails to request discontinuance of certification within 30 days from receipt of notice, then the department shall provide a written notice of revocation. Written notice of revocation shall be by certified mail.

(3) If a qualified consultant or certified professional performs an improper act or fails to perform a requirement specified in parts 213 or 215 of the act when obligated to do so and the act or failure to act constitutes a fraudulent practice as set forth in part 213 or part 215 of the act or meets the definition of "other causes" as defined in R 324.21501(h), or if a qualified consultant or certified professional submits information or causes information to be submitted and knew or should have known, based on the circumstances, that the information submitted is false or misleading, then the department shall provide a written notice of intent to revoke to the qualified consultant or certified professional stating its findings, and shall inform the qualified consultant or certified professional of the opportunity to voluntarily discontinue a certification pursuant to subsection (6) of this rule. A person may avoid revocation of a qualified consultant or certified professional certification by submitting documentation to the department that demonstrates, to the department's satisfaction, compliance with all requirements set forth in these rules. The documentation to demonstrate compliance with the certification requirements shall be submitted within 30 days from the receipt of a notice of intent to revoke. Alternatively, the person may request in writing to voluntarily discontinue his or her certification pursuant to subrule (6) of this rule. If a person fails to provide the required documentation or to request discontinuance of certification within 30 days from receipt of a notice of intent to revoke, then the department shall provide a written notice of revocation. Written notice of revocation shall be by certified mail. If the review committee determines that the documentation submitted is not adequate to remedy the deficiencies, the qualified consultant or certified professional shall be given written notice, by certified mail, of the determination. The notice shall inform the qualified consultant or certified professional of the opportunity to voluntarily discontinue their certification pursuant to subsection (6) of this rule within 30 days of receipt of notice. If a qualified consultant or certified professional fails to request discontinuance of certification within 30 days from receipt of notice, then the department shall provide a written notice of revocation. Written notice of revocation shall be by certified mail.

(4) If the department has determined that the public health, safety, or welfare is endangered, then the department may issue a notice of violation summarily suspending a qualified consultant or certified professional certification. Written notice of a violation shall be by certified mail, personal service, or facsimile. Upon receipt of a notice of violation summarily suspending a qualified consultant or certified professional certification, the qualified consultant or certified professional shall immediately cease conducting activities that require a qualified consultant or certified professional to perform under part 213 or part 215 of the act and these rules. All data and work products created by the consultant relevant to the corrective actions at a site shall be made available to the department, if requested, under section 20117 of the act. A qualified consultant shall notify the department of all owners and operators for whom the qualified consultant is providing consulting services at the time a notice of violation and suspension is received. A person may respond to a notice of violation imposing suspension by submitting to the department, within 30 days from receipt of a notice of violation, written documentation that demonstrates compliance with all requirements set forth in these rules. If a person fails to provide the required documentation within 30 days from receipt of a notice of violation under this subrule, or if the review committee determines that the documentation submitted does not adequately remedy the issues resulting in the suspension, then the department shall provide a written notice of revocation and the suspension will remain in effect through completion of the hearing process as described in this rule, or through completion of the revocation process as described in this rule, whichever applies. Written notice of revocation shall be by certified mail.

(5) In investigating the conduct of a qualified consultant or certified professional, the department may use any available information in making a determination under this rule, including any information obtained before the effective date of these rules.

(6) A qualified consultant or certified professional may submit a written request to voluntarily discontinue a qualified consultant or certified professional certification at any time before receiving a written notice of revocation unless a notice of violation has been issued suspending certification. However, if the department issues a written notice of revocation before the department receives a request to voluntarily discontinue a qualified consultant or certified professional certification, then discontinuance shall not be allowed. Upon submitting to the department a request to voluntarily discontinue a qualified consultant or certified professional certification, the qualified consultant or certified professional shall immediately cease conducting activities that require a qualified consultant or certified professional to perform under part 213 or part 215 of the act and these rules. All data and work results created while under contract with the owner or operator shall be made available to the department, if requested, under section 20117 of the act. A qualified consultant shall notify the department of all owners and operators for whom the qualified consultant is providing consulting services at the time a request to discontinue is submitted. A qualified consultant or certified professional who has requested that a certification be discontinued shall submit a application before reinstatement. An application submitted subsequent to discontinuing certification is subject to the review process as set forth in these rules. An applicant shall not conduct work as a qualified consultant or certified professional until receiving a letter of certification from the department. An applicant may reapply no more than 1 time in any 12-month period after receipt by the department of a request to discontinue. The 12-month period begins on the date that the notice to voluntarily discontinue the certification is received by the department.

(7) A qualified consultant or certified professional who receives a notice of suspension and revocation from the department may request an informal hearing under section 92 of Act No. 306 of the Public Acts of 1969, as amended, being §24.291 of the Michigan Compiled Laws, not later than 21 days from receipt of the notice of revocation. If a qualified consultant or certified professional fails to submit a written request under this subrule within the 21-day period, then the informal hearing is waived. A written request for an informal hearing shall include all documentation specific to the improper activities that are the subject of the suspension or revocation notification.

(8) Within 30 days of receipt of a written request by the department, an informal hearing under this rule will be conducted by a review officer designated by the chief of the division so delegated to implement the qualified consultant and certified professional review program. Based upon findings of fact resulting from the informal hearing, the review officer shall make a recommendation to the department to either preserve the qualified consultant or certified professional certification or to uphold the suspension or revocation.

(9) A final determination shall be made by the department within 30 days of receiving a recommendation from the review officer and shall provide a qualified consultant or certified professional with written notification of the determination by certified mail.

(10) Upon receiving a final determination upholding suspension or revocation of a qualified consultant certification, a consultant shall cease conducting activities for which qualified consultant certification is required under part 213 and part 215 of the act within 21 days from the date of notice, unless a contested case hearing is requested within the 21-day period under subrule (14) of this rule. All data and work product created by the consultant relevant to the corrective actions at a site, shall be made available to the department, if requested, under section 20117 of the act.

(11) The department shall reasonably attempt to provide written notification to the owners or operators for whom the qualified consultant was providing consulting service, if known, by the department.

(12) Upon receiving a final determination upholding suspension or revocation of a certified professional certification, a certified professional shall immediately cease conducting activities required to be performed by a certified professional under part 213 and part 215 of the act. If the certified professional is the only certified professional employed by the qualified consultant, then the qualified consultant shall be notified that he or she no longer meets the requirements for certification under section 21542 of the act.

The suspension and revocation process under this rule will apply.

(13) The department may periodically print a list of suspensions and revocations.

(14) A qualified consultant or certified professional who receives a suspension and revocation notice from the department may, following a final determination from the department under subrule (9) of this rule, if applicable, request a contested case hearing under section 71 of Act No. 306 of the Public Acts of 1969, as amended, being §24.271 of the Michigan Compiled Laws, within 21 days of receipt of the notice. If a qualified

consultant or certified professional does not request a hearing within the 21-day period, then a hearing is waived.

(15) A qualified consultant whose certification is revoked shall have the name under which it was certified removed from the list of qualified consultants.

History: 1999 MR 8, Eff. Sept. 2, 1999

R 324.21515 Recertification.

Rule 15. (1) If a qualified consultant is a firm and the consultant's certification is revoked, then the principals of the organization, including corporate officers, shall not be allowed to reapply for certification as a qualified consultant prior to three years from the date of revocation. A certified professional whose certification is revoked shall not be allowed to reapply for certification as a certified professional prior to three years from the date of revocation. A qualified consultant or certified professional whose certification is suspended or revoked shall not conduct environmental services requiring certification under part 213 or part 215 of the act.

(2) A qualified consultant or certified professional convicted of fraud shall not be allowed to reapply for certification as a qualified consultant or certified professional if a certification is revoked.

History: 1999 MR 8, Eff. Sept. 2, 1999

R 324.21516 Appeal of revocation and suspension.

Rule 16. Judicial review of a suspension and revocation of certification shall be conducted under section 101 of Act No. 306 of the Public Acts of 1969, as amended, being §24.301 of the Michigan Compiled Laws.

History: 1999 MR 8, Eff. Sept. 2, 1999

DEPARTMENT OF COMMUNITY HEALTH

BUREAU OF DISEASE CONTROL AND LABORATORY SERVICES

CONTROL OF COMMUNICABLE DISEASES

R 325.1—R 325.59 Rescinded.

History: 1944 AC; 1944 ACS 2; 1944 ACS 3; 1944 ACS 6; 1944 ACS 17; 1944 ACS 19; 1944 ACS 20; 1944 ACS 28; 1944 ACS 30; 1944 ACS 36; 1944 ACS 39; 1954 AC; 1954 ACS 8, Eff. Nov. 14, 1956; 1954 ACS 10, Eff. June 14, 1957; 1954 ACS 14, Eff. May 14, 1958; 1954 ACS 20, Eff. Nov. 14, 1959; 1954 ACS 21, Eff. Feb. 13, 1960; 1954 ACS 30, Eff. May 15, 1962; 1954 ACS 39, Eff. Aug. 14, 1964; 1954 ACS 41, Eff. Feb. 14, 1965; 1954 ACS 51, Eff. Aug. 15, 1967; 1954 ACS 61, Eff. Feb. 16, 1970; 1954 ACS 77, Eff. Nov. 6, 1973; 1979 AC; rescinded 1979 ACS 6, Eff. Apr. 2, 1981; 1979 ACS 8, Eff. Dec. 10, 1981.

R 325.60

Source: 1981 AACS.

R 325.61—R 325.120

Source: 1997 AACS.

HEALTH LEGISLATION AND POLICY DEVELOPMENT

CHILDHOOD IMMUNIZATION REGISTRY

R 325.161

Source: 1997 AACS.

R 325.162

Source: 1997 AACS.

R 325.163

Source: 1997 AACS.

R 325.164
Source: 1997 AACS.

R 325.165
Source: 1997 AACS.

R 325.166
Source: 1997 AACS.

R 325.167
Source: 1997 AACS.

R 325.168
Source: 1997 AACS.

R 325.169
Source: 1997 AACS.

BUREAU OF INFECTIOUS DISEASE CONTROL

COMMUNICABLE AND RELATED DISEASES

R 325.171 Definitions.

Rule 1. (1) As used in these rules:

(a) "Appropriate local health department" means the local health department that has jurisdiction where an individual who has a disease or condition that is required to be reported resides or the local health department of the county in which the service facility is located.

(b) "Code" means Act No. 368 of the Public Acts of 1978, as amended, being §333.1101 et seq. of the Michigan Compiled Laws.

(c) "Communicable" means capable of being transmitted from individual to individual, from animal to individual, or from an inanimate reservoir to an individual.

(d) "Department" means the Michigan department of community health.

(e) "Designated condition" means any condition that is designated in R 325.172 as any of the following:

(i) A serious communicable disease.

(ii) A serious infection.

(iii) A communicable disease.

(iv) An infection.

(v) A noncommunicable disease.

(f) "Director" means the state director of community health or his or her designee.

(g) "Epidemic" means any increase in the number of cases, above the number of expected cases, of any disease, infection, or other condition in a specific time period, area, or demographic segment of the population.

(h) "Local health officer" means the health officer, or designee, in the appropriate local health department.

(i) "Medical and epidemiological information" means any of the following:

(i) Medical histories.

(ii) Results of examinations.

(iii) Findings on laboratory tests.

(iv) Diagnoses.

(v) Treatments employed.

(vi) Outcomes.

(vii) The description and source of suspected causative agents.

(viii) Any other information that is pertinent to an investigation which is requested by the local health

department or the department in the course of that investigation.
(j) "Venereal disease" means any of the following:
(i) Syphilis.
(ii) Gonorrhea.
(iii) Chancroid.
(iv) Lymphogranuloma venereum.
(v) Granuloma inguinale.
(2) Unless the context requires otherwise or as further clarified in these rules, terms defined in the code have the same meanings when used in these rules.
History: 1993 MR 4, Eff. Apr. 29, 1993; 1999 MR 1, Eff. Feb. 5, 1999.

R 325.172 Designation and classification of diseases and infections.

Rule 2. (1) All of the following conditions are designated as serious communicable diseases:
(a) Acquired immunodeficiency syndrome (AIDS).
(b) Anthrax.
(c) Botulism.
(d) Cholera.
(e) Diphtheria.
(f) Haemophilus influenzae disease, meningitis, or epiglottitis.
(g) Hepatitis B infection in a pregnant woman.
(h) Human immunodeficiency virus (HIV).
(i) Measles (Rubeola).
(j) Meningococcal disease, meningitis, or meningococcemia.
(k) Pertussis.
(l) Plague.
(m) Poliomyelitis, paralytic.
(n) Rabies, human.
(o) Tuberculosis.
(p) Venereal disease.
(q) Viral hemorrhagic fevers, such as Lassa fever and Congo Crimean hemorrhagic fever.
(r) Yellow fever.
(s) The unusual occurrence, outbreak, or epidemic of any condition, including nosocomial infections.
(2) All of the following are designated as serious infections if a laboratory confirms their presence in an individual:
(a) Bacillus anthracis.
(b) Bordetella pertussis.
(c) Calymmatobacterium granulomatis.
(d) Clostridium botulinum.
(e) Corynebacterium diphtheriae.
(f) Haemophilus ducreyi.
(g) Haemophilus influenzae type b.
(h) Hemorrhagic fever viruses.
(i) Hepatitis B surface antigen.
(j) Measles (Rubeola) virus.
(k) Mycobacterium tuberculosis.
(l) Neisseria gonorrhoeae.
(m) Neisseria meningitis.
(n) Poliovirus.
(o) Rabies virus.
(p) Treponema pallidum.
(q) Vibrio cholera serovar 01.
(r) Yellow fever virus.
(s) Yersinia pestis.

(t) The unusual occurrence, outbreak, or epidemic of any infection.
(3) All of the following conditions are designated as communicable diseases:
(a) Amebiasis.
(b) Aseptic (viral) meningitis.
(c) Blastomycosis.
(d) Brucellosis.
(e) Campylobacter enteritis.
(f) Chickenpox.
(g) Chlamydial disease, genital.
(h) Coccidioidomycosis.
(i) Cryptococcosis.
(j) Cryptosporidiosis.
(k) Cyclosporiasis.
(l) Dengue fever.
(m) Ehrlichiosis.
(n) Encephalitis, viral.
(o) Giardiasis.
(p) Hantavirus pulmonary syndrome.
(q) Hemolytic-uremic syndrome (HUS).
(r) Hepatitis A.
(s) Hepatitis B.
(t) Hepatitis C.
(u) Hepatitis, delta.
(v) Hepatitis, non-A non-B.
(w) Hepatitis, viral, unspecified.
(x) Histoplasmosis.
(y) Influenza.
(z) Legionellosis.
(aa) Leprosy.
(bb) Leptospirosis.
(cc) Listeriosis.
(dd) Lyme disease.
(ee) Malaria.
(ff) Meningitis, other bacterial.
(gg) Mumps.
(hh) Psittacosis.
(ii) Q fever.
(jj) Rocky Mountain spotted fever.
(kk) Rubella.
(ll) Rubella syndrome, congenital.
(mm) Salmonellosis.
(nn) Shiga toxin producing escherichia coli associated disease, such as escherichia coli 0157:H7.
(oo) Shigellosis.
(pp) Staphylococcal disease, first 28 days postpartum, mother or child.
(qq) Streptococcal disease, invasive, group A.
(rr) Tetanus.
(ss) Trachoma.
(tt) Trichinosis.
(uu) Tularemia.
(vv) Typhoid fever.
(ww) Typhus.
(xx) Yersinia enteritis.
(4) All of the following are designated infections if laboratory evidence confirms their presence in an

individual:
(a) Arbovirsuses.
(b) Borrelia burgdorferi.
(c) Brucella species.
(d) Campylobacter jejuni.
(e) Chlamydia species.
(f) Cryptosporidium species.
(g) Cyclospora species.
(h) Entamoeba histolytica.
(i) Francisella tularensis.
(j) Giardia lamblia.
(k) Hantavirus.
(l) Hepatitis A infection.
(m) Influenza virus.
(n) Legionella species.
(o) Listeria monocytogenes.
(p) Mumps virus.
(q) Plasmodium species.
(r) Rubella virus.
(s) Salmonella species.
(t) Shiga toxin producing escherichia coli, such as escherichia coli 0157:H7.
(u) Shigella species.
(v) Trichinella spiralis.
(w) Yersinia enterocolitica.
(5) All of the following conditions are designated as noncommunicable diseases:
(a) Guillain-Barre syndrome.
(b) Kawasaki disease.
(c) Reye's syndrome.
(d) Rheumatic fever.
(e) Toxic shock syndrome.
History: 1993 MR 4, Eff. Apr. 29, 1993; 1999 MR 1, Eff. Feb. 5, 1999.

R 325.173
Source: 1993 AACS.

R 325.174
Source: 1993 AACS.

R 325.175
Source: 1993 AACS.

R 325.176
Source: 1995 AACS.

R 325.177
Source: 1993 AACS.

R 325.178 State aid for tuberculosis patients.
Rule 8. (1) As used in this rule:
(a) "Form" means a form furnished by the department.
(b) "Hospital" means a hospital or nursing home that is approved by the department for receipt of state aid for tuberculosis patients.
(c) "Tuberculosis patient" means a patient who has laboratory-confirmed or clinically or radiographically suspect tuberculosis.

(2) An official application form that is signed by the patient or the parent or guardian or person in loco parentis, a physician, and the health officer of the jurisdiction in which the patient is found or is domiciled shall be on file in the hospital at the time of admission for each tuberculosis patient in the hospital, except for any of the following patients:
(a) A private paying tuberculosis patient.
(b) A tuberculosis patient who is committed to the hospital by the probate court in accordance with the provisions of sections 5203, 5205, and 5207 of the code.
(c) A tuberculosis patient who is transferred from another hospital in accordance with the provisions of subrule (4) of this rule.
(d) A patient who is admitted for a non-tuberculosis condition and who is later suspected of having, or proven to have, tuberculosis. With respect to this subdivision, the health officer of the jurisdiction in which the tuberculosis patient is domiciled shall be immediately notified and liability for care shall not be incurred until the health officer approves such care by signing a form. The health officer shall not be required to sign the form retroactively, thereby obligating public funds for the care of a tuberculosis patient who was not properly reported in a timely manner.
(3) A hospital admission report form shall be sent to the department within 4 days after the admission of a tuberculosis patient, including a private tuberculosis patient. A resident of the state at large may be admitted to an approved tuberculosis hospital in accordance with the procedure set forth in this rule. An application form for care as a state-at-large tuberculosis patient shall be completed and submitted to the department as soon as possible after admission.
(4) The administrator of a hospital shall send a hospital discharge report form to the department within 4 days after the transfer, discharge, or death of a tuberculosis patient, including a private tuberculosis patient. When the day of discharge can be anticipated, the administrator of the hospital shall notify the local health officer of the jurisdiction in which the tuberculosis patient plans to live of the probable date of discharge. When a tuberculosis patient leaves the hospital against medical advice, the administrator shall, within 24 hours thereafter, notify both the local health officer of the county responsible for the tuberculosis patient's hospital care and the local health officer of the jurisdiction to which the tuberculosis patient is believed to have gone. State and county financial responsibility for a tuberculosis patient who is admitted as a tuberculosis case or suspect case shall terminate as of the date the patient is found to not have tuberculosis.
(5) Voucher forms shall be sent to the department for reporting individual county charge tuberculosis patients who are treated in accordance with the law. The report shall contain all of the following information:
(a) The name of each patient.
(b) The county to which the voucher is payable.
(c) The beginning and ending dates of the period of time covered by the report.
(d) The amount of subsidy calculated at the rate established by law. Subsidy will be paid from the day of admission or clinical suspicion, but not for the day of discharge. The original copy of the voucher shall be forwarded to the county clerk or clerk of the board of auditors of the county that is to receive the subsidy payments. The clerk, after affixing his or her signature, shall send the original to the department.
(6) When a decision of the state family independence agency as to the county of domicile has been rendered in accordance with the provisions of section 5303 of the code and the county determined to be responsible fails to adhere thereto, payments shall not be made to that county for the care of tuberculosis patients in any hospital until payment for the cases in question has been made.
(7) Voucher forms for state-at-large tuberculosis patients shall be processed the same as county vouchers, except that instead of the county treasurer, the payee will be the hospital where care is received. Payment will be made at the medicaid interim cost charge percentage rate for each hospital that was in effect at the time of admission. Payments will be cost-settled in conjunction with the department's medicaid program. Each hospital shall provide a copy of an audit report covering the time periods for which reimbursement was made. In addition, hospitals shall notify the department of any audit adjustments related to tuberculosis reimbursements. Payment will not be made for hospitalization until the application form has been received and approved by the department. If an individual is readmitted to a hospital, a second application form shall be sent to the department for each subsequent admission of a nonveteran state-at-large tuberculosis patient. It is not necessary to submit a second form for a tuberculosis patient whose care has been previously

authorized as care for a state-at-large tuberculosis patient on the basis of his or her having been honorably discharged from the military service of the United States. A voucher shall bear the certification of the director of patient accounts that any future collections from another source shall be credited to the department. If subsequent investigation shows that a tuberculosis patient authorized and paid for as a state-at-large tuberculosis patient was a legal responsibility of a county in this state, the proper adjustment to the state-at-large account shall be made immediately by the hospital. Further state-at-large payments will not be made to the hospital until the adjustment has been made.

(8) Payments for outpatient services for state-at-large tuberculosis patients will not be made until a properly completed case report form and an approved state-at-large application form are on file with the department. To secure payment for services and drugs, the payee shall submit a form, on a quarterly basis, listing the names of tuberculosis patients served, the type of service, and the cost. Costs shall be based on the latest fee schedule provided by the department.

(9) Failure to comply with any requirement of these rules or of the code is grounds for withholding state payments to the county or the hospital failing to comply.

History: 1993 MR 4, Eff. Apr. 29, 1993; 1999 MR 1, Eff. Feb. 5, 1999.

R 325.179

Source: 1993 AACS.

R 325.180 Procedures for control of rabies; disposition of rabid animals.

Rule 10. (1) For the purposes of this rule, animals that are subject to rabies testing are any nonhuman mammals, except for rabbits or hares and rodents other than woodchucks.

(2) As used in this rule, "owner" means a person who has a right of property ownership of an animal, who keeps or harbors an animal, who has custody of an animal, or who permits an animal to remain on or about any premises occupied by the person.

(3) Any laboratory in this state that conducts examinations of animals for rabies shall report all of the following data to the department within 7 days after examination:

(a) Species of animal.

(b) Name and address of the owner of the animal.

(c) Name and address of the person who submits the specimen.

(d) Name and address of the individuals who have been exposed to the animal or the name and address of the owner of the pet that has been exposed to the animal.

(e) Date and results of the examination.

(4) A physician who performs a postmortem on the body of an individual who died of rabies or who was suspected of dying of rabies shall immediately submit nonpreserved portions of the hippocampus major and spinal cord to the department for rabies examination. A history of the case shall accompany the specimens.

(5) An animal that has bitten an individual or otherwise potentially exposed an individual to rabies shall be handled pursuant to the provisions of the publication entitled "Compendium of Animal Rabies Control, 1998" issued by the national association of state public health veterinarians (NASPHV). The provisions of the publication entitled "Compendium of Animal Rabies Control, 1998" are adopted by reference in these rules. Copies of this publication may be obtained from the State Public Health Veterinarian, Communicable Disease Epidemiology Division, Bureau of Epidemiology, Michigan Department of Community Health, 3423 N. Martin Luther King, Jr. Blvd., P.O. Box 30195, Lansing, Michigan 48909, at no cost as of the time of adoption of these rules.

(6) Any person who has knowledge of an animal bite where rabies is suspected shall, within 24 hours of the biting incident, report the bite to the appropriate local health department and to the local health department where the bite occurred. The report shall include all of the following information:

(a) Animal species inflicting the bite.

(b) Animal owner's name, address, and telephone number.

(c) Vaccination status of the animal.

(d) Date and location of the biting incident.

(e) Name, address, and telephone number of the individual bitten.

(f) Site of the bite on the body.

(g) Name of the reporter of the bite.
History: 1993 MR 4, Eff. Apr. 29, 1993; 1999 MR 1, Eff. Feb. 5, 1999.

R 325.181
Source: 1993 AACS.

R 325.199
Source: 1993 AACS.

RABIES

R 325.201
Source: 1997 AACS.

OFFICE OF THE DIRECTOR

CONVALESCENT SERA AND VACCINES

R 325.210—R 325.224
Source: 1997 AACS.

POLIOMYELITIS VACCINE

R 325.231—R 325.239
Source: 1997 AACS.

DIABETES RESEARCH

R 325.271—R 325.275
Source: 1997 AACS.

KIDNEY TRAINING

R 325.281—R 325.284
Source: 1997 AACS.

BUREAU OF PERSONAL HEALTH SERVICES

MIDWIVES

R 325.321—R 325.330
Source: 1997 AACS.
Editor's note: These rescissions were transmitted to the Joint Committee on Administrative Rules on October 11, 1995. The Joint Committee on Administrative Rules certified the rescissions on November 8, 1995. The rules were filed with the Secretary of State on November 14, 1995. Section 46(1) of Act No. 306 of the Public Acts of 1969, as amended, being §24.246(1) of the Michigan Compiled Laws, provides in part "... An agency shall not file a rule, except an emergency rule under section 48, until at least 10 days after the date of the certificate of approval by the committee..."

OFFICE OF THE DIRECTOR

MINIMUM STANDARDS FOR GROUP DAY CARE OF CHILDREN

R 325.341—R 325.343
Source: 1997 AACS.

COMMUNICABLE DISEASES IN CHILDREN IN GROUP RESIDENCE, CARE, EDUCATION, AND CAMPING

R 325.351, R 325.352
Source: 1997 AACS.

SPECIAL AGENTS OF BUREAU OF RECORDS AND STATISTICS

R 325.361
Source: 1997 AACS.

BARBER SHOPS

R 325.451
Source: 1997 AACS.

FOOD ESTABLISHMENTS

R 325.592, R 325.593
Source: 1997 AACS.

BOTTLE CAPS

R 325.741
Source: 1997 AACS.

TRAILER COACH PARKS

R 325.746
Source: 1997 AACS.

BUREAU OF DISEASE CONTROL AND LABORATORY SERVICES

CONTROL OF TUBERCULOSIS

PART 1. STATE SUBSIDY

R 325.763
Source: 1997 AACS.

PART 2. ADMISSIONS TO TUBERCULOSIS HOSPITALS

R 325.771
Source: 1997 AACS.

R 325.772, R 325.773
Source: 1997 AACS.

R 325.775
Source: 1997 AACS.

PART 3. TRANSFERS, DISCHARGES, AND DEATHS

R 325.781

Source: 1997 AACS.

R 325.782—R 325.784
Source: 1997 AACS.

R 325.786
Source: 1997 AACS.

PART 4A. VOUCHERS FOR COUNTY CHARGE PATIENTS

R 325.801
Source: 1997 AACS.

R 325.802, R 325.803
Source: 1997 AACS.

R 325.804
Source: 1997 AACS.

PART 4B. VOUCHERS FOR STATE AT LARGE PATIENTS

R 325.811, R 325.812
Source: 1997 AACS.

R 325.813
Source: 1997 AACS.

R 325.814—R 325.817
Source: 1997 AACS.

R 325.818
Source: 1997 AACS.

R 325.820
Source: 1997 AACS.

PART 5. REIMBURSEMENTS FOR CARE OF PATIENTS

R 325.831
Source: 1997 AACS.

R 325.832
Source: 1997 AACS.

R 325.833
Source: 1997 AACS.

R 325.834
Source: 1997 AACS.

PART 6. RECALCITRANT PATIENTS

R 325.841—R 325.852
Source: 1997 AACS.

PART 7. REIMBURSEMENT PROCEDURE

R 325.861, R 325.862
Source: 1997 AACS.

R 325.863
Source: 1997 AACS.

R 325.864—R 325.867
Source: 1997 AACS.

R 325.871—R 325.875
Source: 1997 AACS.

PART 8. VOLUNTARY AGREEMENTS BY PATIENTS TO MAKE REIMBURSEMENT

R 325.881—R 325.886
Source: 1997 AACS.

PART 9. WITHHOLDING SUBSIDIES

R 325.891
Source: 1997 AACS.

PART 10. REPORTS OF CHEST X-RAYS

R 325.896
Source: 1997 AACS.

PART 11. EXAMINATION OF PERSONS IN HIGH EXPOSURE GROUPS

R 325.897
Source: 1997 AACS.

R 325.898
Source: 1997 AACS.

REIMBURSEMENT FOR OUTPATIENT SERVICES

R 325.901
Source: 1997 AACS.

R 325.902
Source: 1997 AACS.

HUMANE CARE AND USE OF ANIMALS

R 325.921
Source: 1980 AACS.

R 325.922
Source: 1980 AACS.

R 325.923
Source: 1980 AACS.

R 325.924
Source: 1980 AACS.

R 325.925
Source: 1980 AACS.

R 325.926
Source: 1980 AACS.

ANATOMY BOARD

ANATOMICAL GIFTS

R 325.951
Source: 1981 AACS.

R 325.952
Source: 1981 AACS.

R 325.953
Source: 1981 AACS.

R 325.954
Source: 1981 AACS.

R 325.955
Source: 1981 AACS.

BUREAU OF DISEASE CONTROL AND LABORATORY SERVICES

HUMANE USE OF ANIMALS

R 325.981—R 325.992
Source: 1997 AACS.

DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES

HEALTH FACILITIES SERVICES ADMINISTRATION

MINIMUM STANDARDS FOR HOSPITALS

PART 3. OPERATIONAL RULES AND MINIMUM STANDARDS FOR ALL HOSPITAL-PHYSICAL PLANT, FACILITIES, EQUIPMENT, AND OPERATION

R 325.1053
Source: 1981 AACS.

R 325.1054
Source: 1981 AACS.

R 325.1056
Source: 1981 AACS.

DEPARTMENT OF COMMUNITY HEALTH

OFFICE OF THE DIRECTOR

DONATED AND UNCLAIMED DEAD HUMAN BODIES OR PARTS

R 325.1171—R 325.1177
Source: 1997 AACS.

HEARINGS

R 325.1201—R 325.1206
Source: 1997 AACS.

DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES
BOARD OF EXAMINERS FOR SANITARIANS

R 325.1401—R 325.1412
Source: 1997 AACS.

DEPARTMENT OF COMMUNITY HEALTH
OFFICE OF THE DIRECTOR
PRESCHOOL VISION TESTS

R 325.1481
Source: 1997 AACS.

DISEASE CONTROL IN SCHOOLS

R 325.1491
Source: 1997 AACS.

DEPARTMENT OF AGRICULTURE
AGRICULTURAL LABOR CAMPS

R 325.1501—R 325.1515
Source: 1997 AACS.

R 325.1531—R 325.1536
Source: 1997 AACS.

DEPARTMENT OF ENVIRONMENTAL QUALITY

DRINKING WATER AND RADIOLOGICAL PROTECTION DIVISION

MEDICAL WASTE PRODUCING FACILITIES

325.1541 Definitions.

Rule 1. As used in these rules:

(A) "Act" means the medical waste regulatory act, part 138 of Act No. 368 of the Public Acts of 1978, as

amended, being §§333.13801 to 333.13831 et seq. of the Michigan Compiled Laws.
(B) "Categories of medical waste," as defined in §13805(8) of the act, shall be considered as waste when the items are ready to be disposed. Sharps shall be considered as a medical waste and disposed of under §13811(d) of the act whether or not they have become contaminated with an agent infectious to humans.
(C) "Contiguous property" means the same or geographically adjacent property that may be divided by a public or private right-of-way. Parcels of property connected by a right-of-way which the property owner controls and to which the public does not have access shall also be considered as contiguous property.
(D) "Stained with blood or body fluids," as used in §13805(8)(b) of the act, means the contaminated item cannot release blood or body fluids in a liquid or semiliquid state when compressed, or caked and dried blood or body fluids are not capable of being released when handled.
(E) "Syringes," as included in the definition of "sharps" under §13807(7) of the act, includes all syringes with an attached needle and those parts of a syringe, with or without an attached needle, that are contaminated with a potentially infectious agent. Needles shall only be removed from a syringe in accordance with the procedures established by R 325.70007(2)(e) adopted under section 24 of Act No. 154 of the Public Acts of 1974, as amended.
History: 2000 MR 19, Eff. Nov. 30, 2000.

325.1542 Packaging, labeling, storage, and transportation.

Rule 2. (1) In addition to the requirements established in section 13821 of the act, containers used for packaging, shipping, and transportation of regulated medical waste shall comply with the requirements of Michigan's motor carrier safety act, Act No. 181 of the Public Acts of 1963, as amended, being §§480.11 to 480.22 of the Michigan Compiled Laws.
(2) Identifying labels that are placed on containers containing decontaminated medical waste mixed with other solid waste, as required in §13809(e) of the act, shall be a minimum of 1 inch high.
(3) The 90-day period for "storage" of medical waste, as required in §§13809(h) and 13810(d) of the act, shall begin when use of the storage container is initiated.
(4) When being transported to a sanitary landfill for disposal, packaged medical waste that is not decontaminated shall not be mixed with non-medical wastes.
History: 2000 MR 19, Eff. Nov. 30, 2000.

325.1543 Treatment of medical waste.

Rule 3. (1) Blood and blood products and body fluids that are solidified, but not decontaminated during the solidification process, shall be packaged and disposed of as medical waste as specified in §§13809, 13811(b), and 13821(b) of the act.
History: 2000 MR 19, Eff. Nov. 30, 2000.

325.1544 Equipment maintenance; record retention.

Rule 4. (1) Medical waste producing facilities shall perform testing of their decontamination or sanitization equipment to demonstrate the continued effective operation of the equipment. Testing frequency and procedures shall be pursuant to the manufacturer's recommendations or methods and frequencies approved by the department.
(2) Facilities shall retain and make available testing data and results from the most recent test performed for inspection by the department.
(3) Testing frequency and procedures shall be contained in the producing facility's medical waste management plan.
History: 2000 MR 19, Eff. Nov. 30, 2000.

325.1545 Registration of multiple producing facilities; medical waste management plan content; registrations for school districts; registration fee.

Rule 5. (1) Multiple producing facilities that are owned by 1 entity and located on contiguous property that is owned by the same entity, such as college campuses and large hospital corporations, may register under one registration. The registrant shall maintain a list of the location of all producing facilities located upon the contiguous properties and the type of medical waste produced at each respective facility. The

registrant shall maintain the list of producing facilities and their respective types of medical waste in the registrant's medical waste management plan. Each producing facility shall have a copy of the medical waste management plan on site.
(2) A school district, private school, or charter school system that generates or stores medical waste shall register as a medical waste producing facility. The name and location of all schools producing medical waste within the school district, private school, or charter school system and the type or types of medical waste produced or stored at the respective schools shall be contained in the school district, private school, or charter school system medical waste management plan. A school district, private school, or charter school shall maintain a copy of the plan at each school producing medical waste.
(3) The applicable multiple facility, or school district, private school, or charter school system registration fee shall be the greater of the fees established in §13813(2) or §13815 of the act that would apply to any individual facility located on the contiguous property or school within the school district, private school, or charter school system if it is registered separately.
History: 2000 MR 19, Eff. Nov. 30, 2000.

325.1546 Fee payment for producing facilities with expired registrations; change of ownership.

Rule 6. (1) Registration fee payments received from producing facilities with expired registrations shall have the fees applied by the department back to the date when the last registration expired.
(2) If a change in ownership of a producing facility occurs, then the new owner shall notify the department and register as a new producing facility and pay the designated fee in accordance with §13813(1) and (2) of the act.
History: 2000 MR 19, Eff. Nov. 30, 2000.

325.1547 Training requirement; training schedule; record of training.

Rule 7. (1) Each facility that produces medical waste shall provide instruction in the proper handling of medical waste according to the facility's medical waste management plan to its employees who generate and/or dispose of medical waste. The plan shall be in compliance with the requirements prescribed in §13817 of the act.
(2) A facility shall assure that an employee who handles medical waste is trained before the employee assumes duties that involve the handling of medical waste to enable the employee to handle and dispose of medical waste in a safe and proper manner.
(3) A facility shall assure that current employees who handle medical waste are trained within 90 days after the effective date of these rules. A facility shall assure that a new employee is trained before assuming duties that involve the handling of medical waste to enable the employee to handle and dispose of medical waste in a safe and proper manner. All employees shall receive refresher training when a change in the producing facility's medical waste management plan occurs that directly affects the employee's duties.
(4) A facility that produces medical waste shall create and retain a record of the training of employees who handle medical waste. The record shall include all of the following information with respect to each employee:
(a) Employee's name.
(b) Job classification.
(c) Dates of training.
A facility that produces medical waste shall retain its training records for a minimum period of 3 years.
History: 2000 MR 19, Eff. Nov. 30, 2000.

325.1548 Remedies and penalties.

Rule 8. A person who violates any of the provisions of these rules shall be subject to the remedies and penalties under the act.
History: 2000 MR 19, Eff. Nov. 30, 2000.

325.1549 Contested cases; applicable law.

Rule 9. Administrative procedures in contested cases and judicial review shall be in accordance with, and subject to, chapters 4, 5, and 6 of Act No. 306 of the Public Acts of 1969, as amended, being §§24.271 to

24.306 of the Michigan Compiled Laws.
History: 2000 MR 19, Eff. Nov. 30, 2000.

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF ENVIRONMENTAL HEALTH
CAMPGROUNDS

R 325.1551 Definitions.

Rule 1. (1) As used in these rules:
(a) "Act" means Act No. 368 of the Public Acts of 1978, as amended, being §333.1101 et seq. of the Michigan Compiled Laws.
(b) "Camping cabin" means a recreational unit that is a hard-sided tent or shelter, that is less than 400 square feet in area, that is on skids designed to facilitate relocation from time to time, and that does not have a direct connection to a source of water.
(c) "Modern campground" means a campground where water flush toilets and water under pressure are available at a service building or where a water outlet and a sewer connection are available at each site.
(d) "Park model recreational unit" means a recreational unit that is built on a single chassis mounted on wheels, that has a gross trailer area of not more than 400 square feet in the set-up mode, and that is certified by the manufacturer as complying with American National Standards Institute Standard A119.5.
(e) "Primitive campground" means a campground where a service building that has water flush toilets is not provided and where sewer connections are not provided to sites.
"Sanitary facilities" means all of the following:
(i) The water supply and all water distribution facilities.
(ii) All sewage collection, sewage treatment, and sewage disposal facilities.
(iii) Service buildings.
(iv) Sanitary stations.
(g) "Sanitary station" means a facility where recreational units equipped with freshwater storage tanks and sewage holding tanks can be serviced.
(h) "Seasonally sited recreational unit" means a recreational unit that remains on a site for a continuous period of time of more than 31 days in 1 calendar year.
(i) "Service building" means a structure or portion of a structure that is used to house sanitary facilities, such as water closets, lavatories, and showers.
(j) "Site" means the camp space or land area designated for each recreational unit in a campground.
(k) "Temporary campground" means a campground that is used on a temporary or short-term basis that is not more than 4 weeks.
(l) "Temporary living quarters," as related to camping, means a recreational unit that is occupied or used for more than 4 hours between the hours of 10 p.m. to 6 a.m.
(2) The terms defined in the act have the same meanings when used in these rules.
History: 1954 ACS 68, Eff. July 2, 1971; 1954 ACS 96, Eff. July 19, 1978; 1979 AC; 1987 MR 3, Eff. Apr. 1, 1987; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.1552 Location.

Rule 2. (1) A campground owner shall not locate a campground where it may be detrimental to the public health, safety, or welfare.
(2) A campground owner shall not locate a campground on top of a completed Type II sanitary landfill, as described in Part 115 of Act No. 451 of the Public Acts of 1994, as amended, being §324.11501 et seq. of the Michigan Compiled Laws, or on a completed waste disposal facility, as described in Part 111 of Act No. 451 of the Public Acts of 1994, as amended, being §324.11101 et seq. of the Michigan Compiled Laws.
(3) A campground owner shall locate all outlets to the water distribution system above the elevation defining the 100-year floodplain. The owner shall locate the top of site sewer connections above the elevation defining the 100-year floodplain. This subrule does not apply to water outlets and sewer risers constructed

before the effective date of this rule.
History: 1954 ACS 68, Eff. July 2, 1971; 1979 AC; 1987 MR 3, Eff. Apr. 1, 1987; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.1553 Applications for construction permits; contents.

Rule 3. (1) A campground owner shall submit an application for a construction permit for a new campground or for an alteration or addition to an existing campground that includes information regarding the proposed physical facilities. A permit applicant shall submit 4 sets of plans which are drawn to scale, which show the plot plan and details of all planned facilities, and which clearly indicate how the campground will be constructed in order to comply with these rules. A permit applicant shall submit 3 sets with the application to the department and 1 set to the local or district health department having jurisdiction. If the total cost of a project is more than $15,000.00, then an engineer who is licensed in Michigan shall prepare all plans for new sanitary campground facilities or for additions or alterations to existing sanitary campground facilities.
(2) An application shall indicate the proposed method of garbage and refuse storage and disposal.
History: 1954 ACS 68, Eff. July 2, 1971; 1954 ACS 96, Eff. July 19, 1978; 1979 AC; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.1554 Construction permits.

Rule 4. A construction permit is nontransferable unless the department gives its written consent to a permit transfer. A permit expires 3 years after its date of issuance unless the department grants an extension. The department shall not include delays in construction incurred by reason of litigation incident to the planning or construction of a campground in calculating the date a permit expires. If a petition for extending a permit is granted, the department may require any alterations in the campground plans that would be necessary for approval if the plans for the campground were being submitted at the date that the extension is granted. The department shall list any conditions or stipulations for application approval on the construction permit.
History: 1954 ACS 68, Eff. July 2, 1971; 1979 AC; 2000 MR 19, Eff. Dec. 2000.

R 325.1555 Temporary campgrounds; application for license; operational period.

Rule 5. (1) An applicant for a temporary campground license shall submit an application on a form supplied by the department to the local health department having jurisdiction not less than 2 weeks before operating the temporary campground. The local health department shall then issue or deny the license and forward a copy of the completed application for a license or the reasons for denial to the applicant and to the department. The temporary campground shall not receive recreational units until a license is issued by the department or local health department and displayed at the campground. A temporary campground may operate for not more than a 2-week period, unless approval for an extension is obtained from the local health department. An applicant for an extension shall submit an application to the local health department not less than 3 days before the expiration date of the first 2-week period. A temporary campground shall not operate for more than a 4-week period. Not less than 30 days shall elapse between the end of one licensing period for a temporary campground and the beginning of another for the same campground location. These rules apply to temporary campgrounds, except as modified by this rule.
(2) A temporary campground owner or operator shall provide toilet facilities in a temporary campground in accordance with the schedules indicated in R 325.1555a for temporary primitive campgrounds and R 325.1555b for temporary modern campgrounds. If a temporary campground owner or operator operates the campground in conjunction with other events at the site or an adjacent site, then the owner shall ensure that these toilet facilities are accessible only to the campers. A temporary campground owner or operator shall provide 1 water outlet for every 50 sites, or fraction of 50 sites, and shall provide a sanitary station for the proper disposal of holding tank waste. The owner or operator need not provide showers but if the owner provides showers, then the owner shall follow the schedule in R 325.1571(5). The local health department having jurisdiction may approve alternative proposals for sanitary stations, including the use of a nearby sanitary station, the use of an existing manhole at a municipal sanitary sewer if an attendant is provided, or the use of a licensed septic tank pumper if the campground owner or operator obtains a contract with the

septic tank cleaner.
(3) A temporary campground owner or operator shall locate recreational units in a temporary campground to allow an unobstructed path which is not less than 4 feet wide and which extends completely around the recreational unit.
(4) If a water distribution system or a temporary water distribution system is proposed for a temporary campground, then the campground owner or operator shall obtain a construction permit from the department before the system is constructed.
(5) If electrical service or temporary electrical service is provided in a temporary campground, then the campground owner or operator shall obtain an approval from the electrical authority having jurisdiction before the electrical service or temporary electrical service is energized.
History: 1954 ACS 68, Eff. July 2, 1971; 1954 ACS 96, Eff. July 19, 1978; 1979 AC; 1987 MR 3, Eff. Apr. 1, 1987; 2000 MR Eff. Dec. 8, 2000.

R 325.1555a Temporary primitive campgrounds; privies.

Rule 5a. In a temporary primitive campground, the campground owner or operator shall provide 1 privy for each sex for every 25 sites, or fraction of 25 sites, or 2 unisex privies for each 30 sites, or fraction of 30 sites. The owner may substitute 1 portable privy with a contract for daily servicing for each privy or may substitute 2 portable privies with contracts for less than daily servicing for each privy.
History: 2000 MR 19, Eff. Dec. 8, 2000.

R 325.1555b Temporary modern campgrounds; toilet facilities.

Rule 5b. In a temporary modern campground, the campground owner or operator shall ensure that the number of flush toilets, urinals, and lavatories is in compliance with the fixture schedule in R 325.1571(2).
History: 2000 MR 19, Eff. Dec. 8, 2000.

R 325.1556 Sites; size and arrangement; identification and location; location of recreational units and other structures; permanent structures prohibited; construction verification; marking; drainage; occupancy.

Rule 6. (1) A site in a campground, unless designated on an approved plan as a walk-in site, shall abut on a roadway, shall be of such size and so arranged to provide space for a recreational unit and vehicle parking, and shall have not less than 15 feet of road frontage width and 1,200 square feet of area.
(2) A campground owner shall locate and identify all sites and other facilities as shown on the plans approved under the most recent construction permit issued by the department.
(3) Before the initial licensure of campground sites or other facilities, an applicant shall submit written verification that the construction was completed in accordance with the approved plans and specifications specified in subrule (2) of this rule. If plans prepared by a licensed engineer were required, then a licensed engineer shall provide written verification. An applicant shall submit inspection approval from the electrical authority having jurisdiction and inspection approval from the plumbing authority having jurisdiction before such utilities are initially placed into service.
(4) A campground owner shall locate recreational units or other structures, such as sheds and awnings, to provide an unobstructed path which is not less than 4 feet wide and which extends completely around the recreational unit. A campground owner shall ensure that a permanent structure requiring footings is not located on a campsite.
(5) A campground owner shall mark or arrange a site in a campground so that a camper can readily identify and locate the site.
(6) A campground owner shall ensure that a site is well-drained.
(7) A campground owner shall ensure that a site is occupied by not more than 8 persons and by not more than 1 recreational unit.
(8) A campground owner shall ensure that the number of sites in a campground is not more than the number authorized by the license.
History: 1954 ACS 68, Eff. July 2, 1971; 1954 ACS 96, Eff. July 19, 1978; 1979 AC; 1987 MR 3, Eff. Apr. 1, 1987; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.1556a Primitive campgrounds; privies; potable water; mobile homes prohibited.

Rule 6a. (1) A campground owner shall arrange a primitive campground so that every 25 sites, or fraction of 25 sites, are served with a potable water outlet and a privy for each sex or 2 unisex privies. However, a primitive campground area that does not have more than 10 sites may be served with a unisex privy and a potable water outlet. A campground owner shall not locate a privy closer than 50 feet to a site boundary.

(2) A campground owner shall ensure that a mobile home or single sectional mobile home is not located in a primitive campground.

History: 2000 MR 19, Eff. Dec. 8, 2000.

R 325.1556b Group camping areas.

Rule 6b. (1) A campground owner may provide a group camping area. If individual site water connections or site electrical connections are provided, the campground owner shall ensure that a recreational unit connects to the nearest electrical outlet or the nearest site water connection. The campground owner shall ensure that no more than 1 recreational unit connects to an electrical outlet or a site water connection.

(2) A campground owner is not required to mark an individual campsite boundary in group camping areas if the area boundary is marked and arranged so that it can be readily located and identified by campers. A campground owner shall identify a group camping area by appropriate signs that signify the area name or area number and the maximum number of people that are permitted to use the area. The campground manager shall keep a record at his or her office or home of the number of campers who use the group camping area. A campground owner shall limit the number of persons camping in a group camping area based on the facilities that the campground provides. Eight persons are the equivalent of 1 campsite.

(3) A group camping area shall contain a minimum of 1,200 square feet for each equivalent of 1 campsite.

(4) If a group camping area is provided, then a campground owner shall determine the number of sanitary facilities required in accordance with R 325.1556a(1) for primitive campgrounds and in accordance with R 325.1571(2) and (5) for modern campgrounds.

(5) A campground owner shall arrange a recreational unit in a group camping area so as not to restrict the access of emergency vehicles and recreational units and to provide an unobstructed path which is not less than 4 feet wide and which extends completely around the recreational unit.

History: 2000 MR 19, Eff. Dec. 8, 2000.

R 325.1557 Managers.

Rule 7. A campground owner shall designate a manager or person to be in charge of the campground. The owner shall post a notice indicating where the manager can be contacted when the manager is not on duty. The manager or person in charge shall be available when the campground is occupied. The manager shall post a notice, or provide campers with information at check-in, which indicates the location of the nearest available phone and which lists the locations and telephone numbers for police, fire, and medical assistance.

History: 1954 ACS 68, Eff. July 2, 1971; 1979 AC; 2000 MR 19, eff. Dec. 8, 2000.

R 325.1558 Roads and vehicles.

Rule8. (1) A campground owner shall provide a road right-of-way that is not less than 20 feet wide. A campground owner shall ensure that the right-of-way is free of obstructions and provides free and easy access to abutting sites. A campground owner shall maintain the traveled portion of the right-of-way in a passable and relatively dust-free condition when the campground is in operation.

(2) A campground owner shall ensure that vehicles do not park in the strip of land set aside for a road. A campground owner shall provide space for vehicle parking equal to a minimum of 1.5 the number of sites in a campground. The parking space shall be either on the sites or in a separate parking area.

History: 1954 ACS 68, Eff. July 2, 1971; 1979 AC; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.1559 Water supplies.

Rule 9. (1) A campground owner shall provide a potable water supply in accordance with Act No. 399 of the Public Acts of 1976, as amended, being §325.1001 et seq. of the Michigan Compiled Laws, and rules promulgated under the act, being R 325.10101 et seq. of the Michigan Administrative Code.

(2) A well drilling contractor shall construct any well installation that will serve a campground. A pump installer shall install any pump connected to a well that will serve a campground. A well drilling contractor and a pump installer shall be registered under authority of part 127 of the act. Within 5 years of the effective date of this rule, a campground owner shall provide an above grade room that houses pumping equipment, provide equipment for the disinfection of the entire water system, provide sample taps, and provide pump-to-waste facilities for all wells. A campground owner and person preparing campground plans shall ensure that the campground's water well or wells and water well pump or pumps operating with hydropneumatic storage systems are capable of providing a minimum of 30 gallons per minute or more than 30 gallons per minute if indicated by the sum of the following peak instantaneous demands for water:
(a) One gallon per minute for each site water connection that serves a mobile home or park model recreational unit, and 0.5 of a gallon per minute for each site water connection that serves other sites.
(b) A campground owner shall determine peak instantaneous demands for unthreaded convenience water outlets, water-using fixtures in service buildings, and other water-using facilities served by the campground's water system using the department's fixture method in the publication entitled "Michigan Criteria for Subsurface Sewage Disposal," dated April 1994, or using other nationally recognized methods for determining peak instantaneous demand. The publication may be obtained from the Michigan Department of Environmental Quality, Drinking Water and Radiological Protection Division, Environmental Health Section, P.O. Box 30630, Lansing, Michigan 48909-8130.
(3) A campground owner shall ensure that a water distribution system for a campground has a minimum depth of bury of 2 feet. If the system is designed for winter use, then the campground owner shall ensure that the system has a minimum depth of bury of 3.5 feet or more than 3.5 feet in areas where the frost line typically extends below 3.5 feet.
(4) A campground owner shall provide water under pressure to a campsite occupied by a single sectional mobile home. A campground owner shall ensure that the water distribution system piping is an adequate size to meet peak demands, as determined in subrule (2) of this rule, while maintaining a minimum residual pressure of 20 pounds per square inch.
(5) A campground owner shall ensure that a potable water supply system is designed, installed, and maintained to prevent contamination from nonpotable water sources and other nonpotable liquids. A campground owner shall ensure that below-ground stop and waste valves that have weep holes for use on the waterlines are not used.
(6) A campground owner shall ensure that any plastic waterline that is used in a campground is made of a material approved by the department and has a minimum pressure rating of 160 pounds per square inch. A campground owner shall ensure that the pipe, plastic fittings, and solvent cements are approved by NSF (National Sanitation Foundation) International for potable water supply and bear the NSF International seal of approval.
(7) A campground owner may locate an unthreaded convenience water outlet on a site but shall not allow a direct connection of the outlet to a recreational unit.
(8) If a site water connection is proposed, then a campground owner shall also propose and provide a site sewer connection, a mechanical sewage pump-out facility, or an agreement with a licensed septic tank cleaner.
(9) A campground owner shall not make or allow an alteration to a campground water system without prior written approval from the department. "An alteration to a water system" means the modification of, or addition to, an existing waterworks system or portion of the system that affects the flow, capacity, system service area, source, treatment, or reliability of the system.
History: 1954 ACS 68, Eff. July 2, 1971; 1954 ACS 96, Eff. July 19, 1978; 1979 AC; 1987 MR 3, Eff. Apr. 1, 1987; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.1560 Sewage and wastewater control.

Rule 10. (1) A campground owner and person preparing campground plans shall comply with all applicable statutes and rules regulating the methods and facilities for the collection, treatment, and disposal of sewage and other wastewater. A campground owner shall ensure that the nature, capacity, maintenance, and operation of the methods and facilities do not create unlawful pollution of the waters of the state, a nuisance condition, or a menace to health or safety.

(2) A campground owner shall not make or allow an alteration to a campground sewage system without prior written approval from the department. "An alteration to a sewage system" means the modification of, or addition to, an existing sewage collection, pumping, treatment, or disposal system or a portion of the system that affects the flow, capacity, system service area, or reliability of the system.
History: 1954 ACS 96, Eff. July 19, 1978; 1979 AC; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.1561 Sewage disposal in modern campgrounds.

Rule 11. (1) A campground owner shall connect his or her campground to a local government sewer system, when available. A campground owner and person preparing campground plans shall propose and provide a sewage treatment and disposal system that is acceptable to the department if a local government system is not available.
(2) A person designing a campground sewage disposal system shall base the design capacity of a facility described in subrule (1) of this rule on the following minimum estimated daily liquid flows:
(a) For sites that have water and sewer outlets available to each site - 75 gallons per site.
(b) For sites served by service buildings - 75 gallons per site.
(c) For primitive sites operated in conjunction with a modern campground - 30 gallons per day per primitive site.
(d) For sites for single sectional mobile homes and park model recreational units - 150 gallons per site.
(e) For other facilities operated in conjunction with a campground, a person designing a campground sewage disposal system may use the "Michigan Criteria for Subsurface Sewage Disposal," dated April 1994, as a reference in estimating daily design flow. This publication can be obtained from the Michigan Department of Environmental Quality, Drinking Water and Radiological Protection Division, Environmental Health Section, P.O. Box 30630, Lansing, Michigan 48909-8130.
(3) A campground owner shall ensure that a sewer service riser which is located at a site on a sewer system is trapped. A campground owner shall ensure that a service riser which is designed for winter use is trapped below the frost line. A campground owner shall ensure that the trap and riser is constructed of cast iron or rigid plastic pipe as approved by the plumbing division of the Michigan department of consumer and industry services. A campground owner shall ensure that the top of the riser extends not less than 2 inches above the surrounding ground surface. A campground owner shall ensure that a riser is capped when not in use. A campground owner shall ensure that the sewer service riser is not located closer than 5 feet from a water riser.
(4) A campground owner shall provide a sewer service riser to a campsite occupied by a single sectional mobile home.
(5) A campground owner shall ensure that a gravity sanitary sewer has sufficient capacity to accommodate the maximum hourly flow from the portion of the campground being served and is not less than 4 inches in diameter.
(6) A campground owner shall ensure that a sanitary sewer has a minimum depth of bury of 2 feet. If the sanitary sewer is designed for winter use, then the campground owner shall ensure that the sewer system has a minimum depth of bury of 3.5 feet or more than 3.5 feet in areas where the frost line typically extends below 3.5 feet.
(7) A campground owner shall ensure that a sanitary sewer is installed with sufficient slope to maintain a velocity of 2 feet per second at design flow.
(8) A campground owner shall ensure that all sanitary sewers which are less than 10 inches in diameter have cleanouts located at the end of each sewer line; at all changes in grade, size, and direction of more than 45 degrees; and at distances of not more than 100 feet along sewers.
(9) A campground owner shall ensure that all sewers which are 10 inches in diameter or larger have manholes located at all changes in grade, size, and direction and at distances of not more than 400 feet along sewers. A campground owner shall ensure that a flow channel through a manhole conforms to the slope and shape of the sanitary sewers.
(10) A person designing the campground sewage system shall specify leakage tests for the proposed construction of sanitary sewers.
(11) A campground owner shall ensure that a sanitary sewer or individual sewer service line is not laid within 10 feet horizontally of a waterline.

(12) If a sanitary sewer line crosses a waterline, then a campground owner shall ensure that there is a minimum of 12 inches of clear vertical isolation between the sewer line and the waterline. If it is not feasible to have a minimum of 12 inches of vertical isolation, then a campground owner shall ensure that the sanitary sewer line is encased in concrete for 5 feet on each side of the crossing. A campground owner shall ensure that 1 full length of waterline is centered over the sewer crossing.
History: 1954 ACS 68, Eff. July 2, 1971; 1954 ACS 96, Eff. July 19, 1978; 1979 AC; 1987 MR 3, Eff. Apr. 1, 1987; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.1562 Soil absorption systems; design and location.

Rule 12. A campground owner shall ensure that a soil absorption system is isolated not less than 10 feet from camping sites and is protected from vehicular traffic or other possible damage. A campground owner and person preparing campground plans may use the publication entitled "Michigan Criteria for Subsurface Sewage Disposal," dated April 1994, which is available from the Michigan Department of Environmental Quality, DrinkinG Water and Radiological Protection Division, Environmental Health Section, P.O. Box 30630, Lansing, Michigan 48909-8130, and accepted engineering practice as references in the design and location of an absorption field. A campground owner and person preparing plans for a campground shall ensure that a soil absorption system is not placed in the following locations:
(a) Beneath a building.
(b) Where the soil is unstable or unsettled. Muck or peat soils are unsuitable.
(c) Under a roadway or parking lot or paved area.
(d) Within 100 feet of a lake or stream as a minimum.
(e) In the path of a catchment area of surface runoff.
(f) Where a high groundwater table is closer than 4 feet to the ground surface.
(g) Within the minimum isolation distance of 75 feet from the well.
(h) Where surface flooding may occur.
(i) Where percolation rates above 30 minutes for water to fall 1 inch are encountered.
(j) Where adequate protection cannot be provided for the water-bearing formation.
(k) Where the area is insufficient on which to locate a second absorption field of at least the size of the original field.
History: 1954 ACS 68, Eff. July 2, 1971; 1979 AC; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.1563 Septic and dosing tanks and sewage pumping systems; design.

Rule 13. A campground owner and person preparing campground plans shall ensure that septic and dosing tanks and sewage pumping systems are designed in accordance with accepted engineering practice and may use as a guide the publication entitled "Michigan Criteria for Subsurface Sewage Disposal," dated April 1994, which is available from the Michigan Department of Environmental Quality, Drinking Water and Radiological Protection Division, Environmental Health Section, P.O. Box 30630, Lansing, Michigan 48909-8130.
History: 1954 ACS 68, Eff. July 2, 1971; 1954 ACS 96, Eff. July 19, 1978; 1979 AC; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.1564 Sewage treatment systems.

Rule 14. A person proposing to discharge treated wastewater to the waters of the state shall comply with Act No. 451 of the Public Acts of 1994, as amended, being §324.101 et seq. of the Michigan Compiled Laws.
History: 1954 ACS 68, Eff. July 2, 1971; 1979 AC; 1987 MR 3, Eff. Apr. 1, 1987; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.1566 Sewage disposal in primitive campgrounds.

Rule 16. A campground owner shall ensure that a privy, outhouse, or portable privy that is used as a means of sewage disposal for a primitive campground has a watertight vault which has a minimum storage capacity of 500 gallons and which is vented above the roof. A campground owner shall ensure that the interior of the privy above the vault is constructed of smooth, easily cleanable, nonabsorbent materials and

that all openings are screened. A campground owner shall ensure that a privy has a self-closing door. A campground owner shall ensure that a privy that has a capacity of more than 1 individual has privacy partitions. The department may approve proposals for a portable privy that has less than 500 gallons of storage capacity as part of the annual license to operate the campground if there is a service contract with a licensed septic tank cleaner and if the portable privy was pumped as needed during the previous year.
History: 1954 ACS 68, Eff. July 2, 1971; 1979 AC; 1987 MR 3, Eff. Apr. 1, 1987; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.1568 Seepage pits.

Rule 18. (1) A campground owner shall ensure that all of the following provisions are complied with in regard to seepage pits in the campground:
(a) A seepage pit or replacement seepage pit may only be used on a site licensed before the effective date of this subrule for the disposal of sink wastes and shower water where a direct connection is made between the sink drain and the seepage pit.
(b) The connection between the drain and pit shall not be more than 1.5 inches in diameter.
(c) Other wastes shall not be discharged into the seepage pit.
(d) Approval of the seepage pit or replacement seepage pit shall be restricted to areas where the soil affords acceptable seepage, the groundwater table is sufficiently low, and groundwater or surface water is not endangered.
(e) A seepage pit shall be located not less than 75 feet from a well.
(f) Sufficient data shall be submitted to the health department having jurisdiction to permit evaluating the requirements of this rule before approval may be given.
(g) A recreational unit on a site serviced by a seepage pit shall not be directly connected to the campground water system, unless approved in writing by the local health department having jurisdiction.
(2) The department or the local health department may temporarily or permanently prohibit the use of seepage pits on specific sites in a campground if the discharge of waste to the ground surface is observed or if the seepage pits are not operated and maintained in accord with the other requirements of this rule.
History: 1954 ACS 68, Eff. July 2, 1971; 1954 ACS 96, Eff. July 19, 1978; 1979 AC; 2000 MR 19, Eff. Dec. 2000.

R 325.1569
Source: 1987 AACS.

R 325.1571 Service buildings; required facilities.

Rule 21. (1) If a service building is proposed for a campground, then the campground owner shall ensure that the building is constructed in accordance with the applicable state or local building code and shall include the building details and specifications on the plan required by R 325.1553. In addition, the campground owner shall ensure that all of the following requirements are complied with:
(a) A window that opens is screened. An exterior door has a self-closing device.
(b) An adequate amount of light for cleaning and safety purposes is provided in the service building.
(c) Coved floor and wall joints are provided.
(d) The location of all toilets, lavatories, showers, urinals, enclosures, and floor drains is specified on the plans.
(2) The campground owner shall ensure that a service building at a modern campground is provided with toilet, urinal, and lavatory facilities in accordance with the following schedule:

Campground Minimum Number of Fixtures

	Toilets		Urinals	Lavatories	
Sites	M	F	M	M	F
1-15	1	1	1	1	1
16-30	1	2	1	2	2
31-45	2	2	1	3	3
46-60	2	3	2	3	3

61-100	3	4	2	4	4
101-130	4	5	3	5	5
131-160	5	6	3	6	6
161-190	6	7	3	7	7
191-220	7	8	4	8	8
221-250	8	9	4	9	9
251-280	9	10	4	10	10
281-310	10	11	5	11	11
311-340	11	12	5	12	12
341-370	12	13	5	13	13
371-400	13	14	5	14	14
401-430	14	15	6	15	15
431-460	15	16	6	16	16
461-490	16	17	6	17	17
491-520*	17	18	7	18	18

*A campground that has more than 520 sites shall provide 1 additional toilet and lavatory for each sex for each additional 30 sites or part of 30 sites and 1 additional men's urinal for each additional 100 sites.

(3) In a modern campground, if all the sites are provided with water and sewer services and if occupancy is limited to recreational units connected to the water and sewer systems, then a campground owner shall ensure that, at a minimum, 1 water flush toilet and 1 lavatory are provided.

(4) In a campground where only a portion of the sites are provided with water and sewer services, a campground owner shall ensure that the fixture schedule specified in subrule (2) of this rule is complied with for sites that do not have water and sewer services. The portion of a campground that is restricted to single sectional mobile homes that have sewer and water connections is exempt from the fixture schedule specified in subrule (2) of this rule.

(5) A campground owner has the option of providing showers. A campground that constructs a service building that has showers shall comply with the following schedule:

Shower Schedule

*Sites	1-45	46-80	81-100	101-150	151-200	201-250
Male	1	2	3	4	5	6
Female	1	2	3	4	5	6

**Sites	1-15	16-45	46-60	61-80	81-100	101-130	131-160	161-190	191-220	221-250
Unisex	1	2	3	4	5	6	7	8	9	10

*A campground that has more than 250 sites shall provide 1 shower for each sex for every 50 sites or part of 50 sites.

**A campground that has more than 250 sites shall provide 1 shower for every 30 sites or part of 30 sites.

(6) A campground owner shall provide an effective method, such as curbing or recessed floors, and shower curtains or partitions to keep shower water from dressing rooms and other areas in the service building. A campground owner shall provide a means of regulating the temperature of hot water so that the water temperature will not be more than 120 degrees Fahrenheit.

History: 1954 ACS 68, Eff. July 2, 1971; 1954 ACS 96, Eff. July 19, 1978; 1979 AC; 1987 MR 3, Eff. Apr. 1, 1987; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.1574 Sanitary facilities in campgrounds adjacent to other establishments.

Rule 24. (1) If a primitive campground is operated adjacent to, or in conjunction with, a modern campground served by a service building, then a campground owner shall provide an additional toilet and lavatory for each sex for every 50 sites or fraction of 50 sites in the primitive campground.

(2) If a campground is operated in connection with a resort or other business establishment, then a campground owner shall base the number of sanitary facilities required in excess of the facilities required by the schedule for sites alone on the total number of persons who will use the facilities.
(3) A campground owner shall ensure that the tables entitled "Typical Wastewater Flows" contained in the United States Environmental Protection Agency "Design Manual: Onsite Wastewater Treatment and Disposal Systems," dated October 1980, are followed in determining the additional design capacity of the sewage facility required because of the application of this rule. The applicable tables are adopted by reference in these rules and may be obtained from the United States Environmental Protection Agency, National Service Center for Publications, P.O. Box 42419, Cincinnati, Ohio 45242 at no cost for one copy.
History: 1954 ACS 68, Eff. July 2, 1971; 1954 ACS 96, Eff. July 19, 1978; 1979 AC; 1987 MR 3, Eff. Apr. 1, 1987; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.1576 Sanitary stations.

Rule 26. (1) A campground owner shall provide at least 1 sanitary station of approved design for a modern campground and also for a primitive campground. A modern campground catering solely to recreational vehicles that connect to the campground's water and sewer systems and a primitive campground served solely by hand pump wells are exempt from this subrule.
(2) A campground owner shall ensure that a sanitary station is designed and maintained to prevent contamination from being introduced into the fresh water storage tanks or campground water supply system. A campground owner shall ensure that sanitary stations have a tower for filling fresh water storage tanks and also a separate tower for rinsing sewage spills at the sewage dumping facility. A campground that has individual water connections for all of its sites is exempt from having to provide a tower for filling fresh water storage tanks.
(3) A campground owner shall ensure that all of the following provisions are complied with:
(a) A vacuum breaker is installed at the high point of each tower.
(b) An automatic device is installed to keep hoses off the ground.
(c) A foot-operated hatch is installed to cover the sanitary station sewer riser when not in use.
(d) Signs shall be placed at a sanitary station to identify its purpose and give instructions for its proper use.
History: 1954 ACS 68, Eff. July 2, 1971; 1954 ACS 96, Eff. July 19, 1978; 1979 AC; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.1585

Source: 1987 AACS.

R 325.1586 Variances.

Rule 36. A campground shall comply with these rules; however, the department may grant a written variance if the department determines that strict compliance with these rules would cause unusual practical difficulties and hardships, that the variance would not affect the safe and healthful operation of the campground, and that the spirit and intent of the rules can be maintained. A person shall make a request for a variance to the department in writing.
History: 1954 ACS 96, Eff. Aug. 4, 1978; 1979 AC; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.1599 Rescissions.

Rule 49. The following rules of the department of environmental quality or director of environmental quality are rescinded:
(a) Rules entitled "Camps," being R 325.381 to R 325.383 of the Michigan Administrative Code and appearing on pages 2253 and 2254 of the 1954 Michigan Administrative Code.
(b) Rules entitled "Trailer Coach Parks," being R 325.500 to R 325.538 of the Michigan Administrative Code and appearing on pages 2265 to 2278 of the 1954 Michigan Administrative Code.
(c) A rule entitled "Trailer Parks Operated Only During the Period Between May 1 and December 1," being R 325.540 of the Michigan Administrative Code and appearing on pages 2860 to 2862 of the 1963 Annual Supplement to the Code.
(d) Rules entitled "Sanitation Standards for Garbage and Refuse Disposal at Camps and Summer Resorts,"

being R 325.601 to R 325.604 of the Michigan Administrative Code and appearing on page 2286 of the 1954 Michigan Administrative Code.

(e) Rules entitled "Sanitation Standards for Summer Recreation Camps," being R 325.621 and R 325.635 of the Michigan Administrative Code and appearing on pages 2286 to 2290 of the 1954 Michigan Administrative Code.

(f) Rules entitled "Sanitation Standards for Cabin Camps", being R 325.641 to R 325.655 of the Michigan Administrative Code and appearing on pages 2290 to 2293 of the 1954 Michigan Administrative Code.

(g) Rules entitled "Sanitation Standards for Water Carried Sewage Disposal Systems at Camps and Summer Resorts," being R 325.671 to R 325.676 of the Michigan Administrative Code and appearing on pages 2293 and 2294 of the 1954 Michigan Administrative Code.

History: 1954 ACS 68, Eff. July 2, 1971; 1979 AC; 2000 MR 19, Eff. Dec. 8, 2000.

DIVISION OF WATER SUPPLY

GROUNDWATER QUALITY CONTROL

PART 1. WELL CONSTRUCTION CODE

R 325.1601
Source: 1994 AACS.

R 325.1601a
Source: 1994 AACS.

R 325.1602
Source: 1994 AACS.

R 325.1603
Source: 1994 AACS.

R 325.1603a
Source: 1994 AACS.

R 325.1604
Source: 1994 AACS.

R 325.1605
Source: 1994 AACS.

R 325.1606
Source: 1994 AACS.

R 325.1607
Source: 1994 AACS.

R 325.1608
Source: 1994 AACS.

R 325.1610
Source: 1994 AACS.

R 325.1611
Source: 1994 AACS.

R 325.1612
Source: 1994 AACS.

R 325.1613
Source: 1994 AACS.

R 325.1621
Source: 1994 AACS.

R 325.1622
Source: 1994 AACS.

R 325.1624
Source: 1994 AACS.

R 325.1625
Source: 1994 AACS.

R 325.1626
Source: 1994 AACS.

R 325.1627
Source: 1994 AACS.

R 325.1631
Source: 1997 AACS.

R 325.1631a
Source: 1994 AACS.

R 325.1631b
Source: 1994 AACS.

R 325.1631c
Source: 1994 AACS.

R 325.1631d
Source: 1994 AACS.

R 325.1632
Source: 1994 AACS.

R 325.1632a
Source: 1994 AACS.

R 325.1633
Source: 1997 AACS.

R 325.1633a
Source: 1994 AACS.

R 325.1634
Source: 1997 AACS.

R 325.1634a
Source: 1994 AACS.

R 325.1635
Source: 1994 AACS.

R 325.1636
Source: 1997 AACS.

R 325.1637
Source: 1994 AACS.

R 325.1637a
Source: 1994 AACS.

R 325.1638
Source: 1994 AACS.

R 325.1639
Source: 1994 AACS.

R 325.1640
Source: 1994 AACS.

R 325.1641
Source: 1994 AACS.

R 325.1642
Source: 1994 AACS.

R 325.1651
Source: 1994 AACS.

R 325.1652
Source: 1997 AACS.

R 325.1653
Source: 1994 AACS.

R 325.1653a
Source: 1994 AACS.

R 325.1654
Source: 1994 AACS.

R 325.1655
Source: 1994 AACS.

R 325.1656
Source: 1994 AACS.

R 325.1656a
Source: 1994 AACS.

R 325.1657
Source: 1994 AACS.

R 325.1657a
Source: 1994 AACS.

R 325.1658
Source: 1994 AACS.

R 325.1661
Source: 1994 AACS.

R 325.1662
Source: 1994 AACS.

R 325.1663
Source: 1994 AACS.

R 325.1664
Source: 1994 AACS.

R 325.1665
Source: 1994 AACS.

R 325.1666
Source: 1997 AACS.

R 325.1667
Source: 1994 AACS.

R 325.1668
Source: 1994 AACS.

R 325.1669
Source: 1994 AACS.

R 325.1670
Source: 1994 AACS.

R 325.1671
Source: 1997 AACS.

R 325.1672
Source: 1994 AACS.

R 325.1673
Source: 1994 AACS.

R 325.1674
Source: 1994 AACS.

R 325.1674a
Source: 1994 AACS.

R 325.1675
Source: 1994 AACS.

R 325.1676
Source: 1994 AACS.

PART 2. DRILLING CONTRACTORS' AND PUMP INSTALLERS' REGISTRATION

R 325.1701
Source: 1994 AACS.

R 325.1701a
Source: 1994 AACS.

R 325.1702
Source: 1994 AACS.

R 325.1703
Source: 1994 AACS.

R 325.1704
Source: 1994 AACS.

R 325.1705
Source: 1997 AACS.

R 325.1705a
Source: 1994 AACS.

R 325.1706
Source: 1994 AACS.

R 325.1707
Source: 1994 AACS.

R 325.1707a
Source: 1994 AACS.

R 325.1708
Source: 1994 AACS.

R 325.1709
Source: 1994 AACS.

R 325.1711
Source: 1994 AACS.

PART 3. DRILLING MACHINES AND SERVICE VEHICLES

R 325.1721
Source: 1994 AACS.

R 325.1722
Source: 1994 AACS.

NURSING HOMES

R 325.1901—R 325.2097
Source: 1997 AACS.

DEPARTMENT OF COMMUNITY HEALTH

BUREAU OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH

PUBLIC BATHING BEACHES

R 325.2101
Source: 1995 AACS.

R 325.2102
Source: 1995 AACS.

R 325.2103
Source: 1995 AACS.

DEPARTMENT OF ENVIRONMENTAL QUALITY

ENVIRONMENTAL AND OCCUPATIONAL HEALTH SERVICES ADMINISTRATION

PUBLIC SWIMMING POOLS

PART 1. GENERAL PROVISIONS

R 325.2111
Source: 1983 AACS.

R 325.2113
Source: 1983 AACS.

R 325.2114
Source: 1983 AACS.

R 325.2115
Source: 1983 AACS.

R 325.2116
Source: 1983 AACS.

R 325.2117
Source: 1983 AACS.

R 325.2118
Source: 1983 AACS.

R 325.2118a
Source: 1983 AACS.

R 325.2118b
Source: 1983 AACS.

PART 2. CONSTRUCTION

R 325.2121
Source: 1983 AACS.

R 325.2122
Source: 1983 AACS.

R 325.2123
Source: 1983 AACS.

R 325.2125
Source: 1983 AACS.

R 325.2126
Source: 1983 AACS.

R 325.2127
Source: 1983 AACS.

R 325.2128
Source: 1983 AACS.

R 325.2129
Source: 1983 AACS.

R 325.2131
Source: 1983 AACS.

R 325.2132
Source: 1983 AACS.

R 325.2133
Source: 1983 AACS.

R 325.2134
Source: 1983 AACS.

R 325.2136
Source: 1983 AACS.

R 325.2137
Source: 1983 AACS.

R 325.2138
Source: 1983 AACS.

R 325.2141
Source: 1983 AACS.

R 325.2142
Source: 1983 AACS.

R 325.2143
Source: 1983 AACS.

R 325.2144
Source: 1983 AACS.

R 325.2145
Source: 1983 AACS.

R 325.2146
Source: 1983 AACS.

R 325.2151
Source: 1983 AACS.

R 325.2152
Source: 1983 AACS.

R 325.2153
Source: 1983 AACS.

R 325.2154
Source: 1983 AACS.

R 325.2155
Source: 1983 AACS.

R 325.2156
Source: 1983 AACS.

R 325.2157
Source: 1983 AACS.

R 325.2158
Source: 1983 AACS.

R 325.2159
Source: 1983 AACS.

R 325.2161
Source: 1983 AACS.

R 325.2163
Source: 1983 AACS.

R 325.2165
Source: 1983 AACS.

R 325.2171
Source: 1983 AACS.

R 325.2172
Source: 1983 AACS.

R 325.2174
Source: 1983 AACS.

R 325.2175
Source: 1983 AACS.

R 325.2176
Source: 1983 AACS.

R 325.2178
Source: 1983 AACS.

R 325.2181
Source: 1983 AACS.

PART 3. OPERATION AND USE

R 325.2191
Source: 1983 AACS.

R 325.2192
Source: 1983 AACS.

R 325.2193
Source: 1983 AACS.

R 325.2194
Source: 1983 AACS.

R 325.2195
Source: 1983 AACS.

R 325.2196
Source: 1983 AACS.

R 325.2197
Source: 1983 AACS.

R 325.2198
Source: 1983 AACS.

R 325.2199
Source: 1983 AACS.

DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES
OFFICE OF DIRECTOR
AMBULANCES

R 325.2201—R 325.2208
Source: 1997 AACS.

BUREAU OF HEALTH CARE ADMINISTRATION
ADVANCED EMERGENCY MEDICAL SERVICES

R 325.2211—R 325.2246
Source: 1997 AACS.

BUREAU OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH
OCCUPATIONAL AIR CONTAMINANTS AND PHYSICAL AGENTS

R 325.2430
Source: 1997 AACS.

DEPARTMENT OF AGRICULTURE
FOOD SERVICE SANITATION

R 325.2501—R 325.2505
Source: 1997 AACS.

DEPARTMENT OF COMMUNITY HEALTH
OFFICE OF THE DIRECTOR
MERCURY LEVELS IN FISH FROM MICHIGAN WATERS

R 325.2601—R 325.2605
Source: 1997 AACS.

DEPARTMENT OF STATE POLICE
SPECIAL OPERATIONS DIVISION
TESTS FOR BREATH ALCOHOL

R 325.2651
Source: 1994 AACS.

R 325.2652
Source: 1994 AACS.

R 325.2653
Source: 1994 AACS.

R 325.2654
Source: 1992 AACS.

R 325.2655
Source: 1994 AACS.

R 325.2656
Source: 1994 AACS.

R 325.2657
Source: 1997 AACS.

R 325.2658
Source: 1994 AACS.

FORENSIC SCIENCE DIVISION

ALCOHOL TESTING OF BLOOD AND URINE

R 325.2671
Source: 1993 AACS.

R 325.2672
Source: 1993 AACS.

R 325.2673
Source: 1993 AACS.

R 325.2674
Source: 1993 AACS.

R 325.2675
Source: 1993 AACS.

R 325.2676
Source: 1997 AACS.

R 325.2677
Source: 1997 AACS.

DEPARTMENT OF ENVIRONMENTAL QUALITY

BUREAU OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH

SOLID WASTE DISPOSAL

R 325.2701—R 325.2789
Source: 1997 AACS.

DEPARTMENT OF COMMUNITY HEALTH

OFFICE OF THE DIRECTOR

CERTIFICATION OF SPECIAL SERVICES IN HOSPITALS

R 325.3001—R 325.3187
Source: 1997 AACS.

OFFICE OF VITAL AND HEALTH STATISTICS

COMPLETION, FILING, AND REGISTRATION OF VITAL RECORDS DOCUMENTS

R 325.3201
Source: 1981 AACS.

R 325.3202
Source: 1981 AACS.

R 325.3203
Source: 1981 AACS.

R 325.3204
Source: 1981 AACS.

R 325.3205
Source: 1981 AACS.

R 325.3206
Source: 1981 AACS.

R 325.3207
Source: 1981 AACS.

R 325.3208
Source: 1981 AACS.

R 325.3209
Source: 1981 AACS.

R 325.3210
Source: 1981 AACS.

R 325.3211
Source: 1981 AACS.

R 325.3212
Source: 1981 AACS.

R 325.3213
Source: 1981 AACS.

R 325.3214
Source: 1981 AACS.

R 325.3215
Source: 1981 AACS.

R 325.3216
Source: 1981 AACS.

R 325.3217
Source: 1981 AACS.

R 325.3218
Source: 1981 AACS.

R 325.3219
Source: 1981 AACS.

R 325.3220
Source: 1981 AACS.

R 325.3221
Source: 1981 AACS.

VITAL RECORDS INSPECTION AND DISCLOSURE

R 325.3231
Source: 1983 AACS.

R 325.3232
Source: 1983 AACS.

R 325.3233
Source: 1983 AACS.

R 325.3234
Source: 1983 AACS.

R 325.3235
Source: 1983 AACS.

R 325.3236
Source: 1983 AACS.

AMENDMENTS TO VITAL RECORDS

R 325.3251
Source: 1981 AACS.

R 325.3252
Source: 1981 AACS.

R 325.3253
Source: 1981 AACS.

R 325.3254
Source: 1981 AACS.

R 325.3255
Source: 1981 AACS.

R 325.3256
Source: 1981 AACS.

R 325.3257
Source: 1981 AACS.

R 325.3258
Source: 1981 AACS.

R 325.3259
Source: 1981 AACS.

R 325.3260
Source: 1981 AACS.

R 325.3261
Source: 1981 AACS.

R 325.3262
Source: 1981 AACS.

R 325.3263
Source: 1981 AACS.

R 325.3264
Source: 1981 AACS.

R 325.3265
Source: 1981 AACS.

R 325.3266
Source: 1981 AACS.

R 325.3267
Source: 1981 AACS.

DIVISION OF CHILD HEALTH

HEARING SCREENING AND TESTS

R 325.3271
Source: 1981 AACS.

R 325.3272
Source: 1981 AACS.

R 325.3273
Source: 1981 AACS.

R 325.3274
Source: 1981 AACS.

R 325.3275
Source: 1981 AACS.

R 325.3276
Source: 1981 AACS.

DEPARTMENT OF AGRICULTURE

BUREAU OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH

MOBILE HOME PARKS AND SEASONAL MOBILE HOME PARKS

PART 1. GENERAL PROVISIONS

R 325.3311

Source: 1984 AACS.

R 325.3312
Source: 1980 AACS.

R 325.3313
Source: 1980 AACS.

R 325.3314
Source: 1984 AACS.

PART 2. WATER SUPPLY SYSTEMS

R 325.3321
Source: 1984 AACS.

PART 3. SEWAGE COLLECTION AND DISPOSAL SYSTEMS

R 325.3331
Source: 1984 AACS.

R 325.3332
Source: 1984 AACS.

R 325.3333
Source: 1980 AACS.

R 325.3334
Source: 1984 AACS.

R 325.3335
Source: 1984 AACS.

PART 4. DRAINAGE

R 325.3341
Source: 1984 AACS.

R 325.3342
Source: 1984 AACS.

R 325.3343
Source: 1984 AACS.

R 325.3344
Source: 1980 AACS.

R 325.3345
Source: 1980 AACS.

R 325.3346
Source: 1980 AACS.

R 325.3347
Source: 1984 AACS.

R 325.3348
Source: 1980 AACS.

R 325.3349
Source: 1980 AACS.

PART 5. GARBAGE AND RUBBISH STORAGE AND DISPOSAL

R 325.3351
Source: 1984 AACS.

R 325.3352
Source: 1984 AACS.

R 325.3353
Source: 1984 AACS.

R 325.3354
Source: 1984 AACS.

PART 6. INSECT AND RODENT CONTROL

R 325.3361
Source: 1984 AACS.

R 325.3362
Source: 1984 AACS.

R 325.3363
Source: 1980 AACS.

PART 7. GENERAL OPERATION, MAINTENANCE, AND SAFETY

R 325.3371
Source: 1984 AACS.

R 325.3372
Source: 1984 AACS.

R 325.3373
Source: 1984 AACS.

R 325.3374
Source: 1984 AACS.

PART 8. COORDINATION OF APPROVALS FOR CONSTRUCTION

R 325.3381
Source: 1984 AACS.

R 325.3382
Source: 1984 AACS.

R 325.3383
Source: 1980 AACS.

R 325.3384
Source: 1984 AACS.

R 325.3385

Source: 1984 AACS.

PART 9. CERTIFICATION OF COMPLIANCE

R 325.3391
Source: 1984 AACS.

R 325.3392
Source: 1984 AACS.

R 325.3393
Source: 1984 AACS.

DEPARTMENT OF COMMUNITY HEALTH
BUREAU OF DISEASE CONTROL AND LABORATORY SERVICES
VENEREAL DISEASE

R 325.3401—R 325.3409
Source: 1997 AACS.

R 325.3410
Source: 1981 AACS.

DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES
OCCUPATIONAL HEALTH STANDARDS COMMISSION
EMPLOYEE MEDICAL RECORDS AND TRADE SECRETS

R 325.3451
Source: 1983 AACS.

R 325.3452 Definitions; A to E.

Rule 2. As used in these rules:

(a) "Access" means the right and opportunity to examine and copy.

(b) "Act" means Act No. 154 of the Public Acts of 1974, as amended, being 408.1001 et seq. of the Michigan Compiled Laws.

(c) "Analysis using exposure or medical records" means any compilation of data or any research, statistical, or other study based, at least in part, on information collected from individual employee exposure or medical records or information collected from health insurance claim records, if either the analysis has been reported to an employer or no further work is currently being done by the person who is responsible for preparing the analysis.

(d) "Department" means the department of consumer and industry services.

(e) "Designated representative" means an individual or organization to whom or to which an employee gives written authorization to exercise a right of access. For purposes of access to employee exposure records and analyses using exposure or medical records, a recognized or certified collective bargaining agent shall be treated automatically as a designated representative.

(f) "Director" means the director of the department.

(g) "Employee" means a current employee, a former employee, or an employee who is being assigned or transferred to work where there will be exposure to toxic substances or harmful physical agents. In the case of a deceased or legally incapacitated employee, the employee's legal representative may directly exercise all of the employee's rights under these rules.

(h) "Employee exposure record" means a record that contains any of the following kinds of information concerning employee exposure to toxic substances or harmful physical agents:

(i) Workplace environmental monitoring or measuring, including personal, area, grab, wipe, or other forms of sampling, and related collection and analytical methodologies, calculations, and other background data relevant to the interpretation of the results obtained.
(ii) Biological monitoring results that directly assess the absorption of a substance or agent by body systems, such as the level of a chemical in the blood, urine, breath, hair, or fingernails, but not including results that assess the biological effect of a substance or agent or which assess an employee's use of alcohol or drugs.
(iii) Material safety data sheets indicating that the material may pose a hazard to human health.
(iv) In the absence of the information identified in paragraphs (i) to (iii) of this subdivision, any other record, such as chemical, common, or trade name, that reveals the identity of a toxic substance or harmful physical agent.
(i) "Employee medical record" means a record concerning any medical tests, examinations, or health status of an employee that is made or maintained by a physician, nurse, technician, or other health care personnel, including the items listed in paragraphs (i) to (vi) of this subdivision, but does not include the items listed in paragraphs (vii) to (x) of this subdivision:
(i) Medical and employment questionnaires or histories, including job descriptions and occupational exposures.
(ii) The results of preplacement, periodic, or episodic medical examinations and laboratory tests, including x-ray examinations and all biological monitoring.
(iii) Medical opinions, diagnoses, progress notes, and recommendations.
(iv) Descriptions of treatments and prescriptions, including first aid records.
(v) Employee medical complaints.
(vi) Death certificates.
(vii) Physical specimens, such as blood or urine samples, which are routinely discarded as a part of normal medical practice and which are not required to be maintained by other legal requirements.
(viii) Records concerning health insurance claims which are maintained separately from an employer's medical program and its records and which are not accessible to the employer by employee name or other direct personal identifier, such as a social security number or payroll number.
(ix) Records concerning voluntary employee assistance programs, such as alcohol, drug abuse, or personal counseling programs, if maintained separately from an employer's medical program and its records.
(x) Records which are created solely in preparation for litigation and which are privileged from discovery under the applicable rules of procedure or evidence.
(j) "Employer" means a current employer, a former employer, or a successor employer.
(k) "Exposure" or "exposed" means subjection of an employee to a toxic substance or harmful physical agent in the course of employment through any route of entry, including inhalation, ingestion, skin contact, or absorption, and includes past and potential exposure. "Exposure" or "exposed" does not include situations where an employer can demonstrate that a toxic substance or harmful physical agent is not used, handled, stored, generated, or present in the workplace in any manner different from typical nonoccupational situations.
(l) "Health professional" means any of the following persons who provide medical or other occupational health services to exposed employees:
(i)A physician.
(ii) A nurse.
(iii) An industrial hygienist.
(iv) A toxicologist.
(v) An epidemiologist.
History: 1979 ACS 15, Eff. June 30, 1983; 1993 MR 6, Eff. July 2, 1993; 1998 MR 2, Eff. Mar. 6, 1998

R 325.3453 Definitions; R to T.

Rule 3. As used in these rules:
(a) "Record" means an item, a collection, or a grouping of information, regardless of the form or process by which it is maintained, including paper documents, microfilm, microfiche, x-ray film, or automated data processing.
(b) "Specific chemical identity" means the chemical name, chemical abstract service (CAS) registry number,

or any other information that reveals the precise chemical designation of the substance.
(c) ”Specific written consent” means a written authorization that contains all of the following information:
(i) The name and signature of the employee who authorized the release of medical information.
(ii) The date of written authorization.
(iii) The name of the individual or organization that is authorized to release the medical information.
(iv) The name of the designated representative, either an individual or an organization, that is authorized to receive the released information.
(v) A general description of the medical information that is authorized to be released.
(vi) A general description of the purpose for the release of the medical information.
(vii) A date or condition upon which the written authorization shall expire, if less than 1 year. A written authorization does not operate to authorize the release of medical information that is not in existence on the date of written authorization, unless expressly authorized, and does not operate for more than 1 year from the date of written authorization. A written authorization may be revoked, in writing, prospectively at any time.
(d) “Toxic substance or harmful physical agent” means a chemical substance, a biological agent, or physical stress, such as noise, heat, cold, vibration, repetitive motion, ionizing and nonionizing radiation, hypobaric or hyperbaric pressure, or other commonly recognized environmental stress, to which any of the following provisions apply:
(i) Is regulated by a federal or state law or rule due to a health hazard.
(ii) Is listed in the latest printed edition of the national institute for occupational safety and health (NIOSH) registry of toxic effects of chemical substances. Appendix B to these rules describes the availability of the NIOSH registry of toxic effects of chemical substances. Appendix B may be obtained pursuant to the provisions of R 325.3476.
(iii) Has yielded positive evidence of an acute or chronic health hazard in human, animal, or other biological testing that is conducted by, or known to, an employer.
(iv) Has a material safety data sheet which is available to an employer and which indicates that the material may pose a hazard to human health.
(e) “Trade secret” means any confidential formula, pattern, process, device, or information or compilation of information that is used in an employer's business and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it.
History: 1979 ACS 15, Eff. June 30, 1983; 1993 MR 6, Eff. July 2, 1993 1998 MR 2, Eff. Mar. 6, 1998.

R 325.3454
Source: 1983 AACS.

R 325.3455
Source: 1983 AACS.

R 325.3456
Source: 1993 AACS.

R 325.3457
Source: 1993 AACS.

R 325.3458
Source: 1983 AACS.

R 325.3459
Source: 1993 AACS.

R 325.3460
Source: 1993 AACS.

R 325.3461
Source: 1993 AACS.

R 325.3462
Source: 1983 AACS.

R 325.3463
Source: 1983 AACS.

R 325.3464
Source: 1993 AACS.

R 325.3465
Source: 1983 AACS.

R 325.3466
Source: 1983 AACS.

R 325.3467
Source: 1993 AACS.

R 325.3468
Source: 1983 AACS.

R 325.3469
Source: 1983 AACS.

R 325.3470
Source: 1983 AACS.

R 325.3471
Source: 1993 AACS.

R 325.3472
Source: 1993 AACS.

R 325.3472a
Source: 1993 AACS.

R 325.3473
Source: 1993 AACS.

R 325.3474
Source: 1983 AACS.

R 325.3475
Source: 1983 AACS.

R 325.3476 Rules and appendices; obligations; availability; permission to reproduce.

Rule 26. (1) The information contained in the appendices to these rules is informational and is not intended, by itself, to create any additional obligations not otherwise imposed by these rules, nor to detract from any existing obligations.

(2) Copies of these rules and appendix A and appendix B are available to affected employers and employees at no cost from the Michigan Department of Consumer and Industry Services, Division of Occupational Health, P. O. Box 30649, Lansing, Michigan 48909.

(3) Permission to reproduce any of these documents in full is granted by the director.

History: 1979 ACS 15, Eff. June 30, 1983; 1993 MR 6, Eff. July 2, 1993; 1998 MR 2, Eff. Mar. 6, 1998.

DEPARTMENT OF COMMUNITY HEALTH

BUREAU OF DISEASE CONTROL AND LABORATORY SERVICES

IMMUNIZATIONS IN SCHOOLS, DAY CARE CENTERS, AND CAMPING PROGRAMS

R 325.3501—R 325.3506
Source: 1997 AACS.

R 325.3507
Source: 1997 AACS.

R 325.3508—R 325.3513
Source: 1997 AACS.

DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES

BUREAU OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH

ASBESTOS CONTRACTOR LICENSING

R 325.3551
Source: 1988 AACS.

R 325.3553
Source: 1988 AACS.

R 325.3555
Source: 1988 AACS.

R 325.3557
Source: 1988 AACS.

R 325.3559
Source: 1988 AACS.

R 325.3561
Source: 1988 AACS.

R 325.3563
Source: 1988 AACS.

R 325.3565
Source: 1988 AACS.

R 325.3567
Source: 1988 AACS.

R 325.3569
Source: 1988 AACS.

R 325.3571
Source: 1988 AACS.

AGRICULTURAL LABOR CAMPS

R 325.3601
Source: 1989 AACS.

R 325.3603

Source: 1989 AACS.

R 325.3605
Source: 1989 AACS.

R 325.3607
Source: 1989 AACS.

R 325.3609
Source: 1989 AACS.

R 325.3611
Source: 1989 AACS.

R 325.3613
Source: 1989 AACS.

R 325.3615
Source: 1989 AACS.

R 325.3617
Source: 1989 AACS.

R 325.3619
Source: 1989 AACS.

R 325.3621
Source: 1989 AACS.

R 325.3623
Source: 1989 AACS.

R 325.3625
Source: 1989 AACS.

R 325.3627
Source: 1989 AACS.

R 325.3629
Source: 1989 AACS.

R 325.3631
Source: 1989 AACS.

R 325.3633
Source: 1989 AACS.

R 325.3635
Source: 1989 AACS.

R 325.3637
Source: 1989 AACS.

R 325.3639
Source: 1989 AACS.

R 325.3641
Source: 1989 AACS.

R 325.3643
Source: 1989 AACS.

R 325.3699
Source: 1989 AACS.

DEPARTMENT OF COMMUNITY HEALTH
OFFICE OF THE DIRECTOR
TOXIC SUBSTANCE LOAN PROGRAM

R 325.3701—R 325.3709
Source: 1997 AACS.

OFFICE OF SUBSTANCE ABUSE SERVICES
SUBSTANCE ABUSE SERVICES PROGRAMS

R 325.4001—R 325.4084
Source: 1997 AACS.

PROGRAM MATCH REQUIREMENTS

R 325.4151
Source: 1981 AACS.

R 325.4152
Source: 1981 AACS.

R 325.4153
Source: 1981 AACS.

R 325.4154
Source: 1997 AACS.

R 325.4155
Source: 1981 AACS.

R 325.4156
Source: 1981 AACS.

DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES
DIVISION OF RADIOLOGICAL HEALTH
IONIZING RADIATION

PART 14. MAMMOGRAPHY

GENERAL PROVISIONS

R 325.5601
Source: 1993 AACS.

R 325.5602
Source: 1993 AACS.

R 325.5603
Source: 1993 AACS.

MAMMOGRAPHY AUTHORIZATION

R 325.5605
Source: 1993 AACS.

R 325.5606
Source: 1993 AACS.

R 325.5607
Source: 1993 AACS.

R 325.5608
Source: 1993 AACS.

R 325.5609
Source: 1993 AACS.

R 325.5610
Source: 1993 AACS.

R 325.5611
Source: 1993 AACS.

R 325.5612
Source: 1993 AACS.

R 325.5613
Source: 1993 AACS.

MAMMOGRAPHY SUPERVISOR

R 325.5617
Source: 1993 AACS.

R 325.5618
Source: 1993 AACS.

R 325.5619
Source: 1993 AACS.

OPERATORS OF MAMMOGRAPHY EQUIPMENT

R 325.5621
Source: 1993 AACS.

R 325.5622
Source: 1993 AACS.

R 325.5623
Source: 1993 AACS.

R 325.5624
Source: 1993 AACS.

R 325.5625

Source: 1993 AACS.

RADIATION PHYSICIST

R 325.5631
Source: 1993 AACS.

R 325.5632
Source: 1993 AACS.

R 325.5633
Source: 1993 AACS.

X-RAY EQUIPMENT

R 325.5637
Source: 1993 AACS.

R 325.5638
Source: 1993 AACS.

R 325.5639
Source: 1993 AACS.

R 325.5640
Source: 1993 AACS.

R 325.5641
Source: 1993 AACS.

R 325.5642
Source: 1993 AACS.

R 325.5643
Source: 1993 AACS.

R 325.5644
Source: 1993 AACS.

R 325.5645
Source: 1993 AACS.

R 325.5646
Source: 1993 AACS.

R 325.5647
Source: 1993 AACS.

R 325.5648
Source: 1993 AACS.

R 325.5649
Source: 1993 AACS.

R 325.5650
Source: 1993 AACS.

R 325.5651
Source: 1993 AACS.

R 325.5652
Source: 1993 AACS.

R 325.5655
Source: 1993 AACS.

R 325.5656
Source: 1993 AACS.

QUALITY CONTROL

R 325.5659
Source: 1993 AACS.

R 325.5660
Source: 1993 AACS.

R 325.5661
Source: 1993 AACS.

R 325.5662
Source: 1993 AACS.

R 325.5663
Source: 1993 AACS.

R 325.5664
Source: 1993 AACS.

R 325.5665
Source: 1993 AACS.

DEPARTMENT OF ENVIRONMENTAL QUALITY

DRINKING WATER AND RADIOLOGICAL PROTECTION DIVISION

RADIOACTIVE MATERIAL TRANSPORTATION

R 325.5801—R 325.5810
Source: 1997 AACS.

BUREAU OF HEALTH CARE ADMINISTRATION

FREESTANDING SURGICAL OUTPATIENT FACILITIES DIFFERENTIATED FROM PRIVATE PRACTICE OFFICES

R 325.6001
Source: 1980 AACS.

R 325.6002
Source: 1980 AACS.

DEPARTMENT OF COMMUNITY HEALTH AND INSURANCE BUREAU

HEALTH MAINTENANCE ORGANIZATIONS

PART 1. GENERAL PROVISIONS

R 325.6101
Source: 1988 AACS.

R 325.6105
Source: 1988 AACS.

R 325.6110
Source: 1988 AACS.

R 325.6115
Source: 1988 AACS.

R 325.6120
Source: 1997 AACS.

R 325.6125
Source: 1988 AACS.

R 325.6130
Source: 1988 AACS.

R 325.6135
Source: 1988 AACS.

PART 2. STATE ADMINISTRATION

R 325.6201
Source: 1997 AACS.

R 325.6205
Source: 1988 AACS.

R 325.6210
Source: 1988 AACS.

R 325.6215
Source: 1997 AACS.

R 325.6220
Source: 1997 AACS.

R 325.6225
Source: 1997 AACS.

R 325.6230
Source: 1988 AACS.

R 325.6235
Source: 1988 AACS.

R 325.6240
Source: 1988 AACS.

R 325.6245
Source: 1988 AACS.

R 325.6250
Source: 1997 AACS.

R 325.6255
Source: 1997 AACS.

R 325.6260
Source: 1997 AACS.

R 325.6265
Source: 1997 AACS.

R 325.6270
Source: 1988 AACS.

R 325.6275
Source: 1988 AACS.

R 325.6280
Source: 1997 AACS.

R 325.6285
Source: 1988 AACS.

R 325.6290
Source: 1988 AACS.

PART 3. BUSINESS AND OPERATIONAL REQUIREMENTS

R 325.6301
Source: 1988 AACS.

R 325.6305
Source: 1988 AACS.

R 325.6310
Source: 1988 AACS.

R 325.6315
Source: 1988 AACS.

R 325.6320
Source: 1997 AACS.

R 325.6325
Source: 1997 AACS.

R 325.6330
Source: 1988 AACS.

R 325.6335
Source: 1988 AACS.

R 325.6340
Source: 1988 AACS.

R 325.6345
Source: 1988 AACS.

R 325.6350
Source: 1988 AACS.

R 325.6355
Source: 1988 AACS.

R 325.6360
Source: 1988 AACS.

R 325.6365
Source: 1988 AACS.

PART 4. SUBSCRIBER CONTRACTS, COVERAGE, AND RELATED REQUIREMENTS

R 325.6401
Source: 1988 AACS.

R 325.6405
Source: 1988 AACS.

R 325.6410
Source: 1988 AACS.

R 325.6415
Source: 1988 AACS.

R 325.6420
Source: 1988 AACS.

R 325.6425
Source: 1988 AACS.

R 325.6430
Source: 1988 AACS.

PART 5. MARKETING AND ENROLLMENT

R 325.6501
Source: 1988 AACS.

R 325.6505
Source: 1988 AACS.

R 325.6510
Source: 1988 AACS.

R 325.6515
Source: 1997 AACS.

PART 6. STANDARDS FOR SERVICES, STAFFING, QUALITY ASSURANCE, AND UTILIZATION REVIEW

R 325.6601
Source: 1988 AACS.

R 325.6605
Source: 1988 AACS.

R 325.6610
Source: 1988 AACS.

R 325.6615
Source: 1988 AACS.

R 325.6620
Source: 1988 AACS.

R 325.6625
Source: 1988 AACS.

R 325.6635
Source: 1988 AACS.

PART 7. FACILITY STANDARDS

R 325.6701
Source: 1988 AACS.

R 325.6702
Source: 1988 AACS.

R 325.6705
Source: 1997 AACS.

R 325.6710
Source: 1991 AACS.

R 325.6715
Source: 1988 AACS.

R 325.6720
Source: 1988 AACS.

R 325.6725
Source: 1988 AACS.

R 325.6730
Source: 1988 AACS.

R 325.6735
Source: 1988 AACS.

R 325.6740
Source: 1988 AACS.

R 325.6745
Source: 1988 AACS.

R 325.6750
Source: 1988 AACS.

R 325.6755
Source: 1988 AACS.

R 325.6760

Source: 1997 AACS.

R 325.6765
Source: 1997 AACS.

R 325.6770
Source: 1997 AACS.

R 325.6775
Source: 1997 AACS.

R 325.6780
Source: 1988 AACS.

R 325.6785
Source: 1988 AACS.

R 325.6790
Source: 1988 AACS.

R 325.6795
Source: 1988 AACS.

PART 8. ENROLLEE CLINICAL RECORDS; REPORTS AND INSPECTIONS

R 325.6801
Source: 1988 AACS.

R 325.6805
Source: 1988 AACS.

R 325.6810
Source: 1988 AACS.

R 325.6815
Source: 1988 AACS.

R 325.6820
Source: 1997 AACS.

R 325.6825
Source: 1988 AACS.

R 325.6830
Source: 1988 AACS.

R 325.6835
Source: 1988 AACS.

PART 9. HEALTH MAINTENANCE ORGANIZATION INCLUSION IN HEALTH BENEFIT PLANS

R 325.6901
Source: 1988 AACS.

R 325.6905

Source: 1988 AACS.

R 325.6910
Source: 1988 AACS.

R 325.6925
Source: 1988 AACS.

R 325.6930
Source: 1988 AACS.

R 325.6935
Source: 1988 AACS.

R 325.6950
Source: 1988 AACS.

R 325.6955
Source: 1988 AACS.

R 325.6960
Source: 1988 AACS.

R 325.6965
Source: 1997 AACS.

DEPARTMENT OF COMMUNITY HEALTH
OFFICE OF VITAL AND HEALTH STATISTICS
DISINTERMENT—REINTERMENT

R 325.8051
Source: 1982 AACS.

R 325.8052
Source: 1982 AACS.

R 325.8053
Source: 1982 AACS.

R 325.8054
Source: 1982 AACS.

R 325.8055
Source: 1982 AACS.

R 325.8056
Source: 1982 AACS.

R 325.8057
Source: 1982 AACS.

LABORATORY AND EPIDEMIOLOGICAL SERVICES ADMINISTRATION
DISEASE SURVEILLANCE AND CONTROL

R 325.9001
Source: 1997 AACS.

R 325.9002—R 325.9004
Source: 1997 AACS.

R 325.9005
Source: 1997 AACS.

R 325.9006—R 325.9011
Source: 1997 AACS.

R 325.9012
Source: 1981 AACS.

BUREAU OF LABORATORY AND EPIDEMIOLOGICAL SERVICES

DEFINITION OF "INFECTIOUS AGENT"

R 325.9031
Source: 1987 AACS.

DIVISION OF RESEARCH AND DEVELOPMENT

CHRONIC DISEASE PREVENTION AND CONTROL LIST

R 325.9041
Source: 1989 AACS.

OFFICE OF THE STATE REGISTRAR AND CENTER FOR HEALTH STATISTICS

CANCER REPORTING

R 325.9051
Source: 1985 AACS.

R 325.9052
Source: 1985 AACS.

R 325.9053
Source: 1985 AACS.

R 325.9054
Source: 1985 AACS.

R 325.9055
Source: 1985 AACS.

R 325.9056
Source: 1985 AACS.

R 325.9057
Source: 1985 AACS.

CENTER FOR HEALTH PROMOTION

SPINAL CORD AND TRAUMATIC BRAIN INJURY REPORTING

R 325.9061
Source: 1993 AACS.

R 325.9062
Source: 1993 AACS.

R 325.9063
Source: 1993 AACS.

R 325.9064
Source: 1993 AACS.

R 325.9065
Source: 1993 AACS.

R 325.9066
Source: 1993 AACS.

R 325.9067
Source: 1993 AACS.

BIRTH DEFECTS REPORTING

R 325.9071
Source: 1991 AACS.

R 325.9072
Source: 1991 AACS.

R 325.9073
Source: 1991 AACS.

R 325.9074
Source: 1991 AACS.

R 325.9075
Source: 1991 AACS.

R 325.9076
Source: 1991 AACS.

HEALTH LEGISLATION AND POLICY DEVELOPMENT

BLOOD LEAD ANALYSIS REPORTING

R 325.9081
Source: 1997 AACS.

R 325.9082
Source: 1997 AACS.

R 325.9083
Source: 1997 AACS.

R 325.9084
Source: 1997 AACS.

R 325.9085
Source: 1997 AACS.

R 325.9086
Source: 1997 AACS.

R 325.9087
Source: 1997 AACS.

BUREAU OF HEALTH SYSTEMS

CERTIFICATE OF NEED

PART 1. GENERAL PROVISIONS

R 325.9101
Source: 1996 AACS.

R 325.9103
Source: 1996 AACS.

R 325.9105
Source: 1996 AACS.

R 325.9109
Source: 1996 AACS.

R 325.9121
Source: 1996 AACS.

R 325.9123
Source: 1996 AACS.

R 325.9125
Source: 1996 AACS.

PART 2. LETTERS OF INTENT; APPLICATIONS; REVIEWS

R 325.9201
Source: 1996 AACS.

R 325.9203
Source: 1996 AACS.

R 325.9204
Source: 1996 AACS.

R 325.9205
Source: 1996 AACS.

R 325.9206
Source: 1996 AACS.

R 325.9207
Source: 1996 AACS.

R 325.9208
Source: 1996 AACS.

R 325.9215
Source: 1996 AACS.

R 325.9227
Source: 1996 AACS.

R 325.9229
Source: 1996 AACS.

PART 3. APPROVAL AND ISSUANCE; DISAPPROVAL

R 325.9301
Source: 1996 AACS.

R 325.9303
Source: 1996 AACS.

PART 4. TERMS AND CONDITIONS

R 325.9401
Source: 1986 AACS.

R 325.9403
Source: 1996 AACS.

R 325.9413
Source: 1996 AACS.

R 325.9415
Source: 1996 AACS.

R 325.9417
Source: 1996 AACS.

R 325.9419
Source: 1996 AACS.

PART 5. ADMINISTRATIVE HEARINGS

R 325.9501
Source: 1996 AACS.

R 325.9503
Source: 1996 AACS.

R 325.9505
Source: 1986 AACS.

R 325.9507
Source: 1996 AACS.

R 325.9509
Source: 1996 AACS.

R 325.9511

Source: 1996 AACS.

R 325.9513
Source: 1996 AACS.

R 325.9515
Source: 1996 AACS.

R 325.9517
Source: 1996 AACS.

R 325.9519
Source: 1996 AACS.

R 325.9521
Source: 1996 AACS.

R 325.9523
Source: 1996 AACS.

R 325.9525
Source: 1996 AACS.

DEPARTMENT OF COMMUNITY HEALTH

HEALTH LEGISLATION AND POLICY DEVELOPMENT

LEAD HAZARD REMEDIATION

R 325.9901 Scope; application; definitions.

Rule 1. (1) These rules apply to all activities defined by sections 5451 to 5477 of Act No. 368 of the Public Acts of 1978, as amended, being §§333.5451 to 333.5477 of the Michigan Compiled Laws, and referred to in these rules as the "lead abatement act."
(2) These rules provide specifications applicable to lead hazard remediation activities for all of the following:
(a) Training curricula.
(b) Certification requirements.
(c) Work practice standards.
(d) Notification requirements.
(e) Enforcement actions.
(3) Unless the context dictates otherwise, terms defined in sections 5453 to 5460 of the lead abatement act have the same meanings when used in these rules.
History: 1999 MR 8, Eff. Sep. 15, 1999.

R 325.9902 Training manager qualifications.

Rule 2. Each training program shall employ a training manager who has demonstrated experience, education, or training in the construction industry and has at least 1 of the following:
(a) Not less than 2 years of experience, education, or training in teaching workers or adults.
(b) A bachelor's or graduate degree in any of the following:
(i) Building construction technology.
(ii) Engineering.
(iii) Industrial hygiene.
(iv) Safety.
(v) Public health.
(vi) Education.

(vii) Business administration or program management.
(viii) A field related to any of the areas specified in this subdivision.
(c) Two years of experience in managing a training program specializing in environmental hazards.
History: 1999 MR 8, Eff. Sep. 15, 1999.

R 325.9903 Principal instructor qualifications.

Rule 3. A training manager shall designate a qualified principal instructor for each course session offered. A principal instructor shall possess all of the following qualifications:
(a) Demonstrated experience, education, or training in teaching workers or adults.
(b) Successful completion of the training course which has been accredited by EPA or EPA-authorized state or tribe, which they intend to instruct.
(c) Demonstrated experience, education, or training in any of the following:
(i) Lead or asbestos abatement.
(ii) Painting.
(iii) Carpentry.
(iv) Renovation.
(v) Remodeling.
(vi) Occupational safety and health.
(vii) Industrial hygiene.
History: 1999 MR 8, Eff. Sep. 15, 1999.

R 325.9904 Quality control plan.

Rule 4. The training manager shall develop and implement a quality control plan designed to maintain and improve the quality of the training program. The quality control plan shall contain at least both of the following elements:
(a) Procedures for periodic revision of training materials and the course test to reflect innovations in the field.
(b) Procedures for the training manager's annual review of each principal instructor's competence.
History: 1999 MR 8, Eff. Sep. 15, 1999.

R 325.9905 Inspector training course curriculum requirements.

Rule 5. To become accredited to offer the lead inspector course, a training program shall ensure that its course of study includes, at a minimum, all of the following course topics:
(a) The role and responsibilities of an inspector.
(b) Background information on lead and its adverse health effects.
(c) Background information on federal, state, and local regulations and guidance that pertains to lead-based paint and lead-based paint activities.
(d) Most current lead-based paint inspection methods, including the selection of rooms and components for sampling or testing.*
(e) Documented paint, dust, and soil sampling methodologies.*
(f) Clearance standards and testing, including random sampling.*
(g) Preparation of the final inspection report.*
(h) Recordkeeping.
An asterisk (*) indicates areas that require hands-on activities as an integral component of the course.
History: 1999 MR 8, Eff. Sep. 15, 1999.

R 325.9906 Risk assessor training course curriculum requirements.

Rule 6. To become accredited to offer the lead risk assessor course, a training program shall ensure that its course of study includes, at a minimum, all the following course topics:
(a) The role and responsibilities of a risk assessor.
(b) The collection of background information to perform a risk assessment.
(c) Sources of environmental lead contamination such as paint, surface dust, soil, water, air, packaging, and food.

(d) Visual inspection for the purposes of identifying potential sources of lead-based paint hazards.*
(e) Lead hazard screen protocol.
(f) Most current sampling methods for other sources of lead exposure.*
(g) The interpretation of lead-based paint and other lead sampling results, including all applicable state or federal guidance or regulations pertaining to lead-based paint hazards.*
(h) The development of lead hazard control options, the role of interim controls, and operations and maintenance activities to reduce lead-based paint hazards.
(i) Preparation of a final risk assessment report.*
An asterisk (*) indicates areas that require hands-on activities as an integral component of the course.
History: 1999 MR 8, Eff. Sep. 15, 1999.

R 325.9907 Supervisor training course curriculum requirements.

Rule 7. To become accredited to offer the lead supervisor course, a training program shall ensure that its course of study includes, at a minimum, all of the following course topics:
(a) The role and responsibilities of a supervisor.
(b) Background information on lead and its adverse health effects.
(c) Background information on federal, state, and local regulations and guidance that pertains to lead-based paint abatement.
(d) Liability and insurance issues relating to lead-based paint abatement.
(e) Risk assessment and inspection report interpretation.*
(f) The development and implementation of an occupant protection plan and abatement report.*
(g) Lead-based paint hazard recognition and control.*
(h) Lead-based paint abatement and lead-based paint hazard reduction methods, including restricted practices.*
(i) Interior dust abatement/cleanup or lead-based paint hazard control and reduction methods.*
(j) Soil and exterior dust abatement or lead-based paint hazard control and reduction methods.*
(k) Clearance standards and testing.
(l) Cleanup and waste disposal.
(m) Recordkeeping.
(n) The lead exposure in construction standard, being R 325.51991 and R 325.51992.
An asterisk (*) indicates areas that require hands-on activities as an integral component of the course.
History: 1999 MR 8, Eff. Sep. 15, 1999.

R 325.9908 Project designer training course curriculum requirements.

Rule 8. To become accredited to offer the lead project designer course, a training program shall ensure that its course of study includes, at a minimum, all of the following topics:
(a) The role and responsibilities of a project designer.
(b) The development and implementation of an occupant protection plan for large-scale abatement projects.*
(c) Lead-based paint abatement and lead-based paint hazard reduction methods, including restricted practices for large-scale abatement projects.
(d) Interior dust abatement/cleanup or lead hazard control and reduction methods for large-scale abatement projects.
(e) Clearance standards and testing for large-scale abatement projects.
(f) Integration of lead-based paint abatement methods with modernization and rehabilitation projects for large-scale abatement projects.
An asterisk (*) indicates areas that require hands-on activities as an integral component of the course.
History: 1999 MR 8, Eff. Sep. 15, 1999.

R 325.9909 Abatement worker training course curriculum requirements.

Rule 9. To become accredited to offer the lead abatement worker course, a training program shall ensure that its course of study includes, at a minimum, all of the following course topics:
(a) The role and responsibilities of an abatement worker.
(b) Background information on lead and its adverse health effects

(c) Background information on federal, state, and local regulations and guidance that pertain to lead-based paint abatement.
(d) Lead-based paint hazard recognition and control.*
(e) Lead-based paint abatement and lead-based paint hazard reduction methods, including restricted practices.*
(f) Interior dust abatement methods/cleanup or lead-based paint hazard reduction.*
(g) Soil and exterior dust abatement methods or lead-based paint hazard reduction.*
(h) The lead exposure in construction standard, being R 325.51991 and R 325.51992.
An asterisk (*) indicates areas that require hands-on activities as an integral component of the course.
History: 1999 MR 8, Eff. Sep. 15, 1999.

R 325.9910 Requirements for accreditation of refresher training.

Rule 10. (1) Each refresher course shall review the curriculum topics of the initial courses in these rules or other pertinent rules promulgated by the department. In addition, to become accredited to offer a refresher training course, a training program shall ensure that its course of study includes, at a minimum, all of the following:
(a) An overview of current safety practices relating to lead-based paint activities in general, as well as specific information pertaining to the appropriate discipline.
(b) Current laws and regulations relating to lead-based paint activities in general, as well as specific information pertaining to the appropriate discipline.
(c) Current technologies relating to lead-based paint activities in general, as well as specific information pertaining to the appropriate discipline.
(2) Each refresher course, except for the project designer course, shall last a minimum of 8 training hours. The project designer refresher course shall last a minimum of 4 training hours. The supervisor and project designer refresher courses may be conducted concurrently if the materials for each are adequately covered. For each course offered, the training program shall conduct a hands-on assessment and, at the completion of the course, a course test.
(3) A training program's application for accreditation of the refresher course shall include all of the following information:
(a) A copy of the student and instructor manuals to be used for each course.
(b) A copy of the course agenda for each course.
(c) A description of the facilities and equipment to be used for lectures and hands-on training.
(d) A copy of the course test blueprint for each course.
(e) A description of the activities and procedures that shall be used for conducting the assessment of hands-on skills for each course, if applicable.
(f) A copy of the quality control plan as described in R 325.9904.
(4) A training program seeking accreditation to offer only refresher training courses shall submit a written application to the department. The application shall contain all of the following information:
(a) The refresher training program's name, address, and telephone number.
(b) A list of courses for which the program is applying for accreditation.
(c) A statement signed by the training program manager certifying that the refresher training program meets the minimum requirements established in this rule.
(5) A training program may apply for accreditation of a refresher course concurrently with its application for accreditation of the corresponding initial training course.
History: 1999 MR 8, Eff. Sep. 15, 1999.

R 325.9911 Reaccreditation of training program.

Rule 11. A training program seeking reaccreditation shall submit an application not less than 45 days before the expiration date of the previous year's accreditation. The application shall contain the fee required in section 5471 of the lead abatement act and all of the following information:
(a) The training program's name, address, and telephone number.
(b) A list of courses for which the program is applying for reaccreditation.
(c) A description of any changes to the training facility, equipment, course materials, or instructors since the

program's last application was approved.
(d) A statement signed by the program manager stating both of the following:
(i) The training program complies at all times with the requirements in sections 5462, 5463, and 5464 of the lead abatement act.
(ii) The recordkeeping and reporting requirements of section 5467 of the lead abatement act shall be followed.
History: 1999 MR 8, Eff. Sep. 15, 1999.

R 325.9912 Work practice standards for conducting lead-based paint activities; adoption by reference of documented methodologies.

Rule 12. (1) Only a certified individual may perform any of the following lead-based paint activities:
(a) An inspection.
(b) A lead-hazard screen.
(c) A risk assessment.
(d) An abatement.
A certified individual shall perform an activity specified in this subrule in accordance with the appropriate requirements and shall use documented methodologies.
(2) The following documented methodologies are appropriate for the activities specified in subrule (1) of this rule and are adopted by reference in these rules:
(a) The United States department of housing and urban development (HUD) guidelines for the evaluation and control of lead-based paint hazards in housing.
(b) The environmental protection agency's (EPA) publication entitled "Guidance on Residential Lead-Based Paint, Lead-Contaminated Dust, and Lead-Contaminated Soil."
(c) The EPA's publication entitled "Residential Sampling for Lead:
Protocols for Dust and Soil Sampling," report number EPA 747-R-95-001. A copy of the documents cited in this subrule may be inspected at, or obtained from, at no cost as of the time of adoption of these rules, the Michigan Department of Community Health, Lead Remediation Program, 1001 Terminal Drive, Lansing, Michigan 48906. The documents cited in subdivisions (b) and (c) of this subrule may be obtained, at no charge as of the time of adoption of these rules, from EPA Region 5, Toxic Program Section, 77 West Jackson Blvd., DT8J, Chicago, Illinois 60604,(312)886-3489. The documents cited in subdivision (a) of this subrule may be obtained, at no cost as of the time of adoption of these rules, from HUD USER, P.O. Box 6091, Rockville, Maryland 20849.
(3) An appropriate certified lead professional shall conduct any paint, dust, or soil sampling or testing as part of an activity described in subrule(1) of this rule. The certified professional shall use documented methodologies that incorporate adequate quality control procedures. Composite dust or paint samples are not permitted.
(4) A laboratory recognized by the EPA as capable of performing analyses for lead compounds in the applicable matrix shall analyze any paint chip, dust, or soil samples collected as part of an activity described in subrule (1) of this rule to determine if the samples contain detectable levels of lead that can be quantified numerically.
(5) Acceptable lead-contaminated dust levels shall be the same levels as the clearance levels published by the department.
(6) The department shall publish acceptable lead-contaminated soil levels as necessary for compliance with EPA requirements.
History: 1999 MR 8, Eff. Sep. 15, 1999.

R 325.9913 Clearance levels.

Rule 13. The department shall publish clearance levels established for the completion of abatement activities as necessary to comply with corresponding levels established by the EPA.
History: 1999 MR 8, Eff. Sep. 15, 1999.

R 325.9914 Lead inspections.

Rule 14. (1) Only a person certified by the department as an inspector or risk assessor shall conduct an

inspection. The inspector or risk assessor shall conduct the inspection according to the procedures in this rule.
(2) When conducting an inspection, an inspector or risk assessor shall select the following locations according to documented methodologies and shall test the locations for the presence of lead-based paint:
(a) Each interior and exterior component that has a distinct painting history shall be tested for lead-based paint, except for components that the inspector or risk assessor determines have been replaced after 1978 or do not contain lead-based paint.
(b) In a multifamily dwelling or child-occupied facility, each component that has a distinct painting history in every common area, except for components that the inspector or risk assessor determines have been replaced after 1978 or do not contain lead-based paint.
(3) The certified inspector or risk assessor shall prepare an inspection report. The report shall include all of the following information:
(a) Date of each inspection.
(b) Address of building.
(c) Date of construction.
(d) Apartment numbers, if applicable.
(e) Name, address, and telephone number of the owner or owners.
(f) Name, signature, and certification number of each certified inspector or risk assessor, or both, conducting testing.
(g) Name, address, and telephone number of the certified person employing each inspector or risk assessor, or both, if applicable.
(h) Each testing method and device and sampling procedure employed for paint analysis, including quality control data and, if used, the serial number of any x-ray fluorescence device.
(i) Specific locations of each painted component tested for the presence of lead-based paint.
(j) The results of the inspection expressed in terms appropriate to the sampling method used.
History: 1999 MR 8, Eff. Sep. 15, 1999.

R 325.9915 Lead hazard screen.

Rule 15. (1) Only a person certified by the department as a risk assessor shall conduct a lead hazard screen.
(2) A risk assessor shall conduct a lead hazard screen as follows:
(a) The risk assessor shall collect background information regarding the physical characteristics of the building, residential dwelling, or child-occupied facility and occupant use patterns that may cause lead-based paint exposure to 1 or more children age 6 years and under.
(b) The risk assessor shall conduct a visual inspection of the building, residential dwelling, or child-occupied facility to determine if any deteriorated paint is present and tolocate not less than 2 dust sampling locations.
(c) If deteriorated paint is present, then the risk assessor shall test for the presence of lead for each surface that is determined, using documented methodologies, to be in poor condition and to have a distinct painting history.
(d) In residential dwellings, a risk assessor shall collect 2 dust samples, 1 from the floors and the other from the windows, in rooms, hallways, or stairwells where 1 or more children, age 6 and under, are most likely to come in contact with dust.
(e) In multifamily dwellings and child-occupied facilities, in addition to the floor and window samples required in subdivision (d) of this subrule, the risk assessor shall also collect dust samples from common areas where 1 or more children, age 6 and under, are most likely to come into contact with dust.
(3) The risk assessor shall prepare a lead hazard screen report. The report shall include all of the following information:
(a) Date of assessment.
(b) Address of each building.
(c) Date of construction of buildings.
(d) Apartment number, if applicable.
(e) Name, address, and telephone number of each owner of each building.
(f) Name, signature, and certification of the certified risk assessor conducting the assessment.

(g) Name, address, and telephone number of the certified person employing each certified risk assessor, if applicable.
(h) Name, address, and telephone number of each recognized laboratory analyzing collected samples.
(i) Results of the visual inspection.
(j) Testing method and sampling procedure for the paint analysis employed.
(k) Specific location of each painted component tested for the presence of lead.
(l) All data collected from on-site testing, including quality control data, and, if used, the serial number of any x-ray fluorescence device.
(m) All results of laboratory analyses on collected paint, soil, and dust samples.
(n) Any other sampling results.
(o) Background information regarding the physical characteristics of the building, residential dwelling, or child-occupied facility and occupant use patterns that may cause lead-based paint exposure to 1 or more children age 6 years and under.
(p) Recommendations, if warranted, for a follow-up risk assessment and, as appropriate, any further actions.
History: 1999 MR 8, Eff. Sep. 15, 1999.

R 325.9916 Risk assessment.

Rule 16. (1) Only a person certified by the department as a risk assessor shall conduct a risk assessment. A risk assessor shall conduct a risk assessment according to the procedures in this rule.
(2) The risk assessor shall make a visual inspection for risk assessment of a residential dwelling or child-occupied facility to locate the existence of deteriorated paint, assess the extent and causes of the deterioration, and evaluate other potential lead-based paint hazards.
(3) The risk assessor shall collect background information regarding the physical characteristics of the residential dwelling or child-occupied facility and occupant use patterns that may cause lead-based paint exposure to 1 or more children age 6 years and under.
(4) The risk assessor shall test each surface that has deteriorated paint for the presence of lead if the surface is determined to be in poor condition, using documented methodologies, and to have a distinct painting history. A risk assessor shall also test any other surface for the presence of lead if the surface is determined to be a potential lead-based paint hazard, using documented methodologies, and to have a distinct painting history.
(5) In residential dwellings, the risk assessor shall collect dust samples from the window and floor in all living areas where 1 or more children, age 6 and under, are most likely to come into contact with dust.
(6) For multifamily dwellings and child-occupied facilities, the risk assessor shall collect the samples required in subrule (4) of this rule. In addition, a risk assessor shall collect window and floor dust samples in the following locations:
(a) Common areas adjacent to the sampled residential dwelling or child- occupied facility.
(b) Other common areas in the building where the risk assessor determines that 1 or more children, age 6 and under, are likely to come into contact with dust.
(7) For child-occupied facilities, the risk assessor shall collect window and floor dust samples in each room, hallway, or stairwell utilized by 1 or more children, age 6 and under, and in other common areas in the child-occupied facility where the risk assessor determines 1 or more children, age 6 and under, are likely to come into contact with dust.
(8) The risk assessor shall collect soil samples and have the samples analyzed for lead concentrations in the following locations:
(a) Exterior play areas where bare soil is present.
(b) Dripline/foundation areas where bare soil is present.
(9) A certified risk assessor shall prepare a risk assessment report. The report shall include all of the following information:
(a) Date of assessment.
(b) Address of each building.
(c) Date of construction of buildings.
(d) Apartment number, if applicable.
(e) Name, address, and telephone number of each owner of each building.

(f) Name, signature, and certification of the certified risk assessor conducting the assessment.
(g) Name, address, and telephone number of the certified person employing each certified risk assessor, if applicable.
(h) Name, address, and telephone number of each recognized laboratory conducting analyses of collected samples.
(i) Results of the visual inspection.
(j) Testing method and sampling procedure for the paint analysis employed.
(k) Specific location of each painted component tested for the presence of lead.
(l) All data collected from on-site testing, including quality control data, and, if used, the serial number of any x-ray fluorescence device.
(m) All results of laboratory analysis on collected paint, soil, and dust samples.
(n) Any other sampling results.
(o) Any background information collected under subrule (3) of this rule.
(p) To the extent that they are used as part of the lead-based paint hazard determination, the results of any previous inspections or analyses for the presence of lead-based paint or other assessments of lead-based paint-related hazards.
(q) A description of the location, type, and severity of identified lead-based paint hazards and any other potential lead hazards.
(r) A description of interim controls or abatement options, or both, for each identified lead-based paint hazard and a suggested prioritization for addressing each hazard. If the use of an encapsulant or enclosure is recommended, then the report shall recommend a maintenance and monitoring schedule for the encapsulant or enclosure.

R 325.9917 Abatement.

Rule 17. (1) Only an individual certified by the department shall conduct abatement activities as defined in the lead abatement act. The certified individual shall conduct abatement activities according to the procedures in this rule.
(2) A certified supervisor is required for each abatement project and shall be at the site during all abatement work.
(3) The certified supervisor and the certified person employing the supervisor shall ensure that all abatement activities are conducted according to the requirements of this rule and all other federal, state, and local requirements.
(4) A certified supervisor or project designer shall develop a written occupant protection plan for all abatement projects according to the following procedures:
(a) The occupant protection plan shall be specific to each residential dwelling or child-occupied facility and be developed before the abatement.
(b) The occupant protection plan shall describe the measures and management procedures that shall be taken during the abatement to protect the building occupants from exposure to any lead-based paint hazards.
(5) The certified supervisor shall ensure that all of the following work practices are restricted during abatement activities as follows:
(a) Open-flame burning or torching of lead-based paint is prohibited.
(b) Machine sanding or grinding or abrasive blasting and sandblasting of lead-based paint is prohibited, unless the sanding, grinding, blasting, or sandblasting is conducted using high-efficiency particulate air (HEPA) exhaust control that removes particles of 0.3 microns or larger from the air at an efficiency of 99.97% or more.
(c) Dry scraping of lead-based paint is permitted only in conjunction with heat guns or around electrical outlets or when treating defective paint spots totaling not more than 2 square feet in any 1 room, hallway, or stairwell or totaling not more than 20 square feet on exterior surfaces.
(d) Operating a heat gun on lead-based paint is permitted only if the temperature generated by the heat gun is less below 1100 degrees Fahrenheit.
(6) If soil abatement is conducted, the contractor shall perform the abatement in either of the following ways:
(a) If soil is removed, replace the lead-contaminated soil with soil that is not lead-contaminated.

(b) If soil is not removed, the contractor shall permanently cover, as defined in section 5459 of the lead abatement act, the lead-contaminated soil.
(7) If abatement involves encapsulation, then the contractor shall perform the encapsulation using an encapsulant approved by the department and shall apply encapsulant in accordance with the manufacturer's instructions.
(8) Only a certified inspector or risk assessor shall perform the following post-abatement clearance procedures:
(a) A visual inspection to determine if deteriorated painted surfaces or visible amounts of dust, debris, or residue are still present. If deteriorated painted surfaces or visible amounts of dust, debris, or residue are present, then the contractor shall eliminate the conditions before continuing the clearance procedures.
(b) After the visual inspection and any post-abatement cleanup required by subdivision (a) of this subrule, an independent risk assessor shall conduct clearance lead sampling for lead-contaminated dust. Post-abatement clearance activities shall be conducted as appropriate based upon the extent or manner of abatement activities conducted in or to the residential dwelling or child-occupied facility. All of the following provisions apply to post-abatement clearance sampling:
(i) After conducting an abatement with containment between abated and unabated areas, the risk assessor shall take 1 dust sample from 1 window, if available, and 1 dust sample from the floor of not less than 4 rooms, hallways, or stairwells within the containment area. In addition, the risk assessor shall take 1 dust sample from the floor outside the containment area. If there are less than 4 rooms, hallways, or stairwells within the containment area, then the risk assessor shall sample all rooms, hallways, or stairwells.
(ii) After conducting an abatement with no containment, the risk assessor shall take 2 dust samples from not less than 4 rooms, hallways, or stairwells in the residential dwelling or child-occupied facility. The risk assessor shall take 1 dust sample from 1 window, if available, and 1 dust sample from the floor of each room, hallway, or stairwell selected. If there are less than 4 rooms, hallways, or stairwells within the residential dwelling or child-occupied facility, then the risk assessor shall sample all rooms, hallways, or stairwells.
(iii) The risk assessor shall take dust samples for clearance purposes using documented methodologies that incorporate adequate quality control procedures.
(iv) The risk assessor shall take dust samples for clearance purposes a minimum of 1 hour after completion of final post-abatement cleanup activities.
(c) The risk assessor shall select the rooms, hallways, or stairwells for sampling according to documented methodologies.
(d) The certified inspector or risk assessor shall compare the residual lead level, as determined by the laboratory analysis, from each dust sample with applicable clearance levels for lead in dust on floors and windows. If the residual lead levels in a dust sample exceed the clearance levels, then the contractor shall clean, and the risk assessor shall retest all the components represented by the failed sample until clearance levels are met.
(e) Immediately following an exterior paint abatement, the certified supervisor shall conduct a visual inspection of all horizontal surfaces in the outdoor living area closest to the abated surfaces to ensure that visible dust and debris have been removed. In addition, the supervisor shall conduct a visual inspection to determine the presence of paint chips on the dripline or next to the foundation below any exterior surface abated. If paint chips are present, the contractor shall remove the chips from the site and properly dispose of the chips according to all applicable federal, state, and local requirements.
(f) In a multifamily dwelling that has similarly constructed and maintained residential dwellings, a certified inspector or risk assessor may conduct random sampling for the purposes of clearance only if all of the following provisions are satisfied:
(i) The certified individuals who abate or clean the residential dwellings do not know which residential dwelling will be selected for the random samples.
(ii) A sufficient number of residential dwellings are selected for dust sampling to provide a 95% level of confidence that not more than 5% or 50 of the residential dwellings, whichever is smaller, in the randomly sampled population exceed the appropriate clearance levels.
(iii) The randomly selected residential dwellings are sampled and evaluated for clearance according to the procedures in this subrule.
(9) A certified supervisor or project designer shall prepare an abatement report at the completion of each

abatement activity. The abatement report shall include all of the following information:
(a) Start and completion dates of abatement.
(b) The name and address of each certified person conducting the abatement and the name of each supervisor assigned to the abatement project.
(c) The occupant protection plan prepared under subrule (4) of this rule.
(d) The name, address, and signature of each certified risk assessor or inspector conducting clearance sampling and the date of clearance testing.
(e) The results of clearance testing and all soil analyses, if applicable, and the name of each recognized laboratory that conducted the analyses.
(f) A detailed written description of the abatement, including all of the following:
(i) Abatement methods used.
(ii) Locations of rooms and components where abatement occurred.
(iii) Reason for selecting particular abatement methods for each component.
(iv) Any suggested monitoring of encapsulants or enclosures.
History: 1999 MR 8, Eff. Sep. 15, 1999.

R 325.9918 Lead professional certification requirements for inspector, risk assessor, supervisor, and abatement worker.

Rule 18. (1) Individuals seeking certification or recertification under section 5468 of the lead abatement act shall meet the following requirements:
(a) For an inspector, successfully complete an accredited training course for inspectors and pass the third party examination for inspectors within 6 months of course completion. Additional experience or education is not required.
(b) For a risk assessor, both of the following requirements:
(i) Successfully complete an accredited training course for both an inspector and a risk assessor and pass the third party examinations for both inspector and risk assessor within 6 months of course completion.
(ii) Possess a bachelor's degree, and have 1 year of experience, in a related field, for example, lead, asbestos, environmental remediation work, or construction; or possess an associates degree, and have not less than 2 years of experience, in a related field, for example, lead, asbestos, environmental remediation work, or construction; or be certified as an industrial hygienist, professional engineer, or registered architect or be certified in a related engineering/health/environmental field; or possess a high school diploma or equivalent and have not less than 3 years of experience in a related field, for example lead, asbestos, environmental remediation work, or construction.
(c) For a supervisor, both of the following requirements:
(i) Successfully complete an accredited training course for supervisors and pass the third party examination for supervisors within 6 months of course completion.
(ii) Have 1 year of experience as a certified lead-based paint abatement worker or not less than 2 years of experience in a related field, for example, lead, asbestos, environmental remediation work, or construction, or in the building trades.
(d) For an abatement worker, successfully complete an accredited training course for lead abatement workers and pass the third party examination for abatement workers within 6 months of course completion. Additional experience or education is not required.
(2) The department recognizes the following documents as evidence of meeting the requirements specified in this rule:
(a) Official academic transcripts or diploma as evidence of meeting the education requirements.
(b) Resumes, letters of reference, or documentation of work experience as evidence of meeting the work experience requirements.
(c) Course completion certificates from lead-specific or other related training courses issued by accredited training programs as evidence of meeting the training requirements.
(3) To take the third party examination for a particular discipline, an individual shall comply with both of the following requirements:
(a) Successfully complete an accredited course in the appropriate discipline and receive a course completion certificate from an accredited training program.

(b) Meet or exceed the education and experience requirements of this rule.
(4) An individual may to take the third party examination not more than 3 times within the 6-month period following course completion.
(5) An individual who fails to pass the third party examination 3 times within the 6-month period shall retake the appropriate course from an accredited training program before reapplying for certification from the department.
History: 1999 MR 8, Eff. Sep. 15, 1999.

R 325.9919 Lead professional certification requirements for project designer.

Rule 19. (1) An individual seeking certification or recertification by the department as a project designer shall successfully complete a project designer course, receive a course completion certificate from an accredited training program, and meet both of the following requirements:
(a) Have 4 years of experience in building construction and design or a related field or possess a bachelor's degree in engineering, architecture, or a related profession and have 1 year of experience in building construction and design or a related field.
(b) Successfully complete an accredited training course for supervisors.
(2) The department shall recognize the following documents as evidence of meeting the requirements specified in this rule:
(a) Official academic transcripts or diploma as evidence of meeting the education requirements.
(b) Resumes, letters of reference, or documentation of work experience as evidence of meeting the work experience requirements.
(c) Course completion certificates from lead-specific or other related training courses issued by accredited training programs as evidence of meeting the training requirements.
History: 1999 MR 8, Eff. Sep. 15, 1999.

R 325.9920 Certification based on prior training.

Rule 20. (1) An individual who received training in a lead-based paint activity between October 1, 1990, and March 1, 1999, or an individual who has received lead-based paint activities training at an EPA-authorized accredited training program is eligible for certification by the department if the individual satisfies all of the following provisions:
(a) Provides documentation that the original training was equivalent in length and content to the corresponding discipline described in section 5463 of the lead abatement act.
(b) Meets the education and experience requirements of the discipline for which he or she desires certification as described in these rules.
(c) Passes the third party examination for the discipline for which he or she desires certification within 6 months of completing the appropriate course. This rule does not apply to the project designer discipline.
(2) If the original training was completed more than 6 months before an individual applied to the department for certification, then the individual shall take the appropriate refresher course before being able to take the third party examination.
History: 1999 MR 8, Eff. Sep. 15, 1999.

R 325.9921 Recordkeeping.

Rule 21. (1) A person who is certified by the department under the lead abatement act and these rules shall maintain all records required by the act and these rules for not less than 3 years.
(2) Training programs shall maintain training-related records for a minimum of 3 1/2 years, including, but not limited to, all of the following records:
(a) All information in the application for certification of a course.
(b) Notifications of course schedules.
(c) Course participant information.
(d) Examination results.
(e) Copies of the certificates issued.
(3) The certified person or individual who prepared a report or plan required by these rules shall maintain the report or plan for not less than 3 years. The certified person or individual shall also provide copies of the

report to the building owner who contracted for the person's or individual's services.
History: 1999 MR 8, Eff. Sep. 15, 1999.

R 325.9922 Notifications.

Rule 22. (1) Not less than 7 calender days before commencing abatement activity, a person or individual who conducts lead abatement activities shall notify the department, on forms provided by the department, regarding information the department considers necessary to conduct an unannounced site inspection, including schedule changes. The department shall approve emergency notification that is less than 7 calender days in the following situations:
(a) In the case of a court-ordered abatement.
(b) In other cases where the department deems it necessary to waive the 7-calendar-day requirement to protect the health and safety of the public.
(c) In the case of an unavoidable change in the commencement of abatement activity that occurs less than 7 days before the activity begins.
(2) A person or individual who conducts lead abatement activities shall not provide, in any case, the notification specified in subrule (1) of this rule less than 24 hours before commencing the abatement activities.
(3) A person or individual who provides emergency notification shall receive confirmation of departmental approval of the emergency notification before initiating the activity.
(4) A person or individual who conducts an inspection, risk assessment, or lead-hazard screen shall notify the department, on forms provided by the department, regarding information the department considers necessary, by the fifteenth day of the month following the inspection, risk assessment, or lead-hazard screen activities.
(5) Not less that 7 calender days before commencing training, a training program that conducts lead training courses in any of the disciplines listed in section 5462 of the lead abatement act, whether the courses are initial or refresher, shall notify the department, on forms provided by the department, regarding information the department considers necessary to conduct an unannounced site inspection . A training program shall also notify the department within 10 calender days after a course is completed, on forms provided by the department, of the names of course participants and other information the department deems necessary. Training programs shall notify the department not less than 24 hours in advance of a course cancellation.
History: 1999 MR 8, Eff. Sep. 15, 1999.

R 325.9923 Conflict of interest.

Rule 23. (1) A person shall provide a written disclosure to a client of any affiliation between the person who conducts the inspection, risk assessment, or lead hazard screen and the person or persons, who conduct the abatement on the same property.
(2) Only an accredited inspector or risk assessor who is completely independent of the person or persons who conducted the abatement may conduct clearance testing after abatement activities.
History: 1999 MR 8, Eff. Sep. 15, 1999.

R 325.9924 Annual fees and recertification.

Rule 24. (1) In accordance with the lead abatement act, a training program seeking to maintain accreditation to offer courses in lead-based paint activities shall annually submit to the department, on forms provided by the department, all required information and pay the appropriate fee or fees. The training program's accreditation shall not expire during the department's review or audit of a timely and sufficient reaccreditation application.
(2) In accordance with the lead abatement act, an individual or person seeking to maintain certification to engage in lead-based paint activities shall annually submit to the department, on forms provided by the department, all required information and pay the appropriate fee or fees.
(3) An individual seeking to maintain certification to engage in lead- based paint activities shall recertify with the department every 3 years in accordance with the requirements of section 5468 of the lead abatement act and these rules.

History: 1999 MR 8, Eff. Sep. 15, 1999.

R 325.9925 Enforcement actions.

Rule 25. (1) The department shall comply with Act No. 306 of the Public Acts of 1969, as amended, being §24.201 et seq. of the Michigan Compiled Laws, when taking enforcement actions under the authority of the lead abatement act and these rules.

(2) Not later than 15 working days after receipt of a citation issued under section 5476 of the lead abatement act, a person who is alleged to have violated the lead abatement act or these rules may appeal the alleged violation by petitioning for an administrative hearing. The department shall conduct an administrative hearing in accordance with Act No. 306 of the Public Acts of 1969, as amended, being §24.201 et seq. of the Michigan Compiled Laws. A citation and associated administrative fine become final if the department does not receive a petition for an administrative hearing within the time specified in this subrule.

History: 1999 MR 8, Eff. Sep. 15, 1999.

DEPARTMENT OF ENVIRONMENTAL QUALITY

HEALTH SERVICES ADMINISTRATION

SUPPLYING WATER TO THE PUBLIC

PART 1. GENERAL PROVISIONS

R 325.10102 Definitions; A, B.

Rule 102. As used in these rules:

(a) "Act" means Act No. 399 of the Public Acts of 1976, being S325.1001 et seq. of the Michigan Compiled Laws, and known as the safe drinking water act.

(b) "Action level" means the concentration of lead or copper in water as specified in 604f(1)(c) that determines, in some cases, the treatment requirements that a water system is required to complete.

(c) "Advisory board" means the advisory board of examiners appointed by the director pursuant to the provisions of section 9(2) of the act.

(d) "Alteration" means the modification of, or addition to, an existing waterworks system, or portion of the system, that affects any of the following:

(i) Flow.

(ii) Capacity.

(iii) System service area.

(iv) Source.

(v) Treatment.

(vi) Reliability.

(e) "Approved analytical technique" means a calculation, determination, or other laboratory examination or procedure that has been approved by the United States environmental protection agency pursuant to the provisions of 40 C.F.R. part 141.

(f) "Approved basement" means a basement which has walls and a floor that are constructed of concrete or its equivalent, which is essentially watertight, which is effectively drained, and which is in daily use.

(g) "Aquifer" means an underground water-bearing formation that is saturated and which transmits water in sufficient quantities to serve as a water supply.

(h) "Artesian" means a condition of internal pressure which causes the water level in a well to rise above the aquifer used to supply water at the well location.

(i) "Back-up operator" means a certified operator designated by the public water supply to be in charge of the waterworks system or portion of the waterworks system when the operator-in-charge is not available.

(j) "Bottled drinking water" means water that is ultimately sold, provided, or offered for human consumption in a closed container.

History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1991 MR 11, Eff. Nov. 22, 1991; 1994 MR 12, Eff. Jan. 5, 1995; 2000 MR 19, Eff. Dec. 8 2000.

R 325.10103 Definitions; C.

Rule 103. As used in these rules:

(a) "C" in "CT calculation" means the residual disinfectant concentration measured in milligrams per liter in a representative sample of water.

(b) "Casing" means a durable pipe that is placed in a well to prevent the soil from caving in and to seal off surface drainage or undesirable water, gases, contaminants, or other fluids and prevent them from entering the well and the aquifer supplying the well.

(c) "Casing vent" means an outlet at the upper terminal of a well casing which provides atmospheric pressure in the well and which allows the escape of gases when present.

(d) "Certificate" means a document that is issued by the department to a person who meets the qualification requirements for operating a waterworks system or a portion of the waterworks system.

(e) "Certified operator" means an operator who holds a certificate.

(f) "Community supply" means a public water supply that provides year-round service to not fewer than 15 living units or which regularly provides year-round service to not fewer than 25 residents.

(g) "Complete treatment system" means a treatment system that employs disinfection, coagulation, sedimentation, and filtration units that function collectively to effect control over water quality characteristics to produce a finished water that meets the requirements of the state drinking water standards.

(h) "Compliance cycle" means the 9-year calendar year cycle during which public water systems are required to monitor. Each compliance cycle consists of 3 3-year compliance periods. The first calendar year cycle begins January 1, 1993, and ends December 31, 2001; the second begins January 1, 2002, and ends December 31, 2010; the third begins January 1, 2011, and ends December 31, 2019.

(i) "Compliance period" means a 3-year calendar year period within a compliance cycle. Each compliance cycle has 3 3-year compliance periods. Within the first compliance cycle, the first compliance period runs from January 1, 1993, to December 31, 1995; the second from January 1, 1996, to December 31, 1998; the third from January 1, 1999, to December 31, 2001.

(j) "Confluent growth" means a continuous bacterial growth that covers the entire filtration area of a membrane filter, or portion of a filtration area, in which bacterial colonies are not discrete.

(k) "Construction" means the erection, installation, or alteration of a waterworks system, or any portion of a waterworks system, that affects any of the following:

(i) Flow.

(ii) Capacity.

(iii) System service area.

(iv) Source.

(v) Treatment.

(vi) Reliability.

(l) "Contested cases" means matters that are within the definition of a contested case as set forth by section 3(3) of Act No. 306 of the Public Acts of 1969, as amended, being S24.203(3) of the Michigan Compiled Laws, and matters of issue that involve any of the following which are issued by the director, the department, or the division pursuant to the act and these rules:

(i) Orders.

(ii) Exemptions.

(iii) Variances.

(iv) Stipulations.

(v) Consent agreements.

(vi) Permits.

(vii) Licenses.

(viii) Certificates.

(m) "Contested case hearing" means a hearing that is initiated by the department or a person pursuant to the provisions of chapters 4, 5, and 6 of Act No. 306 of the Public Acts of 1969, as amended, being SS24.271 to 24.306 of the Michigan Compiled Laws.

(n) "Contaminant" means a physical, chemical, biological, or radiological substance or matter in water.

(o) "Contingency plan" means a plan for use by a supplier of water in the event of an emergency.

(p) "Corrosion inhibitor" means a substance that is capable of reducing the corrosivity of water toward metal plumbing materials, especially lead and copper, by forming a protective film on the interior surface of those materials.
(q) "Cross connection" means a connection or arrangement of piping or appurtenances through which a backflow could occur.
(r) "CT calculation" means the product of residual disinfectant concentration (C) in milligrams per liter determined at or before the first customer and the corresponding disinfectant contact time (T) in minutes; C*T is calculated at rated capacity. The total CT shall be the sum of individual CTs of each disinfectant sequence.
(s) "Customer service connection" means the pipe between a water main and customer site piping or building plumbing system.
(t) "Customer site piping" means an underground piping system owned or controlled by the customer that conveys water from the customer service connection to building plumbing systems and other points of use on lands owned or controlled by the customer. Customer site piping does not include any system that incorporates treatment to protect public health.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1991 MR 11, Eff. Nov. 22, 1991; 1993 MR 6, Eff. July 2, 1993; 1994 MR 12, Eff. Jan. 5, 1995; 2000 MR 19 Eff. Dec. 8, 2000.

R 325.10104 Definitions; D, E.

Rule 104. As used in these rules:
(a) “Department” means the department of environmental quality or its authorized agent or representative.
(b) “Deviation” means an exception to a department rule establishing minimum standards or requirements issued in writing or as a condition to a permit to a supplier of water.
(c) “Director” means the director of the department of environmental quality or his or her authorized agent or representative.
(d) “Disinfectant contact time” (T in CT calculations) means the time in minutes that it takes for water to move from the point of disinfectant application or the previous point of disinfectant residual measurement to a point at or before the point where residual disinfectant concentration is measured. Disinfectant contact time in pipelines shall be calculated based on plug flow by dividing the internal volume of the pipe by the maximum hourly flow rate through that pipe. Disinfectant contact time within mixing basins and storage reservoirs shall be determined by tracer studies or an equivalent demonstration.
(e) “Distribution system” means a system that consists of the following components through which water is distributed and used or intended for use for drinking or household purposes:
(i) Piping.
(ii) Transmission or distribution mains.
(iii) Pumps.
(iv) Pumping stations.
(v) Storage tanks.
(vi) Controls.
(vii) Associated appurtenances.
(f) “Division” means the drinking water and radiological protection division of the department.
(g) “Domestic or other non-distribution system plumbing problem” means a coliform contamination problem in a public water system with more than 1 service connection that is limited to the specific service connection from which the coliform-positive sample was taken.
(h) “Drawdown” means the difference between the static water level and the pumping water level in a well or, for a flowing artesian well, the difference between an established datum above ground and the pumping water level.
(i) “Effective corrosion inhibitor residual,” for the purpose of lead and copper control, means a concentration that is sufficient to form a passivating film on the interior walls of a pipe.
(j) “Emergency” means a situation in a public water supply that results in contamination, loss of pressure, lack of adequate supply of water, or other condition that poses an imminent hazard or danger to the public health.
(k) “EPA” means the United States environmental protection agency.

(l) “Established ground surface” means the intended or actual finished grade or elevation of the surface of the ground at the site of a water supply facility.
(m) “Exemption” means an order, with appropriate conditions, time schedules, and compliance requirements, that is issued by the director to a supplier of water permitting a public water supply to be in temporary noncompliance with a state drinking water standard, including a specified treatment technique.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1991 MR 11, Eff. Nov. 22, 1991; 1994 MR 12, Eff. Jan. 5, 1995; 1998 MR 3, Eff. Apr, 8, 1998.

R 325.10105 Definitions; F to L.

Rule 105. As used in these rules:
(a) "Federal act" means the safe drinking water act of 1974, 42 U.S.C. S300f et seq. and the provisions of 40 C.F.R. part 35, S35.600 to S35.630; 40 C.F.R. part 141; and 40 C.F.R. part 142 promulgated by EPA (1999) under the federal act.
(b) "Finished water" means water that is ready for distribution to the customers or users of a public water supply.
(c) "Firm capacity," as applied to wells, pumping stations, or units of treatment systems, means the production capability of each respective part of the waterworks system with the largest well, pump, or treatment unit out of service.
(d) "First draw sample" means a 1-liter sample of tap water which has been standing in plumbing pipes for not less than 6 hours and which is collected without flushing the tap.
(e) "Gravity storage tank" means an elevated or ground level finished water storage reservoir that, during normal use, operates under atmospheric pressure.
(f) "Ground water" or "groundwater" means the water in the zone of saturation in which all of the pore spaces of the subsurface material are filled with water.
(g) "Ground water under the direct influence of surface water" means any water beneath the surface of the ground with significant occurrence of insects or other macroorganisms, algae, or large-diameter pathogens such as Giardia lamblia or Cryptosporidium, or significant and relatively rapid changes in water characteristics such as turbidity, temperature, conductivity or Ph that closely correlate to climatological or surface water conditions.
(h) "Grout" means neat cement, concrete, or other sealing material which is approved by the department and which is used to seal a well casing in a well.
(i) "Imminent hazard" means that in the judgment of the director there is a violation, or a condition that may cause a violation, of the state drinking water standards at a public water supply requiring immediate action to prevent endangering the health of people.
(j) "Initial compliance period" means January 1993 to December 1995. For a system that has less than 150 service connections, the initial compliance period is January 1996 to December 1998 for contaminants listed in part 6 of these rules that have an effective date of January 17, 1994.
(k) "Large water supply," for the purpose of lead and copper control, means a water supply that serves more than 50,000 persons.
(l) "Lead service line" means a service line which is made of lead and which connects the water main to the building inlet and any lead pigtail, gooseneck, or other fitting that is connected to the lead line.
(m) "License" means the license that is issued by the department to a water hauler, or for a water hauling tank, pursuant to section 18 of the act.
(n) "Limited treatment system" means a treatment system including, but not limited to, disinfection, fluoridation, iron removal, ion exchange treatment, phosphate application, or filtration other than complete treatment.
(o) "Living unit" means a house, apartment, or other domicile occupied or intended to be occupied on a day-to-day basis by an individual, family group, or equivalent.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1994 MR 12, Eff. Jan. 5, 1995; 1994 MR 12, Eff. Jan. 5, 1995; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.10106 Definitions; M to O.

Rule 106. As used in these rules:

(a) "Maximum TTHM potential" means the maximum concentration of total trihalomethanes produced in a given water containing a disinfectant residual after 7 days at a temperature of 25 degrees Centigrade or above.
(b) "MCL" means the maximum permissible level of a contaminant in water that is delivered to any user of a public water supply.
(c) "MDL" means method detection limit for analytical work done to determine compliance with the act.
(d) "Medium-size water system," for the purpose of lead and copper control, means a water supply that serves more than 3,300 persons and less than or equal to 50,000 persons.
(e) "Monitoring requirement" means a schedule, frequency, and location for the sampling and analysis of water that is required by the provisions of part 7 of these rules to determine whether a public water supply is in compliance with the state drinking water standards.
(f) "Near the first service connection" means at 1 of the 20% of all service connections in the entire system that are nearest the water supply treatment facility, as measured by water transport time within the distribution system.
(g) "Noncommunity supply" means a public water supply that is not a community supply, but that has not fewer than 15 service connections or that serves not fewer than 25 individuals on an average daily basis for not less than 60 days per year.
(h) "Nontransient noncommunity water supply" or "NTNC" means a noncommunity supply that serves not fewer than 25 of the same individuals on an average daily basis over 6 months per year. This definition includes water supplies in places of employment, schools, and day-care centers.
(i) "NTU" means nephelometric turbidity unit.
(j) "One hundred-year drought elevation" means the minimum projected water surface elevation that would occur at a location once in a period of 100 years.
(k) "One hundred-year flood elevation" means the maximum projected water surface elevation that would occur at a location once in a period of 100 years.
(l) "Operating shift" means that period of time during which operator decisions that affect public health are necessary for proper operation of the waterworks system.
(m) "Operator" means an individual who operates a waterworks system or a portion of a waterworks system.
(n) "Operator in charge" means a certified operator who is designated by the owner of a public water supply as the responsible individual in overall charge of a waterworks system, or portion of a waterworks system, who makes decisions regarding the daily operational activities of the system that will directly impact the quality or quantity of drinking water.
(o) "Optimal corrosion control treatment," for the purpose of lead and copper control, means the corrosion control treatment that minimizes the lead and copper concentrations at users' taps while insuring that the treatment does not cause the water supply to be in violation of any national primary drinking water regulations.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1984 MR 6, Eff. July 6, 1984; 1989 MR 8, Eff. Sept. 13, 1989; 1991 MR 11, Eff. Nov. 22, 1991; 1994 MR 12, Eff. Jan. 5, 1995; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.10107 Definitions; P, R.

Rule 107. As used in these rules:
(a) "Permit" means a public water supply construction permit that is issued to a supplier of water by the department under the provisions of section 4 of the act.
(b) "Person" means an individual, partnership, copartnership, cooperative, firm,company, public or private association or corporation,political subdivision, agency of the state, agency of the federal government, trust, estate, joint structure company, or any other legal entity,or their legal representative, agent, or assignee.
(c) "Pitless adapter" means a device or assembly of parts which permits water to pass through the wall of a well casing or extension of a well casing and which provides access to the well and to the parts of the water system within the well in a manner that prevents the entrance of contaminants into the well and the water produced.
(d) "Plans and specifications" means drawings, data and a true description or representation of an entire waterworks system or parts of the system as it exists or is to be constructed, and a statement of how a waterworks system shall be operated.

(e) "Political subdivision" means a city, village, township, charter township, county, district, authority,or portion or combination of any of the entities specified in this subdivision.
(f) "PQL" means the practical quantitation levels. The pql is the lowest concentration that can be reliably achieved by well-operated laboratories within specified limits of precision and accuracy during routine laboratory operating conditions.
(g) "Production well" means a well that has been approved for use for a public water supply in accordance with the provisions of part 8 of these rules.
(h) "Public hearing" means a hearing which is conducted by the director of the department on matters relating to the functions and responsibilities of the division and which seeks public input relevant to such functions and responsibilities.
(i) "Public water supply" means a waterworks system that provides water for drinking or household purposes to persons other than the supplier of the water, and does not include either of the following:
(i) A waterworks system that supplies water to only 1 living unit.
(ii) A waterworks system that consists solely of customer site piping.
(j) "Pumping water level" means the distance measured from an established datum at or above ground level to the water surface in a well being pumped at a known rate for a known period of time.
(k) "Rated treatment capacity" is one or any combination of the following capacities when water treatment is practiced.
(i) Rated capacity from an approved surface water supply, ground water supply under the direct influence of surface water, or complete treatment system as contained in R 325.11006.
(ii) Firm capacity from an approved ground water supply where firm capacity means the production capability of each respective component of the waterworks system with the largest well, pump, or treatment unit out of service.
(iii) Available capacity obtained under contract and capable of delivery from another approved public water supply.
(l) "Raw water" means water that is obtained from a source by a public water supply before a supplier of water provides any treatment or distributes the water to its customers.
(m) "Regional administrator" means the EPA region V administrator.
(n) "Regulated VOCs" means a group of volatile organic chemicals for which state drinking water standards have been promulgated, but does not include total trihalomethanes.
(o) "Removed from service" means physically disconnected from the waterworks system in a manner that would prevent the inadvertent use of the well and would require specific authorization from the supplier of water to reconnect.
(p) "Repeat sample" means a sample that is collected and analyzed in response to a previous coliform-positive sample.
(q) "Resident" means an individual who owns or occupies a living unit.
(r) "Routine sample" means a water sample that is collected and analyzed to meet the monitoring requirements for total coliform, as outlined in the written sampling plan.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1989 MR 8, Eff. Sept. 13, 1989; 1991 MR 11, Eff. Nov. 22, 1991; 1994 MR 12, Eff. Jan. 5, 1995; 2000 MR 19 Eff. Dec. 8, 2000.

R 325.10108 Definitions; S.

Rule 108. As used in these rules:
(a) "Sanitary survey" means an evaluation, including an on-site review of a waterworks system or a portion thereof, for existing or potential health hazards, including sampling, design, operation, and maintenance, for the purpose of determining the ability of the public water supply to produce, treat, and distribute adequate quantities of water meeting state drinking water standards.
(b) "Service connection" means a direct connection from a distribution water main to a living unit or other site to provide water for drinking or household purposes.
(c) "Service line sample" means a 1-liter sample of water that has been standing for not less than 6 hours in a service line.
(d) "Shift operator" means a certified operator, other than the operator in charge, who is in charge of an operating shift of a waterworks system.

(e) "Single-family structure," for the purpose of lead and copper control, means a building which is constructed as a single-family residence and which is currently used as either a residence or a place of business.
(f) "Small water supply," for the purpose of lead and copper control, means a water supply that serves less than 3,301 persons.
(g) "SOC" means synthetic organic chemical.
(h) "Source" means the point of origin of raw water or means treated water that is purchased or obtained by a public water supply, by a water hauler, or by a person who provides bottled water.
(i) "State drinking water standards" means quality standards setting limits for contaminant levels or establishing treatment techniques to meet standards necessary to protect the public health.
(j) "Static water level" means the distance measured from an established datum at or above ground level to the water surface in a well which is not being pumped, which is not under the influence of pumping, and which is not flowing under artesian pressure.
(k) "Suction line" means a pipe or line that is connected to the inlet side of a pump or pumping equipment.
(l) "Supplier of water" or "supplier" means a person who owns or operates a public water supply, and includes a water hauler.
(m) "Surface water" means water that rests or flows on the surface of the ground.
(n) "System with a single-service connection" means a public water supply that supplies drinking water to consumers through a single-service line.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1991 MR 11, Eff. Nov. 22, 1991; 1993 MR 6, Eff. July 2, 1993; 1994 MR 12, Eff. Jan. 5, 1995; 2000 MR 19 Eff. Dec. 8, 2000.

R 325.10109 Definitions; T to Y.

Rule 109. As used in these rules:
(a) "Test well" means a well that is drilled on a site that has not been approved for use as a production well in accordance with the provisions of part 8 of these rules.
(b) "Too numerous to count" means that the total number of bacterial colonies is more than 200 on a 47-millimeter diameter membrane filter.
(c) "Total trihalomethanes" or "TTHM" means the sum of the concentration in milligrams per liter, rounded to 2 significant figures, of all of the following:
(i) The trihalomethane compounds.
(ii) Trichloromethane (chloroform).
(iii) Dibromochloromethane.
(iv) Bromodichloromethane.
(v) Tribromomethane (bromoform).
(d) "Transient noncommunity water supply" means a noncommunity supply that does not meet the definition of nontransient noncommunity water supply in R 325.10106(h).
(e) "Treatment system" means a facility or structure and associated appurtenances installed for the purpose of treating drinking water before delivery to a distribution system.
(f) "Treatment technique" means a minimum treatment requirement or a necessary methodology or technology that is employed by a supplier of water for the control of the chemical, physical, biological, or radiological characteristics of the public water supply.
(g) "Trihalomethane" or "THM" means 1 of the family of organic compounds named as derivatives of methane, wherein 3 of the 4 hydrogen atoms in methane are each substituted by a halogen atom in the molecular structure.
(h) "Unregulated contaminants" means a group of contaminants for which state drinking water standards have not been promulgated, but for which monitoring requirements apply.
(i) "Variance" means an order, with appropriate conditions and compliance schedules and requirements, which is issued by the director to a supplier of water and which permits a public water supply to be in noncompliance with a state drinking water standard, including a specified treatment technique.
(j) "VOC" means volatile organic chemical.
(k) "Water hauler" means a person engaged in bulk vehicular transportation of water to other than the water hauler's own household which is intended for use or used for drinking or household purposes. Excluded from

this definition are those persons providing water solely for employee use.
(l) "Water transportation tank" means a tank that is associated with an over-the road vehicle that is used for the bulk transport of drinking water.
(m) "Waterworks system" or "system" means a system of pipes and structures through which water is obtained and distributed, including but not limited to:wells and well structures, intakes and cribs, pumping stations, treatment plants, storage tanks, pipelines and appurtenances,or a combination of the items specified in this subdivision, actually used or intended for use for the purpose of furnishing water for drinking or household purposes.
(n) "Year-round service" means the ability of a supplier of water to provide drinking water on a continuous basis to a living unit or facility.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1984 MR 6, Eff. July 6, 1984; 1989 MR 8, Eff. Sept. 13, 1989; 1991 MR 11, Eff. Nov. 22, 1991; 1993 MR 6, Eff. July 2, 1993; 1994 MR 12, Eff. Jan. 5, 1995; 1998 MR 3, Eff. Apr. 8, 1998; 2000 MR 19 Eff. Dec. 8, 2000.

R 325.10110 Definitions; parts 6 and 7.

Rule 110. As used in part 6 and part 7 of these rules:
(a) "Dose equivalent" means the product of the absorbed dose from ionizing radiation and such factors as account for differences in biological effectiveness due to the type of radiation and its distribution in the body as specified by the ICRU.
(b) "Gross alpha particle activity" means the total radioactivity due to alpha particle emission as inferred from measurements on a dry sample.
(c) "Gross beta particle activity" means the total radioactivity due to beta particle emission as inferred from measurements on a dry sample.
(d) "ICRU" means the international commission on radiological units and measurements.
(e) "Man-made beta particle and photon emitters" means all radionuclides emitting beta particles or photons, or both, listed in "Maximum Permissible Body Burdens and Maximum Permissible Concentrations of Radionuclides in Air or in Water for Occupational Exposure," NCRP Report 22, 1963, as adopted by reference in R 325.10112, except the daughter product of thorium 232, uranium 235, and uranium 238.
(f) "Picocurie" or "pCi" means that quantity of radioactive material producing 2.22 nuclear transformations per minute.
(g) "Rem" means the unit of dose equivalent from ionizing radiation to the total body or any internal organ or organ system. A millirem is 1/1000 of a rem.
History: 1954 ACS, Eff. Jan. 12, 1978; 1979 AC; 2000 MR 19 Eff. Dec. 8, 2000.

R 325.10111 RESCINDED.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; rescinded 2000 MR 19, Eff. Dec. 8, 2000.

R 325.10112 Adoption by reference.

Rule 112. The department incorporates by reference, and adopts as a part of these rules, the publication entitled "Maximum Permissible Body Burdens and Maximum Permissible Concentrations of Radionuclides in Air and in Water for Occupational Exposure," NCRP Report 22, 1963, as referred to in parts 1 and 6 of these rules. Copies of the adopted matter are available for inspection at the offices of the department at 184 U.S. Highway 41 East, Negaunee, and 3423 North Martin Luther King Jr. Blvd., Lansing. Copies may be purchased from the National Council on Radiation Protection, 7910 Woodmont Avenue, Suite 800, Bethesda, Maryland 20814, at a cost at the time of adoption of these rules of $20.00.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1998 MR 3, Eff. Apr. 8, 1998; 2000 MR 19 Eff. Dec. 8, 2000.

R 325.10113 Compliance with rules; guidance information.

Rule 113. Suppliers of water may use the information set forth in the following publications for general guidance in complying with the provisions of these rules:
(a) Recommended standards for water works, prepared by the Great Lakes--upper Mississippi river board of state sanitary engineers, is available for inspection at the department offices in Lansing and Negaunee, and

may be purchased at a cost of $8.00 from the Health Education Services, P.O. Box 7126, Albany, New York 12224.

(b) The American water works association manual M-19, emergency planning for water utility management, 1973, as referred to in part 23, is available for inspection at the department offices in Lansing and Negaunee, and may be purchased at a cost of $45.00 from the American Water Works Association, 6666 West Quincy Avenue, Denver, Colorado 80235.

History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 2000 MR 19, Eff. Dec. 8, 2000.

PART 3. VARIANCES AND EXEMPTIONS

R 325.10303
Source: 1991 AACS.

R 325.10304
Source: 1991 AACS.

R 325.10306
Source: 1991 AACS.

R 325.10308a
Source: 1984 AACS.

R 325.10308b Best available technology.

Rule 308b. (1) The department identifies the following as the best technology, treatment technique, or other means generally available for achieving compliance with the MCL:

(a) For organic contaminants that are referenced in R 325.10604b and R 325.10604d, the best available technologies, treatment techniques, or other means available for achieving compliance with the MCLS are granular activated carbon (GAC), packed tower aeration (PTA), or oxidation (OX), as listed in table 3.1.

Table 3.1

BEST AVAILABLE TECHNOLOGIES FOR ORGANIC CONTAMINANTS

CONTAMINANT	GAC	PTA	OX
Alachlor	x		
Aldicarb	x		
Aldicarb sulfone	x		
Aldicarb sulfoxide	x		
Atrazine	x		
Benzene	x	x	
Benzo(a)pyrene	x		
Carbofuran	x		
Carbon tetrachloride	x	x	
Chlordane	x		
Dalapon	x		
2,4-D	x		
Di (2-ethylhexyl)adipate	x	x	
Di (2-ethylhexyl)phthalate	x		
Dibromochloropropane (DBCP)	x		
o-Dichlorobenzene	x	x	
para-Dichlorobenzene	x	x	
1,2-Dichloroethane	x	x	

1,1-Dichloroethylene	x	x	
cis-1,2-Dichloroethylene	x	x	
trans-1,2-Dichloroethylene	x	x	
Dichloromethane	x		
1,2-Dichloropropane	x	x	
Dinoseb	x		
Diquat	x		
Endothall	x		
Endrin	x		
Ethylbenzene	x	x	
Ethylene Dibromide (EDB)	x	x	
Glyphosate			x
Heptachlor	x		
Heptachlor epoxide	x		
Hexachlorobenzene	x		
Hexachlorocyclopentadiene	x	x	
Lindane	x		
Methoxychlor	x		
Monochlorobenzene	x	x	
Oxamyl (Vydate)	x		
Pentachlorophenol	x		
Picloram	x		
Polychlorinated biphenyls(PCB)	x		
Simazine	x		
Styrene	x	x	
2,3,7,8-TCDD (Dioxin)	x		
Tetrachloroethylene	x	x	
Toluene	x	x	
Toxaphene	x		
2,4,5-TP (Silvex)	x		
1,2,4-Trichlorobenzene	x	x	
1,1,1-Trichloroethane	x	x	
1,1,2-Trichloroethane	x	x	
Trichloroethylene	x	x	
Vinyl chloride	x		
Xylene	x	x	

Table 3.2
BEST AVAILABLE TECHNOLOGIES FOR INORGANIC CONTAMINANTS

Chemical Name	Best Available Technologies
Antimony	2,7
Asbestos	2,3,8
Barium	5,6,7,9
Beryllium	1,2,5,6,7

Cadmium	2,5,6,7
Chromium	2,5,62,7
Cyanide	5,7,10
Mercury	21,4,61,71
Nickel	5,6,7
Nitrate	5,7,9
Nitrite	5,7
Selenium	1,23,6,7,9
Thallium	1,5

[1] Best available technology only if influent Hg concentrations are 10 ug/l or less.
[2] Best available technology for chromium III only.
[3] Best available technology for selenium IV only.

Key to best available technologies in table:
1 = activated alumina
2 = coagulation/filtration
3 = direct and diatomite filtration
4 = granular activated carbon
5 = ion exchange
6 = lime softening
7 = reverse osmosis
8 = corrosion control
9 = electrodialysis
10 = chlorine
11 = ultraviolet

(2) The department shall require type I water systems and nontransient, noncommunity water supplies to employ a treatment method identified in subrule (1) of this rule as a condition for granting a variance, except as provided in subrule (3) of this rule. If, after the treatment method is installed in the system, the system cannot meet the MCL, that system shall be eligible for a variance pursuant to the provisions of this part and section 20 of the act.

(3) If a supplier of water can demonstrate through comprehensive engineering assessments, which may include pilot plant studies, that the treatment methods identified in subrule (1) of this rule would only achieve a de minimis reduction in contaminants, the department may issue a schedule of compliance that requires the supplier of water being granted the variance to examine other treatment methods as a condition of obtaining the variance.

(4) If the department determines that a treatment method identified in subrule (3) of this rule is technically feasible, the department may require the supplier of water to use that treatment method in connection with a compliance schedule issued pursuant to the provisions of section 20 of the act. The department's determination shall be based upon studies by the supplier of water and other relevant information.

History: 1989 MR 8, Eff. Sept. 13, 1989; 1993 MR 6, Eff. July 2, 1993; 1994 MR 12, Eff. Jan. 5, 1995; 1998 MR 3, Eff. Apr. 8, 1998.

PART 4. PUBLIC NOTIFICATION AND PUBLIC EDUCATION

R 325.10401
Source: 1994 AACS.

R 325.10402
Source: 1989 AACS.

R 325.10403
Source: 1993 AACS.

R 325.10404
Source: 1991 AACS.

R 325.10405
Source: 1989 AACS.

R 325.10406
Source: 1989 AACS.

R 325.10407
Source: 1994 AACS.

R 325.10409
Source: 1989 AACS.

R 325.10410 Public education regarding lead.

Rule 410. (1) A water system that exceeds the lead action level based on tap water samples that are collected in accordance with the provisions of R 325.10710a shall deliver the public education materials contained in the provisions of 40 C.F.R. part 141, '141.85(a) and (b), (June 7, 1991), which are adopted herein by reference, in accordance with the requirements in this subrule. Copies of 40 C.F.R. part 141, (June 7, 1991), are available from the United States Government Printing Office, Superintendent of Documents, Washington, DC 20402-9325, at a cost as of the time of adoption of these rules of $1.50, or the applicable portions are available free of charge from the Michigan Department of Environmental Quality, Drinking Water and Radiological Protection Division, 3423 North Logan/Martin Luther King Jr. Boulevard, P.O. Box 30630, Lansing, Michigan 48909-8130.

(2) In a community where a significant proportion of the population speaks a language other than English, public education materials shall be communicated in the appropriate language or languages.

(3) A community water supplier that fails to meet the lead action level on the basis of tap water samples that are collected in accordance with the provisions of R 325.10710a shall, within 60 days, do all of the following:

(a) Provide a notice to each customer that contains the information specified in the provision of 40 C.F.R. part 141, '141.85(a), together with the following alert in large print: "Some homes in this community have elevated lead levels in their drinking water. Lead can pose a significant risk to your health. Please read the enclosed notice for further information."

(b) Submit the information specified in the provision of 40 C.F.R. part 141, '141.85(a), to the editorial departments of the major daily and weekly newspapers circulated throughout the community.

(c) Provide pamphlets or brochures that contain the public education materials specified in the provisions of 40 C.F.R. part 141, '141.85(a)(2) and (4), to facilities and organizations, including all of the following:

(i) Public schools or local school boards.

(ii) City or county health department.

(iii) Women, infants, and children (WIC), or head start programs.

(iv) Public and private hospitals or clinics.

(v) Pediatricians.

(vi) Family planning clinics.

(vii) Local welfare agencies.

(d) Submit the public service announcement specified in the provisions of 40 C.F.R. part 141, '141.85 (b), to not less than 5 of the radio and television stations with the largest audiences that broadcast to the community that is served by the water supply. For small systems, the public service announcement may be hand delivered to each customer instead of submitting the announcement to radio and television stations.

(4) A community water supplier shall repeat the tasks specified in subrule (3)(a), (b), and (c) of this rule every 12 months and the tasks specified in subrule (3)(d) of this rule every 6 months for as long as the supply exceeds the lead action level.

(5) Within 60 days after it exceeds the lead action level, a nontransient, noncommunity water supplier shall deliver the public education materials specified in the applicable provisions of 40 C.F.R. 141, '141.85(a)(1), (2), and (4) as follows:

(a) Post informational posters on lead in drinking water in a public place or common area in each of the buildings served by the supply.
(b) Distribute informational pamphlets or brochures on lead in drinking water to each person who is routinely served by the nontransient, noncommunity water supply.
(6) A nontransient, noncommunity water supplier shall repeat the tasks specified in subrule (5) of this rule at least once during each calendar year in which the system exceeds the lead action level.
(7) A water supplier may discontinue delivery of public education materials if the supplier has met the lead action level during the most recent 6-month monitoring period conducted pursuant to the provisions of R 325.10710a. The supplier shall recommence public education in accordance with this rule if it subsequently exceeds the lead action level during any monitoring period.
History: 1994 MR 12, Eff. Jan. 5, 1995; 1998 MR 3, Eff. Apr. 8, 1998.

PART 5. TYPES OF PUBLIC WATER SUPPLIES

R 325.10505
Source: 1991 AACS.

R 325.10506
Source: 1991 AACS.

PART 6. STATE DRINKING WATER STANDARDS AND ANALYTICAL TECHNIQUES

R 325.10601 Purpose.
Rule 601. This part establishes drinking water standards for specific contaminants that shall be met by a supplier of water to assure the protection of the public health. In addition, this part specifies methods to be used in the analyses of water samples from public water supplies to determine compliance with the state drinking water standards.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1991 MR 11, Eff. Nov. 22, 1991; 1993 MR 6, Eff. July 2, 1993; 1998 MR 3, Eff. Apr. 8, 1998.

R 325.10601a Compliance with standards to be determined in accordance with monitoring requirements; analytical results to be performed by certified laboratories.
Rule 601a. (1) Compliance with the drinking water standards specified in this part shall be determined in accordance with the monitoring requirements set forth in part 7 of these rules.
(2) Analytical results that are used to determine compliance with the MCLs established in this part shall be performed by department or EPA-certified or provisionally certified laboratories.
History: 1993 MR 6, Eff. July 2, 1993; 1998 MR 3, Eff. Apr. 8, 1998.

R 325.10602
Source: 1993 AACS.

R 325.10603
Source: 1993 AACS.

R 325.10604 MCLs for beta particle and photon radioactivity from man-made radionuclides in type I public water supplies.
Rule 604. (1) The average annual concentration of beta particle and photon radioactivity from man-made radionuclides in drinking water of type I public water supplies shall not produce an annual dose equivalent to the total body or any internal organ greater than 4 millirems per year.
(2) Except for the radionuclides listed in table 6.1, the concentration of man-made radionuclides in type I public water supplies causing 4 millirems total body or organ dose equivalents shall be calculated on the basis of a 2-liter-per-day drinking water intake using the 168-hour data listed in the publication entitled "Maximum Permissible Body Burdens and Maximum Permissible Concentration of Radionuclides in Air or Water for Occupational Exposure," NBS handbook 69, as amended August, 1963, United States Department

of Commerce, which is adopted in these rules by reference and is available from the Michigan Department of Environmental Quality, Drinking Water and Radiological Protection Division, 3423 North Logan/Martin Luther King Jr. Boulevard, P.O. Box 30630, Lansing, Michigan 48909-8130, at no cost. If 2 or more radionuclides are present, the sum of their annual dose equivalent to the total body or to any organ shall not be more than 4 millirem per year. Table 6.1 reads as follows:

Table 6.1
Average annual concentrations assumed to produce a total body or organ dose of 4 millirem per year.

Radionuclide	Critical organ	pCi per liter
Tritium	Total body	20,000
Strontium-90	Bone marrow	8

History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1993 MR 6, Eff. July 2, 1993; 1998 MR 3, Eff. Apr. 8, 1998.

R 325.10604a
Source: 1993 AACS.

R 325.10604b
Source: 1994 AACS.

R 325.10604c
Source: 1994 AACS.

R 325.10604d MCLs for synthetic organic chemicals.

Rule 604d. (1) The MCLs for synthetic organic chemicals shall be as shown in table 6.4. The MCLs are effective beginning on the dates indicated. The MCLs for the synthetic organic chemicals contained in this rule apply to community and nontransient, noncommunity water supplies.
Table 6.4 reads as follows:

Table 6.4

Contaminant	**Maximum Contaminant Level in mg/l**	**Effective Date**
Alachlor	0.002	July 30, 1992.
Aldicarb	0.003	July 30, 1992.
Aldicarb sulfoxide	0.004	July 30, 1992.
Aldicarb sulfone	0.002	July 30, 1992.
Atrazine	0.003	July 30, 1992.
Benzo(a)pyrene	0.0002	January 17, 1994.
Carbofuran	0.04	July 30, 1992.
Chlordane	0.002	July 30, 1992.
Dalapon	0.2	January 17, 1994.
Di(2-ethylhexyl)adipate	0.4	January 17, 1994.
Di(2-ethylhexyl)phthalate	0.006	January 17, 1994.
Dibromochloropropane	0.0002	July 30, 1992.
Dinoseb	0.007	January 17, 1994.

Diquat	0.02	January 17, 1994.
Endothall	0.1	January 17, 1994.
Endrin	0.002	August 17, 1992.
Ethylene dibromide	0.00005	July 30, 1992.
Glyphosate	0.7	January 17, 1994.
Heptachlor	0.0004	July 30, 1992.
Heptachlor epoxide	0.0002	July 30, 1992.
Hexachlorobenzene	0.001	January 17, 1994.
Hexachlorocyclopentadiene	0.05	January 17, 1994.
Lindane	0.0002	July 30, 1992.
Methoxychlor	0.04	July 30, 1992.
Oxamyl (vydate)	0.2	January 17, 1994.
Pentachlorophenol	0.001	July 30, 1992.
Picloram	0.5	January 17, 1994.
Polychlorinated biphenyls	0.0005	July 30, 1992.
Simazine	0.004	January 17, 1994.
Toxaphene	0.003	July 30, 1992.
2,3,7,8-TCDD (dioxin)	3 X 10-8	January 17, 1994.
2,4-D	0.07	July 30, 1992.
2,4,5-TP silvex	0.05	July 30, 1992.

(2) Compliance with the MCLs for synthetic organic chemicals shall be determined based on the analytical results obtained at each sampling point.
(3) For suppliers that conduct monitoring more than once each year, compliance is determined by a running annual average of all samples taken at each sampling point. If the annual average of any sampling point is more than the MCL, then the system is out of compliance. If the initial sample or a subsequent sample would cause the annual average to be exceeded, then the system is out of compliance immediately. Any samples that are below the detection limit shall be calculated as zero for purposes of determining the annual average.
(4) If monitoring is conducted annually or less frequently, the system is out of compliance if the level of a contaminant at any sampling point is more than the MCL. If a confirmation sample is required by the department, the determination of compliance will be based on the average of 2 samples.
History: 1993 MR 6, Eff. July 2, 1993; 1994 MR 12, Eff. Jan. 5, 1995; 1998 MR 3, Eff. Apr. 8, 1998.

R 325.10604e
Source: 1993 AACS.

R 325.10604f
Source: 1994 AACS.

R 325.10605 Analytical techniques and sample collection procedures; incorporation by reference.

Rule 605. The analytical techniques and sample collection procedures used in the determination of compliance with the drinking water standards for microbiological contaminants, inorganic chemical contaminants, organic chemical contaminants including maximum TTHM potential, turbidity, residual disinfectants, temperature, pH, conductivity, alkalinity, and radioactivity which are contained in 40 C.F.R. parts 141 and 143, (1999, 1995), and which have been promulgated by the United States EPA under authority of the safe drinking water act of 1974 (public law 93-523), the safe drinking water act amendments of 1986 (public law 99-339), and the safe drinking water act amendments of 1996 (public law 104-182), 42 U.S.C. 300F ET SEQ. are adopted by reference in these rules. Copies of the adopted matter are available for inspection at the offices of the department at 3423 North Martin Luther King Jr. Blvd., Lansing. Copies of the adopted material may be obtained from the Superintendent of Documents, United States Government

Printing Office, Post Office Box 371954, Pittsburgh, PA 15250-7954, telephone (202) 512-1800, or the Department of Environmental Quality, Drinking Water and Radiological Protection Division, Post Office Box 30630, Lansing, Michigan 48909-8130. The cost as of the time of adoption of these rules is $37.00. The adopted material is also available at http://www.access.gpo.gov/su_docs.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1991 MR 11, Eff. Nov. 22, 1991; 1993 MR 6, Eff. July 2, 1993; 1998 MR 3, Eff. Apr. 8, 1998.

R 325.10605a Rescinded.
History: 1984 MR 6, Eff. July 6, 1984; 1993 MR 6, Eff. July 2, 1993; rescinded 1998 MR 3, Eff. Apr. 8, 1998.

R 325.10605b Rescinded.
History: 1989 MR 8, Eff. Sept. 13, 1989; 1993 MR 6, Eff. July 2, 1993; 1994 MR 12, Eff. Jan. 5, 1995; rescinded 1998 MR 3, Eff. Apr. 8, 1998.

R 325.10605c Rescinded.
History: 1991 MR 11, Eff. Nov. 22, 1991; 1993 MR 6, Eff. July 2, 1993; 1993 MR 10, Eff. Nov. 17, 1993; rescinded 1998 MR 32, Eff. Apr. 8, 1998.

R 325.10605d Rescinded.
History: 1993 MR 6, Eff. July 2, 1993; 1994 MR 12, Eff. Jan. 5, 1995; rescinded 1998 MR 3, Eff. Apr. 8, 1998.

R 325.10605e Rescinded.
History: 1993 MR 6, Eff. July 2, 1993; 1994 MR 12, Eff. Jan. 5, 1995; rescinded 1998 MR 3, Eff. Apr. 8, 1998.

R 325.10606 Alternate analytical techniques.
Rule 606. With the written permission of the department, concurred in by the administrator of the United States EPA, a public water supply owner may employ an alternate analytical technique. The use of the alternate analytical technique shall not decrease the frequency of monitoring required by these rules.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1998 MR 3, Eff. Apr. 8, 1998.

R 325.10607 Rescinded.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; rescinded 1998 MR 3, Eff. Apr. 8, 1998.

R 325.10608 Rescinded.
History: 1991 MR 11, Eff. Nov. 22, 1991; 1993 MR 6, Eff. July 2, 1993; rescinded 1998 MR 3, Eff. Apr. 8, 1998.

R 325.10609 Rescinded.
History: 1994 MR 12, Eff. Jan. 5, 1995; rescinded 1998 MR 3, Eff. Apr. 8, 1998.

PART 7. SURVEILLANCE, INSPECTION, AND MONITORING

R 325.10702
Source: 1991 AACS.

R 325.10705
Source: 1993 AACS.

R 325.10706
Source: 1993 AACS.

R 325.10707

Source: 1991 AACS.

R 325.10707a Invalidation of total coliform samples.

Rule 707a. (1) A total coliform sample result may be invalidated by the department in any of the following instances:

(a) A laboratory determines that analytical results are invalid due to any of the following situations:

(i) In the absence of gas, any turbid culture in the mtf or p-a techniques.

(ii) Confluent growth.

(iii) Any sample that is inoculated 30 hours or more after it was collected.

(iv) Improper sample analysis caused a total coliform positive result.

(b) The department, on the basis of the results of repeat samples, determines that the total coliform-positive sample resulted from a domestic or other nondistribution system plumbing problem. An invalidation under this subrule may occur if the repeat samples from the same sampling location are total coliform-positive and all other repeat samples are total coliform-negative.

(c) Substantial evidence suggests that a total coliform-positive result is due to a circumstance or condition that does not reflect water quality in the distribution system. The supplier of water shall still collect all required repeat samples.

(2) The decision to invalidate a total coliform-positive sample shall be in writing and available to EPA and the public.

(3) A total coliform-positive sample shall not be invalidated solely because all repeat samples are total coliform-negative.

(4) If a sample is invalidated pursuant to the provisions of subrule (1) of this rule, a supplier of water shall collect another sample from the same location as the original sample within 24 hours of being notified until a valid result is obtained. The department may waive the 24-hour time limit on a case-by-case basis.

History: 1991 MR 11, Eff. Nov. 22, 1991; 1993 MR 10, Eff. Nov. 17, 1993; 1998 MR 3, ff. Apr. 8, 1998.

R 325.10707b

Source: 1991 AACS.

R 325.10708

Source: 1991 AACS.

R 325.10709 Special purpose and invalidated samples.

Rule 709. Special purpose samples, such as those taken following water main placement, replacement or repair, and samples invalidated pursuant to the provisions of R 325.10707a shall not be used to determine compliance with the provisions of R 325.10705 and R 325.10706.

History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1991 MR 11, Eff. Nov. 22, 1991; 1998 MR 3, Eff. Apr. 8, 1998.

R 325.10710 Collection and analysis of samples for inorganic chemicals.

Rule 710. (1) Suppliers of water of type I and type II public water supplies shall collect water samples and cause analyses to be made for inorganic chemicals to determine compliance with the state drinking water standards as set forth in R 325.10604c. Each public water supply shall monitor at the time designated by the department during each compliance period.

(2) The department may require samples to be collected and analyzed at a prescribed frequency for inorganic chemicals for type III public water supplies.

(3) Beginning in the initial compliance period, type I and nontransient, noncommunity water suppliers shall conduct monitoring in accordance with this rule to determine compliance with the MCLs for inorganic contaminants outlined in R 325.10604c. Transient, noncommunity water suppliers shall conduct monitoring to determine compliance with the nitrate, nitrite, and total nitrate and nitrite MCLs in R 325.10604c, table 6.3, in accordance with this rule, beginning in the initial compliance period.

(4) Monitoring shall be conducted as follows:

(a) Suppliers of water from groundwater systems shall take a minimum of 1 sample at every entry point to the distribution system that is representative of each well after treatment. The supplier shall take each

sample at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.
(b) Suppliers of water from surface water systems, or combined surface water and groundwater systems, shall take a minimum of 1 sample at every entry point to the distribution system after any application of treatment or in the distribution system at a sampling point that is representative of each source after treatment. The supplier shall take each sample at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.
(c) If a system draws water from more than 1 source and the sources are combined before distribution, the supplier shall sample at an entry point to the distribution system during periods when water is representative of all sources being used.
(d) The total number of samples that shall be analyzed to meet the requirements of this rule may be reduced by the department when compositing of samples is utilized. All of the following provisions apply to the compositing of samples:
(i) Composite samples from a maximum of 5 sampling points are allowed.
(ii) Compositing of samples shall be done in the laboratory.
(iii) If the concentration in the composite sample is greater than or equal to 1/5 of the MCL of any inorganic chemical, then a follow-up sample shall be collected within 14 days from each sampling point included in the composite. These samples shall be analyzed for the contaminants that exceeded 1/5 of the MCL in the composite sample.
(iv) Compositing shall only be performed using samples from within a single water system.
(v) If duplicates of the original sample taken from each sampling point used in the composite are available, the supplier may use these instead of resampling. The duplicates shall be analyzed and the results reported to the department within 14 days of collection.
(5) The frequency of monitoring that is conducted to determine compliance with the MCLs in R 325.10604c for antimony, arsenic, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, selenium, and thallium shall be as follows:
(a) Suppliers of water of groundwater systems shall take 1 sample at each sampling point during each compliance period. Suppliers of water of surface water systems or combined surface water and groundwater systems shall take 1 sample annually at each sampling point.
(b) A supplier of water may apply to the department for a waiver from the monitoring frequencies specified in subdivision (a) of this subrule. The department may grant a waiver for monitoring cyanide if the department determines that the system is not vulnerable due to the lack of any industrial source of cyanide. All of the following provisions apply to a waiver:
(i) A supplier shall take a minimum of 1 sample while the waiver is effective.
(ii) The term during which a waiver is effective shall not be more than 1 compliance cycle.
(iii) A waiver may be granted if a surface water supplier has monitored annually for not less than 3 years or a groundwater supplier has conducted not less than 3 rounds of monitoring. At least 1 sample shall have been taken since January 1, 1990. Both surface and groundwater suppliers shall demonstrate that all previous analytical results were less than the MCL. Supplies that use a new water source are not eligible for a waiver until 3 rounds of monitoring from the new source have been completed.
(iv) All of the following items shall be considered by the department in determining the appropriate reduced monitoring frequency:
(A) Reported concentrations from all previous monitoring.
(B) The degree of variation in reported concentrations.
(C) Other factors that may affect contaminant concentrations, such as changes in any of the following:
(1) Groundwater pumping rates.
(2) The system's configuration.
(3) The system's operating procedures.
(4) Stream flows or characteristics.
(v) A waiver shall be in writing and shall set forth the basis for the determination. The determination may be initiated by the department or upon an application by the public water supplier specifying the basis for its request. The determination may be revised by the department based on new data.
(c) Supplies that exceed the MCLs as determined in R 325.10604c shall be monitored quarterly beginning in

the next quarter after the violation occurred. The department may decrease the quarterly monitoring requirement to the frequencies specified in the provisions of subdivisions (a) and (b) of this subrule if it has determined that the supply is reliably and consistently below the MCL. A groundwater supplier shall take not less than 2 quarterly samples and a surface water supplier shall take not less than 4 quarterly samples before the department's determination.

(6) The frequency of monitoring that is conducted to determine compliance with the MCL in R 325.10604c for asbestos shall be as follows:

(a) Each community and nontransient, noncommunity water supply shall monitor for asbestos during the first 3-year compliance period of each 9-year compliance cycle beginning in the compliance period starting January 1, 1993.

(b) If the supplier believes its water is not vulnerable to either asbestos contamination in its source water or asbestos contamination due to corrosion of asbestos-cement pipe, or both, it may apply to the department for a waiver of the monitoring requirement in subdivision (a) of this subrule. If the department grants the waiver, the supplier is not required to monitor. A waiver remains in effect until the completion of the 3-year compliance period. The department may grant a waiver based on a consideration of both of the following factors:

(i) Potential asbestos contamination of the water source.

(ii) The use of asbestos-cement pipe for finished water distribution and the corrosive nature of the water.

(c) A supplier of a system that is vulnerable to asbestos contamination due solely to the corrosion of asbestos-cement pipe shall take 1 sample at a tap that is served by asbestos-cement pipe and under conditions where asbestos contamination is most likely to occur.

(d) A supplier of a system that is vulnerable to asbestos contamination due solely to source water shall monitor in accordance with the provisions of subrule (4) of this rule.

(e) A supplier of a system that is vulnerable to asbestos contamination due both to its source water supply and corrosion of asbestos-cement pipe shall take 1 sample at a tap that is served by asbestos-cement pipe and under conditions where asbestos contamination is most likely to occur.

(f) A supplier of water that exceeds the MCLs as determined in R 325.10604c shall monitor quarterly beginning in the next quarter after a violation occurred.

(g) The quarterly monitoring requirement may be decreased by the department to the frequency specified in subdivision (a) of this subrule if the department determines that the supply is reliably and consistently below the MCL. A groundwater supplier shall take a minimum of 2 quarterly samples and a surface water or combined surface water and groundwater supplier shall take a minimum of 4 quarterly samples before this determination.

(h) If monitoring data collected after January 1, 1990, are generally consistent with the requirements of this subrule, then that data may be used to satisfy the monitoring requirement for the initial compliance period beginning January 1, 1993.

(7) The frequency of monitoring that is conducted to determine compliance with the MCLs in R 325.10604c for nitrate shall be as follows:

(a) Community and nontransient, noncommunity water supplies that are served by groundwater systems shall be monitored annually. Supplies that are served by surface water shall be monitored quarterly.

(b) For community and nontransient, noncommunity water systems, the repeat monitoring frequency for groundwater systems shall be quarterly for at least 1 year following any 1 sample in which the concentration is 50% or more of the MCL. The sampling frequency for groundwater systems may be reduced by the department to annually after 4 consecutive quarterly samples are reliably and consistently less than the MCL.

(c) For community and nontransient, noncommunity water systems, the department may allow a surface water supplier to reduce the sampling frequency to annually if all analytical results from 4 consecutive quarters are less than 50% of the MCL. A surface water supply shall return to being monitored quarterly if any 1 sample is 50% or more of the MCL.

(d) Each transient, noncommunity water supply shall be monitored annually.

(e) After the initial round of quarterly sampling is completed, each community and nontransient, noncommunity supply that is being monitored annually shall take subsequent samples during the quarter or quarters which previously resulted in the highest analytical result.

(8) The frequency of monitoring that is conducted to determine compliance with the MCLs in R 325.10604c for nitrite shall be as follows:
(a) A supplier of a type I or type II water supply shall take 1 sample at each sampling point in the compliance period beginning January 1, 1993, and ending December 31, 1995.
(b) After the initial sample, supplies where an analytical result for nitrite is less than 50% of the MCL shall be monitored at the frequency specified by the department.
(c) The repeat monitoring frequency for any water supply shall be quarterly for at least 1 year following any 1 sample in which the concentration is 50% or more of the MCL. The department may allow a supplier to reduce the sampling frequency to annually after determining the supply is reliably and consistently less than the MCL.
(d) Suppliers that are monitoring annually shall take each subsequent sample during the quarter or quarters that previously resulted in the highest analytical result.
(9) Confirmation samples are required as follows:
(a) Where the results of sampling for any of the following indicate a level that is more than the MCL, the department may require that 1 additional sample be collected as soon as possible after the initial sample was taken, but not more than 2 weeks later, at the same sampling point:
(i) Asbestos.
(ii) Antimony.
(iii)Barium.
(iv) Beryllium.
(v) Cadmium.
(vi) Chromium.
(vii)Cyanide.
(viii) Fluoride.
(ix) Mercury.
(x) Nickel.
(xi) Selenium.
(xii)Thallium.
(b) Where nitrate or nitrite sampling results indicate a level that is more than the MCL, the supplier shall take a confirmation sample within 24 hours of the supplier's receipt of notification of the analytical results of the first sample. Suppliers that are unable to comply with the 24-hour sampling requirement shall immediately notify the consumers who are served by the area served by the public water system in accordance with the requirements of part 4 of these rules and shall analyze a confirmation sample within 2 weeks of notification of the analytical results of the first sample.
(c) If a confirmation sample that is required by the department is taken for any contaminant, then the results of the initial and confirmation sample shall be averaged. The resulting average shall be used to determine the supply's compliance in accordance with the provisions of R 325.10604c (2), (3), (4), and (5). Results of obvious sampling errors may be deleted by the department.
(d) The department may require more frequent monitoring than specified in this rule or may require confirmation samples for positive or negative results.
(e) Suppliers may apply to the department to conduct more frequent monitoring than the minimum monitoring frequencies specified in this rule.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1993 MR 6, Eff. July 2, 1993; 1994 MR 12, Eff. Jan. 5, 1995; 1998 MR 3, Eff. Apr. 8, 1998.

R 325.10710a Monitoring requirements for lead and copper in tap water.

Rule 710a. (1) With respect to monitoring for lead and copper in tap water, all of the following provisions apply to sample site location:
(a) By the applicable date for the commencement of monitoring pursuant to the provisions of subrule (4)(a) of this rule, each water supplier shall complete a materials evaluation of its distribution system to identify a pool of targeted sampling sites that is in compliance with the requirements of this rule and which is large enough to ensure that the water supplier can collect the number of lead and copper tap samples that are required pursuant to the provisions of subrule (3) of this rule. All sites from which first draw samples are

collected shall be selected from the pool of targeted sampling sites. Sampling sites shall not include faucets that have point-of-use or point-of-entry treatment devices that are designed to remove inorganic contaminants.

(b) A water supplier shall use the information on lead, copper, and galvanized steel that it is required to collect pursuant to the provisions of 40 C.F.R. '141.42(d), August 27, 1980, (Special Monitoring for Corrosivity Characteristics) when conducting a materials evaluation. When an evaluation of the information that is collected pursuant to the provisions of 40 C.F.R. '141.42(d), August 27, 1980, is insufficient to locate the requisite number of lead and copper sampling sites that are in compliance with the targeting criteria in this subrule, the water supplier shall review the sources of information listed in paragraphs (i) to (iii) of this subdivision to identify a sufficient number of sampling sites. The provisions of 40 C.F.R. part 141, August 27, 1980, are adopted by reference in these rules and are available from the United States Government Printing Office, Superintendent of Documents, Washington DC 20402-9325, at a cost as of the time of adoption of these rules of $1.50, or the applicable portions may be obtained from the Michigan Department of Environmental Quality, Drinking Water and Radiological Protection Division, 3423 North Martin Luther King Jr. Boulevard, P.O. Box 30630, Lansing, Michigan 48909-8130, at no charge. In addition, the supplier shall collect all of the following information, where possible, in the course of its normal operations (for example, checking service line materials when reading water meters or performing maintenance activities):

(i) All plumbing codes, permits, and records in the files of the building department or departments that indicate the plumbing materials which are installed within publicly and privately owned structures connected to the distribution system.

(ii) All inspections and records of the distribution system that indicate the material composition of the service connections which connect a structure to the distribution system.

(iii) All existing water quality information, which includes the results of all prior analyses of the supply or individual structures connected to the system, that indicates locations which may be particularly susceptible to high lead or copper concentrations.

(c) The sampling sites that are selected for a community water supply's sampling pool (tier 1 sampling sites) shall consist of single-family structures to which either or both of the following provisions apply:

(i) The structures contain copper pipes which have been soldered with lead and which were installed after 1982 or which contain lead pipes.

(ii) The structures are served by a lead service line. When multiple-family residences comprise at least 20% of the structures that are served by a water supply, the supplier may include these types of structures in its sampling pool.

(d) For any community water supply that has insufficient tier 1 sampling sites, the sampling pool shall be completed with tier 2 sampling sites, that consist of buildings, including multiple-family residences to which either or both of the following provisions apply:

(i) The structures contain copper pipes which have been soldered with lead and which were installed after 1982 or which contain lead pipes.

(ii) The structures are served by a lead service line.

(e) For any community water supply that has insufficient tier 1 and tier 2 sampling sites, the sampling pool shall be completed with tier 3 sampling sites, that consist of single-family structures that contain copper pipes which have been soldered with lead and which were installed before 1983.

(f) The sampling sites that are selected for a nontransient, noncommunity water supply (tier 1 sampling sites) shall consist of buildings to which either or both of the following provisions apply:

(i) The structures contain copper pipes which have been soldered with lead and which were installed after 1982 or which contain lead pipes.

(ii) The structures are served by a lead service line.

(g) A nontransient, noncommunity water supplier that has insufficient tier 1 sites shall complete its sampling pool with sampling sites which have copper pipes that were soldered with lead and which were installed before 1983.

(h) If a water supplier's sampling pool does not consist exclusively of tier 1 sites, then the supplier shall demonstrate, in documentation submitted to the department pursuant to the provisions of R 325.10710d(a)(ii), why a review of the information listed in subdivision (b) of this subrule was inadequate to locate a sufficient number of tier 1 sites. Any community water supplier that includes tier 3 sampling sites in its

sampling pool shall demonstrate in the documentation why the supplier was unable to locate a sufficient number of tier 1 and tier 2 sampling sites.

(i) If a water supplier's distribution system contains lead service lines, then the supplier shall draw 50% of the samples that are collected during each monitoring period from sites that contain lead pipes or copper pipes with lead solder and 50% of the samples from sites that are served by a lead service line. A water supplier that cannot identify a sufficient number of sampling sites that are served by either lead service lines or copper pipes with lead solder or lead pipes shall submit documentation to the department, pursuant to the provisions of R 325.10710d(a)(iv), that explains why the supplier was unable to locate a sufficient number of such sites. The water supplier shall collect first-draw tap samples from all of the limited sites identified and shall complete its sampling pool in compliance with the provisions of subdivisions (c) to (g) of this subrule.

(2) With respect to monitoring for lead and copper in tap water, all of the following provisions apply to sample collection methods:

(a) All tap samples for lead and copper that are collected in compliance with this subrule, with the exception of lead service line samples that are collected pursuant to the provisions of R 325.10604f(5)(c), shall be first-draw samples.

(b) Each first-draw tap sample for lead and copper shall be 1 liter in volume and have stood motionless in the plumbing system of each sampling site for not less than 6 hours. First-draw samples from residential housing shall be collected from the cold-water kitchen tap or bathroom sink tap. First-draw samples from a nonresidential building shall be collected at an interior tap from which water is typically drawn for consumption. First-draw samples may be collected by the supplier or the supplier may allow residents to collect first-draw samples after instructing the residents about the sampling procedures specified in this subdivision. To avoid problems of residents handling nitric acid, acidification of first-draw samples may be done up to 14 days after the sample is collected. If the sample is not acidified immediately after collection, the sample shall stand in the original container for not less than 28 hours after acidification. If a supplier allows residents to perform sampling, the supplier shall not challenge the accuracy of the sampling results based on alleged errors in sample collection.

(c) Each service line sample shall be 1 liter in volume and have stood motionless in the lead service line for not less than 6 hours. Lead service line samples shall be collected in 1 of the following 3 ways:

(i) At the tap after flushing the volume of water between the tap and the lead service line. The volume of water shall be calculated based on the interior diameter and length of the pipe between the tap and the lead service line.

(ii) Tapping directly into the lead service line.

(iii) If the sampling site is a building that is constructed as a single-family residence, allowing the water to run until there is a significant change in temperature which would be indicative of water that has been standing in the lead service line.

(d) A water supplier shall collect each first-draw tap sample from the same sampling site from which it collected a previous sample. If, for any reason, the water supplier cannot gain entry to a sampling site to collect a follow-up tap sample, the supplier may collect the follow-up tap sample from another sampling site in its sampling pool.

(3) Water suppliers shall collect at least 1 sample during each monitoring period specified in subrule (4) of this rule from the number of sites listed in the standard monitoring column set forth in this subrule. If the system has less than the required number of sampling sites, the supplier shall collect 1 sample from each available site as defined in subrule (1))(c) to (g) of this rule. A supplier that conducts reduced monitoring pursuant to the provisions of subrule (4)(d) of this rule may collect 1 sample from the number of sites specified in the reduced monitoring column set forth in this subrule during each monitoring period specified in subrule (4)(d) of this rule.

System Size (Number of People Served)	Number of Sites (Standardized Monitoring)	Number of Sites (Reduced Monitoring)
More than 100,000	100	50

10,001 to 100,000	60	30
3,301 to 10,000	40	20
501 to 3,300	20	10
101 to 500	10	5
Less than 101	5	5

(4) With respect to monitoring for lead and copper in tap water, all of the following provisions apply to the timing of monitoring:
(a) The first 6-month monitoring period for small, medium-size, and large systems shall begin on the following dates:

System Size (Number of People Served)	First 6-Month Monitoring Period Begins On
More than 50,000	January 1, 1992
3,301 to 50,000	July 1, 1992
Less than 3,301	July 1, 1993

All large systems shall be monitored during 2 consecutive 6-month periods. All small and medium-size systems shall be monitored during each 6-month monitoring period until either of the following occurs:
(i) The supply exceeds the lead or copper action level and the supplier is therefore required to implement the corrosion control treatment requirements pursuant to the provisions of R 325.10604f(2), in which case the supplier shall continue monitoring in accordance with the provisions of subdivision (b) of this subrule.
(ii) The supply is in compliance with the lead and copper action levels during 2 consecutive 6-month monitoring periods, in which case the supplier may reduce monitoring in accordance with the provisions of subdivision (d) of this subrule.
(b) All of the following provisions apply to monitoring after the installation of corrosion control and source water treatment:
(i) The supplier of any large system that installs optimal corrosion control treatment pursuant to the provisions of R 325.10604f(2)(d)(iii) shall monitor during 2 consecutive 6-month monitoring periods by the date specified in R 325.10604f(2)(d)(iv).
(ii) The supplier of any small or medium-size system that installs optimal corrosion control treatment pursuant to the provisions of R 325.10604f(2)(e)(v) shall monitor during 2 consecutive 6-month monitoring periods by the date specified in R 325.10604f(2)(e)(vi). (iii) Any supplier that installs source water treatment pursuant to the provisions of R 325.10604f(4)(a)(ii) shall monitor during 2 consecutive 6-month monitoring periods by the date specified in R 325.10604f(4)(a)(iii).
(c) After the department specifies the values for water quality control parameters, the supplier shall monitor during each subsequent 6-month monitoring period, with the first monitoring period to begin on the date the department specifies the optimal values.
(d) All of the following provisions apply to reduced monitoring:
(i) An owner of a small or medium-size water system that is in compliance with the lead and copper action levels during each of 2 consecutive 6-month monitoring periods may reduce the number of samples in accordance with the provisions of subrule (3) of this rule and may reduce the frequency of sampling to once each year.
(ii) Any supplier that maintains the range of values for the water quality control parameters reflecting optimal corrosion control treatment specified by the department during each of 2 consecutive 6-month monitoring periods may request that the department allow the supplier to reduce the frequency of monitoring to once each year and to reduce the number of lead and copper samples in accordance with the provisions of subrule (3) of this rule.
(iii) The owner of a small or medium-size water system that is in compliance with the lead and copper action levels during 3 consecutive years of monitoring may reduce the frequency of monitoring for lead and copper from annually to once every 3 years. The owner of any water system that maintains the range of values for the water quality control parameters that reflect optimal corrosion control treatment specified by the

department during 3 consecutive years of monitoring may request that the department allow the owner to reduce the frequency of monitoring from annually to once every 3 years.
(iv) A supplier who reduces the number and frequency of sampling shall collect these samples from sites that are included in the pool of targeted sampling sites that are identified in subrule (1) of this rule. A supplier who samples annually or less frequently shall conduct the lead and copper tap sampling during the month of June, July, August, or September.
(v) The owner of a small or medium-size water system which is subject to reduced monitoring and which exceeds the lead or copper action level shall resume sampling in accordance with the provisions of subdivision (c) of this subrule and shall collect the number of samples specified for the standard monitoring pursuant to the provisions of subrule (3) of this rule.
The owner shall also conduct water quality parameter monitoring in accordance with the provisions of R 325.10710b(4), (5), or (6), as appropriate, during the monitoring period in which the system exceeded the action level. The owner of a water system which is subject to reduced monitoring frequency and which fails to operate within the range of values for the water quality control parameters specified by the department shall resume tap water sampling in accordance with the provisions of subdivision (c) of this subrule and shall collect the number of samples specified for standard monitoring pursuant to the provisions of subrule (3) of this rule.
(5) The results of any monitoring that is conducted in addition to the minimum requirements of this rule shall be considered in calculating the ninetieth percentile lead or copper level.
History: 1994 MR 12, Eff. Jan. 5, 1995; 1998 MR 3, Eff. Apr. 8, 1998.

R 325.10710b Monitoring requirements for supplies exceeding lead and copper action levels.

Rule 710b. (1) An owner of a large water system, and an owner of a small or medium-size system that exceeds the lead or copper action level, shall monitor water quality parameters in addition to lead and copper in accordance with this rule. The requirements of this rule are summarized in table 7.2a.
(2) The following provisions are general requirements that pertain to sample collection methods:
(a) Tap samples shall be representative of water quality throughout the distribution system taking all of the following factors into account:
(i) The number of persons served.
(ii) The different sources of water.
(iii) The different treatment methods employed by the supplier.
(iv) Seasonal variability.
Tap sampling pursuant to the provisions of this subdivision is not required to be conducted at taps that are targeted for lead and copper sampling pursuant to the provisions of R 325.10710a(1).
(b) Samples that are collected at the entry point or points to the distribution system shall be from locations that are representative of each source after treatment. if a supply draws water from more than 1 source and the sources are combined before distribution, the supplier shall sample at an entry point to the distribution system during periods of normal operating conditions, for example, when water is representative of all sources that are being used.
(3) The following provisions are general requirements that pertain to the number of samples:
(a) A supplier shall collect 2 tap samples for applicable water quality parameters during each monitoring period that is specified pursuant to the provisions of subrules (4) to (7) of this rule from the following number of sites:

System Size (Number of People Served)	Number of Sites for Water Quality Parameters
More than 100,000	25
10,001 to 100,000	10
3,301 to 10,000	3
501 to 3,300	2
101 to 500	1
Less than 101	1

(b) A supplier shall collect 2 samples for each applicable water quality parameter at each entry point to the distribution system during each monitoring period that is specified in subrule (4) of this rule. During each monitoring period that is specified in subrules (5) to (7) of this rule, a supplier shall collect 1 sample for each applicable water quality parameter at each entry point to the distribution system.
(4) An owner of a large water system shall measure the applicable water quality parameters, at the locations specified in the following subdivisions at taps and at each entry point to the distribution system during each 6-month monitoring period that is specified in R 325.10710a(4) (a). An owner of a small or medium-size system shall measure the applicable water quality parameters at the locations specified in the following subdivisions during each 6-month monitoring period, as specified in R 325.10710a(4)(a), that the supply exceeds the lead or copper action level:
(a) At taps, a sample for each of the following:
(i) pH.
(ii) Alkalinity.
(iii) Orthophosphate, when an inhibitor that contains a phosphate compound is used.
(iv) Silica, when an inhibitor that contains a silicate compound is used.
(v) Calcium.
(vi) Conductivity.
(vii) Water temperature.
(b) At each entry point to the distribution system, a sample for each of the applicable parameters that are listed in subdivision (a) of this subrule.
(5) The owner of a large system who installs optimal corrosion control treatment pursuant to the provisions of R 325.10604f(2)(d)(iii) shall measure the water quality parameters at the locations and frequencies that is specified in the following subdivisions during each 6-month monitoring period specified in R 325.10710a(4)(b)(i). The owner of a small or medium-size system who installs optimal corrosion control treatment shall measure the water quality parameters at the locations specified in the following subdivisions during each 6-month monitoring period, as specified in R 325.10710a(4)(b)(ii), that the system exceeds the lead or copper action level:
(a) At taps, 2 samples for each of the following:
(i) pH.
(ii) Alkalinity.
(iii) Orthophosphate, when an inhibitor that contains a phosphate compound is used.
(iv) Silica, when an inhibitor that contains a silicate compound is used.
(v) Calcium, when calcium carbonate stabilization is used as part of the corrosion control.
(b) At each entry point to the distribution system, 1 sample every 2 weeks (biweekly) for each of the following:
(i) pH.
(ii) When alkalinity is adjusted as part of optimal corrosion control, a reading of the dosage rate of the chemical that is used to adjust alkalinity and a reading of the alkalinity concentration.
(iii) When a corrosion inhibitor is used as part of optimal corrosion control, a reading of the dosage rate of the inhibitor that is used and a reading of the concentration of orthophosphate or silica, whichever is applicable.
(6) After the department specifies the values for applicable water quality control parameters that reflect optimal corrosion control treatment, an owner of a large system shall measure the applicable water quality parameters in accordance with the provisions of subrule (5) of this rule during each monitoring period that is specified in R 325.10710a(4)(c).
The owner of a small or medium-size system shall measure the applicable water quality parameters in accordance with the provisions of subrule (5) of this rule during each monitoring period, as specified in R 325.10710a(4)(c), that the supply exceeds the lead or copper action level. The supplier may take a confirmation sample for any water quality parameter value not later than 3 days after the first sample. If a confirmation sample is taken, the result shall be averaged with the first sampling result and the average shall be used for any compliance determinations pursuant to the provisions of R 325.10604f(3)(f). The department may delete the results of obvious sampling errors from the calculation.

(7) All of the following provisions apply to reduced monitoring:
(a) The owner of a water system that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment during each of 2 consecutive 6-month monitoring periods pursuant to the provisions of subrule (6) of this rule shall continue monitoring at the entry point or points to the distribution system as specified in subrule (5)(b) of this rule. The owner of the system may collect 2 tap samples for applicable water quality parameters from the following reduced number of sites during each 6-month monitoring period:

System Size (Number of People Served)	Reduced Number of Sites For Water Quality Parameters
More than 100,000	10
10,001 to 100,000	7
3,301 to 10,000	3
501 to 3,300	2
101 to 500	1
Less than 101	1

(b) A water supplier that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the department during 3 consecutive years of annual monitoring pursuant to the provisions of this subdivision may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in subdivision (a) of this subrule from annually to every 3 years.
(c) The owner of a water supply for which sampling is conducted annually shall collect the samples evenly throughout the year so as to reflect seasonal variability.
(d) The owner of a water supply that is subject to the reduced monitoring frequency who fails to operate within the range of values for the water quality parameters specified by the department shall resume tap water sampling in accordance with the number and frequency requirements specified in subrule (6) of this rule.
(8) Both of the following provisions apply to additional monitoring by suppliers:
(a) The results of monitoring that is conducted in addition to the minimum requirements of this rule shall be considered in determining the concentrations of water quality parameters.
(b) A water supplier that fails to meet the lead action level on the basis of tap samples that are collected in accordance with the provisions of R 325.10710a shall offer to arrange for sampling the tap water of any customer who requests it. The supplier is not required to pay for collecting or analyzing the sample and is not required to collect and analyze the sample.
(9) Table 7.2a reads as follows:

Table 7.2a
Summary of Monitoring Requirements for Water Quality Parameters - Lead, Copper, Corrosion Control1

MONITORING PERIOD	PARAMETERS2	LOCATION	FREQUENCY
Initial Monitoring	pH, alkalinity, orthophosphate or silica3, calcium, conductivity, temperature	Taps and at entry points or points to distrubution system	Every 6 months

After installation of corrosion control	pH alkalinity, orthophosphate or or silica3, calcium4	Taps	Every 6 months
	pH, alkalinity dosage rate and concentration (if alkalinity adjusted as part of corrosion control), inhibitor dosage rate and inhibitor residual5	Entry point or points to distrubution system	Biweekly
After department specifies parameter values for optimal corrosion control	pH alkalinity, orthophosphate or or silica3, calcium4	Taps	Every 6 months
	pH, alkalinity dosage rate and concentration (if alkalinity adjusted as part of corrosion control), inhibitor dosage rate and inhibitor residual5	Entry point or points to distrubution system	Biweekly
Reduced monitoring	pH alkalinity, orthophosphate or or silica3, calcium4	Taps	Every 6 months
	pH, alkalinity dosage rate and concentration (if alkalinity adjusted as part of corrosion control), inhibitor dosage rate and inhibitor residual5	Entry point or points to distrubution system	Biweekly

1 Table is for illustrative purposes; consult the text of this part for precise regulatory requirements.
2 Small and medium-size systems have to monitor for water quality parameters only during monitoring periods in which the supply exceeds the lead or copper action level.
3 Orthophosphate shall be measured only when an inhibitor containing a phosphate compound is used. Silica shall be measured only when an inhibitor containing silicate compound is used.
4 Calcium shall be measured only when calcium carbonate stabilization is used as part of corrosion control.
5 Inhibitor dosage rates and inhibitor residual concentrations (orthophosphate or silica) shall be measured only when an inhibitor is used.
History: 1994 MR 12, Eff. Jan. 5, 1995; 1998 MR 3, Eff. Apr. 8, 1998; 1998 MR 2, Eff.Apr. 8, 1998.

R 325.10710c Monitoring requirements for lead and copper in source water.

Rule 710c. (1) Both of the following provisions apply to monitoring for lead and copper in source water with respect to sample location, collection methods, and number of samples:
(a) The owner of a water supply that fails to meet the lead or copper action level on the basis of tap samples that are collected in accordance with the provisions of R 325.10710a shall collect lead and copper source water samples in accordance with the requirements regarding sample location, number of samples, and collection methods specified in R 325.10710(1) to (4). However, the timing of sampling for lead and copper shall be in compliance with the provisions of subrules (2) and (3) of this rule and not in compliance with the dates that are specified in R 325.10710(4).
(b) If the results of sampling indicate that the maximum permissible source water levels established by the

department pursuant to the provisions of R 325.10604f(4)(b), then the department may require that 1 additional sample be collected as soon as possible after the initial sample was taken, but not more than 2 weeks later, at the same sampling point. If a department-required confirmation sample is taken for lead or copper, then the results of the initial and confirmation samples shall be averaged in determining compliance with the department specified maximum permissible levels. A sample value that is below the detection limit shall be considered to be zero. A value that is above the detection limit, but below the PQL, shall either be considered as the measured value or be considered ½ of the PQL.

(2) The owner of a supply that exceeds the lead or copper action level at the tap shall collect 1 source water sample from each entry point to the distribution system within 6 months after the action level is exceeded.

(3) A supplier that installs source water treatment pursuant to the provisions of R 325.10604f(4)(a)(ii) shall collect an additional source water sample from each entry point to the distribution system during 2 consecutive 6-month monitoring periods by the deadline specified in R 325.10604(4)(a)(iii).

(4) Both of the following provisions apply to the monitoring frequency after the department specifies maximum permissible source water levels or determines that source water treatment is not needed:

(a) A supplier shall monitor at the frequency specified in the following paragraphs where the department specifies maximum permissible source water levels pursuant to the provisions of R 325.10604f(4)(b) or determines that the supplier is not required to install source water treatment pursuant to the provisions of R 325.10604f(4)(b)(ii):

(i) The owner of a water supply that uses only groundwater shall collect samples once during the 3-year compliance period, as defined in R 325.10103, that is in effect when the applicable department determination pursuant to the provisions of this subdivision is made. The owner shall collect samples once during each subsequent compliance period.

(ii) The owner of a water supply that uses surface water or a combination of surface water and groundwater shall collect samples once during each year. The first annual monitoring period shall begin on the date on which the applicable department determination is made pursuant to the provisions of this subdivision.

(b) A supplier is not required to conduct source water sampling for lead or copper if the supply is in compliance with the action level for the specific contaminant in tap water samples during the entire source water sampling period applicable to the supply pursuant to the provisions of subdivisions (a)(i) and (ii) of this subrule.

(5) All of the following provisions apply to reduced monitoring frequency:

(a) The owner of a water supply that uses only groundwater who demonstrates that finished drinking water entering the distribution system has been maintained below the maximum permissible lead or copper concentrations, or both, that are specified by the department in R 325.10604(4)(b) during not less than 3 consecutive compliance periods pursuant to the provisions of subrule (4)(a) of this rule may reduce the monitoring frequency for lead or copper, or both, to once during each 9-year compliance cycle, as defined in R 325.10103.

(b) The owner of a water supply that uses surface water or a combination of surface water and groundwater, who demonstrates that finished drinking water entering the distribution system has been maintained below the maximum permissible lead and copper concentrations specified by the department in R 325.10604(4)(b) for not less than 3 consecutive years may reduce the monitoring frequency in subrule (4)(a) of this rule to once during each 9-year compliance cycle, as defined in R 325.10103.

(c) The owner of a water supply that uses a new source of water is not eligible for reduced monitoring for lead or copper until concentrations in samples that are collected from the new source during 3 consecutive monitoring periods are below the maximum permissible lead and copper concentrations specified by the department in R 325.10604f(4).

History: 1994 MR 12, Eff. Jan. 5, 1995; 1998 MR 3, Eff. Apr. 8, 1998.

R 325.10710d Reporting requirements for lead, copper, and corrosion control.

Rule 710d. A water supplier shall report all of the following information to the department in accordance with this rule:

(a) All of the following provisions apply to reporting for tap water monitoring for lead and copper and for water quality parameter monitoring:

(i) A water supplier shall report the information that is specified in all of the following provisions for all tap

water samples within the first 10 days after the end of each applicable monitoring period that is specified in R 325.10710a, R 325.10710b, and R 325.10710c, for example, every 6-months, annually, or every 3 years:

(A) The results of all tap samples for lead and copper including the location of each site and the criteria in R 325.10710a(1)(c)(d)(e)(f) or (g) used to select the site for the supply's sampling pool.

(B) Certification that each first-draw sample that is collected by the water supplier is 1 liter in volume and, to the best of the supplier's knowledge, has stood motionless in the service line or in the interior plumbing of a sampling site for not less than 6 hours.

(C) Where residents collected samples, certification that each tap sample that was collected by the residents was taken after the supplier informed the residents of the proper sampling procedures specified in R 325.10710a(2)(b).

(D) The ninetieth percentile lead and copper concentrations measured from among all lead and copper tap water samples that were collected during each monitoring period, calculated in compliance with the provisions of R 325.10604f(1)(c)(i).

(E) With the exception of initial tap sampling that is conducted pursuant to the provisions of R 325.10710a(4)(a), a supplier shall designate any site that was not sampled during previous monitoring periods and include an explanation of why sampling sites have changed.

(F) The results of all tap samples for pH and, where applicable, alkalinity, calcium, conductivity, temperature, and orthophosphate or silica collected pursuant to the provisions of R 325.10710b(b) to (e).

(G) The results of all samples that were collected at the entry point or points to the distribution system for applicable water quality parameters pursuant to the provisions of R 325.10710b(b) to (e).

(ii) By the applicable date specified in R 325.10710a(4)(a) for the commencement of monitoring, each community water supplier that does not complete its targeted sampling pool with tier 1 sampling sites that are in compliance with the criteria specified in R 325.10710a(1)(c) shall send documentation to the department justifying its selection of tier 2 or tier 3, or tier 2 and 3, sampling sites pursuant to the provisions of R 325.10710a(1)(d) or (1)(e).

(iii) By the applicable date specified in R 325.10710a(4)(a) for the commencement of monitoring, each nontransient, noncommunity water supplier that does not complete its sampling pool with tier 1 sampling sites that are in compliance with the criteria specified in R 325.10710a(1)(f) shall send documentation to the department justifying its selection of sampling sites pursuant to the provisions of R 325.10710a(1)(g).

(iv) By the applicable date specified in R 325.10710a(4)(a) for the commencement of monitoring, the owner of each water supply that has lead service lines who is not able to locate the number of sites served by the lines, as required pursuant to the provisions of R 325.10710a(1)(i), shall send documentation to the department demonstrating why the owner was unable to locate a sufficient number of the sites based upon the information listed in R 325.10710a(1)(b).

(v) Each water supplier that requests that the department reduce the number and frequency of sampling shall provide the information required pursuant to the provisions of R 325.10710a.

(b) Both of the following provisions apply to source water monitoring reporting:

(i) A water supplier shall report the sampling results for all source water samples that are collected in accordance with the provisions of R 325.10710c within the first 10 days after the end of each source water monitoring period, for example, annually, per compliance period, or per compliance cycle, that is specified in R 325.10710c.

(ii) With the exception of the first round of source water sampling that is conducted pursuant to the provisions of R 325.10710c(2), a supplier shall specify any site that was not sampled during previous monitoring periods and include an explanation of why the sampling point has changed.

(c) by the applicable dates specified in R 325.10604f(2), a supplier shall report all of the following information with respect to corrosion control treatment:

(i) For a supplier that demonstrates that it has already optimized corrosion control, the information required in R 325.10604f(2)(b)(ii) or (iii).

(ii) For a supplier that is required to optimize corrosion control, the supplier's recommendation regarding optimal corrosion control treatment pursuant to the provisions of R 325.10604f(3)(a).

(iii) For a supplier that is required to evaluate the effectiveness of corrosion control treatments pursuant to the provisions of R 325.10604f(3)(c), the information that is required by R 325.10604f(3)(c).

(iv) For a supplier that is required to install optimal corrosion control designated by the department

pursuant to the provisions of R 325.10604f(3)(d), documentation certifying that the owner of the system has completed installing the optimal corrosion control.

(d) By the applicable dates specified in R 325.10604f(4), a supplier shall provide the following information to the department:

(i) If required pursuant to the provisions of R 325.10604f(4)(b)(i), the supplier's recommendation regarding source water treatment.

(ii) For a supplier that is required to install source water treatment pursuant to the provisions of R 325.10604f(4)(b)(ii), documentation certifying that the supplier has completed installing the treatment designated by the department within 24 months after the department designated the treatment.

(e) A supplier shall report all of the following information to the department to demonstrate compliance with the requirements of R 325.10604f(5):

(i) Within 12 months after a supply exceeds the lead action level in sampling referred to in R 325.10604f(5)(a), the supplier shall submit a written report to the department that demonstrates that the supplier has conducted a materials evaluation, including the evaluation specified in R 325.10710a(1), to identify the initial number of lead service lines in its distribution system and shall provide the department with the supplier's schedule for replacing annually not less than 7% of the initial number of lead service lines in its distribution system.

(ii) Within 12 months after a supply exceeds the lead action level in sampling referred to in R 325.10604f(5)(a), and every 12 months thereafter, the supplier shall submit a written report to the department that demonstrates that the supplier has complied with either of the following requirements:

(A) Replaced, in the previous 12 months, not less than 7% of the initial lead service lines, or a greater number of lines specified by the department pursuant to the provisions of R 325.10604f(5), in its distribution system.

(B) Conducted sampling which demonstrates that the lead concentration in all service line samples from an individual line or lines, taken pursuant to the provisions of R 325.10710a(2)(c), is less than or equal to 0.015 mg/l. In such cases, the total number of lines which were replaced or which meet the criteria specified in R 325.10604f(5)(c), or both, shall equal not less than 7% of the initial number of lead lines identified pursuant to the provisions of subdivision (a) of this rule or the percentage that is specified by the department pursuant to the provisions of R 325.10604f.

(iii) The annual documentation submitted to the department pursuant to the provisions of paragraph (ii) of this subdivision, which shall contain all of the following information:

(A) The number of lead service lines that are scheduled to be replaced during the previous year of the supply's replacement schedule.

(B) The number and location of each lead service line that was replaced during the previous year of the supply's replacement schedule.

(C) If measured, the water lead concentration and location of each lead service line sampled, the sampling method, and the date of sampling.

(iv) As soon as practicable, but not later than 3 months after a supply exceeds the lead action level in sampling referred to in R 325.10604f(a), any supplier seeking to rebut the presumption that it has control over the entire lead service line pursuant to the provisions of R 325.10604f(d) shall submit documentation to the department describing the legal authority, for example, state statutes, municipal ordinances, public service contracts, or other applicable legal authority, that limits the supplier's control over the service lines and the extent of the system's control.

(f) By December 31 of each year, a supplier that is subject to the public education requirements in R 325.10410 shall submit documentation to the department demonstrating that the supplier has delivered the public education materials that are in compliance with the content requirements specified in R 325.10410 and the delivery requirements in R 325.10410. The information shall include a list of all of the newspapers, radio stations, television stations, facilities, and organizations to which the supplier delivered public education materials during the previous year. The water supplier shall submit the documentation required by this subdivision annually for as long as the water supply exceeds the lead action level.

(g) A supplier that collects sampling data in addition to that required by this part shall report the results to the department within the first 10 days following the end of the applicable monitoring period specified in R 325.10710a, R 325.10710b, and R 325.10710c during which the samples are collected.

History: 1994 MR 12, Eff. Jan. 5, 1995; 1998 MR 3, Eff. Apr. 8, 1998.

R 325.10711
Source: 1997 AACS.

R 325.10712
Source: 1997 AACS.

R 325.10713
Source: 1997 AACS.

R 325.10714
Source: 1997 AACS.

R 325.10715
Source: 1997 AACS.

R 325.10716 Collection and analysis of samples for VOCs.

Rule 716. (1) Beginning with the initial compliance period, suppliers of water of community and nontransient, noncommunity public water supplies shall collect samples and cause analyses to be made according to the provisions of this rule for volatile organic chemicals to determine compliance with the state drinking water standards listed in R 325.10604b. Each supplier shall monitor at the time designated by the department within each compliance period. The department may increase required monitoring where necessary to detect variations within a water system.

(2) For transient, noncommunity and type III public water supplies, the department may require samples to be collected and analyzed at prescribed frequencies for organic chemicals.

(3) Suppliers of groundwater systems shall take a minimum of 1 sample at every entry point to the distribution system that is representative of each well after treatment. Each sample shall be taken at the same sampling point unless conditions make another sampling point more representative of each source, treatment plant, or within the distribution system.

(4) Suppliers of surface water systems or combined surface water and groundwater systems shall take a minimum of 1 sample at points in the distribution system that are representative of each source or at each entry point to the distribution system after treatment. Each sample shall be taken at the same sampling point unless conditions make another sampling point more representative of each source, treatment plant, or within the distribution system.

(5) If the system draws water from more than 1 source and the sources are combined before distribution, the supply shall be sampled at an entry point to the distribution system during periods of normal operating conditions when water that is representative of all sources is being used.

(6) Each community and nontransient, noncommunity water supplier shall take 4 consecutive quarterly samples for each contaminant, except for vinyl chloride, that is listed in R 325.10604b during each compliance period, beginning in the initial compliance period. Monitoring data from a single sample rather than 4 quarterly samples that are collected pursuant to R 325.10717a after January 1, 1988, for purposes of initial monitoring compliance may be used to satisfy the initial monitoring requirement of this subrule if the data are generally consistent with the other requirements of this rule. Systems which use grandfathered samples and which did not detect any VOCs listed in R 325.10604b, table 6.2, shall, beginning with the initial compliance period, monitor annually in accordance with the provisions of subrule (7) of this rule.

(7) If the initial monitoring has been completed by December 31, 1992, and the supplier did not detect any contaminant that is listed in R 325.10604b, then each groundwater and surface water supplier shall take 1 sample annually beginning with the initial compliance period.

(8) After a supplier has performed annual sampling for not less than 3 years, the department may allow a groundwater supplier that has not previously detected any contaminant that is listed in R 325.10604b to take 1 sample during each compliance period.

(9) Each community and nontransient noncommunity groundwater supplier that does not detect, at or above 0.0005 milligrams per liter, a contaminant that is listed in R 325.10604b may apply to the department for a

waiver from portions of the requirements of subrules (6) and (7) of this rule after completing the initial monitoring. A waiver shall be effective for not more than 6 years. The department may also issue waivers to small systems for the initial round of 1,2,4 trichlorobenzene monitoring.

(10) The following factors will be evaluated to determine if a waiver will be granted:

(a) Knowledge of previous use, including transport, storage, or disposal, of the contaminant within the watershed or zone of influence of the system.

A supplier is not eligible for waiver if it is determined that previous use of the contaminant within the watershed or zone of influence has occurred.

(b) If previous use of the contaminant is unknown or the contaminant has been used previously, then all of the following factors shall be used to determine whether a waiver is granted:

(i) Previous analytical results.

(ii) The proximity of the system to a potential point or non-point source of contamination. Point sources include spills and leaks of chemicals at or near a water treatment facility or at manufacturing, distribution, or storage facilities or from hazardous and municipal waste landfills and other waste-handling or treatment facilities.

(iii) The environmental persistence and transport of the contaminants.

(iv) The number of persons who are served by the public water system and the proximity of a smaller system to a larger system.

(v) How well the water source is protected against contamination, such as whether it is a surface water or groundwater system. Groundwater supplies shall consider factors such as depth of the well, the type of soil, and wellhead protection. Surface water supplies shall consider watershed protection.

(11) As a condition of a waiver, a groundwater supplier shall take 1 sample at each sampling point during the time the waiver is effective and update its vulnerability assessment considering the factors listed in subrule (10) of this rule. If the department does not reconfirm that the system is nonvulnerable based on this vulnerability assessment within 3 years of the initial determination, then the waiver is invalidated and the supplier is required to sample annually as specified in subrule (7) of this rule.

(12) Each community and nontransient noncommunity surface water supplier that does not detect a contaminant listed in R 325.10604b may apply to the department for a waiver from the requirements of subrule (7) of this rule after completing the initial monitoring. Systems that do not detect a contaminant listed in R 325.10604b shall be determined by the department to be nonvulnerable based on a vulnerability assessment, considering the factors listed in subrule (10) of this rule, during each compliance period.

Each supplier that receives a waiver shall sample at the frequency specified by the department.

(13) If a contaminant, other than vinyl chloride, that is listed in R 325.10604b is detected at a level that is more than 0.0005 milligrams per liter in any sample, then all of the following provisions apply:

(a) The supplier shall monitor quarterly at each sampling point that resulted in a detection.

(b) The department may decrease the quarterly monitoring requirement specified in subdivision (a) of this subrule if it has determined that the system is reliably and consistently below the MCL. A groundwater supplier shall take not less than 2 quarterly samples and a surface water supplier shall take not less than 4 quarterly samples for this determination.

(c) If the department determines that the supply is reliably and consistently below the mcl, the department may allow the supplier to monitor annually. Suppliers that monitor annually shall monitor during the quarter or quarters that previously yielded the highest analytical result.

(d) Suppliers which conduct 3 consecutive annual samples and which do not detect a contaminant may apply to the department for a waiver as specified in subrule (9) of this rule.

(e) Groundwater suppliers that have detected 1 or more of the following 2-carbon organic compounds shall monitor quarterly for vinyl chloride:

(i) Trichloroethylene.

(ii) Tetrachloroethylene.

(iii) 1,2-dichloroethane.

(iv) 1,1,1-trichloroethane.

(v) cis-1,2-dichloroethylene.

(vi) trans-1,2-dichloroethylene.

(vii) 1,1-dichloroethylene.

A vinyl chloride sample shall be taken at each sampling point at which 1 or more of the 2-carbon organic compounds were detected. If the results of the first analysis do not detect vinyl chloride, the department may reduce the quarterly monitoring frequency of vinyl chloride monitoring to 1 sample during each compliance period. Surface water suppliers shall monitor for vinyl chloride as specified by the department.

(14) Suppliers that violate the requirements of R 325.10604b shall monitor quarterly. After not less than 4 consecutive quarterly samples that show the supply is in compliance with the provisions of R 325.10604b and the department determines that the supply is reliably and consistently below the MCL, the supplier may monitor at the frequency and time specified in subrule (13)(c) of this rule.

(15) The department may require a confirmation sample for positive or negative results. If a confirmation sample is required by the department, the result shall be averaged with the first sampling result and the average shall be used for the compliance determination as specified by R 325.10604b.

The department may delete results of obvious sampling errors from the calculation.

(16) The department may reduce the total number of samples a supplier shall analyze by allowing the use of compositing when the population served by the system is greater than 3,300 persons. Composite samples from not more than 5 sampling points within a single water system are allowed if the detection limit of the method used for analysis is less than 1/5 of the MCL. Compositing of samples shall be done in the laboratory and analyzed within 14 days of sample collection. All of the following provisions apply to compositing:

(a) If the concentration in the composite sample is more than or equal to 0.0005 milligrams per liter for any contaminant that is listed in R 325.10604b then a supplier shall take a follow-up sample within 14 days from each sampling point that is included in the composite and shall analyze the sample.

(b) If duplicates of the original sample that is taken from each sampling point used in the composite are available, the supplier may use these instead of resampling. A supplier shall analyze the duplicate and shall report the results to the department within 14 days of collection.

(c) The method for compositing samples specified in the provisions of 40 C.F.R. part 141, paragraph 141.24(f)(14)(iv) and (v), July 1, 1991, is adopted by reference in these rules and is available from the United States Government Printing Office, Superintendent of Documents, Washington, DC 20402-9325, or from the Michigan Department of Environmental Quality, Drinking Water and Radiological Protection Division, 3423 North Martin Luther King Jr. Boulevard, P.O. Box 30630, Lansing, Michigan 48909-8130. The cost at the time of adoption of these rules is $1.50.

History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1993 MR 6, Eff. July 2, 1993; 1994 MR 12, Eff. Jan. 5, 1995; 1998 MR 3, Eff. Apr. 8, 1998.

R 325.10717 Collection and analysis of samples for synthetic organic chemicals.

Rule 717. (1) Suppliers of water for community and nontransient, noncommunity public water supplies shall collect samples and cause analyses to be made according to the provisions of this rule for synthetic organic chemicals to determine compliance with the state drinking water standards specified in R 325.10604d. Each supplier shall monitor at the time designated by the department within each compliance period.

(2) A groundwater supplier shall take at least 1 sample at every entry point to the distribution system that is representative of each well after treatment. Each sample shall be taken at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.

(3) A surface water supplier shall take at least 1 sample at points in the distribution system that are representative of each source or at each entry point to the distribution system after treatment. Each sample shall be taken at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant. Surface water supplies include supplies that have a combination of surface and ground sources.

(4) If a system draws water from more than 1 source and the sources are combined before distribution, the supplier shall sample at an entry point to the distribution system during periods of normal operating conditions when water that is representative of all sources is being used.

(5) Each community and nontransient, noncommunity water supplier shall take 4 consecutive quarterly samples for each contaminant that is listed in R 325.10604d during each compliance period beginning with the initial compliance period.

(6) A supplier that serves more than 3,300 persons and that does not detect a contaminant in the initial

compliance period may reduce the sampling frequency to not less than 2 quarterly samples in 1 year during each repeat compliance period.
(7) A supplier that serves less than 3,301 persons and that does not detect a contaminant in the initial compliance period may reduce the sampling frequency to a minimum of 1 sample during each repeat compliance period.
(8) Each community and nontransient water supply may apply to the department for a waiver from the requirements of subrule (5), (6), or (7) of this rule. A supplier shall reapply for a waiver for each compliance period.
(9) The department may grant a waiver if a determination by the department does not reveal previous use, including transport, storage, or disposal, of the contaminant within the watershed or zone of influence. If previous use of the contaminant is unknown or if the contaminant has been used previously, then all of the following factors shall be used to determine whether a waiver is granted.
(a) Previous analytical results.
(b) The proximity of the system to a potential point or non-point source of contamination. Point sources include spills and leaks of chemicals at or near a water treatment facility, at manufacturing, distribution, or storage facilities or from hazardous and municipal waste-handling or treatment facilities. Non-point sources include the use of pesticides to control insect and weed pests in agricultural areas, forest lands, and homes and gardens and also include other land application uses.
(c) The environmental persistence and transport of the pesticide or PCBs.
(d) How well the water source is protected against contamination due to such factors as depth of the well, the type of soil, and the integrity of the well casing.
(e) Elevated nitrate levels at the water supply source.
(f) Use of PCBs in equipment that is used in the production, storage, or distribution of water.
(10) If a contaminant that is listed in R 325.10604d is detected in any sample, then all of the following provisions apply:
(a) Each supply shall be monitored quarterly at each sampling point that resulted in a detection. The department may decrease the quarterly monitoring requirement specified in this subrule if it has determined that the supply is reliably and consistently below the MCL. A groundwater supplier shall take not less than 2 quarterly samples and a surface water supplier shall take not less than 4 quarterly samples before this determination.
(b) After the department determines that the supply is reliably and consistently below the MCL, the department may allow the supply to be monitored annually. A supplier that monitors annually shall monitor during the quarter that previously yielded the highest analytical result.
(c) A supplier that has conducted 3 consecutive annual samples and has not detected a contaminant may apply to the department for a waiver as specified in subrule (9) of this rule.
(d) If monitoring results in detection of 1 or more of the following contaminants, then subsequent monitoring shall analyze for all related contaminants:
(i) Aldicarb.
(ii) Aldicarb sulfone.
(iii) Aldicarb sulfoxide.
(iv) Heptachlor.
(v) Heptachlor epoxide.
(e) As used in this rule, "detection" means finding more than or equal to the following concentrations for each contaminant:

Contaminant	Detection Limit (mg/l)
(i) Alachlor	0.0002.
(ii) Aldicarb	0.0005.
(iii) Aldicarb sulfoxide	0.0005.
(iv) Aldicarb sulfone	0.0008.
(v) Atrazine	0.0001.
(vi) Benzo(a)pyrene	0.00002.

(vii) Carbofuran	0.0009.
(viii) Chlorodane	0.0002.
(ix) Dalapon	0.001.
(x) 1,2-Dibromo-3-Chloropropane (DBCP)	0.00002.
(xi) Di(2-ethylhexyl)adipate	0.0006.
(xii) Di(2-ethylhexyl)phthalate	0.0006.
(xiii) Dinoseb	0.0002.
(xiv) Diquat	0.0004.
(xv) 2,4-D	0.0001.
(xvi) Endothall	0.009.
(xvii) Endrin	0.00001.
(xviii) Ethylene dibromide (EDB)	0.00001.
(xix) Glyphosate	0.006.
(xx) Heptachlor	0.00004.
(xxi) Heptachlor epoxide	0.00002.
(xxii) Hexachlorobenzene	0.0001.
(xxiii) Hexachlorocyclopentadiene	0.0001.
(xxiv) Lindane	0.00002.
(xxv) Methoxychlor	0.0001.
(xxvi) Oxamyl	0.002.
(xxvii) Picloram	0.0001.
(xxviii) Polychlorinated biphenyls (PCBS) (as decachlorobiphenyl)	0.0001.
(xxix) Pentachlorophenol	0.00004.
(xxx) Simazine	0.00007.
(xxxi) Toxaphene	0.001.
(xxxii) 2,3,7,8-TCDD (dioxin)	0.000000005.
(xxxiii) 2,4,5-TP (silvex)	0.0002.

(11) A supplier that violates the requirements of R 325.10604d shall monitor quarterly. After not less than 4 quarterly samples show that the supply is in compliance and the department determines the supply is reliably and consistently below the MCL, a supplier shall monitor the supply at the frequency specified in subrule (10)(b) of this rule.

(12) The department may require a confirmation sample for positive or negative results. If a confirmation sample is required, the result shall be averaged with the first sampling result and the average shall be used for the compliance determination. The department may delete results of obvious sampling errors from this calculation.

(13) The department may reduce the total number of samples a supplier is required to analyze by allowing the use of compositing. Composite samples from not more than 5 sampling points within the same system are allowed if the detection limit if the detection limit of the method used for the analysis is less than 1/5 of the MCL. A supplier shall perform the compositing of samples in the laboratory and shall analyze the samples within 14 days of sample collection. Both of the following provisions apply to compositing:

(a) If the concentration in the composite sample detects 1 or more contaminants that are listed in R 325.10604d, then a supplier shall take a follow-up sample within 14 days from each sampling point included in the composite and shall analyze the sample for that contaminant.

(b) If duplicates of the original sample taken from each sampling point that is used in the composite are available, a supplier may use these duplicates instead of resampling. A supplier shall analyze the duplicate and shall report the results to the department within 14 days of collection.

(14) If monitoring data that are collected after January 1, 1990, are generally consistent with the requirements of R 325.10717, R 325.10604(d), and R 325.10605(e), then the department may allow systems to use that data to satisfy the monitoring requirement for the initial compliance period.

(15) To detect variations within a system, due to fluctuations in concentration due to seasonal use or changes in water source, the department may increase the required monitoring frequency.
(16) A determination of compliance may be based upon analytical results and other information compiled by the department.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1984 MR 6, Eff. July 6, 1984; 1989 MR 8, Eff. Sept. 13, 1989; 1993 MR 6, Eff. July 2, 1993; 1994 MR 12, Eff. Jan. 5, 1995; 1998 MR 3, Eff. Apr. 8, 1998.

R 325.10717a
Source: 1997 AACS.

R 325.10717b Monitoring for unregulated contaminants.
Rule 717b. All of the following provisions apply to monitoring for unregulated contaminants:
(a) A community or nontransient, noncommunity water supplier shall monitor for unregulated contaminants as set forth in this rule. A community water system or nontransient, noncommunity water supply that serves less than 150 service connections shall be treated as being in compliance with the monitoring requirements if, in the absence of department-initiated sampling, the supplier of water notifies the department that the system is available for sampling.
(b) An owner of a surface water system or a system that has a combination of surface and ground sources shall sample at points in the distribution system representative of each water source or at entry points to the distribution system after any application of treatment.
(c) An owner of a groundwater system shall sample at points of entry to the distribution system representative of each well after any application of treatment.
(d) If a system draws water from more than 1 source and the sources are combined before distribution, a supplier shall sample at an entry point to the distribution system during periods of normal operating conditions when water that is representative of all sources is being used.
(e) Each sample shall be taken at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.
(f) The department may require confirmation samples.
(g) A supplier shall perform repeat monitoring for unregulated contaminants at least once every 5 years.
(h) Monitoring data collected any time after January 1, 1983, may be used to meet the requirements for unregulated contaminant monitoring if the monitoring program was consistent with the requirements of this rule. In addition, the results of EPA's groundwater supply survey may be used in a similar manner for systems supplied by a single well.
(i) The total number of samples a supplier shall analyze may be reduced by compositing. Composite samples from a maximum of 5 sampling points may be used. A supplier shall perform the compositing of samples in a laboratory and shall analyze the composite samples within 14 days of collection. Compositing is only permitted from sampling points within a single system.
(j) A supplier shall complete initial monitoring for the unregulated VOCs specified in paragraphs (i) to (xx) of this subdivision according to the provisions of table 7.3. The minimum number of samples that a supplier is required to collect from surface water systems is 1 year of quarterly samples per water source. The minimum number of samples that a supplier is required to collect from groundwater systems is 1 sample per sampling point.

Table 7.3
Initial Monitoring

System Size (population)	Begin not later than
More than 10,000	January-March Quarter 1988
3,300 to 10,000	January-March Quarter 1989
Less than 3,300	January-March Quarter 1991

Paragraphs (i) to (xx) of this subdivision read as follows:
(i) Chloroform.

(ii) Bromodichloromethane.
(iii) Chlorodibromomethane.
(iv) Bromoform.
(v) dibromomethane.
(vi) m-dichlorobenzene.
(vii) 1,1-Dichloropropene.
(viii) 1,1-Dichloroethane.
(ix) 1,1,2,2-Tetrachloroethane.
(x) 1,3-Dichloropropane.
(xi) Chloromethane.
(xii) Bromomethane.
(xiii) 1,2,3-Trichloropropane.
(xiv) 1,1,1,2-Tetrachloroethane.
(xv) Chloroethane.
(xvi) 2,2-Dichloropropane.
(xvii) o-chlorotoluene.
(xviii) p-chlorotoluene.
(xix) Bromobenzene.
(xx) 1,3-Dichloropropene.
(k) Monitoring for the unregulated contaminants specified in this subdivision, shall be conducted by a supplier according to the following provisions, shall be completed by the supplier by December 31, 1995, and shall be reported by the supplier to the department:
(i) Each community and nontransient, noncommunity water supplier shall take 4 consecutive quarterly samples at each sampling point for each organic contaminant listed in subparagraphs (A) to (J) of this paragraph:
(A) Aldrin.
(B) Butachlor.
(C) Carbaryl.
(D) Dicamba.
(E) Dieldrin.
(F) 3-Hydrozycarbofuran.
(G) Methomyl.
(H) Metolachlor.
(I) Metribuzin.
(J) Propachlor.
(ii) Each community and nontransient, noncommunity water supplier shall take 1 sample at each sampling point for sulfate.
(iii) The department may grant a waiver from the requirements of paragraph (i) of this subdivision based on the criteria specified in R 325.10717(9). The department may grant a waiver from the requirements of paragraph (ii) of this subdivision if previous analytical results indicate contamination would not occur and if the results were collected after January 1, 1990.
(l) Supplier monitoring for the following contaminants may be required by the department based on the vulnerability of the water supply to these contaminants:
(i) 1,2,4-Trimethylbenzene.
(ii) 1,2,3-Trichlorobenzene.
(iii) N-Propylbenzene.
(iv) N-butylbenzene.
(v) Naphthalene.
(vi) Hexachlorobutadiene.
(vii) 1,3,5-Trimethylbenzene.
(viii) P-Isopropyltoluene.
(ix) Isopropylbenzene.
(x) Tert-Butylbenzene.

(xi) Sec-Butylbenzene.
(xii) Fluorotrichloromethane.
(xiii) Dichlorodifluoromethane.
(xiv) Bromochloromethane.
(m) a supplier of water for a community public water system shall collect and analyze 1 sample per plant at the entry point to the distribution system to determine sodium concentration levels. samples shall be collected and analyzed annually for a system that utilizes surface water sources in whole or in part and not less than once every 3 years for a system that utilizes solely ground water sources. the minimum number of samples required to be taken by the system shall be based on the number of treatment plants used by the system, except that multiple wells drawing raw water from a single aquifer may be considered 1 treatment plant for determining the minimum number of samples. the supplier of water shall report to the department the results of the analyses for sodium within the first 10 days of the month following the month in which the sample results were received or within the first 10 days following the end of the required monitoring period, whichever is sooner. if more than annual sampling is required, then the supplier shall report the average sodium concentration within 10 days of the month following the month in which the analytical results of the last sample used for the annual average were received.
(n) an analysis for a contaminant listed in this rule shall be conducted only by laboratories certified under part 27 of these rules.
History: 1989 MR 8, Eff. Sept. 13, 1989; 1991 MR 11, Eff. Nov. 22, 1991; 1993 MR 6, Eff. July 2, 1993; 1994 MR 12, Eff. Jan. 5, 1995; 1998 MR 3, Eff. Apr. 8, 1998.

R 325.10717c
Source: 1993 AACS.

R 325.10718
Source: 1997 AACS.

R 325.10719
Source: 1993 AACS.

R 325.10719a
Source: 1984 AACS.

R 325.10719b
Source: 1984 AACS.

R 325.10719c
Source: 1984 AACS.

R 325.10719d
Source: 1984 AACS.

R 325.10720
Source: 1993 AACS.

R 325.10721
Source: 1991 AACS.

R 325.10724
Source: 1997 AACS.

R 325.10728
Source: 1989 AACS.

R 325.10734
Source: 1991 AACS.

R 325.10737
Source: 1997 AACS.

PART 8. GROUNDWATER SOURCES

R 325.10822
Source: 1991 AACS.

R 325.10831
Source: 1991 AACS.

R 325.10833
Source: 1997 AACS.

PART 10. TREATMENT SYSTEMS AND PUMPING FACILITIES

R 325.11002 Applicability; approval of deviations from minimum standards and requirements.

Rule 1002. (1) The provisions of this part apply to all public water supplies that utilize sources of water requiring complete treatment, to certain other treatment systems, and to all water pumping facilities. These rules are standards and requirements which shall be considered by the department when issuing permits or approvals for waterworks systems.

(2) Deviations from the minimum standards and requirements prescribed by this part may be approved by the department upon a showing by an owner of a public water supply that the deviation will not adversely affect public health.

(3) Any deviations to the requirements for complete treatment of water sources shall not be in conflict with the provisions of 40 C.F.R. part 141 (June 29, 1989). For purposes of this subrule, the provisions of 40 C.F.R. part 141 (June 29, 1989) are adopted by reference. Copies of the adopted material may be obtained from the United States Environmental Protection Agency, Region V, Water Supply Branch, 230 South Dearborn Street, Chicago, Illinois 60604, at no cost, or from the Michigan Department of Public Health, Division of Water Supply, 3423 North Martin Luther King, Jr. Blvd., Lansing, Michigan 48909, at no cost.

History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1991 MR 11, Eff. Nov. 22, 1991.

R 325.11004
Source: 1994 AACS.

R 325.11008
Source: 1991 AACS.

PART 11. DISTRIBUTION SYSTEMS AND STORAGE TANKS

R 325.11110
Source: 1991 AACS.

R 325.11117
Source: 1991 AACS.

PART 14. CROSS-CONNECTIONS

R 325.11404 Local cross-connection control programs.

Rule 1404. (1) A water utility shall develop a comprehensive control program for the elimination and prevention of all cross-connections. The plan for the program shall be submitted to the department for review and approval within 1 year after the effective date of these rules. When the plan is approved, the water utility shall implement the program for removal of all existing cross-connections and prevention of all future cross-connections.

(2) The program shall include but not be limited to all of the following:
(a) A complete description of the method of administering the program, including the designation of inspection and enforcement agency or agencies.
The local authority for implementation of the program shall be indicated, preferably by ordinance.
(b) A time schedule for inspection and reinspection of all water utility customers' premises for possible cross-connections. The periodic reinspection shall be to ascertain whether or not safe air gaps or required protective devices are in place and in working order.
(c) A description of the methods and devices, as approved by the department, used to protect the public water supply.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1998 MR 3, Eff. Apr. 8, 1998.

R 325.11405 Corrections and protective devices.

Rule 1405. (1) A user of public water supply shall obtain written approval by the water utility or authorized inspection agency of any proposed corrective action or protective device before using or installing it.
(2) The total time allowed for completion of the necessary corrections shall be contingent upon the degree of hazard involved and include the time required to obtain and install equipment. If he cross-connection has not been removed, after a reasonable period of time, the water utility shall physically separate the public water supply from the onsite piping system in such a manner that the 2 systems cannot again be connected by any unauthorized person.
(3) A water utility shall report annually to the department on the status of the cross-connection control program on a form provided by the department.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1998 MR 3, Eff. April 8, 1998.

R 325.11406 Piping identification.

Rule 1406. When a secondary water source is used in addition to a public water supply system, exposed public water and secondary water piping shall be identified by distinguishing colors or tags and so maintained that each pipe may be traced readily in its entirety. If piping is so installed that it is impossible to trace it in its entirety, it will be necessary to protect the public water supply at the service connection in a manner acceptable to the department.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1998 MR 3, Eff. Apr. 8, 1998.

PART 15. OPERATION REPORTS AND RECORDKEEPING

R 325.11502
Source: 1991 AACS.

R 325.11503
Source: 1991 AACS.

R 325.11505a
Source: 1991 AACS.

R 325.11506
Source: 1994 AACS.

PART 19. EXAMINATION AND CERTIFICATION OF OPERATORS

R 325.11901 Classification of treatment systems.

Rule 1901. (1) Complete treatment systems are classified based on population served by the public water supply or rated treatment capacity of the treatment system as follows:
(a) Class F-1: Complete treatment systems for community supplies serving a population greater than 20,000, or with a rated treatment capacity greater than 5.0 million gallons of water per day.

(b) Class F-2: Complete treatment systems for community supplies serving a population from 4,000 to 20,000, or with a rated treatment capacity from 2.0 to 5.0 million gallons of water per day.
(c) Class F-3: Complete treatment systems for community supplies serving a population from 1,000 to 4,000 or with a rated treatment capacity from 0.5 to 2.0 million gallons of water per day.
(d) Class F-4: Complete treatment systems for community supplies serving a population of less than 1,000, or with a rated treatment capacity less than 0.5 million gallons of water per day.
(e) Class F-5: Complete treatment systems for noncommunity supplies.
(2) Limited treatment systems are classified based on population served by the public water supply or rated treatment capacity of the treatment system as follows:
(a) Class D-1: Limited treatment systems for community supplies serving a population greater than 20,000, or with a rated treatment capacity greater than 5.0 million gallons of water per day.
(b) Class D-2: Limited treatment systems for community supplies serving a population from 4,000 to 20,000, or with a rated treatment capacity from 2.0 to 5.0 million gallons of water per day.
(c) Class D-3: Limited treatment systems for community supplies serving a population from 1,000 to 4,000, or with a rated treatment capacity from 0.5 to 2.0 million gallons of water per day.
(d) Class D-4: Limited treatment systems for community supplies serving a population of less than 1,000, or with a rated treatment capacity less than 0.5 million gallons of water per day.
(e) Class D-5: Limited treatment systems for noncommunity supplies.
(3) Waterworks systems that use as a source surface water or ground water under the direct influence of surface water shall be classified as F systems.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.11902 Classification of distribution systems and other public water supplies.

Rule 1902. The following classifications are assigned to public water supplies:
(a) Class S-1: Distribution systems for community supplies serving a population greater than 20,000.
(b) Class S-2: Distribution systems for community supplies serving a population from 4,000 to 20,000.
(c) Class S-3: Distribution systems for community supplies serving a population from 1,000 to 4,000.
(d) Class S-4: Distribution systems for community supplies serving a population of less than 1,000.
(e) Class S-5: Nontransient noncommunity water supplies with no treatment or community supplies with no treatment and a distribution system limited in extent.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.11903 Change in classification of treatment system, distribution system, or public water supply.

Rule 1903. Any public water supply classified in accordance with R 325.11901 and R 325.11902 may be placed in a different classification by the department by reason of:
(a) Incorporation in the treatment system of special features of design.
(b) Making operation different from usual.
(c) Treating a particularly difficult type of raw water.
(d) Upon a finding that the population served has changed.
(e) The use of complex treatment systems.
(f) The presence of a large service population.
(g) When the distribution system is extensive or complex.
(h) When a treatment system failure will not impact public health.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 2000 MR 19, Eff. 8, 2000.

R 325.11904 Notification of change in classification.

Rule 1904. (1) A supplier of water of a public water supply affected by a change in classification shall be notified by the department by mail. A change in classification by the department shall be effective 6 months after the date of the next applicable examination.
(2) The classification of a newly constructed waterworks system shall be effective at the time of initial operation.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.11905 Certification of operators.

Rule 1905. (1) Any waterworks system or portion of a system which has been classified in accordance with R 325.11901 or R 325.11902 shall be under the supervision of an operator in charge certified in the system classification as specified in these rules.

(2) A certified operator may operate any waterworks system as follows:

(a) Within a classification at or below the level of his or her certificate.

(b) At a different classification as follows:

(i) A certified operator who holds an F certificate meets the qualifications to operate a D treatment system of comparable numerical classification.

(ii) A certified operator who holds an F certificate or D certificate meets the qualifications to operate a class S-5 system.

(3) A shift operator shall be on site and in charge of each operating shift at a community supply in the F classification when the operator in charge is not on site.

(4) The department may waive the requirement of subrule (3) of this rule upon approval of an operational plan submitted by the public water supply that demonstrates that public health will be adequately protected when a certified shift operator is not on site. The operational plan shall include provision for a back-up operator holding an F-4 or higher certificate.

(5) Shift operators at a community supply in the F classification are required to hold an F-4 or higher certificate, except that shift operators at community supplies with a rated treatment capacity more than 100,000,000 gallons of water per day shall hold an F-3 or higher certificate.

(6) For purposes of training a shift operator to occupy a vacant position, the department may authorize a deviation from the requirements of subrule (3) of this rule by granting a provisional certification for a period of time, which shall not be more than 2 years. A person who occupies a position pursuant to this subrule shall otherwise be qualified to become certified by examination during this time and shall be titled an operator trainee.

(7) A class D-1 or class D-2 system shall designate one or more operators holding a D-4 or higher certificate as a back-up operator.

(8) A class S-1 or class S-2 system shall designate one or more operators holding an S-4 or higher certificate as a back-up operator.

(9) A waterworks system shall have in place a plan for proper operation of the waterworks system when the operator in charge is not available.

(10) Any form of operator certification not currently recognized in these rules shall be considered null and void as of the effective date of these rules.

History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; rescinded 2000 MR 19, Eff. Dec. 8, 2000.

R 325.11906 RESCINDED.

History: 2000 MR 19, Eff. Dec. 8, 2000.

R 325.11906a Restricted certificates for existing operators.

Rule 1906a. (1) The owner of a waterworks system classified for the first time as a result of these revised rules as a class F-5, class D-5, or class S-5 system may designate to the department an operator currently employed by the owner as the certified operator in charge of the system. Such designation shall be made within 90 days after notification by the department that the system has been classified as such or within 2 years from the effective date of these revised rules, whichever date comes first.

(a) If the class F-5, class D-5, or class S-5 system has an acceptable record of compliance with the safe drinking water act requirements and provided that the designated operator attends a specific department approved training program, the department shall issue a site specific, restricted certification to the operator designated in subrule (1) of this rule.

(2) The owner of a waterworks system reclassified as a result of these revised rules may designate to the department a properly certified operator currently employed by the owner as the operator in charge of the system and any other properly certified operator or operators currently employed by the owner as a shift operator or operators. Such designation shall be made within 90 days after notification by the department

that the system has been reclassified or within 2 years from the effective date of these revised rules, whichever date comes first.
(a) The department shall issue site specific, restricted certification to the operator or operators designated in subrule (2) of this rule.
(3) The owner of a manufactured housing community waterworks system may designate to the department an operator currently employed by the owner as the certified operator in charge of the system or portion of the system. Such designation shall be made within 90 days after notification by the department of the system's classification or reclassification as such or within 2 years from the effective date of these revised rules, whichever date comes first.
(a) Provided that the designated operator attends a specific department approved training program, the department shall issue site specific, restricted certification to the operator designated in subrule (3) of this rule.
(4) An operator issued restricted certification under this rule is only authorized to operate the waterworks system or portion of the system that is designated on the restricted certificate issued to him or her, except such operator may operate any other waterworks system or portion of a system for which he or she holds certification for. An operator with a restricted certification is subject to the same requirements for performance as other certification classes and the certificate may be suspended or revoked or the operator placed on probation in accordance with R 325.11917.
History: 2000 MR 19, Eff. Dec. 8, 2000.

R 325.11906b Notices to the department.
Rule 1906b. (1) A public water supply shall provide to the department upon request the name of the operator in charge of the waterworks system or portion of the system, any shift operator, and any back-up operator required under R 325.11905.
(2) A public water supply shall notify the department within 7 days when the supply no longer has the services of an operator in charge, a shift operator, or a back-up operator.
History: 2000 MR 19, Eff. Dec. 8, 2000.

R 325.11907
Source: 1991 AACS.

R 325.11908 Advisory board; powers and duties.
Rule 1908. (1) The advisory board shall meet not less than twice each year at designated times and places and shall advise the department in program implementation and any revisions to the operator certification program. The advisory board shall assist the department in examining all persons making application for certification who meet the minimum requirements established by the department pursuant to R 325.11911. The advisory board shall schedule at least 1 annual examination for treatment system operators in the F-1, F-2, F-3, F-4 and D-1, D-2, D-3, D-4 classes and at least 1 annual examination for the distribution system operators in the S-1, S-2, S-3, S-4 classes, and shall provide public notice of the date, time, and place for each examination not less than 90 days before the date set for the examination.
(2) The advisory board shall approve a protocol for the examination of operators in class F-5, class D-5, and class S-5 systems.
(3) After review of the application and the results of the examination, the department shall issue or deny an applicant a certificate in the appropriate public water supply classification.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.11909
Source: 1991 AACS.

R 325.11910 Application for examination; notice to accepted applicants of examination.
Rule 1910. (1) To be certified for the operation of a public water supply other than a class F-5, class D-5 or –class S-5, an individual shall submit, to the department, not less than 45 days before the announced examination date, an application for examination on a form provided by the department. To be certified for

the operation of a class F-5, class D-5, or class S-5 an individual shall submit, to the department, not less than 20 days before the examination date, an application for examination on a form provided by the department. The information contained on the application shall be evaluated by the department, shall be subject to review by the advisory board, and shall constitute a part of the examination. The department may require verification of the education and experience of an applicant for an examination.

(2) Not less than 15 days before the examination the department shall notify all applicants of its findings and shall notify those applicants accepted for examination of the date, time, and place of the examination.

(3) For the purposes of certifying individuals attending specific department approved training programs specified under R 325.11906a, the department may waive the requirement for an examination application.

History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1991 MR 11, Eff. Nov. 22, 1991; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.11911 Applicant for certification; grading.

Rule 1911. (1) An applicant for certification shall be graded in 4 major divisions as follows:

(a) Educational qualifications of the applicant.

(b) Experience qualifications of the applicant, where applicable.

(c) The examination.

(d) The laboratory examination, where applicable.

(2) An applicant shall satisfy the minimum criteria established by the department as outlined in table 1 for educational qualifications before admission to the examination.

TABLE 1

Education Points Required to Write an Examination

Educational Qualifications

F-1	80	D-1	70	S-1	70
F-2	70	D-2	60	S-2	60
F-3	60	D-3	60	S-3	60
F-4	60	D-4	60	S-4	60
F-5	60	D-5	60	S-5	60

Schedule of Points Given for Formal Education

8TH Grade	40
10TH Grade	50
H.S. Diploma, GED or Equivalent	60
2 yr. Associate Degree	70
Bachelor Degree	70
Advanced Degree	70
*Approved Two Year Water/Wastewater Tech.	80
Bachelor of Science in Engineering, Chemistry or Microbiology	80
Advanced Degree in Engineering, Chemistry or Microbiology	90

Education Points Allowed as Substitution for Experience

	F-1	F-2	F-3	F-4	D-1	D-2	D-3	D-4	S-1	S-2	S-3	S-4
**Science B.S.	12	9	6	0	12	9	6	3	12	9	6	3
**Adv Degree	18	12	6	0	18	12	6	3	18	12	6	3
Bach Degree	4	4	0	0	2	2	0	0	2	2	0	0

	F-1	F-2	F-3	F-4	D-1	D-2	D-3	D-4	S-1	S-2	S-3	S-4
Adv Degree	4	4	0	0	2	2	0	0	2	2	0	0
*W/WW Tech	0	0	0	3	0	0	0	6	0	0	0	6

*Curriculum approved by advisory board of examiners
**Degree shall be in engineering, chemistry, or microbiology

(3) Criteria used for grading shall be determined by the department subject to the approval of the advisory board and shall be made available by the department.
(4) An applicant for certification may be required to submit, to the department, on request, names of persons familiar with the experience qualifications of the applicant.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1991 MR 11, Eff. Nov. 22, 1991; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.11912 Examination.

Rule 1912. (1) A written examination shall be prepared by the department with the concurrence of the advisory board for each public water supply classification, except the F-5, D-5, or S-5 classifications.
(2) A performance-based laboratory examination may be prepared by the department with the concurrence of the advisory board for any classification.
(3) Examinations shall be administered by the department subject to review by the advisory board.
(4) Examinations for F-5, D-5, or S-5 classifications may be any combination of training, written, or oral examination or performance based examination approved by the advisory board.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1991 MR 11, Eff. Nov. 22, 1991; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.11913 Equivalent certificate.

Rule 1913. (1) The department shall prepare an application form to be used by applicants for an equivalent certificate. A waterworks system operator issued certification pursuant to the provisions of R 325.1009 of the Michigan Administrative Code that does not hold a current certificate, and who submits a complete application for an equivalent certificate within 1 year after the application form becomes available from the department may, under the conditions specified in subrule (2) of this rule, be issued a new certificate of comparable classification. Equivalent certificates for an individual who holds multiple certificates shall only be issued for the higher class within the appropriate waterworks system category.
(2) The department shall, on the basis of an evaluation of the information provided on the application form for an equivalent certificate, determine if the equivalent certificate is to be issued. An individual has no longer than 2 years from the effective date of these rules to complete the required continuing education requirements as prorated from the certificate's expiration date. The department shall issue a certificate upon approval. A restricted certificate is valid only for the waterworks system designated on the certificate.
(3) Equivalent certificates issued shall state all of the following information:
(a) The certified individual's name.
(b) The certification class or classes.
(c) The date of certificate expiration.
(d) The official certificate number.
In addition, a restricted certificate shall name the water system for which the certificate is valid.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1991 MR 11, Eff. Nov. 22, 1991; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.11914 Reciprocity.

Rule 1914. (1) An operator certificate in a comparable classification may be issued by the department, without examination, to an individual who holds a similar operator certificate in another state, a territory or possession of the United States, or another country, if the requirements for certification of operators under which the certificate was issued are comparable to the requirements prescribed by this part.
(2) The department may issue a temporary certificate for an individual who petitions for reciprocity under

subrule (1) of this rule. The temporary certificate shall expire at such time as the individual has an opportunity to obtain the results from taking the next available equivalent Michigan certification exam but shall not exceed 18 months in duration. If the individual fails the equivalent Michigan certification exam, he or she will not be eligible for any additional temporary certification.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.11915 Renewal requirements.

Rule 1915. (1) The department shall renew a certificate on a 3-year cycle. To renew a certificate, a certificate holder shall submit, to the department, an application for renewal on a form provided by the department.
(2) To have a certificate renewed, a holder of an F-1 or F-1 (restricted), F-2 or F-2 (restricted), F-3 or F-3 (restricted), D-1 or D-1 (restricted), D-2 or D-2 (restricted), D-3 or D-3 (restricted), S-1 or S-1 (restricted), S-2 or S-2 (restricted), S-3 or S-3 (restricted) certificate shall have completed, during the renewal cycle, not less than 24 hours of advisory board-approved training or continuing education, regardless of the category or class or number of certificates held. To have a class F-4 or F-4 (restricted), D-4 or D-4 (restricted), or S-4 or S-4 (restricted) certificate renewed, a certificate holder shall have completed, during the renewal cycle, not less than 12 hours of advisory board-approved training or continuing education. To have a class F-5, class D-5 or class S-5 certificate renewed, a certificate holder shall have completed not less than 9 hours of advisory board-approved training or continuing education during the renewal cycle.
(3) To have a certificate issued under R 325.11906a(1) renewed, a certificate holder shall have completed not less than 9 hours of advisory board-approved training or continuing education during the renewal cycle and the water system shall have an acceptable record of compliance with safe drinking water act requirements.
(4) To have a certificate issued under R 325.11906a(2) or (3) renewed, a certificate holder shall meet any applicable renewal requirements described in subrules (1) and (2) of this rule.
(5) Types of education or training programs that may be approved include, but are not limited to:
(a) Association programs that are sponsored by any of the following entities:
(i) American water works association.
(ii) Township, municipal, and county organizations.
(iii) Professional and trade organizations.
(iv) National rural water association
(b) Home study courses, such as videotapes, audiocassettes, and correspondence courses.
(c) Private contractor technical courses.
(d) University, college, and community college courses.
(e) Department and environmental protection agency sponsored training programs.
(f) Training sponsored by nationally recognized organizations.
(g) Water utility in-service training.
(6) A holder of a certificate shall be responsible for renewal of a certificate regardless of notification.
(7) A certificate holder shall keep his or her own record of approved training, education, and work experience and be prepared to present proof of that training, education, and experience if required by the department.
(8) The failure of an applicant for renewal to meet the requirements of this subrule and subrules (1) to (7) of this rule shall constitute grounds for refusing to renew a certificate.
(9) For a holder of multiple certificates within a category, the department shall only renew the certificate representing the higher class within a waterworks system category.
(10) A holder of a certificate who is not eligible for renewal or who has been refused renewal pursuant to the provisions of subrules (1) to (9) of this rule may apply for examination pursuant to the provisions of R 325.11910.
(11) A holder of a certificate who has not met the continuing education requirements of subrule (2) of this rule for his or her certification may be issued a certificate for the classification within the same category for which the continuing education requirements have been met. A certificate that is not renewed shall expire.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1991 MR 11, Eff. Nov. 22, 1991; 2000 MR 19, Eff. Dec. 8, 2000.

R 325.11915a Reinstatement.

Rule 1915a. The department may reinstate an expired certificate within 1 year from the expiration date of the certificate when an individual has completed the necessary continuing education requirements as prorated from the certificate's expiration date. Upon department approval, a new certificate shall be issued.
History: 1991 MR 11, Eff. Nov. 22, 1991; 2000 Mr 19, Eff. Dec. 8, 2000.

R 325.11916
Source: 1997 AACS.

R 325.11917 Suspension or revocation of certificates.

Rule 1917. (1) After notice and a hearing before the advisory board, the director may place on probation, suspend, or revoke the certificate of an operator if the director determines that any of the following provisions apply:
(a) The operator is incompetent or unable to properly perform the duties of a waterworks system operator.
(b) The operator has committed fraud or has falsified an application, report, or record with respect to his or her application or with respect to a water supply.
(c) The operator has been negligent in the discharge of properly assigned duties or responsibilities with respect to a water supply.
(2) The department shall provide a notice of probation, suspension, or revocation, in writing, to the operator and to the owner of the public water supply where the operator is employed.
(3) The department shall not accept an application for examination during the time period of suspension for an operator who has a suspended certificate.
(4) Upon recommendation of the advisory board, the director shall determine the length of suspension of a certificate.
(5) Renewal of a suspended certificate is allowed if the applicant meets all renewal requirements including the training and continuing education requirements; however, the renewal does not affect the terms of suspension in any way.
(6) The department shall not accept an application for examination from an operator for a period of 5 years from the effective date of the revocation of certificate.
(7) Upon recommendation of the advisory board, the director may place a certified operator on probation for up to 2 years in accordance with the provisions of subrule (1) of this rule. A certificate holder who is placed on probation is subject to the terms and conditions of the order of probation.
History: 1954 ACS 94, Eff. Jan. 12, 1978; 1979 AC; 1991 MR 11, Eff. Nov. 22, 1991; 2000 MR 19, Eff. Dec. 8, 2000.

PART 27. LABORATORY CERTIFICATION

R 325.12701
Source: 1994 AACS.

R 325.12702 Certification for inorganic chemical analyses.

Rule 2702. (1) Laboratories may conduct sample analyses under provisional certification until January 1, 1996.
(2) To receive certification to conduct analyses for antimony, asbestos, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, nitrate, nitrite, selenium, and thallium, a laboratory shall comply with both of the following provisions:
(a) Analyze performance evaluation samples that include those substances provided by EPA's environmental monitoring systems laboratory or equivalent samples provided by the department.
(b) Achieve quantitative results on the analyses that are within the acceptance limits in table 27.1.

Table 27.1

Contaminant	**Acceptance Limit milligrams per liter (mg/l)**
Antimony	+/-30% at 0.006 mg/l.

Asbestos	2 standard deviations based on study statistics.
Barium	+/-15% at 0.15 mg/l.
Beryllium	+/-15% at 0.001 mg/l.
Cadmium	+/-20% at 0.002 mg/l.
Chromium	+/-15% at 0.01 mg/l.
Copper	+/-10% at 0.050 mg/l.
Cyanide	+/-25% at 0.1 mg/l.
Fluoride	+/-10% at 1 to 10 mg/l.
Lead	+/-30% at 0.0050 mg/l.
Mercury	+/-30% at 0.0005 mg/l.
Nickel	+/-15% at 0.01 mg/l.
Nitrate	+/-10% at 0.4 mg/l.
Nitrite	+/-15% at 0.4 mg/l.
Selenium	+/-20% at 0.01 mg/l.
Thallium	+/-30% at 0.002 mg/l.

(3) To receive certification to conduct analyses for lead and copper, a laboratory shall be in compliance with all of the following requirements:
(a) Analyze performance evaluation samples, including lead and copper, that are provided by EPA's environmental monitoring and support laboratory or equivalent samples provided by the department.
(b) Achieve quantitative acceptance limits as specified in table 27.1 and as follows:
(i) Lead: "30% of the actual amount in the performance evaluation sample when the actual amount is greater than or equal to 0.005 mg/l. the practical quantitation level, or PQl, for lead is 0.005 mg/l.
(ii) Copper: "10% of the actual amount in the performance evaluation sample when the actual amount is greater than or equal to 0.050 mg/l. the practical quantitation level, or PQL, for copper is 0.050 mg/l.
(c) Achieve method detection limits (MDLs) according to the procedures specified in 40 C.F.R. part 136, appendix B, as follows:
(i) Lead: 0.001 mg/l, only if source water compositing is performed.
(ii) Copper: 0.001 mg/l, or 0.020 mg/l when atomic absorption direct aspiration is used, only if source water compositing is performed.
(d) All lead and copper levels measured between the PQL and MDL shall be either reported as measured or they shall be reported as ½ the PQL specified for lead and copper in subdivision (b) of this subrule. all levels below the lead and copper MDLs shall be reported as zero.
(e) All copper levels measured between the PQL and the MDL shall be either reported as measured or they shall be reported as ½ the PQL (0.025 mg/l). All levels below the copper MDL shall be reported as zero.
History: 1994 MR 12, Eff. Jan. 5, 1995; 1998 MR 3, Eff. Apr. 8, 1998.

R 325.12705 Certification for VOC analyses.

Rule 2705. (1) To receive certification to conduct analyses for the VOCs, other than vinyl chloride, listed in part 6, table 6.2, of these rules, a laboratory shall be in compliance with all of the following requirements:
(a) Analyze performance evaluation samples which include the VOCs, other than vinyl chloride, listed in part 6, table 6.2, of these rules and which are provided by EPA's environmental monitoring systems laboratory or equivalent samples provided by the department.
(b) Achieve the quantitative acceptance limits specified in subdivisions
(c) and (d) of this subrule for not less than 80% of the regulated organic chemicals listed in part 6, table 6.2, of these rules.
(c) Achieve quantitative results on the analyses performed under subdivision (a) of this subrule that are within "20% of the actual amount of the substances in the performance evaluation sample when the actual amount is greater than or equal to 0.010 mg/l.
(d) Achieve quantitative results on the analyses performed under subdivision (a) of this subrule that are within "40% of the actual amount of the substances in the performance evaluation sample when the actual

amount is less than 0.010 mg/l.
(e) Achieve a method detection limit of 0.0005 mg/l, according to the procedures specified in 40 C.F.R. part 136, appendix B.
(2) To receive certification for vinyl chloride, a laboratory shall be in compliance with all of the following requirements:
(a) Analyze performance evaluation samples provided by EPA's environmental monitoring systems laboratory or equivalent samples provided
by the department.
(b) Achieve quantitative results on the analyses performed under subdivision (a) of this subrule that are within "40% of the actual amount of vinyl chloride in the performance evaluation sample.
(c) Achieve a method detection limit of 0.0005 mg/l, according to the procedures specified in 40 C.F.R. part 136, appendix B.
(d) Obtain certification for the VOCs listed in part 6, table 6.2, of these rules.
(3) Each certified laboratory shall determine the method detection limit
(MDL), as defined in 40 C.F.R. part 136, appendix B, at which the laboratory is capable of detecting VOCs. The acceptable MDL is 0.0005 mg/l.
(4) To composite samples, the laboratory shall be in compliance with both of the following provisions:
(a) For compositing samples before gas chromatograph (GC) analysis, be in compliance with all of the following provisions:
(i) Add 5 ml or equal larger amounts of each sample (up to 5 samples are allowed) to a 25-ml glass syringe. Special precautions shall be taken to maintain zero headspace in the syringe.
(ii) The samples shall be cooled at 4o Celsius during compositing to minimize volatilization losses.
(iii) Mix well and draw out a 5-ml aliquot for analysis.
(iv) Follow sample introduction, purging, and desorption steps described in the method.
(v) If less than 5 samples are used for compositing, a proportionately smaller syringe may be used.
(b) For compositing samples before GC/MS analysis, be in compliance with all of the following provisions:
(i) Inject 5-ml or equal larger amounts of each aqueous sample (up to 5 samples are allowed) into a 25-ml purging device using the sample introduction technique described in the method.
(ii) The total volume of the sample in the purging device shall be 25 ml.
(iii) Purge and desorb as described in the method.
(5) To receive conditional approval to conduct analyses for benzene, vinyl chloride, carbon tetrachloride, 1,2-dichloroethane, trichloroethylene, 1,1-dichloroethylene, 1,1,1-trichloroethane, and paradichlorobenzene, a laboratory shall be in compliance with all of the following provisions:
(a) Analyze performance evaluation samples which include benzene, vinyl chloride, carbon tetrachloride, 1,2-dichloroethane, trichloroethylene, 1, 1 dichloroethylene, 1,1,1-trichloroethane, and paradichlorobenzene and which are provided by EPA'S environmental monitoring and support laboratory or equivalent samples provided by the department.
(b) Achieve the quantitative acceptance limits specified in subdivisions (c) and (d) of this subrule for not less than 6 of the 7 subject organic chemicals.
(c) Achieve quantitative results on the analyses performed under subdivision (a) of this subrule that are within "20% of the actual amount of the substances in the performance evaluation sample when the actual amount is greater than or equal to 0.010 mg/l.
(d) Achieve quantitative results on the analyses performed under subdivision (a) of this subrule that are within "40% of the actual amount of the substances in the performance evaluation sample when the active amount is less than 0.010 mg/l.
(e) Achieve a method detection limit of 0.0005 mg/l, according to the procedures in 40 C.F.R. part 136, appendix B.
(f) Be currently approved by EPA or the department for the analyses of trihalomethanes in drinking water.
(6) To receive conditional approval for vinyl chloride, a laboratory shall be in compliance with all of the following requirements:
(a) Analyze performance evaluation samples provided by EPA's environmental monitoring and support laboratory or equivalent samples provided by the department.
(b) Achieve quantitative results on the analyses performed under subdivision (a) of this subrule that are

within "40% of the actual amount of vinyl chloride in the performance evaluation sample.
(c) Achieve a method detection limit of 0.0005 mg/l, according to the procedures in 40 C.F.R. part 136, appendix B.
(d) Receive approval or be currently approved by EPA or the department as specified in subrule (5) of this rule.
(7) 40 C.F.R. part 136, appendix B, is available from the United States Government Printing Office, Superintendent of Documents, Washington, DC 20402-9325, or from the Michigan Department of Environmental Quality, Drinking Water and Radiological Protection Division, 3423 North Martin Luther King Jr. Boulevard, P.O. Box 30630, Lansing, Michigan 48909-8130. The cost at the time of adoption of these rules is $1.50.
History: 1994 MR 12, Eff. Jan. 5, 1995; 1998 MR 3, Eff. Apr. 8, 1998.

R 325.12706
Source: 1994 AACS.

PART 28. WELLHEAD PROTECTION GRANT ASSISTANCE

R. 325.12801 Definitions.
Rule 2801. As used in these rules:
(a) "Abandoned well" means any of the following which presents a threat to the groundwater resource and which no longer serves the purpose for which he was intended or has been taken out of service:
(i) A water well.
(ii) A monitoring well.
(iii) An oil well.
(iv) A gas well.
(v) A mineral well.
(vi) A drainage well.
(vii) A re-charge well.
(viii) A test well.
(ix) An injection well.
(x) Other unplugged borings.
(b) "Aquifer test" means a groundwater resource assessment completed under Act No. 399aof the Public Acts of 1976, as amended, being S 325.1001 et seq. of the Michigan Compiled Laws, R 325.10813 governing the study of hydrogeological conditions by suppliers of water of type I and type IIa public water supplies, and R 325.10814 governing the studies of suppliers of water of type IIb and type III public water supplies.
(c) "Contaminant source inventory" means the identification of sources of contamination or land uses within a wellhead protection area that have a potential to adversely impact the groundwater resource.
(d) "Delineation" means a hydrogeologic investigation conducted for the purpose of determining a wellhead protection area that meets the requirements of the state of Michigan wellhead protection program.
(e) "Elements" means the 7 areas that shall be addressed to obtain approval of a wellhead protection program includes all of the following:
(i) Roles and duties.
(ii) Delineate shovel wellhead protection area.
(iii) Identification of potential and known contaminants sources.
(iv) Management strategies.
(v) Contingency plans for the wellhead protection area.
(vi) New wells.
(vii) Public participation.
(f) "Grant application" means a community public water supply, or a not-for-profit, nontransient, noncommunity public water supply that applies for grant assistance under the wellhead protection grant program on behalf of the persons or municipality served by the public water supply.
(g) "Grant assistance" means the dedication grant funds to a public water supply to support the development and implementation of a wellhead protection program.

(h) "Grant eligibility activity" means a task undertaken by a community or nontransient, noncommunity public water supply for the purpose of determining a wellhead protection area or developing in implementing a wellhead protection program that is eligible for grand assistance in accordance with these rules.
(i) "Grant program priority list" means an annual list of grant applicants developed by the department that ranks the applicants for priortization of grant assistance.
(j) "Local team" means a group of not less than 3 persons that includes the public water supply superintendent, a representative of the municipality, a representative from it least 1 of the following entities whose purpose is to facilitate the development, implementation and long-term maintenance of a wellhead protection program:
(i) Local health department.
(ii) Local fire department.
(iii) Business and industry.
(iv) Agriculture.
(v) Education.
(vi) Planning.
(vii) Environmental groups.
(viii) The general public.
A local team for nontransient, noncommunity public water supplies shall include representation from not less than 3 of the groups listed in this subdivision.
(k) "Low tritium public water supply" means a community supply or nontransient noncommunity water supply that has had its well water sampled for tritium and had sample results of now more than 1.0 tritium unit (TU).
(l) "Total grant assistance" means the maximum amount of grant assistance each fiscal year the public water supply may receive based upon the population served by the public water supply and the number of wells owned in operated by the public water supply.
(m) "Wellhead protection area" means the area which has been approved by the department in accordance with the State of Michigan wellhead protection program, which represents the service and subsurface area surrounding a water while or well field, which supplies a public water supply, and through which contaminants are reasonably likely to move toward and reach the water well or well field within a 10-year time of travel.
(n) "Wellhead protection program" means a program that is that approved by department upon meeting the criteria for approval under the state of Michigan wellhead protection program.
History: 1999 MR 1, Eff. Jan. 25, 1999.

R 325. 12802 Applicant qualifications.

Rule 2802 (1) Community and not-for-profit, nontransient, noncommunity public water supplies that utilize groundwater as a source of water, exclusive of federally owned public water supplies, may qualify for grant assistance.
(2) The public water supply that applies for grant assistance shall provide a local match equal to the grant assistance requested in the grant application.
(3) The public water supply the receives grant assistance shall be able to complete the grant-eligible activities specified in the grant application within 2 years from the time the grand assistance is awarded to the public water supply.
(4) Public water supplies that have outstanding prior year fees as prescribed in the Act are not eligible for grand assistance.
History: 1999 MR 1, Eff. Jan. 25, 1999.

R 325.12803 Submission of applications.

Rule 2803. (1) An applicant for grant assistance shall apply to the department on a form prescribed and provided by the department.
(2) The department shall establish a deadline for submission of applications in the grant application process and shall notify applicants of the application deadline on the form prescribed and provided by the department.

(3) An applicant shall provide a description of the grant-eligible activities for which the grant assistance is to be applied.
(4) An application shall include proof, through 1 of the following, of a local match to the grant assistance and prove that the grant assistance and local match will be expended on grant-eligible activities, as applicable:
(a) Providing documentation of a line-item budget dedicated to the grant-eligible activities identified in the grand application. The line item the budget shall include the dedication of bonds to grant-eligible activities in amount equal to the grant assistance plus the local match.
(b) Providing documentation of a contractually binding agreement committing the applicants to expenditure of funds in an amount equal to the grant assistance plus the local match for the grant-eligible activities identified in the grant application.
(c) Providing documentation of previous expenditures on grant-eligible activities equivalent to or greater than the grant assistance requested in the grand application.
(d) Providing documentation the match through a combination of any of the items specified in this sub rule.
(5) Previous expenditures by the applicant seal abandoned wells as defying in Part 127 of Act No. 368 of the Public Acts of 1978, as amended, being S333.12701 et seq. all but Michigan Compiled Laws, within a wellhead protection area or within a 1-mile radius of a low tritium public water supply may be utilized as local match.
History: 1999 MR 1, Eff. Jan. 25, 1999.

R 325.12804 Long-term commitment to wellhead protection.

Rule 2804. (1) A grant applicant shall demonstrate a long-term commitment to the development, implementation, and maintenance of a wellhead protection program by providing both of the following:
(a) The time line for completion of the grant-eligible activities.
(b) A time line for the completion of each of the elements required of a state-approved wellhead protection program.
(2) The applicant shall demonstrate the establishment of a local team whose goal is to facilitate the development, implementation, and maintenance of a wellhead protection program.
History: 1999 MR 1, Eff. Jan. 25, 1999.

R 325.12805 Priority list.

Rule 2805. (1) Annually, the department shall develop a grant program priority list of applicants deemed eligible for grant assistance.
(2) For the purpose of providing grant assistance, the grant program priority list shall take effect on the first day of each fiscal year, except for the fiscal year 1998.
(3) The grant program priority list shall be based upon all of the following criteria:
(a) The establishment of a local team.
(b) Coordination of local team with an adjacent municipality.
(c) The adoption of a local ordinance or resolution related to wellhead protection.
(d) The manner in which the local matches provided.
(e) The proposed time line for completion of a whilehead protection program.
(f) Incorporation of the wellhead protection program into other landuse planning strategies.
History: 1999 MR 1, Eff. Jan. 25, 1999.

R 325.12806 Availability of grant funds.

Rule 2806. (1) Grant assistance shall be provided to ineligible grant applicant to the extent that grant funds are available as determined by the department.
(2) An eligible grant denied grant assistance during the year a grant program priority list of develop shall be prioritize on the next annual grant program priority list using the same criteria, unless the applicant submits an amendment to the grant application that alters the applicant's status on the grant program priority list or unless conditions change for the original grant submittal.
(3) An applicant that is not received grant assistance upon application in any previous fiscal year show he placed on the grant program priority list ahead of an applicant who was funded in a previous year in funded in the current fiscal year of application in all the following provisions apply:

(a) The applicant meets the minimal points requirement for funding in the priority list or as specified in R 325.12807(2).
(b) The awarding a grant assistance to the applicant is in compliance with R 325.128100.
(c) Grant funds are available.
History: 1999 MR 1, Eff. Jan. 25, 1999.

R 325.12807 Priority list score.

Rule 2807. (1) The maximum of 25 points may be awarded to grant applicant for prioritization on the annual grant program priority list.
(2) A minimum of 10 points is required in the preiority list score to be eligible for grant assistance.
(3) A maximum 5 points shall be assigned a grant applicant for the development of a local team. The points shall be assigned in accordance with the following schedule:
(a) Five points for a team that includes representation by the public water supply superintendent, the municipality, or any 6 of the following entities:
(i) The local health department.
(ii) The local fire department.
(iii) Business and industry.
(iv) Agriculture.
(v) Education.
(vi) Planning.
(vii) An environmental group.
(viii) The general public.
(b) Four points for a team that includes representation by the public water supply superintendent, the municipality, or any 5 of the following entities:
(i) The local health department.
(ii) The local fire department.
(iii) Business and industry.
(iv) Agriculture.
(v) Education.
(vi) Planning.
(vii) An environmental group.
(viii) The general public.
(c) Three points for a team that includes representation by the public water supply superintendent, the municipality, and any 4 of the following entities:
(i) The local health department.
(ii) The local fire department.
(iii) Business and industry.
(iv) Agriculture.
(v) Education.
(vi) Planning.
(vii) An environmental group.
(viii) The general public.
(d) Two points for team that includes representation by the public water supply superintendent, the municipality, and any 3 of the following entities:
(i) The local health department.
(ii) The local fire department.
(iii) Business and industry.
(iv) Agriculture.
(v) Education.
(vi) Planning.
(vii) An environmental group.
(viii) The general public.
(e) One point for team that includes representation by the public water supplies superintendent, the

municipality, and any 2 of the filing entities:
(i) The local health department.
(ii) The local fire department.
(iii) Business and industry.
(iv) Agriculture.
(v) Education.
(vi) Planning.
(vii) An environmental group.
(viii) The general public.
(4) Two points to be assigned for local team that includes representation from adjacent municipality which has landed in the projected or approved wellhead protection area or which receives service from the applicant or if the approved wellhead protection area lies entirely within the jurisdiction of a municipality and the public water supply does not provide service to an area outside of the jurisdiction of the municipality.
(5) A maximum of 3 points to be assigned a grant applicant for the adoption of an ordinance or resolution as follows:
(a) Three points for the passage of a local ordinance related to the development and implementation of a local wellhead protection program.
(b) One point for the adoption of a local resolution that demonstrates a commitment to the development and implementation of a local wellhead protection program.
(6) A maximum of six points to be assigned a great applicant based upon the manner in which the local match is demonstrated as follows:
(a) Six points for demonstrating that the local matchhas been provided through the previous expenditure of funds on grant-eligible activities.
(b) Three points for demonstrating that the local match and the grant assistance have been committed through a contractually binding agreement with a consultant.
(c) One point for demonstrating that the local match has been provided as an identifiable item within a local budget dedicating the local match and the grant assistance to grant-eligible activities.
(7) The maximum of 3 points to be assigned a grant applicant based upon the timeline for completion of a wellhead protection program as follows:
(a) Three points for a program completed before the date of grant application.
(b) Two points for a time line for program completion within 1 year of the date of application.
(c) One point for a time line for program completion within 3 years of the date of application.
(8) A maximum of 6 points shall be assigned to grant applicant as follows:
(a) Three points for a plan to incorporate the wellhead protection program into a municipality's master plan or other regional land use planning program.
(b) Three points for a plan to implement a public outreach, education, or planning program of not less than 3 years duration.
(9) If the priority list score results in a tie between 2 applicants, then the award of grant funds shall be provided to the applicants as follows:
(a) The applicant that has received the lesser amount in total grant funds through application in previous fiscal years shall be awarded the grant funds in the current year of application.
(b) If the applicants have received the same amount in total grant funds through application in previous fiscal years, then the applicant whose public water supply exhibits the greatest population-to-grant dollars ratio shall be awarded the grant assistance.
History: 1999 MR 1, Eff. Jan. 25, 1999.

R 325.12808 Total grant assistance based upon population served.

Rule 2808. (1) The total grant assistance received by a public water supplied in the wellhead protection grant program shall be based upon the total population served by the public water supply.
(2) The total grant assistance available to a public water supplies shall be as follows:
(a) A public water supply that serves a population of 500 persons or less shall be eligible for total grant assistance of not more than $7,500.00.

(b) A public water supply deserves a population of 501 to 3,300 persons shall be eligible for a total grant assistance of not more than $15,000.00.
(c) The public water supply the serves a population of 3,301 to 10,000 persons shall be eligible for a total grant assistance of not more than $30,000.00.
(d) A public water supply deserves a population of more than 10,000 persons shall be eligible for total grant assistants of not more than $50,000.00.
(3) A grant applicant the requests grant assistants in excess of the population-based limit for the total grant assistance shall be granted the maximum allowable grant assistance in accordance with subrule(2) of this rule the other requirements for grant assistance are fulfilled.
History: 1999 MR 1, Eff. Jan. 25, 1999.

R 325.12809 Total grant assistance based upon number of wells.

Rule 2809. (1) The total grant assistance available to a public water supply based upon the population served shall be increased based upon the supplemental grant of systems that reflects the number of wells which the public water supply owns and operates as follows:
(a) A public water supply that owns and operates 3 to 5 wells shall be eligible for supplemental grant assistance of not more than $5,000.00.
(b) A public water supply that owns and operates 6 to 10 wells shall be eligible for supplemental grant assistance of not more than $10,000.00.
(c) A public water supply that owns and operates 11 to 15 wells shall be eligible for supplemental grant assistance of not more than $15,000.00.
(d) A public water supply that owns and operates more than 15 wells shall be eligible for supplemental grant assistance of not more than $20,000.00.
(2) A grant applicant that requests supplemental grant assistance in excess of the maximum based upon the number of wells owned and operated by the public water supplies shall be provided the maximum grant assistance in accordance with subrule (1) of this rule.
History: 1999 MR 1, Eff. Jan. 25, 1999.

R 325.12810 Distribution of available grant funds based upon population served by public water supplies.

Rule 2810. (1) If the requests for grant assistance exceeded the grant funds available in fiscal year, then the maximum and minimum grant assistance provided to public water supplies according to the population served shall be based upon a percentage of the total grant funds available for the fiscal year as follows:
(a) Public water supplies serving a population of 500 persons or less shall receive now more than 30%, and not less than 15%, of the total grant funds available in any given fiscal year.
(b) Public water supplies serving a population of 501 to 3,300 persons shall receive now more than 50%, and not less than 25%, of the total grant funds available in any given fiscal year.
(c) Public water supplies serving a population of 3,301 to 10,000 persons shall receive now more than 30%, and not less than 15%, of the total grant funds available in any given fiscal year.
(d) Public water supplies serving a population of more than 10,000 persons shall receive now more than 30%, and not less than 15%, of the total grant funds available in any given fiscal year.
(2) The department may provide greater percentage of the available grant funds to public water supplies of a given population served in requests for grant assistance do not exceed the established minimum percentage of total grant funds available to public water supplies of other population-served categories.
History: 1999 MR 1, Eff. Jan. 25, 1999.

R 325.12811 Disbursement of grant assistance.

Rule 2811. (1) Department shall disbursement grant assistance upon submittal of a project report demonstrating that the applicant has completed the brand-eligible activities identified in the grant application.
(2) Department may provide a partial disbursement of the grant assistance upon submittal of a project report demonstrating that the applicant has completed a corresponding and appropriate portion of the grant-eligible activities identified in the grant application. A partial disbursements of the grant assistance shall

not exceed 50% of the total cost of the corresponding and appropriate portion of the grant-eligible activities for which the partial disbursement is requested.
History: 1999 MR 1, Eff. Jan. 25, 1999.

R 325.12812 Grant-eligible activities to support local wellhead protection programs; contact person; formation of local team; team responsibilities.

Rule 2812. (1) Grant-eligible activities shall support the development or implementation of a local wellhead protection program and shall be consistent with the state of Michigan wellhead protection program.
(2) A public water supplies shall provide the department with the name, title, and address of a contact person who shall take the lead in the development and implementation of the local wellhead protection program, including local administration of the wellhead protection grant.
(3) A public water supplies to provide the department with evidence of the formation of a local team. The team shall consist of the public water supply superintendent, the municipality, and at least 1 of the following entities:
(a) The local health department.
(b) The local fire department.
(c) Business and industry.
(d) Agriculture.
(e) Education.
(f) Planning.
(g) An environmental group.
(h) The general public.
(4) The local team shall be responsible for providing a time line for the completion of grant-eligible activities identified in the grant application.
(5) The local team shall be responsible for providing a time line for the completion of a wellhead protection program.
History: 1999 MR 1, Eff. Jan. 25, 1999.

R 325.12813 Wellhead protection program elements.

Rule 2813. (1) The following wellhead protection program elements include grant-eligible activities for which grant funds may be applied:
(a) The establishment of roles and duties.
(b) The delineation of a wellhead protection area.
(c) The completion of a contaminant source and land use inventory.
(d) The development or implementation of management strategies and programs to control contaminant sources or land use.
(e) The development and implementation of a contingency plan.
(f) The phasing of new wells into a wellhead protection program.
(g) The development or implementation of public participation strategies in a wellhead protection program.
(2) Program development and implementation activities, such as a contaminants source and land use inventory, development and implementation all management strategies, contingency planning and public participation, are eligible for grant assistance in more than 1 fiscal year.
History: 1999 MR 1, Eff. Jan. 25, 1999.

R 325.12814 Grant-eligible activities; development and implementation of certain partnership agreements.

Rule 2814. The development implementation of partnership agreements between municipalities for the purpose of wellhead protection is grant-eligible.
History: 1999 MR 1, Eff. Jan. 25, 1999.

R 325.12815 Grant-eligible delineation activities.

Rule 2815. (1) Grant-eligible delineation activities shall be proposed, described, and completed in

accordance with the wellhead protection area delineation guidance established by the department in the state of Michigan wellhead protection program.
(2) Grant-eligible activities include the following:
(a) The compilation of existing hydrogeologic information.
(b) The installation of observation wells for an aquifer test on an existing public water supply well.
(c) Aquifer tests and aquifer test analysis on an existing public water supply well.
(d) Surveying.
(e) Collection of static water levels.
(3) If deemed necessary by the department due to the lack of accessibility to existing wells, the area geology indicates a public water supply may be a low tritium water supply, or a known groundwater contamination is present within the wellhead protection area, the following activities may be deemed grant-eligible:
(a) The installation of monitoring wells for the collection of static water level information.
(b) The collection and analysis of tritium samples.
(c) The installation of sentinel wells to monitor water quality within the wellhead protection area.
History: 1999 MR 1, Eff. Jan. 25, 1999.

R 325.12816 Grant-eligible contaminant source in land use inventory activities.

Rule 2816. (1) Contaminant source and land use inventories to identify existing and potential threats to a public water supply our grant-eligible within the wellhead protection area or within a 1-mile radius of the well field for a low tritium public water supply.
(2) The following contaminant source and land use inventory activities are grant-eligible activities:
(a) Record searches to identify potential sources of contamination and land uses that have a potential to impact the groundwater.
(b) General surveys to identify potential sources of contamination and land uses that have a potential to impact the groundwater.
(c) On-site inspection of facilities that have a potential to impact the groundwater.
(d) Record searches to identify historical land uses that have a potential to impact groundwater.
(e) The mapping of existing and potential sources of contamination within the wellhead protection area.
(f) Updating a contaminants source inventory.
(g) The development and implementation of a program to locate and identify abandoned wells.
History: 1999 MR 1, Eff. Jan. 25, 1999.

R 325.12817 Grant-eligible management activities.

Rule 2817. (1) Grant-eligible management activities shall provide an elevated level of protection to the wellhead protection area or within a 1-mile radius of the well field for a low tritium public water supply. (2) Grant-eligible management activities include the following:
(a) The development and implementation of best management practices that reduce the risk of groundwater contamination.
(b) The development and implementation of wellhead protection resolutions or ordinances.
(c) On-site inspections for the purpose of improving facility management all potential sources of contamination.
(d) The development and implementation of a program to control abandoned Wells, excluding the actual sealing of abandoned wells.
(e) Incorporation of a wellhead protection program into a municipality's master plan or other regional land use planning program.
History: 1999 MR 1, Eff. Jan. 25, 1999.

R 325.12818 Grant-eligible contingency plan an emergency response protocol activities.

Rule 2818. The development and implementation of a contingency plan and emergency response protocol for a wellhead protection aerial or within a 1-mile radius of a well field for a low tritium public water supply are grant eligible activities.
History: 1999 MR 1, Eff. Jan. 25, 1999.

R 325.12819 Grant-eligible new well activities.

Rule 2819. Grant-eligible activities for new wells include the following:

(a) Completion of a delineation for a new well or well field, exclusive all the cost incurred to conduct an aquifer test that is a requirement of the public water supply program for the construction of new wells.

(b) The development and implementation of a wellhead protection program for a new well or well field.

(c) Incorporation of a new well or well field into an existing wellhead protection program.

History: 1999 MR 1, Eff. Jan. 25, 1999.

R 325.12820 Grant-eligible public participation activities.

Rule 2820. (1) Grant-eligible activities or public participation shall provide a positive benefit to the wellhead protection program by raising public awareness in matters pertaining to wellhead protection and utilization of the groundwater resource by public water supply. (2) Grant-eligible activities for public participation include, but may not be limited to, the following:

(a) The development and implementation of a school curriculum related to wellhead protection.

(b) The development and implementation of a strategy to educate the general public on issues related to wellhead protection.

(c) The development, production, and circulation of educational materials.

(d) The development, preparation, and production of media announcements, such as news releases, newspaper articles, and radio announcements.

(e) Signing activities which identify an approved wellhead protection area or which promote the concept of wellhead protection, such as storm drains stenciling and the construction and placement of road signs.

History: 1999 MR 1, Eff. Jan. 25, 1999.

DEPARTMENT OF COMMUNITY HEALTH

OFFICE OF LOCAL HEALTH SERVICES

LOCAL HEALTH PERSONNEL

R 325.13001
Source: 1980 AACS.

R 325.13002
Source: 1980 AACS.

R 325.13003
Source: 1980 AACS.

R 325.13004
Source: 1980 AACS.

R 325.13005
Source: 1980 AACS.

R 325.13006
Source: 1980 AACS.

R 325.13007
Source: 1980 AACS.

R 325.13008
Source: 1980 AACS.

R 325.13009
Source: 1980 AACS.

COST-SHARED SERVICES

R 325.13051
Source: 1981 AACS.

R 325.13053
Source: 1981 AACS.

R 325.13055
Source: 1981 AACS.

R 325.13057
Source: 1981 AACS.

R 325.13059
Source: 1981 AACS.

R 325.13061
Source: 1981 AACS.

R 325.13063
Source: 1981 AACS.

R 325.13065
Source: 1981 AACS.

R 325.13067
Source: 1981 AACS.

R 325.13069
Source: 1981 AACS.

R 325.13071
Source: 1981 AACS.

DIVISION OF CHILD HEALTH

VISION SCREENING AND TESTING

R 325.13091
Source: 1981 AACS.

R 325.13092
Source: 1981 AACS.

R 325.13093
Source: 1981 AACS.

R 325.13094
Source: 1981 AACS.

R 325.13095
Source: 1981 AACS.

R 325.13096
Source: 1981 AACS.

DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES

BUREAU OF HEALTH FACILITIES

HOSPICE

PART 1. GENERAL PROVISIONS

R 325.13101
Source: 1984 AACS.

R 325.13102
Source: 1984 AACS.

R 325.13104
Source: 1984 AACS.

R 325.13105
Source: 1984 AACS.

R 325.13106
Source: 1984 AACS.

R 325.13107
Source: 1984 AACS.

R 325.13108
Source: 1984 AACS.

R 325.13109
Source: 1984 AACS.

R 325.13110
Source: 1984 AACS.

R 325.13111
Source: 1984 AACS.

PART 2. LICENSURE

R 325.13201
Source: 1984 AACS.

R 325.13202
Source: 1984 AACS.

R 325.13203
Source: 1984 AACS.

R 325.13204
Source: 1984 AACS.

R 325.13205
Source: 1984 AACS.

R 325.13206
Source: 1984 AACS.

R 325.13207

Source: 1984 AACS.

R 325.13208
Source: 1984 AACS.

R 325.13209
Source: 1984 AACS.

R 325.13210
Source: 1984 AACS.

R 325.13211
Source: 1984 AACS.

R 325.13212
Source: 1984 AACS.

R 325.13213
Source: 1984 AACS.

PART 3. SERVICES

R 325.13301
Source: 1984 AACS.

R 325.13302
Source: 1984 AACS.

R 325.13303
Source: 1984 AACS.

R 325.13304
Source: 1984 AACS.

R 325.13305
Source: 1984 AACS.

R 325.13306
Source: 1984 AACS.

R 325.13307
Source: 1984 AACS.

PART 4. HEARING PROCEDURE

R 325.13401
Source: 1984 AACS.

R 325.13402
Source: 1984 AACS.

R 325.13403
Source: 1984 AACS.

R 325.13404
Source: 1984 AACS.

R 325.13405
Source: 1984 AACS.

R 325.13406
Source: 1984 AACS.

R 325.13407
Source: 1984 AACS.

R 325.13408
Source: 1984 AACS.

R 325.13409
Source: 1984 AACS.

R 325.13410
Source: 1984 AACS.

R 325.13411
Source: 1984 AACS.

R 325.13412
Source: 1984 AACS.

R 325.13413
Source: 1984 AACS.

R 325.13414
Source: 1984 AACS.

R 325.13415
Source: 1984 AACS.

R 325.13416
Source: 1984 AACS.

R 325.13417
Source: 1984 AACS.

R 325.13418
Source: 1984 AACS.

DEPARTMENT OF COMMUNITY HEALTH
OFFICE OF SUBSTANCE ABUSE SERVICES
SUBSTANCE ABUSE SERVICE PROGRAM

PART 1. GENERAL PROVISIONS

R 325.14101
Source: 1981 AACS.

R 325.14102
Source: 1981 AACS.

R 325.14103
Source: 1981 AACS.

R 325.14104
Source: 1981 AACS.

R 325.14105
Source: 1981 AACS.

R 325.14106
Source: 1981 AACS.

R 325.14107
Source: 1981 AACS.

R 325.14108
Source: 1981 AACS.

R 325.14109
Source: 1981 AACS.

R 325.14110
Source: 1981 AACS.

R 325.14111
Source: 1981 AACS.

R 325.14112
Source: 1981 AACS.

R 325.14113
Source: 1981 AACS.

R 325.14114
Source: 1981 AACS.

R 325.14115
Source: 1981 AACS.

R 325.14116
Source: 1988 AACS.

R 325.14117
Source: 1981 AACS.

R 325.14125
Source: 1981 AACS.

PART 2. LICENSURE OF SUBSTANCE ABUSE PROGRAMS

R 325.14201
Source: 1981 AACS.

R 325.14202
Source: 1981 AACS.

R 325.14203
Source: 1981 AACS.

R 325.14204
Source: 1981 AACS.

R 325.14205
Source: 1981 AACS.

R 325.14206
Source: 1981 AACS.

R 325.14207
Source: 1981 AACS.

R 325.14208
Source: 1981 AACS.

R 325.14209
Source: 1981 AACS.

R 325.14210
Source: 1981 AACS.

R 325.14211
Source: 1981 AACS.

R 325.14212
Source: 1981 AACS.

R 325.14213
Source: 1981 AACS.

R 325.14214
Source: 1981 AACS.

PART 3. RECIPIENT RIGHTS

R 325.14301
Source: 1981 AACS.

R 325.14302
Source: 1981 AACS.

R 325.14303
Source: 1981 AACS.

R 325.14304
Source: 1981 AACS.

R 325.14305
Source: 1981 AACS.

R 325.14306
Source: 1981 AACS.

PART 4. METHADONE TREATMENT AND OTHER CHEMOTHERAPY

R 325.14401
Source: 1981 AACS.

R 325.14402
Source: 1981 AACS.

R 325.14403
Source: 1981 AACS.

R 325.14404
Source: 1981 AACS.

R 325.14405
Source: 1981 AACS.

R 325.14406
Source: 1981 AACS.

R 325.14407
Source: 1981 AACS.

R 325.14408
Source: 1981 AACS.

R 325.14409
Source: 1981 AACS.

R 325.14410
Source: 1981 AACS.

R 325.14411
Source: 1981 AACS.

R 325.14412
Source: 1981 AACS.

R 325.14413
Source: 1981 AACS.

R 325.14414
Source: 1981 AACS.

R 325.14415
Source: 1981 AACS.

R 325.14416
Source: 1981 AACS.

R 325.14417
Source: 1981 AACS.

R 325.14418
Source: 1981 AACS.

R 325.14419
Source: 1981 AACS.

R 325.14420
Source: 1981 AACS.

R 325.14421
Source: 1981 AACS.

R 325.14422
Source: 1981 AACS.

R 325.14423
Source: 1981 AACS.

PART 5. PREVENTION

R 325.14501
Source: 1981 AACS.

R 325.14521
Source: 1981 AACS.

R 325.14522
Source: 1981 AACS.

R 325.14523
Source: 1981 AACS.

R 325.14524
Source: 1981 AACS.

R 325.14525
Source: 1981 AACS.

R 325.14526
Source: 1981 AACS.

R 325.14527
Source: 1981 AACS.

R 325.14528
Source: 1981 AACS.

R 325.14529
Source: 1981 AACS.

R 325.14530
Source: 1981 AACS.

PART 6. CASEFINDING

R 325.14601
Source: 1981 AACS.

R 325.14602
Source: 1981 AACS.

R 325.14603
Source: 1981 AACS.

R 325.14621
Source: 1981 AACS.

R 325.14622
Source: 1981 AACS.

R 325.14623
Source: 1981 AACS.

PART 7. OUTPATIENT PROGRAMS

R 325.14701

Source: 1981 AACS.

R 325.14702
Source: 1981 AACS.

R 325.14703
Source: 1981 AACS.

R 325.14704
Source: 1981 AACS.

R 325.14705
Source: 1981 AACS.

R 325.14706
Source: 1981 AACS.

R 325.14707
Source: 1981 AACS.

R 325.14708
Source: 1981 AACS.

R 325.14709
Source: 1981 AACS.

R 325.14710
Source: 1981 AACS.

R 325.14711
Source: 1981 AACS.

R 325.14712
Source: 1981 AACS.

PART 8. INPATIENT PROGRAMS

R 325.14801
Source: 1981 AACS.

R 325.14802
Source: 1981 AACS.

R 325.14803
Source: 1981 AACS.

R 325.14804
Source: 1981 AACS.

R 325.14805
Source: 1981 AACS.

R 325.14806
Source: 1981 AACS.

R 325.14807
Source: 1981 AACS.

PART 9. RESIDENTIAL PROGRAMS

R 325.14901
Source: 1981 AACS.

R 325.14902
Source: 1981 AACS.

R 325.14903
Source: 1981 AACS.

R 325.14904
Source: 1981 AACS.

R 325.14905
Source: 1981 AACS.

R 325.14906
Source: 1981 AACS.

R 325.14907
Source: 1981 AACS.

R 325.14908
Source: 1981 AACS.

R 325.14909
Source: 1981 AACS.

R 325.14910
Source: 1981 AACS.

R 325.14911
Source: 1981 AACS.

R 325.14921
Source: 1981 AACS.

R 325.14922
Source: 1981 AACS.

R 325.14923
Source: 1981 AACS.

R 325.14924
Source: 1981 AACS.

R 325.14925
Source: 1981 AACS.

R 325.14926
Source: 1981 AACS.

R 325.14927
Source: 1981 AACS.

R 325.14928
Source: 1981 AACS.

DIVISION OF OCCUPATIONAL HEALTH

CLASS IV DRY CLEANING ESTABLISHMENTS

PART 1. GENERAL PROVISIONS

R 325.17101
Source: 1981 AACS.

R 325.17102
Source: 1981 AACS.

R 325.17103
Source: 1981 AACS.

R 325.17104
Source: 1981 AACS.

R 325.17105
Source: 1981 AACS.

R 325.17106
Source: 1981 AACS.

R 325.17107
Source: 1981 AACS.

R 325.17108
Source: 1981 AACS.

R 325.17109
Source: 1981 AACS.

PART 2. DRAWINGS

R 325.17201
Source: 1981 AACS.

R 325.17202
Source: 1987 AACS.

R 325.17203
Source: 1981 AACS.

R 325.17204
Source: 1981 AACS.

R 325.17205
Source: 1981 AACS.

R 325.17206
Source: 1981 AACS.

R 325.17207
Source: 1981 AACS.

R 325.17208
Source: 1981 AACS.

R 325.17209
Source: 1981 AACS.

R 325.17210
Source: 1981 AACS.

PART 3. LICENSURE

R 325.17301
Source: 1987 AACS.

R 325.17302
Source: 1987 AACS.

R 325.17303
Source: 1981 AACS.

R 325.17304
Source: 1981 AACS.

R 325.17305
Source: 1981 AACS.

R 325.17306
Source: 1981 AACS.

R 325.17307
Source: 1981 AACS.

R 325.17308
Source: 1981 AACS.

R 325.17309
Source: 1981 AACS.

PART 4. DRY CLEANING MACHINE REQUIREMENTS

R 325.17401
Source: 1981 AACS.

R 325.17402
Source: 1981 AACS.

R 325.17403
Source: 1981 AACS.

R 325.17404
Source: 1981 AACS.

R 325.17405
Source: 1981 AACS.

R 325.17406
Source: 1981 AACS.

R 325.17407
Source: 1981 AACS.

R 325.17408
Source: 1981 AACS.

R 325.17409
Source: 1981 AACS.

PART 5. BUILDING REQUIREMENTS

R 325.17501
Source: 1981 AACS.

R 325.17502
Source: 1981 AACS.

R 325.17503
Source: 1981 AACS.

R 325.17504
Source: 1981 AACS.

R 325.17505
Source: 1981 AACS.

R 325.17506
Source: 1981 AACS.

R 325.17507
Source: 1981 AACS.

R 325.17508
Source: 1981 AACS.

R 325.17509
Source: 1981 AACS.

R 325.17510
Source: 1981 AACS.

PART 7. INSTALLATION, OPERATION, AND VENTILATION

R 325.17701
Source: 1981 AACS.

R 325.17702
Source: 1981 AACS.

R 325.17703
Source: 1981 AACS.

R 325.17704
Source: 1981 AACS.

R 325.17705
Source: 1981 AACS.

R 325.17706
Source: 1981 AACS.

R 325.17707
Source: 1981 AACS.

R 325.17708
Source: 1981 AACS.

R 325.17709
Source: 1981 AACS.

R 325.17710
Source: 1981 AACS.

R 325.17711
Source: 1981 AACS.

R 325.17712
Source: 1981 AACS.

PART 9. INSPECTIONS OF DRY CLEANING ESTABLISHMENTS

R 325.17901
Source: 1981 AACS.

R 325.17902
Source: 1981 AACS.

R 325.17903
Source: 1981 AACS.

R 325.17904
Source: 1981 AACS.

R 325.17905
Source: 1981 AACS.

R 325.17906
Source: 1981 AACS.

PART 10. CONTESTED CASES

R 325.18001
Source: 1981 AACS.

R 325.18002
Source: 1981 AACS.

R 325.18003
Source: 1981 AACS.

R 325.18004
Source: 1981 AACS.

R 325.18005
Source: 1981 AACS.

R 325.18006
Source: 1981 AACS.

PART 11. TYPICAL DESIGN PRINTS AND DIAGRAMS

R 325.18101
Source: 1981 AACS.

R 325.18102
Source: 1981 AACS.

R 325.18103
Source: 1981 AACS.

R 325.18104
Source: 1981 AACS.

DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES

OCCUPATIONAL HEALTH STANDARDS COMMISSION

PROCESS SAFETY MANAGEMENT OF HIGHLY HAZARDOUS CHEMICALS

R 325.18301 Scope.

Rule 1. (1) These rules establish the minimum requirements for preventing or minimizing the consequences of catastrophic releases of toxic, reactive, flammable, or explosive chemicals.

(2) The regulations adopted by R 325.18302 shall apply to all workplaces pursuant to the provisions of 29 C.F.R. §1910.119.

(3) The manufacture of explosives, as defined in the provisions of 29 C.F.R. §1910.109(a)(3), Explosives, shall also be in compliance with the requirements contained in the provisions of 29 C.F.R. §1910.119.

(4) The manufacture of pyrotechnics as defined in the provisions of 29 C.F.R. §1910.109(a)(10) shall also be in compliance with the provisions of these rules.

History: 1993 MR 9, Eff. Sept. 17, 1993;1999 MR 8, Eff. Aug. 19, 1999.

R 325.18302 Adoption by reference of federal regulations.

Rule 2. (1) The federal occupational safety and health administration's regulations on process safety management of highly hazardous chemicals that have been promulgated by the United States department of labor and codified at 29 C.F.R. §1910.119, which were published in the Federal Register on February 24, 1992, which have an effective date of May 26, 1992, and which were amended March 7, 1996, appearing in the Federal Register on pp. 9238, are adopted by reference in these rules as of the effective date of these rules. The definitionsreferred to in R 325.18301(3) and (4) and codified at 19 C.F.R. §1910.109(a)(3) and (10) are adopted in these rules by reference.

(2) The adopted federal regulations shall have the same force and effect as a rule promulgated pursuant to the provisions of Act No. 154 of the Public Acts of 1974, as amended, being §408.1001 et seq. of the Michigan Compiled Laws.

(3) The following provisions are amendments to federal regulations adopted by reference by the department of consumer and industry services.

(a) A reference to 29 C.F.R. §1910.1200 is deemed to be a reference to Part 42., Part 92., and R 325.77001 Hazard Communication, being R 408.44201et seq., R 408.19201 et seq., and R 325.77001 et seq, respectively, of the Michigan Administrative Code.

(b) A reference to 29 C.F.R. §1910.38, as adopted by reference in R 325.52125 Hazardous Waste Operations and Emergency Response, is deemed to be a reference to general industry safety standard Part 6. Fire Exits, being R 408.10601 et seq. Of the Michigan Administrative Code.

(c) A reference to 29 C.F.R. §1910.109, Explosives and Blasting Agents, means general industry safety standard Part 55. Explosives and Blasting Agents, being R 408.15501 et seq. of the Michigan Administrative Code.

(4) The adopted federal regulations are available without cost at the time of adoption of these rules from the United States Department of Labor, OSHA, 801 South Waverly, Room 306, Lansing, Michigan 48917, or

from the Michigan Department of Consumer and Industry Services, Standards Division, P.O. Box 30643, Lansing, Michigan 48909.
History: 1993 MR 9, Eff. Sept. 17, 1993; 1999 MR 8, Eff. Aug. 19, 1999.

HEALTH FACILITIES SERVICES ADMINISTRATION

NURSING HOMES AND NURSING CARE FACILITIES

PART 1. GENERAL PROVISIONS

R 325.20101
Source: 1981 AACS.

R 325.20102
Source: 1981 AACS.

R 325.20103
Source: 1981 AACS.

R 325.20104
Source: 1983 AACS.

R 325.20106
Source: 1981 AACS.

R 325.20107
Source: 1981 AACS.

R 325.20108
Source: 1981 AACS.

R 325.20109
Source: 1981 AACS.

R 325.20110
Source: 1981 AACS.

R 325.20111
Source: 1981 AACS.

R 325.20112
Source: 1981 AACS.

R 325.20113
Source: 1983 AACS.

R 325.20114
Source: 1981 AACS.

R 325.20115
Source: 1981 AACS.

R 325.20116
Source: 1981 AACS.

R 325.20117
Source: 1983 AACS.

R 325.20118
Source: 1981 AACS.

PART 2. LICENSURE

R 325.20201
Source: 1981 AACS.

R 325.20202
Source: 1981 AACS.

R 325.20203
Source: 1981 AACS.

R 325.20204
Source: 1981 AACS.

R 325.20205
Source: 1981 AACS.

R 325.20206
Source: 1983 AACS.

R 325.20207
Source: 1981 AACS.

R 325.20208
Source: 1981 AACS.

R 325.20209
Source: 1981 AACS.

R 325.20210
Source: 1981 AACS.

R 325.20211
Source: 1981 AACS.

R 325.20212
Source: 1981 AACS.

R 325.20213
Source: 1981 AACS.

R 325.20214
Source: 1981 AACS.

R 325.20215
Source: 1981 AACS.

PART 3. ACCESS TO NURSING HOMES AND PATIENTS

R 325.20301
Source: 1981 AACS.

R 325.20302
Source: 1983 AACS.

R 325.20303
Source: 1983 AACS.

R 325.20304
Source: 1983 AACS.

PART 4. ADMINISTRATIVE MANAGEMENT OF HOMES

R 325.20401
Source: 1981 AACS.

R 325.20402
Source: 1981 AACS.

R 325.20403
Source: 1981 AACS.

R 325.20404
Source: 1983 AACS.

R 325.20405
Source: 1981 AACS.

R 325.20406
Source: 1983 AACS.

R 325.20407
Source: 1981 AACS.

PART 5. PATIENT CARE

R 325.20501
Source: 1981 AACS.

R 325.20502
Source: 1983 AACS.

R 325.20503
Source: 1981 AACS.

R 325.20504
Source: 1981 AACS.

R 325.20505
Source: 1981 AACS.

R 325.20506
Source: 1981 AACS.

R 325.20507
Source: 1981 AACS.

R 325.20508
Source: 1981 AACS.

R 325.20509
Source: 1981 AACS.

PART 6. PHYSICIAN SERVICES

R 325.20601
Source: 1981 AACS.

R 325.20602
Source: 1981 AACS.

R 325.20603
Source: 1983 AACS.

R 325.20604
Source: 1981 AACS.

R 325.20605
Source: 1983 AACS.

R 325.20606
Source: 1981 AACS.

PART 7. NURSING SERVICES

R 325.20701
Source: 1983 AACS.

R 325.20702
Source: 1983 AACS.

R 325.20703
Source: 1986 AACS.

R 325.20704
Source: 1986 AACS.

R 325.20705
Source: 1981 AACS.

R 325.20706
Source: 1981 AACS.

R 325.20707
Source: 1983 AACS.

R 325.20708
Source: 1981 AACS.

R 325.20709
Source: 1984 AACS.

R 325.20710
Source: 1981 AACS.

R 325.20711
Source: 1983 AACS.

R 325.20712
Source: 1983 AACS.

R 325.20713
Source: 1981 AACS.

R 325.20714
Source: 1983 AACS.

PART 8. DIETARY SERVICES

R 325.20801
Source: 1983 AACS.

R 325.20802
Source: 1981 AACS.

R 325.20803
Source: 1981 AACS.

R 325.20804
Source: 1983 AACS.

R 325.20805
Source: 1981 AACS.

R 325.20806
Source: 1983 AACS.

PART 9. PHARMACEUTICAL SERVICES

R 325.20901
Source: 1983 AACS.

R 325.20902
Source: 1981 AACS.

R 325.20903
Source: 1981 AACS.

R 325.20904
Source: 1981 AACS.

R 325.20905
Source: 1981 AACS.

R 325.20906
Source: 1981 AACS.

PART 10. OTHER SERVICES

R 325.21001
Source: 1981 AACS.

R 325.21002
Source: 1981 AACS.

R 325.21003
Source: 1986 AACS.

PART 11. RECORDS

R 325.21101
Source: 1983 AACS.

R 325.21102
Source: 1983 AACS.

R 325.21103
Source: 1981 AACS.

R 325.21104
Source: 1981 AACS.

R 325.21105
Source: 1983 AACS.

PART 12. MEDICAL AUDIT, UTILIZATION REVIEW, AND QUALITY CONTROL

R 325.21201
Source: 1981 AACS.

R 325.21203
Source: 1981 AACS.

R 325.21204
Source: 1981 AACS.

PART 13. BUILDINGS AND GROUNDS

R 325.21301
Source: 1981 AACS.

R 325.21302
Source: 1981 AACS.

R 325.21303
Source: 1983 AACS.

R 325.21304
Source: 1981 AACS.

R 325.21305
Source: 1983 AACS.

R 325.21306
Source: 1983 AACS.

R 325.21307
Source: 1983 AACS.

R 325.21308
Source: 1981 AACS.

R 325.21309
Source: 1981 AACS.

R 325.21310
Source: 1981 AACS.

R 325.21311
Source: 1983 AACS.

R 325.21312
Source: 1981 AACS.

R 325.21313
Source: 1981 AACS.

R 325.21314
Source: 1981 AACS.

R 325.21315
Source: 1981 AACS.

R 325.21316
Source: 1983 AACS.

R 325.21317
Source: 1983 AACS.

R 325.21318
Source: 1981 AACS.

R 325.21319
Source: 1981 AACS.

R 325.21320
Source: 1981 AACS.

R 325.21321
Source: 1981 AACS.

R 325.21322
Source: 1981 AACS.

R 325.21323
Source: 1983 AACS.

R 325.21324
Source: 1981 AACS.

R 325.21325
Source: 1981 AACS.

R 325.21326
Source: 1983 AACS.

R 325.21327
Source: 1983 AACS.

R 325.21328
Source: 1981 AACS.

PART 14. CHILD CARE HOMES AND CHILD CARE UNITS

R 325.21401
Source: 1981 AACS.

R 325.21402
Source: 1981 AACS.

R 325.21403
Source: 1981 AACS.

R 325.21404
Source: 1981 AACS.

R 325.21405
Source: 1981 AACS.

R 325.21406
Source: 1981 AACS.

R 325.21407
Source: 1981 AACS.

R 325.21408
Source: 1981 AACS.

R 325.21409
Source: 1981 AACS.

R 325.21410
Source: 1981 AACS.

R 325.21411
Source: 1981 AACS.

PART 15. CERTIFICATION

R 325.21501
Source: 1981 AACS.

R 325.21502
Source: 1981 AACS.

R 325.21503
Source: 1981 AACS.

R 325.21504
Source: 1981 AACS.

R 325.21505
Source: 1981 AACS.

R 325.21506
Source: 1981 AACS.

R 325.21507
Source: 1981 AACS.

R 325.21508
Source: 1981 AACS.

R 325.21509
Source: 1981 AACS.

R 325.21510
Source: 1981 AACS.

R 325.21511
Source: 1981 AACS.

R 325.21512
Source: 1981 AACS.

R 325.21513
Source: 1981 AACS.

R 325.21514
Source: 1981 AACS.

R 325.21515
Source: 1981 AACS.

PART 16. NURSING FACILITIES FOR CARE OF MENTALLY ILL PATIENTS

R 325.21601
Source: 1981 AACS.

R 325.21602
Source: 1981 AACS.

R 325.21603
Source: 1981 AACS.

R 325.21604
Source: 1981 AACS.

R 325.21605
Source: 1981 AACS.

PART 17. NURSING FACILITIES FOR CARE OF MENTALLY RETARDED PATIENTS

R 325.21701
Source: 1981 AACS.

R 325.21702
Source: 1981 AACS.

R 325.21703
Source: 1981 AACS.

R 325.21704
Source: 1981 AACS.

R 325.21705
Source: 1981 AACS.

PART 18. NURSING FACILITIES FOR CARE OF TUBERCULOSIS PATIENTS

R 325.21801
Source: 1981 AACS.

R 325.21802

Source: 1981 AACS.

R 325.21803
Source: 1981 AACS.

R 325.21804
Source: 1981 AACS.

R 325.21805
Source: 1981 AACS.

R 325.21806
Source: 1981 AACS.

R 325.21807
Source: 1981 AACS.

PART 19. HEARING PROCEDURE

R 325.21901
Source: 1981 AACS.

R 325.21902
Source: 1981 AACS.

R 325.21903
Source: 1981 AACS.

R 325.21904
Source: 1981 AACS.

R 325.21905
Source: 1981 AACS.

R 325.21906
Source: 1981 AACS.

R 325.21907
Source: 1981 AACS.

R 325.21908
Source: 1981 AACS.

R 325.21909
Source: 1981 AACS.

R 325.21910
Source: 1981 AACS.

R 325.21911
Source: 1981 AACS.

R 325.21912
Source: 1981 AACS.

R 325.21913
Source: 1981 AACS.

R 325.21914

Source: 1981 AACS.

R 325.21915
Source: 1981 AACS.

R 325.21916
Source: 1981 AACS.

R 325.21917
Source: 1981 AACS.

R 325.21918
Source: 1981 AACS.

R 325.21919
Source: 1981 AACS.

R 325.21920
Source: 1981 AACS.

R 325.21921
Source: 1981 AACS.

R 325.21922
Source: 1981 AACS.

PART 20. EDUCATION AND TRAINING OF UNLICENSED NURSING PERSONNEL

R 325.22001
Source: 1983 AACS.

R 325.22002
Source: 1983 AACS.

R 325.22003
Source: 1983 AACS.

R 325.22003a
Source: 1984 AACS.

R 325.22004
Source: 1983 AACS.

EMERGENCY MEDICAL SERVICES

PART 1. GENERAL PROVISIONS

R 325.23101
Source: 1984 AACS.

R 325.23102
Source: 1984 AACS.

R 325.23103
Source: 1984 AACS.

R 325.23104
Source: 1984 AACS.

R 325.23105
Source: 1984 AACS.

R 325.23106
Source: 1984 AACS.

R 325.23107
Source: 1984 AACS.

PART 2. EMERGENCY MEDICAL SERVICES SYSTEM

R 325.23201
Source: 1984 AACS.

R 325.23202
Source: 1984 AACS.

R 325.23203
Source: 1984 AACS.

PART 3. AMBULANCE PERSONNEL, AMBULANCE ATTENDANTS

R 325.23301
Source: 1984 AACS.

R 325.23302
Source: 1984 AACS.

R 325.23303
Source: 1984 AACS.

R 325.23304
Source: 1984 AACS.

PART 4. ADVANCED EMERGENCY MEDICAL TECHNICIANS, EMERGENCY MEDICAL TECHNICIAN SPECIALISTS, EMERGENCY MEDICAL TECHNICIANS

R 325.23401
Source: 1984 AACS.

R 325.23402
Source: 1984 AACS.

R 325.23403
Source: 1984 AACS.

R 325.23404
Source: 1984 AACS.

R 325.23405
Source: 1984 AACS.

R 325.23406
Source: 1984 AACS.

R 325.23407
Source: 1984 AACS.

PART 5. INSTRUCTOR-COORDINATORS

R 325.23501
Source: 1984 AACS.

R 325.23502
Source: 1984 AACS.

R 325.23503
Source: 1984 AACS.

R 325.23504
Source: 1984 AACS.

R 325.23505
Source: 1984 AACS.

R 325.23506
Source: 1984 AACS.

R 325.23507
Source: 1984 AACS.

PART 6. TRAINING PROGRAM REQUIREMENTS

R 325.23601
Source: 1984 AACS.

R 325.23602
Source: 1984 AACS.

R 325.23603
Source: 1984 AACS.

PART 7. MEDICAL CONTROL

R 325.23701
Source: 1984 AACS.

R 325.23702
Source: 1984 AACS.

R 325.23703
Source: 1984 AACS.

R 325.23704
Source: 1984 AACS.

R 325.23705
Source: 1984 AACS.

R 325.23706
Source: 1984 AACS.

R 325.23707
Source: 1984 AACS.

PART 8. ADVANCED AND LIMITED ADVANCED MOBILE EMERGENCY CARE SERVICES

R 325.23801
Source: 1984 AACS.

R 325.23802
Source: 1984 AACS.

R 325.23803
Source: 1984 AACS.

R 325.23804
Source: 1984 AACS.

R 325.23805
Source: 1984 AACS.

R 325.23806
Source: 1984 AACS.

R 325.23807
Source: 1984 AACS.

R 325.23808
Source: 1984 AACS.

PART 9. AMBULANCE OPERATIONS

R 325.23901
Source: 1984 AACS.

R 325.23902
Source: 1984 AACS.

R 325.23903
Source: 1984 AACS.

R 325.23904
Source: 1984 AACS.

R 325.23905
Source: 1984 AACS.

R 325.23906
Source: 1984 AACS.

PART 10. VEHICLE STANDARDS

R 325.24001
Source: 1984 AACS.

R 325.24002
Source: 1984 AACS.

R 325.24003
Source: 1984 AACS.

R 325.24004
Source: 1984 AACS.

R 325.24005
Source: 1984 AACS.

R 325.24006
Source: 1984 AACS.

R 325.24007
Source: 1984 AACS.

R 325.24008
Source: 1984 AACS.

R 325.24009
Source: 1984 AACS.

R 325.24010
Source: 1984 AACS.

R 325.24011
Source: 1984 AACS.

R 325.24012
Source: 1984 AACS.

R 325.24013
Source: 1984 AACS.

R 325.24014
Source: 1984 AACS.

R 325.24015
Source: 1984 AACS.

R 325.24016
Source: 1984 AACS.

R 325.24017
Source: 1984 AACS.

R 325.24018
Source: 1984 AACS.

R 325.24020
Source: 1984 AACS.

PART 11. HEARING PROCEDURES

R 325.24101
Source: 1984 AACS.

R 325.24102
Source: 1984 AACS.

R 325.24103
Source: 1984 AACS.

R 325.24104
Source: 1984 AACS.

R 325.24105
Source: 1984 AACS.

R 325.24106
Source: 1984 AACS.

R 325.24107
Source: 1984 AACS.

R 325.24108
Source: 1984 AACS.

R 325.24109
Source: 1984 AACS.

R 325.24110
Source: 1984 AACS.

R 325.24111
Source: 1984 AACS.

R 325.24112
Source: 1984 AACS.

R 325.24113
Source: 1984 AACS.

R 325.24114
Source: 1984 AACS.

R 325.24115
Source: 1984 AACS.

R 325.24116
Source: 1984 AACS.

R 325.24117
Source: 1984 AACS.

R 325.24118
Source: 1984 AACS.

DEPARTMENT OF AGRICULTURE

BUREAU OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH

FOOD SERVICE SANITATION

PART 1. GENERAL PROVISIONS

R 325.25101
Source: 1981 AACS.

R 325.25102
Source: 1981 AACS.

R 325.25103
Source: 1981 AACS.

R 325.25104
Source: 1981 AACS.

R 325.25105
Source: 1981 AACS.

R 325.25106
Source: 1981 AACS.

PART 4. DEPARTMENT AND LOCAL HEALTH DEPARTMENT PROGRAM REQUIREMENTS, PROCEDURES, AND EVALUATIONS

R 325.25401
Source: 1981 AACS.

R 325.25402
Source: 1981 AACS.

R 325.25403
Source: 1981 AACS.

R 325.25404
Source: 1981 AACS.

PART 5. ICE

R 325.25501
Source: 1981 AACS.

R 325.25502
Source: 1981 AACS.

R 325.25503
Source: 1981 AACS.

R 325.25504
Source: 1981 AACS.

R 325.25505
Source: 1981 AACS.

PART 6. TEMPORARY AND MOBILE FOOD SERVICE ESTABLISHMENTS

R 325.25601
Source: 1981 AACS.

R 325.25602
Source: 1981 AACS.

R 325.25603
Source: 1981 AACS.

R 325.25604
Source: 1981 AACS.

R 325.25605
Source: 1981 AACS.

R 325.25606
Source: 1981 AACS.

R 325.25607
Source: 1981 AACS.

PART 7. PLAN SUBMITTAL AND REVIEW

R 325.25701
Source: 1981 AACS.

R 325.25702
Source: 1981 AACS.

R 325.25703
Source: 1981 AACS.

R 325.25704
Source: 1981 AACS.

R 325.25705
Source: 1981 AACS.

R 325.25706
Source: 1981 AACS.

R 325.25707
Source: 1981 AACS.

R 325.25708
Source: 1981 AACS.

PART 8. LICENSING AND ENFORCEMENT

R 325.25801
Source: 1981 AACS.

R 325.25802
Source: 1981 AACS.

R 325.25803
Source: 1981 AACS.

R 325.25804
Source: 1981 AACS.

R 325.25805
Source: 1981 AACS.

R 325.25806
Source: 1981 AACS.

R 325.25807
Source: 1981 AACS.

PART 9. SURVEILLANCE AND INSPECTIONS

R 325.25901

Source: 1981 AACS.

R 325.25902
Source: 1981 AACS.

R 325.25903
Source: 1981 AACS.

R 325.25904
Source: 1981 AACS.

R 325.25905
Source: 1981 AACS.

R 325.25906
Source: 1981 AACS.

R 325.25907
Source: 1981 AACS.

R 325.25908
Source: 1981 AACS.

R 325.25909
Source: 1981 AACS.

R 325.25910
Source: 1981 AACS.

PART 10. VENTILATION

R 325.26001
Source: 1981 AACS.

R 325.26002
Source: 1981 AACS.

R 325.26003
Source: 1981 AACS.

R 325.26004
Source: 1981 AACS.

R 325.26005
Source: 1981 AACS.

R 325.26006
Source: 1981 AACS.

R 325.26007
Source: 1981 AACS.

R 325.26008
Source: 1981 AACS.

DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES

DIRECTOR'S OFFICE

METHYLENEDIANILINE (MDA)

R 325.50051
Source: 1993 AACS.

R 325.50052 Definitions.
Rule 2. As used in these rules:
(a) "Act" means 1974 PA 154, MCL 408.1001 et seq.
(b) "Action level" means a concentration of airborne MDA of 5 parts MDA per billion parts of air (5 ppb) as an 8-hour, time-weighted average.
(c) "Authorized person" means any person who is specifically authorized by an employer to enter a regulated area, or any person who enters a regulated area as a designed representative of employees, for the purpose of exercising the right to observe monitoring and measuring procedures described in R 325.50073 or any other person who is authorized by the act or the administrative rules issued under the act.
(d) "Container" means any of the following, but does not include a pipe or piping systems:
(i) A barrel.
(ii) A bottle.
(iii) A can.
(iv) A cylinder.
(v) A drum.
(vi) A reaction vessel.
(vii) A storage tank.
(viii) Commercial packaging.
(e) "Decontamination area" means a work area which is outside of, but as near as practical to, a regulated area, which consists of a storage area, a wash area, and a clean change area, and which is used for the decontamination of workers, materials, and equipment that are contaminated with MDA.
(f) "Dermal exposure to MDA" means any employee exposure that involves skin contact with either of the following nonairborne forms of MDA:
(i) Liquid, powdered, granular, or flaked mixtures that contain MDA in concentrations greater than 0.1% by weight or volume.
(ii) Materials, other than finished articles, that contain MDA in concentrations greater than 0.1% by weight or volume.
(g) "Director" means the director of the Michigan department of consumer and industry services or his or her designee.
(h) "Emergency" means an occurrence, such as an equipment failure, a rupture of containers, or the failure of control equipment, that results in an unexpected and potentially hazardous release of MDA.
(i) "Employee exposure" means exposure to MDA that would occur if the employee were not using respirators or protective work clothing and equipment.
(j) "Finished article containing MDA" means a manufactured item for which all of the following provisions apply:
(i) The item is formed to a specific shape or design during manufacture.
(ii) The item has an end use function or functions that are dependent, in whole or part, upon the item's shape or design.
(iii) If applicable, the item is an item that is fully cured by having been subjected to the conditions of time and temperature necessary to complete the desired chemical reaction.
(k) "Historical monitoring data" means monitoring data for construction work that meet all of the following conditions:
(i) The data upon which judgments are based are scientifically sound and are collected using methods that are sufficiently accurate and precise.
(ii) The processes and work practices that were in use when the historical monitoring data were obtained are essentially the same as the processes and work practices to be used during the job for which initial monitoring will not be performed.
(iii) The characteristics of the MDA-containing material being handled when the historical monitoring data

were obtained are the same as the characteristics of the MDA-containing material on the job for which initial monitoring will not be performed.
(iv) The environmental conditions that were prevailing when the historical monitoring data were obtained are the same as the environmental conditions on the job for which initial monitoring will not be performed.
(v) Other data that are relevant to the operations, materials, processing, or employee exposures covered by the exemptions from monitoring specified in R 325.50056(1)(a) and (b) are substantially similar. The data shall be scientifically sound, the characteristics of the MDA-containing material shall be similar, and the environmental conditions shall be comparable.
(l) "Methylenedianiline" or "MDA" means the chemical, 4,4'-diaminodiphenylmethane, chemical abstract service registry number 101-77-9, in the form of a vapor, liquid, or solid. This definition also includes the salts of MDA.
(m) "Regulated areas" means areas in a workplace where airborne concentrations of MDA exceed, or can reasonably be expected to exceed, the permissible exposure limits or where dermal exposure to MDA can occur.
(n) "STEL" means short-term exposure limit as determined by a 15-minute sample period.
History: 1993 MR 9, Eff. Sept. 17, 1993; 1999 MR 10, Eff. Oct. 18, 1999.

R 325.50053
Source: 1993 AACS.

R 325.50054 Emergency conditions; written plan; alerts.
Rule 4. (1) An employer shall develop a written plan to effectively handle emergency situations for each workplace where there is a possibility of an emergency. The plan for a construction site shall identify emergency escape routes for employees and be in place before construction operations begin. An employer shall implement appropriate portions of the plan in the event of an emergency. The emergency plan shall provide for all of the
following:
(a) Plans and procedures to equip employees who are engaged in correcting emergency conditions with the appropriate personal protective equipment and clothing as required in R 325.50060 and R 325.50061 until the emergency is abated.
(b) Procedures for alerting and evacuating affected employees.
(c) Procedures for fire protection and prevention as required in R 408.41842 or R 408.10623, as applicable.
(2) If there is a possibility of employee exposure to MDA due to an emergency, then an employer shall develop means to promptly alert employees of the possibility of direct exposure. If an emergency occurs, an employer shall immediately evacuate affected employees who are not engaged in correcting emergency conditions. An employer shall develop and implement means for alerting other employees who may be exposed as a result of the emergency.
History: 1993 MR 9, Eff. Sept. 17, 1993; 1999 MR 10, Eff. Oct. 18, 1999.

R 325.50055
Source: 1993 AACS.

R 325.50056
Source: 1993 AACS.

R 325.50057
Source: 1993 AACS.

R 325.50058
Source: 1993 AACS.

R 325.50059
Source: 1993 AACS.

R 325.50060 Respiratory protection; selection; program.

Rule 10. (1) For employees who use respirators required by these rules, an employer shall provide respirators that comply with the requirements of these rules. An employer shall ensure that employees use respirators during all of the following:

(a) Periods necessary to install or implement feasible engineering and work practice controls.

(b) Work operations for which an employer establishes that engineering and work practice controls are not feasible.

(c) Work operations for which feasible engineering and work practice controls are not yet sufficient to reduce exposure to or below the PEL.

(d) Emergencies.

(2) An employer shall select, and ensure that employees use, the appropriate respirator from table 1 of this rule. An employer shall give an employee who cannot use a negative-pressure respirator the option of using either a positive-pressure respirator or a supplied-air respirator that is operated in the continuous-flow or pressure-demand mode.

(3) Table 1 reads as follows:

Table 1
Respiratory Protection for MDA

Airborne Concentrations of MDA or Condition of Use	**Respirator Type**
(a) Less than or equal to 10 x PEL.	Half-mask respirator with HEPA* cartridge.**
(b) Less than or equal to 50 x PEL.	Full facepiece respirator with HEPA* cartridge or canister.**
(c) Less than or equal to 1,000 X PEL.	Full facepiece, powered air-purifying respirator with HEPA* cartridges.**
(d) Greater than 1,000 x PEL or unknown concentrations	Self-contained breathing apparatus with full facepiece in positive-pressure mode.
	Full facepiece, positive pressure demand supplied-air respirator with auxiliary self-contained air supply.
(e) Escape.	Any full facepiece air-purifying respirator with HEPA* cartridges.**
	Any positive-pressure or continuous-flow self-contained breathing apparatus with full facepiece or hood.
(f) Firefighting.	Full facepiece self-contained breathing apparatus in positive-pressure-demand mode.

Note: Respirators that are assigned for higher environmental concentrations may be used at lower concentrations.

*High-efficiency particulate air filter (HEPA) means a filter that is not less than 99.97% efficient against monodispersed particulates of 0.3 micrometers or larger.

**Combination HEPA and organic vapor cartridges shall be used if MDA is used in liquid form or in a process that requires heat.

(4) An employer shall implement a respiratory protection program in accordance with 29 C.F.R §1910.134(b) to (d) and (f) to (m), except for (d)(1)(iii), as adopted by reference in R 325.60051 et seq. of the Michigan Administrative Code.

R 325.50061

Source: 1993 AACS.

R 325.50062
Source: 1993 AACS.

R 325.50063
Source: 1993 AACS.

R 325.50064
Source: 1993 AACS.

R 325.50065
Source: 1993 AACS.

R 325.50066
Source: 1993 AACS.

R 325.50067
Source: 1993 AACS.

R 325.50068
Source: 1993 AACS.

R 325.50069
Source: 1993 AACS.

R 325.50070
Source: 1993 AACS.

R 325.50071
Source: 1993 AACS.

R 325.50072
Source: 1993 AACS.

R 325.50073
Source: 1993 AACS.

R 325.50074 Rescinded.
History: 1993 MR 9, Eff. Sept. 17, 1993; rescinded 2000 MR 11, Eff. Aug. 7, 2000.

R 325.50075 Appendices.
Rule 25. Appendices A, B, C, and D to these rules are informational only and are not intended to create any additional obligations or requirements not otherwise imposed by these rules or to detract from any established obligations or requirements.
History: 1993 MR 9, Eff. Sept. 17, 1993; 1999 MR 10, Eff. Oct. 18, 1999.

R 325.50076 Availability of rules and appendices; permission to copy.
Rule 26. (1) Copies of these rules and appendices are available at no cost from the Michigan Department of Consumer and Industry Services, Standards Division, P.O. Box 30643, Lansing, Michigan 48909.
(2) Permission to copy any of these documents in full is granted by the director.
History: 1993 MR 9, Eff. Sept. 17, 1993; 1999 MR 10, Eff. Oct. 18, 1999.

1,3-BUTADIENE

R 325.50091
Source: 1997 AACS.

R 325.50092 Adoption by reference of federal regulations.

Rule 2. (1) The federal occupational safety and health administration's regulations on 1,3-butadiene that have been promulgated by the United States department of labor and codified at 29 C.F.R. §1910.1051, including appendix E, which were published in the Federal Register on November 4, 1996, and which have an effective date 90 days after the publication in the Federal Register, are adopted by reference in these rules as of the effective date of these rules, except as specified in subrule (2) of this rule.
(2) All of the following provisions apply as of the effective date of these rules:
(a) A reference to 29 C.F.R. §1910.133, eye and face protection, in 29 C.F.R. part 1910, subpart I, means R 325.60001 et seq. and R 408.13301 et seq. of the Michigan Administrative Code.
(b) A reference to 29 C.F.R. §1910.134, respiratory protection, in 29 C.F.R. part 1910, subpart I, means occupational health rule 3502, general respiratory protection.
(c) A reference to 29 C.F.R. §1910.1200 and §1926.59, hazard communication, in 29 C.F.R. 1910 and 1926, subpart Z, means R 325.77001 et seq., R 408.44201 et seq., and R 408.19201 et seq. of the Michigan Administrative Code.
(d) A reference to 29 C.F.R. §1910.20, employee exposure and medical records, in 29 C.F.R. 1910, subpart C, means R 325.3451 et seq. of the Michigan Administrative Code.
(3) These federal regulations adopted in this rule have the same force and effect as a rule promulgated pursuant to the provisions of Act No. 154 of the Public Acts of 1974, as amended, being §408.1001 et seq. of the Michigan Compiled Laws.
(4) The adopted federal regulations are available without cost as of the time of adoption of these rules from the United States Department of Labor, OSHA, 801 South Waverly, Room 306, Lansing, Michigan 48917, or from Michigan Department of Consumer and Industry Services, MIOSHA Standards Division, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan 48909.
History: 1997 MR 10, Eff. Oct. 30, 1997.

COKE OVEN EMISSIONS

R 325.50101 Definitions; A to E.

Rule 101. As used in these rules:
(a) "Authorized person" means a person specifically required by the employer to enter a regulated area, or a person entering such an area as a designated representative of employees for the purpose of observing the monitoring and measuring procedures under R 325.50135.
(b) "Beehive oven" means a coke oven in which the products of carbonization other than coke are not recovered, but are released into the ambient air.
(c) "Coke oven" means a retort in which coke is produced by the destructive distillation or carbonization of coal.
(d) "Coke oven battery" means a structure containing a number of slot-type coke ovens.
(e) "Coke oven emissions" means the soluble fraction of total particulate matter present during the destructive distillation or carbonization of coal for the production of coke as determined by benzene extraction or an equivalent analytical method.
(f) "Director" means the director of the Michigan department of public health or his or her authorized representative.
(g) "Emergency" means an occurrence such as, but not limited to, equipment failure which is likely to, or does, result in a massive release of coke oven emissions.
(h) "Existing coke oven battery" means a battery in operation or under construction on January 20, 1977, and which is not a rehabilitated coke oven battery.
History: 1954 ACS 97, Eff. Nov. 13, 1978; 1979 AC.

R 325.50102 Definitions; G to S.

Rule 102. As used in these rules:

(a) "Green push" means coke which, when removed from the oven, results in emissions due to the presence of incompletely coked coal.

(b) "O.H. rule" means an occupational health rule adopted by reference in accordance with section 14 of Act No. 154 of the Public Acts of 1974, as amended. Copies of these rules are available from the Michigan department of public health.

(c) "Pipeline charging" means an apparatus used to introduce coal into an oven which uses a pipe or duct permanently mounted onto an oven and through which coal is charged.

(d) "Rehabilitated coke oven battery" means a battery which is rebuilt, overhauled, renovated, or restored such as from the pad up, after January 20, 1977.

(e) "Sequential charging" means a procedure, usually automatically timed, by which a predetermined volume of coal in each larry car hopper is introduced into an oven such that no more than 2 hoppers commence or finish discharging simultaneously although, at some point, all hoppers are discharging simultaneously.

(f) "Stage charging" means a procedure by which a predetermined volume of coal in each larry car hopper is introduced into an oven such that no more than 2 hoppers are discharging simultaneously.

History: 1954 ACS 97, Eff. Nov. 13, 1978; 1979 AC.

R 325.50106

Source: 1987 AACS.

R 325.50107

Source: 1987 AACS.

R 325.50108

Source: 1987 AACS.

R 325.50109

Source: 1987 AACS.

R 325.50117 Respiratory protection.

Rule 117. (1) Where respiratory protection is required under these rules, an employer shall provide and assure the use of respirators which comply with the requirements of this rule. Compliance with the permissible exposure limit shall not be achieved by the use of respirators, except as follows:

(a) During the time period necessary to install or implement feasible engineering and work practice controls.

(b) In work situations where feasible engineering and work practice controls are not yet sufficient to reduce exposure to or below the permissible exposure limit.

(c) In work operations, such as maintenance and repair activity, in which engineering and work practice controls are not technologically feasible.

(d) In emergencies.

(2) Where respirators are required, an employer shall select, provide, and assure the use of, the appropriate respirator or combination of respirators on the basis of the following table:

Table 1.

Respiratory Protection for Coke Oven Emissions

Airborne Concentration of Coke Oven Emissions	**Approved Respirator**
a. Any Concentration	1. A type C supplied-air respirator operated in pressure demand or other positive pressure or continuous flow mode; or

	2. A powered air-purifying particulate filter respirator for dust or mist; or
	3. A powered air purifying particulate filter respirator or combination chemical cartridge and particulate filter respirator for coke oven emissions
b. Concentrations not greater than 1500 ug/m3	1. Any particulate filter respirator for dust and mist, except single-use respirator; or
	2. Any particulate filter respirator or combination chemical cartridge and particulate filter respirator for coke oven emissions; or
	3. Any respirator listed in this rule.

(3) Where a respirator is required by this rule for concentrations not greater than 1500 ug/m3, an employer shall provide, at the option of each affected employee, either a particulate filter respirator or a powered air-purifying respirator as described in table I.
(4) An employer shall select respirators appropriate for coke oven emissions from among those approved for protection against dust and mist by the United States department of health and human services, national institute for occupational safety and health (NIOSH), under the provisions of the Code of Federal Regulations, title 30, mineral resources, chapter I, subchapter B, part 11, as amended through December 30, 1977. The Code of Federal Regulations, title 30, is incorporated herein by reference and may be inspected at the Lansing office of the Michigan department of public health and may be purchased from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, or from the Michigan Department of Public Health, 3500 North Martin Luther King, Jr. Blvd., P.O. Box 30035, Lansing, Michigan 48909, at a cost of $4.80.
(5) An employer shall institute a respiratory protection program in accordance with O.H. rule 3502, general respiratory protection.
(6) An employer shall assure that a respirator issued to an employee exhibits minimum facepiece leakage and that the respirator is fitted properly.
(7) An employer shall allow each employee who uses a filter respirator to change the filter elements when an increase in breathing resistance is detected and shall maintain an adequate supply of filter elements for this purpose.
(8) An employer shall allow employees who wear respirators to wash their faces and respirator facepieces as necessary to prevent skin irritation associated with respirator use.
History: 1954 ACS 97, Eff. Nov. 13, 1978; 1979 AC; 1987 MR 10, Eff. Oct. 27, 1987.

R 325.50118 Protective clothing and equipment; provision and use.

Rule 118. An employer shall provide and assure the use of appropriate protective clothing and equipment, such as, but not limited to, all of the following:
(a) Flame-resistant jacket and pants.
(b) Flame-resistant gloves.
(c) Devices that insulate footwear from hot surfaces.
(d) Face shields or vented goggles which comply with R 408.13501 to R 408.13569 of the Michigan Administrative Code administered and enforced by the Michigan department of labor.
(e) Safety shoes which comply with R 408.13101 to R 408.13135 of the Michigan Administrative Code administered and enforced by the Michigan department of labor.
(f) Protective helmets which comply with R 408.13201 to R 408.13241 of the Michigan Administrative Code administered and enforced by the Michigan department of labor.
History: 1954 ACS 97, Eff. Nov. 13, 1978; 1979 AC.

R 325.50124 Medical surveillance; initial examinations.

Rule 124. At the time of initial assignment to a regulated area or upon the institution of the medical surveillance program, an employer shall provide a medical examination for employees covered under R 325.50123(1), which shall include at least the following elements:

(a) A work history and medical history, which shall include smoking history and the presence and degree of respiratory symptoms, such as breathlessness, cough, sputum production, and wheezing.

(b) A 14- x 17-inch posterior-anterior chest x-ray film. An international labour office UICC/Cincinnati (ILO U/C) rating is recommended.

(c) Pulmonary function tests, including forced vital capacity (FVC) and forced expiratory volume at 1 second (FEV 1.0), with recording of type of equipment used.

(d) Weight.

(e) A skin examination.

(f) Urinalysis for sugar, albumin, and hematuria.

(g) A sputum cytology examination.

(h) A urinary cytology examination.

History: 1954 ACS 97, Eff. Nov. 13, 1978; 1979 AC.

R 325.50125 Medical surveillance; periodic examinations.

Rule 125. (1) An employer shall provide the examinations specified in R 325.50124(a) to (d) at least annually for employees covered under R 325.50123(1).

(2) The employer shall provide the examinations specified in R 325.50124 (a) to (h) at least once semiannually for employees 45 years of age or older or with 5 or more years' employment in the regulated area.

(3) If an employee who is 45 years of age or older, or who has 5 or more years' employment in the regulated area, transfers or is transferred from employment in a regulated area, the employer shall continue to provide the examinations specified in R 325.50124(a) to (h) once semiannually as long as such employee is employed by the same employer or a successor employer.

(4) If an employee has not taken the examinations specified in subrules (1) to (3) within the 6 months preceding the termination of employment, the employer shall provide such examinations to the employee upon termination of employment.

History: 1954 ACS 97, Eff. Nov. 13, 1978; 1979 AC.

R 325.50136 Availability of rules, information sheets, and guides.

Rule 136. (1) A copy of these rules, the substance information sheet, and the air monitoring and medical surveillance guides for coke oven emissions, shall be provided to each employer by the Michigan Department of Public Health, P.O. Box 30035, Lansing, Michigan 48909.

(2) Permission to reproduce each or all of these documents in full is granted by the director.

History: 1954 ACS 97, Eff. Nov. 13, 1978; 1979 AC.

OCCUPATIONAL HEALTH STANDARDS

PART 2. TUNNELS, SHAFTS, CAISSONS, AND COFFERDAMS

R 325.50201—R 325.50231

Source: 1997 AACS.

AIR CONTAMINANTS

R 325.51101

Source: 1990 AACS.

R 325.51102

Source: 1990 AACS.

R 325.51103
Source: 1990 AACS.

R 325.51104
Source: 1990 AACS.

R 325.51105
Source: 1990 AACS.

R 325.51106
Source: 1990 AACS.

R 325.51107
Source: 1990 AACS.

R 325.51108
Source: 1990 AACS.

ETHYLENE OXIDE

R 325.51151
Source: 1993 AACS.

R 325.51152 Definitions.
Rule 2. As used in these rules:
(a) "Act" means Act No. 154 of the Public Acts of 1974, as amended, being §408.1001 et seq. of the Michigan Compiled Laws.
(b) "Action level" means a concentration of EtO of 0.5 parts EtO per million parts of air (0.5 ppm) calculated as an 8-hour, time-weighted average.
(c) "Authorized person" means any person specifically authorized by the employer whose duties require the person to enter a regulated area, any person entering such an area as a designated representative of employees for the purpose of exercising the right to observe monitoring procedures under R 325.51176, or any other person authorized by the act.
(d) "Director" means the director of the Michigan department of consumer and industry services or his or her designee.
(e) "Emergency" means any occurrence which is likely to or does result in an unexpected release of ethylene oxide, such as equipment failure, rupture of containers, or failure of control equipment.
(f) "Employee exposure" means exposure to airborne EtO which would occur if the employee were not using respiratory protective equipment.
(g) "Ethylene oxide" or "EtO" means a 3-membered ring organic compound, chemical formula C2H4O.
(h) "O.H. rule" means an occupational health rule adopted by reference pursuant to section 14 of the act or promulgated pursuant to section 24 of the act. Copies of these rules are available from the Michigan department of consumer and industry services.
History: 1988 MR 6, Eff. July 6, 1988; 2000 MR 2, Eff. Feb. 23, 2000.

R 325.51153
Source: 1993 AACS.

R 325.51154
Source: 1993 AACS.

R 325.51155
Source: 1993 AACS.

R 325.51156

Source: 1993 AACS.

R 325.51157
Source: 1988 AACS.

R 325.51158
Source: 1988 AACS.

R 325.51159
Source: 1993 AACS.

R 325.51160
Source: 1988 AACS.

R 325.51161
Source: 1993 AACS.

R 325.51162 Respirators; selection; respiratory protection program.

Rule 12. (1) For employees who use respirators required by these rules, the employer shall provide respirators that comply with the requirements of these rules. Respirators must be used during all of the following:
(a) Periods necessary to install or implement feasible engineering and work practice controls.
(b) Work operations, such as maintenance and repair activities and vessel cleaning, for which engineering and work practice controls are not feasible.
(c) Work operations for which feasible engineering and work practice controls are not yet sufficient to reduce an employee's exposure to or below the TWA.
(d) Emergencies.
(2) The employer shall select the appropriate respirator from table 1.

TABLE 1--MINIMUM REQUIREMENTS FOR RESPIRATORY PROTECTION FOR AIRBORNE ETHYLENE OXIDE

Condition of use or concentration of airborne EtO (ppm)	**Minimum Required Respirator**
Equal to or less than 50	Full facepiece respirator with EtO approved canister, front- or back-mounted.
Equal to or less than 2,000	(a) Positive-pressure, supplied-air respirator equipped with full facepiece, hood, or helmet, or
	(b) Continuous-flow, supplied-air respirator (positive-pressure) equipped with hood, helmet, or suit.
Concentration above 2,000 or unknown concentration (such as in emergencies).	(a) Positive-pressure, self-contained breathing apparatus(SCBA) equipped with full facepiece, or
	(b) Positive-pressure, full facepiece, supplied-air respirator equipped with auxiliary positive-pressure, self-contained breathing apparatus.

Firefighting	Positive-pressure, self-contained breathing apparatus equipped with full facepiece.
Escape	Any respirator described in this table.

Note: Respirators approved for use in higher concentrations are permitted to be used in lower concentrations.
(3) The employer must implement a respiratory protection program in accordance with 29 CFR §1910.134 (b) to (d), and (f) to (m), except for (d)(1)(iii), as adopted by reference in R 325.60051.
History: 1988 MR 6, Eff. July 6, 1988; 1993 MR 6, Eff. July 2, 1993; 2000 MR 2, Eff. Feb. 23, 2000.

R 325.51163 Protective clothing and equipment.

Rule 13. If it is possible that employees could have eye or skin contact with EtO or EtO solutions, then the employer must select and provide, at no cost to the employee, appropriate protective clothing or other equipment in accordance with occupational health rule R 325.6001 et seq.
To protect any area of the employee's body that may come in contact with the EtO or EtO solution, and must ensure that the employee wears the protective clothing and equipment provided.
History: 1988 MR 6, Eff. July 6, 1988; ; 2000 MR 2, Eff. Feb. 23, 2000.

R 325.51164
Source: 1988 AACS.

R 325.51165
Source: 1988 AACS.

R 325.51166
Source: 1988 AACS.

R 325.51167
Source: 1988 AACS.

R 325.51168
Source: 1988 AACS.

R 325.51169
Source: 1988 AACS.

R 325.51170
Source: 1993 AACS.

R 325.51171
Source: 1988 AACS.

R 325.51172
Source: 1993 AACS.

R 325.51173
Source: 1993 AACS.

R 325.51174
Source: 1993 AACS.

R 325.51175
Source: 1988 AACS.

R 325.51176
Source: 1988 AACS.

R 325.51177 Availability of rules and appendices; permission to reproduce.

Rule 27. (1) Appendices A to D to these rules are informational and are not intended to create any additional obligations not otherwise imposed or to detract from any existing obligations. Copies of these rules and related appendices entitled "Appendix A--Substance Safety Data Sheet for Ethylene Oxide," "Appendix B--Substance Technical Information for Ethylene Oxide," "Appendix C--Medical Surveillance Information for Ethylene Oxide," and "Appendix D--Sampling and Analytical Methods for Ethylene Oxide" are available to affected employers and employees at no cost from the Michigan Department of Consumer and Industry Services, Standards Division, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan 48909.
(2) Permission to reproduce any of the documents specified in subrule
(1) of this rule in full is granted by the director.
History: 1988 MR 6, Eff. July 6, 1988; 1993 MR 6, Eff. July 2, 1993; 2000 MR 2, Eff. Feb. 23, 2000.

ASBESTOS STANDARDS FOR CONSTRUCTION

R 325.51301
Source: 1997 AACS.

R 325.51302 Adoption by reference of federal standard.

Rule 2. (1) The federal occupational safety and health administration's regulations on occupational exposure to asbestos that have been promulgated by the United States department of labor and codified at 29 C.F.R. §1926.1101, August 10, 1994, and amendments which apply to construction work and which appear in the Federal Register on June 28, 1995, pp. 33343 to 33345; June 29, 1995, pp. 33974 to 34002; July 13, 1995, pp. 36043 to 36044; September 29, 1995, pp. 50411 to 50413; August 23, 1996, pp. 43454 to 43459; January 8, 1998, p. 1298; April 23, 1998, p. 20099; and June 29, 1998, p. 35138, are adopted by reference in these rules as of the effective date of these rules.
(2) The adopted federal regulations have the same force and effect as a rule promulgated under 1974 PA 154, MCL 408.1001 et seq.
(3) The adopted federal regulations are available without cost as of the time of adoption of these rules from the United States Department of Labor, OSHA, 801 South Waverly, Room 306, Lansing, Michigan 48917, or from the Michigan Department of Consumer and Industry Services, Standards Division, P.O. Box 30643, Lansing, Michigan 48909.
History: 1994 MR 6, Eff. June 17, 1994; 1995 MR 2, Eff. Mar. 16, 1995; 1997 MR 10, Eff. Nov. 7, 1997; 1999 MR 10, Eff. Oct. 18, 1999.

ASBESTOS STANDARDS FOR GENERAL INDUSTRY

R 325.51311
Source: 1997 AACS.

R 325.51312 Adoption by reference of federal standard.

Rule 2. (1) The federal occupational safety and health administration's regulations on occupational exposure to asbestos that have been promulgated by the United States department of labor and codified at 29 C.F.R. §1910.1001, August 10, 1994, and amendments appearing in the Federal Register on June 28, 1995, pp. 33343 to 33345; August 23, 1996, pp. 43454 to 43459; and January 8, 1998, pp. 1285 to 1286, are adopted by reference in this rule as of the effective date of this rule, except for the regulations and amendments that apply to construction work.
(2) The adopted federal regulations shall have the same force and effect as a rule promulgated under 1974 PA 154, MCL 408.1001 et seq.
(3) The adopted federal regulations are available without cost as of the time of adoption of these rules from

the United States Department of Labor, OSHA, 801 South Waverly, Room 306, Lansing, Michigan 48917, or from the Michigan Department of Consumer and Industry Services, Standards Division, P.O. Box 30643, Lansing, Michigan 48909.
History: 1994 MR 6, Eff. June 17, 1994; 1995 MR 2, Eff. Mar. 16, 1995; 1997 MR 10, Eff. Nov. 2, 1997; 2000 MR 11, Eff. Aug. 15, 2000.

DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES

DIRECTOR'S OFFICE

OCCUPATIONAL HEALTH STANDARDS--VINYL CHLORIDE

R 325.51401 Scope and application.

Rule 1. (1) These rules specify the requirements for the control of employee exposure to vinyl chloride (chloroethene), chemical abstracts service registry no. 75014.
(2) These rules apply to the manufacture, reaction, packaging, repackaging, storage, handling, or use of vinyl chloride or polyvinyl chloride, but do not apply to the handling or use of fabricated products made of polyvinyl chloride.
(3) These rules apply to the transportation of vinyl chloride or polyvinyl chloride, except to the extent that the United States department of transportation regulates the hazards covered by these rules.
(4) These rules replace occupational health rule 2260, which is rescinded.
History: 2000 MR 5, Eff. Apr. 27, 2000.

R 325.51402 Definitions.

Rule 2. As used in these rules:
(a) "Action level" means a concentration of vinyl chloride of 0.5 ppm averaged over an 8-hour work day.
(b) "Authorized person" means any person specifically authorized by the employer whose duties require him or her to enter a regulated area or any person entering an area as a designated representative of employees for the purpose of exercising an opportunity to observe monitoring and measuring procedures.
(c) "Director" means the director of the department of consumer and industry services.
(d) "Emergency" means any occurrence such as equipment failure, or operation of a relief device which is likely to, or does, result in massive release of vinyl chloride.
(e) "Fabricated product" means a product made wholly or partly from polyvinyl chloride, and which does not require further processing at temperatures, and for times, sufficient to cause mass melting of the polyvinyl chloride resulting in the release of vinyl chloride.
(f) "Hazardous operation" means an operation, procedure, or activity where a release of either vinyl chloride liquid or gas might be expected as a consequence of the operation or because of an accident in the operation, which would result in an employee exposure in excess of the permissible exposure limit.
(g) "Polyvinyl chloride" means polyvinyl chloride homopolymer or copolymer before conversion to a fabricated product.
(h) "Vinyl chloride" means vinyl chloride monomer.
History: 2000 MR 5, Eff. Apr. 27, 2000.

R 325.51403 Permissible exposure limit.

Rule 3. (1) An employer shall ensure that an employee is not exposed to vinyl chloride at concentrations greater than 1 ppm averaged over an 8-hour period.
(2) An employer shall ensure that an employee is not exposed to vinyl chloride at concentrations greater than 5 ppm averaged over any period not exceeding 15 minutes.
(3) An employer shall ensure that an employee is not exposed to vinyl chloride by direct contact with liquid vinyl chloride.
History: 2000 MR 5, Eff. Apr. 27, 2000.

R 325.51404 Monitoring.

Rule 4. (1) An employer shall undertake a program of initial monitoring and measurement in each establishment to determine if there is any employee exposed, without regard to the use of respirators, in excess of the action level.
(2) If a determination conducted under subrule (1) of this rule shows any employee exposures, without regard to the use of respirators, in excess of the action level, then an employer shall establish a program for determining exposures for each employee. The following provisions apply to the program:
(a) Shall be repeated at least monthly if an employee is exposed, without regard to the use of respirators, in excess of the permissible exposure limit.
(b) Shall be repeated not less than quarterly if an employee is exposed, without regard to the use of respirators, in excess of the action level.
(c) May be discontinued for an employee only if at least two consecutive monitoring determinations, made not less than 5 working days apart, show exposures for the employee at or below the action level.
(3) If there is a production, process, or control change which may result in an increase in the release of vinyl chloride, or the employer has any other reason to suspect that any employee may be exposed in excess of the action level, then the employer shall ensure that a determination of employee exposure under subrule (1) of this rule is performed.
(4) An employer shall ensure that the method of monitoring and measurement has an accuracy (with a confidence level of 95 percent) of not less than plus or minus 50 percent from 0.25 through 0.5 ppm, plus or minus 35 percent from over 0.5 ppm through 1.0 ppm, and plus or minus 25 percent over 1.0 ppm. Methods meeting these accuracy requirements are available in the "NIOSH Manual of Analytical Methods".
(5) An employee or a designated representative shall be afforded reasonable opportunity to observe the monitoring and measuring required by these rules.
History: 2000 MR 5, Eff. Apr. 27, 2000.

R 325.51405 Regulated area.

Rule 5. (1) An employer shall establish a regulated area under both of the following conditions:
(a) Vinyl chloride or polyvinyl chloride is manufactured, reacted, repackaged, stored, handled or used.
(b) Vinyl chloride concentrations are in excess of the permissible exposure limit.
(2) An employer shall limit access to regulated areas to authorized persons. A daily roster shall be made of authorized persons who enter.
History: 2000 MR 5, Eff. Apr. 27, 2000.

R 325.51406 Methods of compliance.

Rule 6. (1) An employer shall ensure that employee exposure to vinyl chloride is controlled to at or below the permissible exposure limit provided in R 325.51403 of these rules by the following engineering, work practice, and personal protective controls:
(a) Feasible engineering and work practice controls shall immediately be used to reduce exposures to at or below the permissible exposure limit.
(b) If feasible engineering and work practice controls which can be instituted immediately are not sufficient to reduce exposures to at or below the permissible exposure limit, then the controls shall nonetheless be used to reduce exposures to the lowest practicable level, and shall be supplemented by respiratory protection in accordance with R 325.51407 of these rules. An employer shall establish and implement a program to reduce exposures to, at, or below the permissible exposure limit, or to the greatest extent feasible, solely by means of engineering and work practice controls, as soon as it is feasible.
(c) An employer shall develop written plans for a program and furnish the plans upon request for examination and copying to the authorized representatives of the director. The plans shall be updated at least every six months.
History: 2000 MR 5, Eff. Apr. 27, 2000.

R 325.51407 Respiratory protection.

Rule 7. (1) For employees who use respirators required by these rules, an employer shall provide respirators that comply with the requirements of these rules.
(2) An employer shall implement a respiratory protection program in accordance with 29 C.F.R. §1910.134(b)

to (d) and (f) to (m), except for (d)(1)(iii) and (d)(3)(iii)(b)(1) and (2), as adopted by reference in Michigan Administrative Rule, R 325.60051 et seq.

(3) An employer shall select respirators from the following table:

Atmospheric concentration of vinyl chloride Required apparatus (a) Unknown, or above 3,600 parts per million (ppm) Open-circuit, self-contained breathing apparatus, pressure demand type, with full facepiece. (b) Not over 3,600 ppm (i) Combination type C supplied-air respirator, pressure demand type, with full or half facepiece and auxiliary self-contained air supply; or (c) Not over 1,000 ppm (ii) Combination type, supplied-air respirator continuous flow type, with full or half facepiece and auxiliary self-contained air supply. Type C, supplied-air respirator, continuous flow type, with full or half facepiece, helmet, or hood. (d) Not over 100 ppm (i) Combination type C supplied-air respirator, demand type, with full facepiece and auxiliary self-contained air supply; or

(ii) Open-circuit self-contained breathing apparatus with full facepiece, in demand mode; or Type C supplied-air respirator, demand type, with full facepiece. (e) Not over 25 ppm (i) A powered air-purifying respirator with hood, helmet, full or half facepiece, and a canister that provides a service life of not less than 4 hours for concentrations of vinyl chloride up to 25 ppm; or

(ii) A gas mask, front- or back-mounted canister that provides a service life of not less than 4 hours for concentrations of vinyl chloride up to 25 ppm. (f) Not over 10 ppm (i) Combination type C supplied-air respirator, demand type, with half facepiece and auxiliary self-contained air supply; or

(ii) Type C supplied-air respirator, demand type, with half facepiece; or

(iii) Any chemical cartridge respirator with an organic vapor cartridge that provides a service life of at least 1 hour for concentrations of vinyl chloride up to 10 ppm._Note: Respirators specified for higher concentrations may be used for lower concentrations.

(4) An employer shall replace air-purifying canisters or cartridges before the expiration of their service life or the end of the shift in which they are first used, whichever occurs first. In addition, an employer shall provide a continuous monitoring and alarm system where concentrations of vinyl chloride could reasonably exceed the allowable concentrations for the devices in use. An employer shall use the system to alert employees when vinyl chloride concentrations exceed the allowable concentrations for the devices in use.

(5) An employer may use apparatus prescribed for higher concentrations for any lower concentration.

History: 2000 MR 5, Eff. Apr. 27, 2000.

R 325.51408 Hazardous operations.

Rule 8. (1) An employer shall ensure that employees engaged in hazardous operations, including entry of vessels to clean polyvinyl chloride residue from vessel walls, be provided and required to wear and use all of the following;

(a) Respiratory protection in accordance with R 325.51403 and R 325.51407.

(b) Protective garments to prevent skin contact with liquid vinyl chloride or with polyvinyl chloride residue from vessel walls. An employer shall select the protective garments for the operation and its possible exposure conditions.

(2) An employer shall ensure that protective garments are provided clean and dry for each use.

History: 2000 MR 5, Eff. Apr. 27, 2000.

R 325.51409 Emergency situations.

Rule 9. (1) An employer shall develop a written operations plan for emergency situations for each facility storing, handling, or otherwise using vinyl chloride as a liquid or compressed gas. Appropriate portions of the plan shall be implemented in the event of an emergency. The plan shall specifically provide the following:

(a) Employers shall equip employees engaged in hazardous operations or correcting situations of existing hazardous releases as required in R 325.51408.

(b) Employers shall ensure that other employees not equipped in accordance with subdivision (a) of this subrule shall evacuate the area and not return until conditions are controlled by the methods required in R 325.51406 and the emergency is abated.

History: 2000 MR 5, Eff. Apr. 27, 2000.

R 325.51410 Training.

Rule 10. (1) An employer shall provide training to each employee engaged in vinyl chloride or polyvinyl chloride operations. Training shall be in a program relating to the hazards of vinyl chloride and precautions for its safe use.

(2) The program shall include all of the following:

(a) The nature of the health hazard from chronic exposure to vinyl chloride including specifically the carcinogenic hazard.

(b) The specific nature of operations which could result in exposure to vinyl chloride in excess of the permissible limit and necessary protective steps.

(c) The purpose for, proper use, and limitations of respiratory protective devices.

(d) The fire hazard and acute toxicity of vinyl chloride, and the necessary protective steps.

(e) The purpose for, and a description, of the monitoring program.

(f) The purpose for, and a description of, the medical surveillance program.

(g) Emergency procedures.

(h) Specific information to aid the employee in recognition of conditions which may result in the release of vinyl chloride.

(i) A review of this rule at the employee's first training and indoctrination program, and annually thereafter.

(3) Employers shall provide all materials relating to the program to the director upon request.

History: 2000 MR 5, Eff. Apr. 27, 2000.

R 325.51411. Medical surveillance.

Rule 11. (1) An employer shall institute a program of medical surveillance for each employee exposed, without regard to the use of respirators, to vinyl chloride in excess of the action level. The employer shall provide each exposed employee with an opportunity for examinations and tests in accordance with this subrule. The employer shall ensure that all medical examinations and procedures be performed by or under the supervision of a licensed physician. The medical examinations and procedures shall be provided without cost to the employee.

(2) An employer shall ensure that at the time of initial assignment, or upon institution of medical surveillance, the following provisions are met:

(a) A general physical examination shall be performed, with specific attention to detecting enlargement of liver, spleen or kidneys, or dysfunction in these organs, and for abnormalities in skin, connective tissues and the pulmonary system (See Appendix I of this rule).

(b) A medical history shall be taken, to include all of the following information:

(i) Alcohol intake.

(ii) Past history of hepatitis.

(iii) Work history and past exposure to potential hepatotoxic agents, including drugs and chemicals.

(iv) Past history of blood transfusions.

(v) Past history of hospitalizations.

(c) A serum specimen shall be obtained and determinations made of the following:

(i) Total bilirubin.

(ii) Alkaline phosphatase.

(iii) Serum glutamic oxalacetic transaminase (SGOT).

(iv) Serum glutamic pyruvic transaminase (SGPT).

(v) Gamma glutamyl transpeptidase.

(3) An employer shall ensure that examinations provided in accordance with these rules are performed at least:

(a) Every 6 months for each employee who has been employed in vinyl chloride or polyvinyl chloride manufacturing for 10 years or longer.

(b) Annually for all other employees.

(4) An employer shall ensure that each employee exposed to an emergency is afforded appropriate medical surveillance.

(5) An employer shall obtain from the examining physician promptly after any examination a statement of each employee's suitability for continued exposure to vinyl chloride including use of protective equipment

and respirators. An employer shall provide a copy of the physician's statement to each employee.
(6) An employer shall withdraw an employee from possible contact with vinyl chloride if the employee's health would be materially impaired by continued exposure.
(7) An employer shall ensure that laboratory analyses for all biological specimens included in medical examinations be performed in laboratories licensed under 42 C.F.R. Part 74.
(8) If the examining physician determines that alternative medical examination to those required by subrule (11)(a) of this rule will provide at least equal assurance of detecting medical conditions pertinent to the exposure to vinyl chloride, then the employer may accept the alternative examinations as meeting the requirements of subrule (11)(a) of this rule. The employer shall obtain a statement from the examining physician setting forth the alternative examinations and the rationale for substitution. This statement shall be available upon request for examination and copying by the director.
History: 2000 MR 5, Eff. Apr. 27, 2000.

R 325.51412 Signs and labels.

Rule 12. (1) An employer shall ensure that entrances to regulated areas be posted with legible signs bearing the following legend:

CANCER-SUSPECT AGENT AREA

AUTHORIZED PERSONNEL ONLY

CANCER-SUSPECT AGENT IN THIS AREA

PROTECTIVE EQUIPMENT REQUIRED

AUTHORIZED PERSONNEL ONLY

(3) An employer shall ensure that containers of polyvinyl chloride resin waste from reactors or other waste contaminated with vinyl chloride be legibly labeled with the following legend:

CONTAMINATED WITH

VINYL CHLORIDE

CANCER-SUSPECT AGENT

(4) An employer shall ensure that containers of polyvinyl chloride be legibly labeled with the following legend:

POLYVINYL CHLORIDE (or Trade Name)

contains

VINYL CHLORIDE

VINYL CHLORIDE IS A CANCER-SUSPECT AGENT

(5) An employer shall ensure that containers of vinyl chloride be legibly labeled with either of the following legends:
(a)

VINYL CHLORIDE

CANCER-SUSPECT AGENT

applied near the label or placard.
(6) An employer shall ensure that no statement shall appear on or near any required sign, label, or instruction which contradicts or detracts from the effect of any required warning, information, or instruction.
History: 2000 MR 5, Eff. Apr. 27, 2000.

R 325.51413 Records.

Rule 13. (1) An employer shall ensure that all records maintained in accordance with these rules include the name and social security number of each employee, if relevant.
(2) An employer shall keep records of required monitoring and measuring, medical records, and authorized personnel rosters. An employer shall make the records available to the director for examination and copying.
(3) An employer shall ensure that monitoring and measuring records comply with all of the following provisions:
(a) State the date of the monitoring and measuring and the concentrations determined and identify the instruments and methods used.
(b) Include any additional information necessary to determine individual employee exposures where exposures are determined by means other than individual monitoring of employees.
(c) Are maintained for not less than 30 years.
(4) An employer shall maintain authorized personnel rosters for not less than 30 years.
(5) An employer shall maintain medical records for the duration of employment of each employee plus 20 years, or for 30 years, whichever is longer.
(6) If an employer ceases to do business and there is no successor to receive and retain the employer's records for the prescribed period, then the employer shall transmit the records, by registered mail, to the director and shall notify each employee individually, in writing, of the transfer. An employer shall also comply with requirements in R 325.3475, employee medical records and trade secrets, regarding transfer of records.
(7) An employer shall provide access to an employee or the employee's designated representative to examine and copy records of required monitoring and measuring.
(8) An employer shall provide a former employee access to examine and copy required monitoring and measuring records reflecting the former employee's own exposures.
(9) Upon written request of an employee, an employer shall furnish a copy of the medical record of the employee to a physician designated by the employee.
History: 2000 MR 5, Eff. Apr. 27, 2000.

R 325.51414 Reports.

Rule 14. (1) Not later than 1 month after the establishment of a regulated area, an employer shall report the following information to the Michigan department of consumer and industry services:
(a) The address and location of each establishment that has 1 or more regulated areas.
(b) The number of employees in each regulated area during normal operations, including maintenance.
An employer shall report any changes to the information within 15 days.
(2) An employer shall report emergencies, and the facts obtainable at the time of the emergency, to the Michigan department of consumer and industry services within 24 hours of the emergency. Upon request of the director of the department of consumer and industry services, the employer shall submit additional information, in writing, relevant to the nature and extent of employee exposures and measures taken to prevent future emergencies of similar nature.
(3) Within 10 working days following any monitoring and measuring which discloses that any employee has been exposed, without regard to the use of respirators, in excess of the permissible exposure limit, an employer shall notify each exposed employee, in writing, of the results of the exposure measurement and the

steps being taken to reduce the exposure to within the permissible exposure limit.
History: 2000 MR 5, Eff. Apr. 27, 2000.

FORMALDEHYDE

R 325.51451
Source: 1990 AACS.

R 325.51452 Definitions.

Rule 2. As used in these rules:
(a) "Action level" means a concentration of 0.5 part formaldehyde per million parts of air (0.5 ppm) calculated as an 8-hour, time-weighted average (TWA) concentration.
(b) "Authorized person" means any person who is required by work duties to be present in regulated areas or who is authorized to be present in regulated areas by the employer, by these rules, or by Act No. 154 of the Public Acts of 1974, as amended, being §§408.1001 et seq. of the Michigan Compiled Laws.
(c) "Director" means the director of the Michigan department of public health or his or her designee.
(d) "Emergency" is any occurrence, such as an equipment failure, the rupture of containers, or the failure to control equipment, that results in an uncontrolled release of a significant amount of formaldehyde.
(e) "Employee exposure" means the exposure to airborne formaldehyde which would occur without the use of a respirator.
(f) "Formaldehyde" means the chemical substance HCHO, chemical abstracts service registry no. 50-00-0.
History: 1990 MR 12, Eff. Jan. 3, 1991.

R 325.51453
Source: 1993 AACS.

R 325.51454
Source: 1993 AACS.

R 325.51455
Source: 1993 AACS.

R 325.51456
Source: 1990 AACS.

R 325.51457
Source: 1990 AACS.

R 325.51458
Source: 1990 AACS.

R 325.51459
Source: 1990 AACS.

R 325.51460 Respiratory protection.

Rule 10. (1) Where respiratory protection is required, an employer shall provide the respirators at no cost to the employee and shall ensure that they are properly used. The respirators shall be in compliance with the requirements of these rules and shall reduce the concentration of formaldehyde inhaled by the employee to at or below both the TWA and the STEL. Respirators shall be used in all of the following circumstances:
(a) During the interval necessary to install or implement feasible engineering and work practice controls.
(b) In work operations, such as maintenance and repair activities or vessel cleaning, for which the employer establishes that engineering and work practice controls are not feasible.
(c) In work situations where feasible engineering and work practice controls are not yet sufficient to reduce exposure to or below the PELs.

(d) In emergencies.
(2) The appropriate respirators as specified in table 1 shall be selected from those approved by the mine safety and health administration (MSHA) and by the national institute for occupational safety and health (NIOSH).
(3) An employer shall provide a powered, air-purifying respirator that is adequate to protect against formaldehyde exposures to any employee who experiences difficulty wearing a negative-pressure respirator to reduce exposure to formaldehyde.
(4) Table 1 reads as follows:

Table 1

MINIMUM REQUIREMENTS FOR RESPIRATORY PROTECTION AGAINST FORMALDEHYDE

Condition of use or formaldehyde concentration (ppm)	**Minimum respirator required 1**
Up to 7.5 ppm (10 x PEL.)	Full facepiece with cartidges or canisters specifically approved for protection against formaldehyde.2
Up to 75 ppm (100 x PEL.)	Full face-mask with chin-style or chest or back-mounted type with industrial-size canister specifically approved for protection against formaldehyde.
	Type C supplied-air respirator, pressure demand or continuous flow type, with full facepiece, hood, or helmut
Above 75 ppm or unknown (emergencies) (100 x PEL.)	Self-contained breathing apparatus (SCBA) with positive-presure facepiece.
	Combination supplied-air, full facepiece, positive-pressure respiratopr with auxilary self-contained air supply.
Firefighting	SCBA with positive pressure in facepiece.
Escape	SCBA in demand or pressure demand mode. Full-face mask with chin-style or front or back-mounted type industrial size canister specifically approved for protection against formaldehyde.

1 Respirators specified for use at higher concentrations may be used at lower concentrations.

2 A half-mask respirator with cartridges specifically approved for protection against formaldehyde can be substituted for the full facepiece respirator if effective gasproof goggles are provided and used in combination with the half-mask respirator.

History: 1990 MR 12, Eff. Jan. 3, 1991; 1993 MR 6, Eff. June 24, 1993.

R 325.51461 Use of respirators.

Rule 11. (1) If respirator use is required by these rules, an employer shall institute a respiratory protection program in accordance with the provisions of occupational health rule 3502(2), (4), (5), and (6).

(2) An employer shall perform either quantitative or qualitative face fit tests in accordance with the procedures outlined in appendix E, which is adopted by reference in R 325.51476, at the time of initial fitting and at least annually thereafter for all employees who are required by these rules to wear negative-pressure respirators.
(3) Respirators selected shall be from those exhibiting the best facepiece fit. A respirator shall not be chosen if the respirator has the potential to permit an employee to inhale formaldehyde at concentrations in excess of either the TWA or the STEL.
(4) Where air-purifying, chemical-cartridge respirators are used, the cartridges shall be replaced after 3 hours of use or at the end of the work shift, whichever is sooner, unless the cartridge contains a national institute of safety and health (NIOSH)-approved end-of-service-life indicator to show when breakthrough occurs.
(5) Unless the canister contains a NIOSH-approved end-of-service-life indicator to show when breakthrough occurs, canisters used in atmospheres up to 7.5 ppm (10 x PEL) shall be replaced every 4 hours and industrial-sized canisters used in atmospheres up to 75 ppm (100 x PEL) shall be replaced every 2 hours or at the end of the workshift, whichever is sooner.
(6) An employer shall permit employees to leave the work area to wash their faces and respirator facepieces as needed to prevent skin irritation from respirator use.
History: 1990 MR 12, Eff. Jan. 3, 1991; 1993 MR 6, Eff. June 24, 1993.

R 325.51462 Protective equipment and clothing.

Rule 12. (1) An employer shall comply with the provisions of general industry safety standards, Part 33. Personal Protective Equipment, being R 408.13301 et seq. of the Michigan Administrative Code. When protective equipment of clothing is provided under the provisions of Part 33, an employer shall provide these protective devices at no cost to the employee and assure that the employee wears them.
(2) An employer shall select protective clothing and equipment based upon the form of formaldehyde to be encountered, the conditions of use, and the hazard to be prevented.
(3) All contact of the eyes and skin with liquids containing 1% or more formaldehyde shall be prevented by the use of chemical protective clothing made of material impervious to formaldehyde and the use of other personal protective equipment, such as goggles and face shields, as appropriate to the operation.
(4) Contact with irritating or sensitizing materials shall be prevented to the extent necessary to eliminate the hazard. Where a face shield is worn, chemical safety goggles are also required if there is a danger of formaldehyde reaching the area of the eye. Full body protection shall be worn for entry into areas where concentrations of formaldehyde exceed 100 ppm and for emergency reentry into areas of unknown concentrations.
History: 1990 MR 12, Eff. Jan. 3, 1991.

R 325.51463
Source: 1990 AACS.

R 325.51464
Source: 1990 AACS.

R 325.51465
Source: 1990 AACS.

R 325.51466
Source: 1990 AACS.

R 325.51467
Source: 1993 AACS.

R 325.51468
Source: 1990 AACS.

R 325.51469

Source: 1990 AACS.

R 325.51470 Employee medical removal procedures.

Rule 20. (1) This rule applies if an employee reports any of the following symptoms attributed to workplace formaldehyde exposure:

(a) Significant irritation of the mucosa of the eyes or of the upper airways.

(b) Respiratory sensitization.

(c) Dermal irritation.

(d) Dermal sensitization.

This rule does not apply in the case of dermal irritation or sensitization if the product that is suspected of causing the dermal condition contains less than 0.05% formaldehyde.

(2) An employee's report of signs or symptoms of possible overexposure to formaldehyde shall be evaluated by a physician who is selected by the employer pursuant to the provisions of R 325.51467. If the physician determines that a medical examination is not necessary, there shall be a 2-week evaluation and remediation period to permit the employer to ascertain whether the signs or symptoms subside untreated or with the use of creams, gloves, first aid treatment, or personal protective equipment. Industrial hygiene measures that limit an employee's exposure to formaldehyde may also be implemented during this period. An employee shall be referred immediately to a physician before the end of the 2-week period if the signs or symptoms worsen. Earnings, seniority, and benefits shall not be altered during the 2-week period by virtue of the employee's report.

(3) If the signs or symptoms of possible overexposure to formaldehyde have not subsided or been remedied by the end of the 2-week period, or earlier if the signs or symptoms warrant, an employee shall be examined by a physician who is selected by the employer. The physician shall presume, absent contrary evidence, that observed dermal irritation or dermal sensitization is not attributable to formaldehyde when products to which the affected employee is exposed contain less than 0.1% formaldehyde.

(4) Medical examinations shall be conducted in compliance with the provisions of R 325.51468(2). Additional guidelines for conducting medical exams are contained in appendix C to these rules. A copy of appendix C is available at no cost from the Michigan Department of Public Health, Division of Occupational Health, 3423 North Martin Luther King Jr. Blvd., P.O. Box 30195, Lansing, MI 48909.

(5) If the physician finds that significant irritation of the mucosa of the eyes or the upper airways, respiratory sensitization, dermal irritation, or dermal sensitization results from workplace formaldehyde exposure and recommends restrictions or removal of the employee from formaldehyde exposure, the employer shall promptly comply with the restrictions or recommendation of removal. If there is a recommendation of removal, the employer shall remove the affected employee from the current formaldehyde exposure and, if possible, transfer the employee to work that does not result in exposure to formaldehyde or that results in significantly less exposure to formaldehyde.

(6) When an employee is removed pursuant to the provisions of subrule (5) of this rule, an employer shall transfer the employee to comparable work for which the employee is qualified or can be trained in not more than a 6-month period, and work where the formaldehyde exposures are as low as possible, but not higher than the action level. The employer shall maintain the employee's current earnings, seniority, and other benefits.

If comparable work is not available, the employer shall maintain the employee's current earnings, seniority, and other benefits until comparable work becomes available, until the employee is determined to be unable to return to workplace formaldehyde exposure, until the employee is determined to be able to return to the original job status, or for 6 months, whichever occurs first.

(7) An employer shall arrange for a follow-up medical examination to take place within 6 months after an employee is removed from formaldehyde exposure pursuant to the provisions of this rule. The examination shall determine if the employee can return to the original job status or if the removal is to be permanent. A physician shall make a decision within 6 months of the date that an employee was removed as to whether the employee can be returned to the original job status or if the removal is to be permanent.

(8) An employer's obligation to provide earnings, seniority and other benefits to an employee who is removed from formaldehyde exposure may be reduced to the extent that the employee receives compensation for earnings lost during the period of removal either from a publicly or employer-

funded compensation program or from employment with another employer that is made possible by the employee's removal.
(9) In making determinations of the formaldehyde content of materials pursuant to the provisions of this rule, an employer may rely on objective data.
History: 1990 MR 12, Eff. Jan. 3, 1991; 1993 MR 6, Eff. June 24, 1993.

R 325.51471
Source: 1993 AACS.

R 325.51472
Source: 1993 AACS.

R 325.51473
Source: 1993 AACS.

R 325.51474
Source: 1990 AACS.

R 325.51475
Source: 1993 AACS.

R 325.51476 Appendices.
Rule 26. (1) Appendices A, B, C, and D are informational and are not intended to create any additional obligations not otherwise imposed or to detract from any existing obligations.
(2) The provisions of appendix E to 29 C.F.R. S1910.1048, December 4, 1987, are adopted herein by reference and compliance with the content of this appendix is mandatory. Appendix E may be inspected at the Lansing office of the department of public health and is available, at no cost, from the Division of Occupational Health, P.O. Box 30195, Lansing, Michigan 48909, or may be purchased from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, at a cost of $29.00.
History: 1990 MR 12, Eff. Jan. 3, 1991.

R 325.51477 Availability of rules; permission to reproduce.
Rule 27. (1) Single copies of these rules are available to affected employers and employees at no cost from the Michigan Department of Public Health, Division of Occupational Health, P.O. Box 30195, Lansing, Michigan 48909.
(2) Permission to reproduce these rules and their appendices, in full or in part, is granted by the director.
History: 1990 MR 12, Eff. Jan. 3, 1991.

ACRYLONITRILE (AN)

R 325.51501
Source: 1980 AACS.

R 325.51502 Definitions.
Rule 502. As used in these rules:
(a) "Acrylonitrile" or "AN" means acrylonitrile monomer, chemical formula CH2=CHCN.
(b) "Act" means Act No. 154 of the Public Acts of 1974, as amended, being §408.1001 et seq. of the Michigan Compiled Laws.
(c) "Action level" means a concentration of AN of 1 ppm as an 8-hour, time-weighted average.
(d) "Authorized person" means any person specifically authorized by the employer whose duties require the person to enter a regulated area, or any person entering such an area as a designated representative of employees for the purpose of exercising the opportunity to observe monitoring procedures under R 325.51526.
(e) "Decontamination" means the treating of materials and surfaces by water washdown, ventilation, or

other means to assure that the materials will not expose an employee to airborne concentrations of AN of more than 1 ppm.
(f) "Director" means the director of the Michigan department of consumer and industry services or his or her designee.
(g) "Emergency" means any occurrence, such as, equipment failure, rupture of containers, or failure of control equipment, which results in an unexpected massive release of AN.
(h) "Liquid AN" means AN monomer in liquid form and liquid or semiliquid polymer intermediates, including slurries, suspensions, emulsions, and solutions which are produced during the polymerization of AN.
(i) "O.H. rule" means an occupational health rule adopted by reference pursuant to section 14 of the act or promulgated pursuant to section 24 of the act. Copies of these rules are available from the Michigan department of consumer and industry services.
History: 1979 ACS 3, Eff. July 10, 1980; 2000 MR 2, Eff. Feb. 23, 2000.

R 325.51503
Source: 1980 AACS.

R 325.51504
Source: 1980 AACS.

R 325.51505
Source: 1980 AACS.

R 325.51506
Source: 1980 AACS.

R 325.51507
Source: 1980 AACS.

R 325.51508
Source: 1980 AACS.

R 325.51509 Respiratory protection.

Rule 509. (1) For employees who use respirators required by these rules, the employer shall provide respirators that comply with the requirements of this rule.
Respirators must be used during:
(a) Periods necessary to install or implement feasible engineering and work practice controls.
(b) Work operations, such as maintenance and repair activities or reactor cleaning, for which the employer establishes that engineering and work practice controls are not feasible.
(c) Work situations for which feasible engineering and work practice controls are not yet sufficient to reduce an employee's exposure to or below the permissible exposure limits.
(d) Emergencies.
(2) Respirator selection. The employer shall select the appropriate respirator from table 1 of this rule.
(3) Table 1 reads as follows:

Table 1

Concentration of AN or condition of use	Respirator type
(a) Less than or equal to 20 ppm.	(i) Chemical cartridge respirator with organic vapor cartridge or cartridges and halfmask facepiece or

	(ii) Supplied-air respirator with halfmask facepiece.
(b) Less than or equal to 100 ppm or maximum use concentration (MUC) of cartridges or canisters, whichever is lower.	(I) Full Facepiece respirator with any of the following:
	(A) organic vapor cartridge
	(B) organic vapor gas mask chin-style
	(C) organic vapor gas mask canister, front or back mounted.
	(ii) Supplied-air respirator with full facepiece; or
	(iii) Self-contained breathing apparatus with full facepiece.
(c) Less than or equal to 4,000 ppm	Supplied-air respirator operated in the positive pressure mode with full facepiece, helmet, suit, or hood.
(d) Greater than 4,000 ppm, or unknown concentration.	(i) Supplied-air and auxiliary self-contained breathing apparatus with full facepiece in positive pressure mode; or
	(ii) Self-contained breathing apparatus with full facepiece in positive pressure mode.
(e) Firefighting.	Self-contained breathing apparatus with full facepiece in positive pressure mode.
(f) Escape.	(i) Any organic vapor respirator, or
	(ii) Any self-contained breathing apparatus.

Respiratory Protection for Acrylonitrile (AN)

(4) The employer shall implement a respiratory protection program in accordance with 29 CFR §1910.134 (b) to (d) and (f) to (m), except for (d)(1)(iii), (d)(3)(iii)(b)(1), and (2), as adopted by reference in R 325.60051 to R 325.60052.

(5) If air-purifying respirators (chemical-cartridge or chemical-canister types) are used, then:

(a) The air-purifying canister or cartridge must be replaced prior to the expiration of its service life or at the completion of each shift, whichever occurs first.

(b) A label must be attached to the cartridge or canister to indicate the date and time at which it is first installed on the respirator.

History: 1979 ACS 3, Eff. July 10, 1980; 2000 MR 2, Eff. Feb. 23, 2000.

R 325.51510
Source: 1980 AACS.

R 325.51511
Source: 1993 AACS.

R 325.51512
Source: 1980 AACS.

R 325.51513
Source: 1980 AACS.

R 325.51514
Source: 1980 AACS.

R 325.51515
Source: 1980 AACS.

R 325.51516
Source: 1980 AACS.

R 325.51517 Medical surveillance program; information provided to physician by employer.

Rule 517. An employer shall provide all of the following information to the examining physician:
(a) A copy of these rules and related appendices which may be obtained from the department of consumer and industry services.
(b) A description of an affected employee's duties as they relate to the employee's exposure.
(c) The employee's representative exposure level.
(d) The employee's anticipated or estimated exposure level for preplacement examinations or for cases of exposure due to an emergency.
(e) A description of any personal protective equipment used or to be used.
(f) Information from previous medical examinations of the affected employee which is not otherwise available to the examining physician.
History: 1979 ACS 3, Eff. July 10, 1980; 2000 MR 2, Eff. Feb. 23, 2000.

R 325.51518
Source: 1980 AACS.

R 325.51519 Employee information and training program; applicability; provision of information to employees; availability of rules and other materials to employees and director.

Rule 519. (1) An employer shall institute a training and information program for, and assure the participation of, all employees exposed to AN above the action level, all employees whose exposures are maintained below the action level by engineering and work practice controls, and all employees subject to potential skin or eye contact with liquid AN.
(2) Training shall be provided at the time of initial assignment or upon institution of the training program and at least once annually thereafter.
(3) The employer shall assure that each employee is informed of all of the following:
(a) The information contained in appendices A and B of these rules.
Appendices A and B are available from the department of consumer and industry services.
(b) The quantity, location, manner of use, release, or storage of AN, and the specific nature of operations which could result in exposure to AN, as well as any necessary protective steps.
(c) The purpose, proper use, and limitations of respirators and protective clothing.
(d) The purpose and a description of the medical surveillance program required by these rules.
(e) The emergency procedures developed, as required by R 325.51510.
(f) Engineering and work practice controls, their function, and an employee's relationship to these controls.
(g) A review of these rules.
(4) An employer shall make a copy of these rules and appendices readily available to all affected employees.
(5) Upon request, an employer shall provide all materials relating to the employee information and training program to the director.
History: 1979 ACS 3, Eff. July 10, 1980; 2000 MR 2, Eff. Feb. 23, 2000.

R 325.51520
Source: 1980 AACS.

R 325.51521

Source: 1980 AACS.

R 325.51522
Source: 1980 AACS.

R 325.51523
Source: 1980 AACS.

R 325.51524
Source: 1993 AACS.

R 325.51525
Source: 1993 AACS.

R 325.51526
Source: 1980 AACS.

R 325.51527 Availability of rules and appendices; permission to reproduce.
Rule 527. (1) A copy of these rules and related appendices entitled:
"Appendix A--Substance Safety Data Sheet," "Appendix B—Substance Technical Information," "Appendix C--Medical Surveillance Information for Acrylonitrile," and "Appendix D--Sampling and Analytical Methods for Acrylonitrile" are available to affected employers and employees at no cost from the Michigan Department of Consumer and Industry Services, Standards Division, P.O. Box 30643, Lansing, Michigan 48909.
(2) Permission to reproduce any of these documents in full is granted by the director.
History: 1979 ACS 3, Eff. July 10, 1980; 1993 MR 6, Eff. July 2, 1993; 2000 MR 2, Eff. Feb. 23, 2000.

INORGANIC ARSENIC (AS)

R 325.51601
Source: 1993 AACS.

R 325.51602 Definitions.
Rule 602. As used in these rules:
(a) “Act” means Act No. 154 of the Public Acts of 1974, as amended, being §408.1001 et seq. of the Michigan Compiled Laws.
(b) “Action level” means a concentration of inorganic arsenic of 5 micrograms per cubic meter of air (5 _g/m3) averaged over any 8-hour period.
(c) “Authorized person” means a person who is specifically required by the employer to enter a regulated area or a person who enters such an area as a designated representative of employees for the purpose of observing the monitoring and measuring procedures under R 325.51627.
(d) “Department” means the department of consumer and industry services.
(e) “Director” means the director of the department or the designee of the director.
(f) “Inorganic arsenic” means elemental arsenic, copper acetoarsenite, and all inorganic compounds containing arsenic, except arsine, measured as arsenic (As).
(g) “O.H. rule” means an occupational health rule which is adopted by reference pursuant to section 14 of the act or promulgated pursuant to section 24 of the act. Copies of these rules are available from the Michigan department of consumer and industry services, standards division.
History: 1979 ACS 3, Eff. July 10, 1980; 2000 MR 1, Eff. Jan. 20, 2000.

R 325.51603
Source: 1980 AACS.

R 325.51604
Source: 1980 AACS.

R 325.51605
Source: 1980 AACS.

R 325.51606
Source: 1993 AACS.

R 325.51607
Source: 1980 AACS.

R 325.51608
Source: 1980 AACS.

R 325.51609
Source: 1980 AACS.

R 325.51610 Respirators; use.

Rule 610. For employees who use respirators required by these rules, the employer shall provide respirators that comply with the requirements of this rule. Respirators shall be used during all of the following:

(a) Periods necessary to install or implement feasible engineering or work practice controls.

(b) Work operations, such as maintenance and repair activities, for which the employer establishes that engineering and work practice controls are not feasible.

(c) Work operations for which engineering and work practice controls are not yet sufficient to reduce employee exposures to or below the permissible exposure limit.

(d) Emergencies.

History: 1979 ACS 3, Eff. July 10, 1980; 2000 MR 1, Eff. Jan. 20, 2000.

R 325.51611 Respirator program

Rule 611. (1) The employer shall implement a respiratory protection program in accordance with 29 C.F.R. 1910.134(b) to (d) and (f) to (m), except for (d)(1)(iii), as adopted by reference in Michigan Administrative Rule, R 325.50051 et seq.

(2) If an employee exhibits breathing difficulty during fit testing or respirator use, then the employee shall be examined by a physician trained in pulmonary medicine to determine whether the employee can use a respirator while performing the required duty.

(3) Table 1 reads as follows:

TABLE 1
RESPIRATOR PROTECTION FOR INORGANIC ARSENIC PARTICULATE, EXCEPT FOR THOSE WITH SIGNIFICANT VAPOR PRESSURE

Concentration of inorganic arsenic (as As) or condition of use	Required respirator
(a) Unknown or greater or lesser than 20,000 _g/m3 (20 mg/m3) or firefighting	Any full-facepiece, self-contained breathing apparatus operated in positive pressure mode.
(b) Not greater than 20,000 _g/m3 (20 mg/m3)	Supplied-air respirator with full facepiece, hood, helmet, or suit and operated in positive pressure mode.
(c) Not greater than 10,000 _g/m3 (10 mg/m3)	(i) Powered air-purifying respirators in all inlet face coverings with high-efficiency filters.1 (ii) Half-mask, supplied-air respirator operated in positive pressure mode.

(d) Not greater than 500 _g/m3	(i) Full-facepiece, air purifying respirator equipped with high-efficiency filter.1 (ii) Any full-facepiece, supplied-air respirator. (iii) Any full-facepiece, self- contained breathing apparatus.
(e) Not greater than 100 _g/m3	(i) Half-mask, air-purifying respirator equipped with high-efficiency filter.1 (ii) Any half-mask, supplied-air respirator.

1High-efficiency filter--99.7 pct efficiency against 0.3 micrometer monodisperse diethyl-hexyl phthalate (DOP) particles.

(4) Table 2 reads as follows:

TABLE 2
RESPIRATORY PROTECTION FOR INORGANIC ARSENICALS (SUCH AS ARSENIC TRICHLORIDE2 AND ARSENIC PHOSPHIDE) WITH SIGNIFICANT VAPOR PRESSURE

Concentration of inorganic arsenic (as As) or condition of use	**Respirator type**
(a) Unknown or greater or lesser than 20,000 _g/m3 (20 mg/m3) or firefighting	Any full-facepiece, self-contained breathing apparatus operated in positive pressure mode
(b) Not greater than 20,000 _g/m3 (20 mg/m3)	Supplied-air respirator with full facepiece, hood, helmet, or suit and operated in positive pressure mode.
(c) Not greater than 10,000 _g/m3 (10 mg/m3)	Half-mask2, supplied-air respirator operated in positive pressure mode.
(d) Not greater than 500 _g/m3	(i) Front or back-mounted gas mask equipped with high-efficiency filter1 and acid gas canister.
	(ii) Any full-facepiece supplied air respirator.
	(iii) Any full-facepiece self-contained breathing apparatus.
(e) Not greater than 100 _g/m3 respirator.	(i) Half-mask2 air-purifying equipped with high-efficiency filter1 and acid gas cartridge.

	(ii) Any half-mask, supplied air respirator

1High efficiency filter--99.7 pct efficiency against 0.3 micrometer monodisperse diethy-hexyl phthalate (DOP) particles. 2Half-mask respirators shall not be used for protection against arsenic trichloride, as it is rapidly absorbed through the skin.
(5) The employer shall use table 1 of this rule to select the appropriate respirator or combination of respirators for inorganic arsenic compounds without significant vapor pressure, and the employer shall use table 2 of this rule to select the appropriate respirators for inorganic arsenic compounds that have significant vapor pressure.
(6) If employee exposures exceed the permissible exposure limit for inorganic arsenic and also exceed the relevant limit for other gases, such as sulfur dioxide, then an air-purifying respirator provided to the employee as specified by this rule shall have a combination high-efficiency filter with an appropriate gas sorbent. (See footnote in table 1 of this section).
(7) Employees required to use respirators may choose, and the employer shall provide, a powered air-purifying respirator if the powered air-purifying respirator will provide proper protection. In addition, the employer shall provide a combination dust and acid-gas respirator to employees who are exposed to gases over the relevant exposure limits.
History: 1979 ACS 3, Eff. July 10, 1980; 1993 MR 6, Eff. July 2, 1993; 2000 MR 1, Eff. Jan. 20, 2000.
Editor's Note: Pursuant to Section 56 of 1969 PA 306, as amended, being Section 24.256 of the Michigan Compiled Laws, an obvious error in this rule has been corrected at the request of the promulgating agency. The rule as published in the Michigan Register and filed with the Office of the Great Seal contained an incorrect reference to "29 C.F.R. 1910.314(b) to (d) and (f) to (m), except for (d)(iii)...". The correct reference is "29 C.F.R. 1910.314(b) to(d) and (f) to (m), except for (d)(1)(iii)...".

R 325.51612 Rescinded.
History: 1979 ACS 3, Eff. July 10, 1980; Rescinded 2000 MR 1, Eff. Jan. 20, 2000.

R 325.51613 Rescinded.
History: 1979 ACS 3, Eff. July 10, 1980; Rescinded 2000 MR 1, Eff. Jan. 20, 2000.

R 325.51614 Protective work clothing and equipment; provision and use; cleaning and replacement; notice to cleaning or laundering persons of the potentially harmful effects of exposure to inorganic arsenic.

Rule 614. (1) If the possibility of skin or eye irritation from inorganic arsenic exists, and for all employees working in a regulated area, an employer shall provide, at no cost to the employee, and shall assure that employees use, appropriate and clean protective work clothing and equipment, such as the following:
(a) Coveralls or similar full-body work clothing.
(b) Gloves and shoes or coverlets.
(c) Face shields or vented goggles if necessary to prevent eye irritation. Such shields or goggles shall comply with R 408.13311 to R 408.13313 and R 408.13340 to R 408.13369 of the Michigan Administrative Code, which are administered and enforced by the Michigan department of consumer and industry services.
(d) Impervious clothing for employees who are subject to exposure to arsenic trichloride.
(2) An employer shall provide the protective clothing that is required in subrule (1) of this rule in a freshly laundered and dry condition at least once each week. If an employee works in an area where the exposure to inorganic arsenic is over 100 micrograms per cubic meter (100 _g/m3) or in an area where more frequent washing is needed to prevent skin irritation, then the protective clothing shall be laundered daily. (3) An employer shall clean, launder, or dispose of protective clothing that is required by subrule (1) of this rule.
(4) An employer shall repair or replace the protective clothing and equipment as necessary to maintain the effectiveness of the protective clothing and equipment.
(5) At the completion of a work shift, an employer shall assure that all protective clothing is removed only in change rooms prescribed in R 325.51616(1).
(6) An employer shall assure that contaminated protective clothing which is to be cleaned, laundered, or

disposed of is placed in a closed container in the change room in a manner that prevents the dispersion of inorganic arsenic outside the container.
(7) An employer shall inform, in writing, any person who cleans or launders clothing that is required by this rule of the potentially harmful effect, including the carcinogenic effects, of exposure to inorganic arsenic.
(8) An employer shall assure that the containers of contaminated protective clothing and equipment which are in the workplace or which are to be removed from the workplace are labeled as follows:
CAUTION: Clothing contaminated with inorganic arsenic; do not remove dust by blowing or shaking. Dispose of inorganic arsenic-contaminated wash water pursuant to applicable local, state, or federal regulations.
(9) An employer shall prohibit the removal of inorganic arsenic from protective clothing or equipment by blowing or shaking.
History: 1979 ACS 3, Eff. July 10, 1980; 1993 MR 6, Eff. July 2, 1993; 2000 MR 1, Eff. Jan. 20, 2000.

R 325.51615
Source: 1980 AACS.

R 325.51616
Source: 1980 AACS.

R 325.51617
Source: 1980 AACS.

R 325.51618 Medical surveillance program; initial examinations.
Rule 618. (1) Within 60 days after the effective date of these rules, an employer shall provide an opportunity for an initial medical examination, if not already provided, to an employee who is covered by the medical provisions of these rules.
(2) An employer shall provide an opportunity for an initial medical examination at the time of the first assignment to an area where the employee is likely to be exposed to more than the action level of inorganic arsenic for not less than 30 days per year.
(3) The initial medical examination shall include all of the following elements:
(a) A work history and a medical history that shall include a smoking history and the presence and degree of respiratory symptoms, such as breathlessness, cough, sputum production, and wheezing. (b) A 14-inch by 17-inch posterior-anterior chest X ray and the international labor office UICC/Cincinnati (ILO U/C) rating.
(c) A nasal and skin examination.
(d) Other examinations that the physician believes are appropriate because of the employee's exposure to inorganic arsenic or because of required respirator use.
History: 1979 ACS 3, Eff. July 10, 1980; 1993 MR 6, Eff. July 2, 1993; 2000 MR 1, Eff. Jan. 20, 2000.

R 325.51619 Medical surveillance program; periodic examination.
Rule 619. (1) An employer shall provide the examinations specified in R 325.51618(3)(a) to (d) at least once a year for a covered employee who is under 45 years of age and who has less than 10 years of exposure to inorganic arsenic above the action level, without regard to respirator use.
(2) An employer shall provide a medical examination as specified in R 325.51618(3)(a), (c), and (d) at least semiannually and the X ray requirement specified in R 325.51618(3)(b) at least annually for other covered employees.
(3) If a covered employee has not taken the examination specified in R 325.51618(3) within 6 months before the termination of employment, then the employer shall provide the examination to the employee upon termination of employment.
(4) If for any reason an employee develops signs or symptoms commonly associated with exposure to inorganic arsenic, then the employer shall provide an appropriate examination and emergency medical treatment.
History: 1979 ACS 3, Eff. July 10, 1980; 2000 MR 1, Eff. Jan. 20, 2000.

R 325.51620

Source: 1980 AACS.

R 325.51621
Source: 1980 AACS.

R 325.51622
Source: 1993 AACS.

R 325.51623
Source: 1980 AACS.

R 325.51624
Source: 1980 AACS.

R 325.51625
Source: 1993 AACS.

R 325.51626
Source: 1980 AACS.

R 325.51627
Source: 1980 AACS.

R 325.51628 Availability of rules and appendices; permission to reproduce.

Rule 628. (1) A copy of these rules and related appendices, which are titled "Appendix A—Substance Information Sheet," "Appendix B—Substance Technical Information," and "Appendix C—Medical Surveillance Information," are available to affected employers and employees at no cost from the Michigan Department of Consumer and Industry Services, Standards Division, P.O. Box 30643, Lansing, Michigan 48909.

(2) Permission to reproduce any of these documents in full is granted by the director.

(3) The information contained in the appendices to this section is not intended by itself to create any additional obligations not otherwise imposed by this standard nor detract from any existing obligation.

History: 1979 ACS 3, Eff. July 10, 1980; 1993 MR 6, Eff. July 2, 1993; 2000 MR 1, Eff. Jan. 20, 2000.

DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES

OCCUPATIONAL HEALTH STANDARDS COMMISSION

METHYLENE CHLORIDE

R 325.51651 Scope and application.

Rule 1. (1) These rules apply to all occupational exposures to methylene chloride (MC), chemical abstracts service registry no. 75-09-2, in all industries covered by Act No. 154 of the Public Acts of 1974, as amended, being 408.1001 et seq. of the Michigan Complied Laws.

(2) These rules replace all references to methylene chloride contained in table G-2 in R 325.51108 and table 4 of exhibit 1 of the O.H. rule 6201 (1). R 325.51652 Adoption by reference of federal regulations.

History: 1998 MR 2, Eff. Mar. 4, 1998.

R 325.51652 Adoption by reference of federal regulations.

Rule 2. (1) The federal occupational safety and health administrations regulations on methylene chloride that have been promulgated by the United States department of labor, codified at 29 C.F.R. SS1910.1052 and 1926.1152, and published in the Federal Register on January 10, 1997, and amendments appearing in the Federal Register on August 8, 1997, pp. 42666 and 42667; August 14, 1997, p. 43581; September 15, 1997, pp. 48175 and 48176; January 8, 1998, p. 1295; and September 22, 1998, pp. 50729 to 50732, are adopted by reference in these rules.

(2) All of the following provisions apply with respect to the regulations adopted in subrule (1) of these rules:
(a) A reference to 29 C.F.R. 1910.120, hazardous waste and emergency response, in 29 C.F.R. part 1910, subpart H, means occupational health rules for hazardous waste operations and emergency response, being R 325.52101 et seq., of the Michigan Administrative Code.
(b) A reference to 29 C.F.R. 1910.133, eye and face protection, in 29 C.F.R. part 1910, subpart I, means occupational health rules for personal protective equipment, being R 325.60001 et seq. of the Michigan Administrative Code; general industry safety standard Part 33. Personal Protective Equipment, being R 408.13301 et seq., of the Michigan Administrative Code; and construction safety standard Part 6. Personal Protective Equipment, being R 408.40601 et seq., of the Michigan Administrative Code.
(c) A reference to 29 C.F.R. SS1910.1200 and 1926.59, hazard communication, in 29 C.F.R. part 1910, subpart Z, means occupational health rules for hazard communication, being R 325.77001 et seq. of the Michigan Administrative Code; general industry safety standard Part 92. Hazard Communication, being R 408.19201 et seq. of the Michigan Administrative Code; and construction safety standard Part 42. Hazard Communication, being R 408.44201 et seq. of the Michigan Administrative Code.
(d) A reference to 29 C.F.R. 1910.1020, access to employee exposure records and medical records, in 29 C.F.R. part 1910, subpart Z, means occupational health rules for employee medical records and trade secrets, being R 325.3451 et seq. of the Michigan Administrative Code.
(e) A reference to 29 C.F.R. 1910.1000, air contaminants, in 29 C.F.R. part 1910, subpart Z, means occupational health rules for air contaminants, being R 325.51101 et seq. of the Michigan Administrative Code.
(3) The provisions of 29 C.F.R. SS1910.1052 and 1926.1152 have the same force and effect as rules promulgated under Act No. 154 of the Public Acts of 1974, as amended, being 408.1001 et seq. of the Michigan Compiled Laws.
(4) The provisions of 29 C.F.R. SS1910.1052 and 1926.1152 are available without cost as of the time of adoption of these rules from the United States Department of Labor, OSHA, 801 South Waverly, Room 306, Lansing, Michigan 48917, or from the Michigan Department of Consumer and Industry Services, Standards Division, 7150 Harris Drive, P. O. Box 30643, Lansing, Michigan 48909.
History: 1998 MR 2, Eff. Mar. 4, 1998; 1999 MR 8, Eff. Aug. 27, 1999.

CADMIUM

R 325.51851 Scope and application.

Rule 1. (1) These rules apply to all occupational exposures to cadmium and cadmium compounds in all forms and in all industries and employment situations, including the construction industry, except as provided in subrule (2) of this rule.
(2) Some of these rules and subrules of these rules apply only to the construction industry or to general industry and agricultural operations, as indicated in the rules and subrules. If a specific application is not indicated in a rule or subrule, then the rule or subrule applies to general industry, agricultural operations, and the construction industry.
(3) The rule replaces all references to cadmium contained in tables G-1-A and G-2 in R 325.51108 and table 2 of exhibit I of occupational health rule 6201.
History: 1993 MR 9, Eff. Sept. 17, 1993; 1998 MR 2, Eff. Mar. 1, 1998.

R 325.51852 Definitions.

Rule 2. As used in these rules:
(a) “Action level” (AL) means an airborne concentration of cadmium of 2.5 micrograms per cubic meter of air (2.5 _g/m3), calculated as an 8-hour, time-weighted average (TWA).
(b) “Authorized person” means a person who is authorized by an employer, and who is required by work duties, to be present in a regulated area, or a person who is authorized under Act No. 154 of the Public Acts of 1974, as amended, being §408.1001 et seq. of the Michigan Compiled Laws, and regulations issued under Act No. 154 to be in a regulated area for the purpose of conducting an authorized investigation.

(c) "Competent person" means a person who is designated by an employer to act on the employer's behalf, who is capable of identifying existing and potential cadmium hazards in the workplace and the proper methods to control the hazards to protect workers, and who has the authority necessary to take prompt corrective measures to eliminate or control such hazards. See R 325.51884 for the duties of a competent person.
(d) "Construction industry" means employers whose operations involve the construction, alteration, maintenance, repair, and demolition of a facility. Construction work includes any of the following:
(i) The wrecking, demolition, or salvage of structures where cadmium or materials that contain cadmium are present.
(ii) The use of cadmium-containing paints and cutting, brazing, burning, grinding, or welding on surfaces that are painted with cadmium-containing paints.
(iii) The construction, alteration, repair, maintenance, or renovation of structures, substrates, or portions thereof that contain cadmium or materials that contain cadmium.
(iv) Cadmium welding or cutting of cadmium-plated steel and brazing or welding with cadmium alloys.
(v) The installation of products that contain cadmium.
(vi) Electrical grounding with cadmium welding and electrical work using cadmium-coated conduit.
(vii) Maintaining or retrofitting cadmium-coated equipment.
(viii) Cadmium contamination cleanup and emergency operations that involve cadmium.
(ix) The transportation, disposal, storage, or containment of cadmium or materials, that contain cadmium on the site or location at which construction activities are performed.
(e) "Director" means the director of the Michigan department of consumer and industry services or his or her designee.
(f) "Employee exposure" means the exposure to airborne cadmium that would occur if the employee were not using respiratory protective equipment.
(g) "Final medical determination" means the written medical opinion of the employee's health status by the examining physician under R 325.51870 to R 325.51876, R 325.51877 if the review is by more than 1 physician, or R 325.51877(5) if the alternative physician determination is invoked. It is the final, written medical finding, recommendation, or determination that emerges from the medical surveillance process.
(h) "High-efficiency particulate air (HEPA) filter" means a filter that is capable of trapping and retaining not less than 99.97% of mono-dispersed particles that are 0.3 micrometers in diameter.
(i) "Regulated area" means an area which is demarcated by an employer and in which an employee's exposure to airborne concentrations of cadmium exceeds, or can reasonably be expected to exceed, the permissible exposure limit (PEL).
History: 1993 MR 9, Eff. Sept. 17, 1993; 1999 MR 4, Eff. Apr. 21, 1999.

R 325.51853
Source: 1993 AACS.

R 325.51854
Source: 1993 AACS.

R 325.51855 Exposure monitoring; applicability of subrules (1), (2), (4), and (6).

Rule 5. (1) This subrule applies only to general industry and agricultural operations. Except as provided for in this subrule and subrule (3) of this rule, an employer shall monitor employee exposures and shall base initial determinations on the monitoring results. If an employer has monitored after September 14, 1991, under workplace conditions that, in all important aspects, closely resemble currently prevailing workplace conditions and If the monitoring satisfies all other requirements of R 325.51854, including the accuracy and confidence levels specified in subrule (5) of this rule, then an employer may rely on the earlier monitoring results to satisfy the requirements of this subrule.
(2) This subrule applies only to the construction industry. Except as provided for in subrule (3) of this rule, if a determination that is made in compliance with the provisions of R 325.51854(1) shows the possibility of employee exposure to cadmium at or above the action level, then an employer shall conduct exposure monitoring as soon as practicable that is representative of the exposure for each employee in the workplace

who is or may be exposed to cadmium at or above the action level. In addition, if an employee periodically performs tasks that may expose the employee to a higher concentration of airborne cadmium, then the employee shall be monitored while performing the tasks.
(3) If an employer has objective data, as specified in R 325.51881(2), which demonstrate that employee exposure to cadmium will not exceed the action level under the expected conditions of processing, use, or handling, then an employer may rely upon the data instead of implementing the initial monitoring required by subrules (1) and (2) of this rule. (4) This subrule applies only to The construction industry. If, pursuant to the provisions of R 325.51854(1) or R 325.51855(2), a determination of exposure is made that a potentially exposed employee is not exposed to airborne concentrations of cadmium at or above the action level, an employer shall make a written record of the determination. The record shall include at least the monitoring data that is developed pursuant to the provisions of subrules (2) and (3) of this rule, if applicable, and shall also include the name and social security number of each employee and the date of the determination.
(5) If the initial monitoring or periodic monitoring reveals employee exposures to be at or above the action level, then an employer shall monitor at a frequency and pattern needed to ensure that the monitoring results reflect, with reasonable accuracy, an employee's typical exposure levels given the variability in the tasks performed, work practices, and environmental conditions on the jobsite and to ensure the adequacy of respiratory protection selection and the effectiveness of engineering and work practice controls.
(6) This subrule applies only to general industry and agricultural operations. An employer shall perform the periodic monitoring that is described in subrule (5) of this rule at least once every 6 months until the conditions specified in subrule (7) of this rule are met.
(7) If the initial monitoring or the periodic monitoring indicates that an employee exposure is below the action level and that exposure is confirmed by the results of other monitoring that is performed not less than 7 days later, then an employer may discontinue the monitoring for employees whose exposures are represented by initial or periodic and other monitoring.
(8) An employer shall conduct exposure monitoring that is required by the provision of subrules (2) and (5) of this rule if any of the following situations occur:
(a) There has been a change in the raw materials, equipment, personnel, work practices, or finished products that may result in additional employees being exposed to cadmium at or above the action level.
(b) An employee who is presently exposed to cadmium at or above the action level becomes exposed above the PEL.
(c) An employer or competent person has any reason to suspect that any other change might result in an additional exposure.
History: 1993 MR 9, Eff. Sept. 17, 1993; 1998 MR 2, Eff. Mar. 1, 1998.

R 325.51856 Employee notification of monitoring results.

Rule 6. (1) Not later than 15 working days for general industry and agricultural operations and not later than 5 working days for the construction industry, after an employer receives the results of any exposure monitoring that is performed pursuant to the provisions of these rules, an employer shall notify each affected employee individually, in writing, of the results. In addition, within the same time period, an employer shall post the results of the exposure monitoring in an appropriate location that is accessible to all affected employees.
(2) If monitoring results indicate that employee exposure exceeds the PEL, then an employer shall include, in the written notice, a statement that the PEL has been exceeded and a description of the corrective action that is being taken by the employer to reduce employee exposure to or below the PEL.
History: 1993 MR 9, Eff. Sept. 17, 1993; 1998 MR 2, Eff. Mar. 1, 1998.

R 325.51857
Source: 1993 AACS.

R 325.51858 Engineering and work practice controls; written compliance program; applicability of rule to general industry and agricultural operations.

Rule 8. (1) This rule applies only to general industry and agricultural operations. Except as specified in subrules (2), (4), and (5) of this rule, an employer shall implement

engineering and work practice controls to reduce and maintain employee exposure to cadmium at or below the PEL, unless, and to the extent that, the employer can demonstrate that the controls are not feasible.
(2) Except as specified in subrules (4) and (5) of this rule, for industries where a separate engineering control air limit (SECAL) is specified for the particular processes set forth in table 1, an employer shall implement engineering and work practice controls to reduce and maintain employee exposure at or below the specified SECAL, unless, and to the extent that, the employer can demonstrate that the controls are not feasible.
(3) Table 1 reads as follows:

Table 1
SEPARATE ENGINEERING CONTROL AIRBORNE LIMITS (SECAL)

Industry	Process	SECAL (microgram Cd/m3 air)
Nickel cadmium battery	Platemaking, plate preparation.	50
	All other processes.	15
Zinc/cadmium refining*	Cadmium refining, casting, melting, oxide production, sinter plant.	50
Pigment manufacture	Calcine, crushing, milling, blending.	50
	All other processes.	15
Stabilizers*	Cadmium oxide charging, crushing, drying, blending.	50
Lead smelting*	Sinter plant, blast furnace, baghouse, yard area.	50
Plating*	Mechanical plating.	15

*Processes in these industries that are not specified in this table shall achieve the PEL using engineering controls and work practices as required in subrule (2) of this rule.
(4) The requirement to implement engineering and work practice controls to achieve the PEL or SECAL, where applicable, does not apply if an employer can demonstrate both of the following:
(a) An employee is only intermittently exposed.
(b) An employee is not exposed above the PEL on 30 or more days per 12-consecutive-month period.
(5) If engineering and work practice controls are required and are not sufficient to reduce employee exposure to or below the PEL or SECAL, then an employer shall implement the controls to reduce exposures to the lowest levels achievable. The employer shall supplement the controls with respiratory protection that is in compliance with the provisions of R 325.51862 and R 325.51863 and the PEL.
(6) An employer shall not use employee rotation as a method of compliance.
(7) All of the following provisions apply to a written compliance program:
(a) If the PEL is exceeded, then an employer shall establish and implement a written compliance program to reduce employee exposure to or below the PEL by means of engineering and work practice controls, as required by subrules (1) and (2) of this rule.
(b) If engineering and work practice controls cannot reduce exposures to or below the PEL, then an employer shall include, in the written compliance program, the use of appropriate respiratory protection to achieve

compliance with the PEL.
(c) A written compliance program shall include all of the following information:
(i) A description of each operation in which cadmium is emitted, including all of the following information, as appropriate:
(A) The machinery used.
(B) The material processed.
(C) The controls in place.
(D) The crew size.
(E) Employee job responsibilities.
(F) Operating procedures.
(G) Maintenance practices.
(ii) A description of the specific means that will be employed to achieve compliance, including engineering plans and studies that are used to determine the methods that are selected for controlling exposure to cadmium and, where necessary, the use of appropriate respiratory protection to achieve the PEL.
(iii) A report of the technology applicable to meeting the PEL.
(iv) Air monitoring data that document the levels and sources of cadmium emissions.
(v) A detailed schedule for implementation of the program, including documentation such as copies of purchase orders for equipment and copies of construction contracts.
(vi) A work practice program that includes items required by the provisions of R 325.51864 to R 325.51866.
(vii) A written plan for emergency situations, as specified in R325.51864.
(viii) Other relevant information.
(d) A written compliance program shall be reviewed and updated at least annually, or more often if necessary, to reflect significant changes in the employer's compliance status.
(e) Upon request, a written compliance program shall be provided to affected employees, designated employee representatives, and the director for examination and copying.
History: 1993 MR 9, Eff. Sept. 17, 1993; 1998 MR 2, Eff. Mar. 1, 1998.

R 325.51859
Source: 1993 AACS.

R 325.51860
Source: 1993 AACS.

R 325.51861
Source: 1993 AACS.

R 325.51862 Respiratory protection; circumstances for use; selection.
Rule 12. (1) For employees who use respirators required by this rule, the employer shall provide respirators that comply with the requirements of this rule. Respirators must be used during all of the following:
(a) Periods necessary to install or implement feasible engineering and work practice controls when employee exposures exceed the PEL.
(b) Maintenance and repair activities and brief or intermittent work operations for which employee exposures exceed the PEL and engineering and work practice controls are not feasible or are not required.
(c) Work operations in the regulated areas specified in R 325.51857.
(d) Work operations for which the employer has implemented all feasible engineering and work practice controls and such controls are not sufficient to reduce exposures to or below the PEL.
(e) Emergencies.
(f) Work operations for which an employee who is exposed to cadmium at or above the action level requests a respirator.
(g) Work operations for which engineering controls are not required by R 325.51859(2) to reduce employee exposures that exceed the PEL.
(2) The employer shall select the appropriate respirator from table 2.

(3) Table 2 reads as follows:

Table 2
RESPIRATORY PROTECTION FOR CADMIUM

Airborne concentration or condition of use (a)	**Required Respiratory Type (b)**
10 times or less	A half-mask, air-purifying respirator equipped with a HEPAc filter. (d)
25 times or less	A powered air-purifying respirator (PAPR) with a loose-fitting hood or helmet equipped with a HEPA filter, or a supplied-air respirator with a loose-fitting hood or helmet facepiece operated in the continuous flow mode.
50 times or less	A full facepiece air-purifying respirator equipped with a HEPA filter, or a powered air-purifying respirator with a tight-fitting half-mask equipped with a HEPA filter, or a supplied-air respirator with a tight-fitting half-mask operated in the continuous flow mode.
250 times or less	A powered air-purifying respirator with tight-fitting full facepiece equipped with a HEPA filter, or supplied-air respirator with a tight-fitting full facepiece operated in the continuous flow mode.
1,000 times or less	A supplied-air respirator with a half-mask or full facepiece operated in the pressure demand or other positive pressure mode.
More than 1,000 times or unknown concentrations	A self-contained breathing apparatus with a full facepiece operated in the pressure demand or other positive pressure mode; or a supplied-air respirator with a full facepiece operated in the pressure demand or other positive pressure mode and equipped with an auxiliary escape-type self-contained breathing apparatus operated in the pressure demand mode.
Fire fighting	A self-contained breathing apparatus with a full facepiece operated in the pressure demand or other positive pressure mode.

(a) Concentrations expressed as multiple of the PEL.
(b) Respirators assigned for higher environmental concentrations may be used at lower exposure levels. Quantitative fit testing is required for all tight-fitting air-purifying respirators where the airborne concentration of cadmium is more than 10
times the TWA PEL (10 x 5 _g/m3 = 50 _g/m3). A full facepiece respirator is required when eye irritation is experienced.
(c) HEPA means high-efficiency particulate air.
(d) Fit testing, qualitative or quantitative, is required.
(4) An employer shall provide a powered, air-purifying respirator (PAPR) in place of a negative pressure respirator if an employee who is entitled to a respirator chooses to use this type of respirator and if a PAPR respirator will provide adequate protection to the employee.

History: 1993 MR 9, Eff. Sept. 17, 1993; 1999 MR 4, Eff. Apr. 21, 1999.

R 325.51863 Respiratory protection program; fit testing.

Rule 13. (1) The employer shall implement a respiratory protection program in accordance with 29 C.F.R. §1910.134(b) to (d) and (f) to (m), except for (d)(1)(iii).

(2) If an employee exhibits breathing difficulty during fit testing or respirator use, then the employer shall provide the employee with a medical examination under R 325.51868(2)(d) to determine if the employee can use a respirator while preforming the required duties.

(3) An employee shall not use a respirator when, based on his or her most recent medical examination, the examining physician determines that the employee will be unable to continue to function normally while using a respirator. If the physician determines the employee must be limited in, or removed from, the employee's current job because of the employee's inability to use a respirator, then the employer shall conduct the job limitation or removal under R 325.51875 and R 325.51876.

History: 1993 MR 9, Eff. Sept. 17, 1993; 1998 MR 2, Eff. Mar. 1, 1998; 1999 MR 4, Eff. Apr. 21, 1999.

R 325.51864

Source: 1993 AACS.

R 325.51865 Protective work clothing and equipment.

Rule 15. (1) If an employee is exposed to airborne cadmium above the PEL or if skin or eye irritation is associated with cadmium exposure at any level, then an employer shall provide, at no cost to the employee, and ensure that the employee uses, appropriate protective work clothing and equipment that prevents contamination of the employee and the employee's garments. Protective work clothing and equipment includes all of the following:

(a) Coveralls or similar full-body work clothing.

(b) Gloves, head coverings, and boots or foot coverings.

(c) Face shields, vented goggles, or other appropriate protective equipment that is in compliance with the provisions of R 408.13301 et seq. of the Michigan Administrative Code.

(2) All of the following provisions pertain to the removal and storage of protective work clothing and equipment:

(a) An employer shall ensure that employees remove all protective clothing and equipment that is contaminated with cadmium at the completion of the work shift and that employees do so only in change rooms that are provided in accordance with the provisions of R325.51866(2).

(b) An employer shall ensure that an employee does not take cadmium-contaminated protective clothing or equipment from the workplace, except for employees who are authorized to do so for purposes of laundering, cleaning, maintaining, or disposing of cadmium-contaminated protective clothing and equipment at an appropriate location or facility away from the workplace.

(c) An employer shall ensure that contaminated protective clothing and equipment, when removed for laundering, cleaning, maintenance, or disposal, is placed and stored in sealed, impermeable bags or other closed, impermeable containers that are designed to prevent the dispersion of cadmium dust.

(d) An employer shall assure that bags or containers of contaminated protective clothing and equipment that are to be taken out of the change rooms or the workplace for laundering, cleaning, maintenance, or disposal bear labels in accordance with the provisions of R325.51879(3).

(3) All of the following provisions pertain to the cleaning, replacement, and disposal of protective clothing and equipment:

(a) An employer shall provide the protective clothing and equipment required by subrule (1) of this rule in a clean and dry condition as often as necessary to maintain its effectiveness, but at least weekly. An employer is responsible for cleaning and laundering the protective clothing and equipment required by this rule to maintain its effectiveness and is also responsible for disposing of the clothing and equipment.

(b) An employer is responsible for repairing or replacing required protective clothing and equipment as needed to maintain its effectiveness. An employer shall ensure that rips or tears, which are detected while an employee is working are immediately mended or the worksuit shall be immediately replaced.

(c) An employer shall prohibit the removal of cadmium from protective clothing and equipment by blowing,

shaking, or any other means that disperses cadmium into the air.
(d) An employer shall ensure that any laundering of contaminated clothing or cleaning of contaminated equipment in the workplace is done in a manner that prevents the release of airborne cadmium in excess of the PEL.
(e) An employer shall inform any person who launders or cleans protective clothing or equipment contaminated with cadmium of the potentially harmful effects of exposure to cadmium and that the clothing and equipment should be laundered or cleaned in a manner to effectively prevent the release of airborne cadmium in excess of the PEL.
History: 1993 MR 9, Eff. Sept. 17, 1993; 1998 MR 2, Eff. Mar. 1, 1998.

R 325.51866
Source: 1993 AACS.

R 325.51867
Source: 1993 AACS.

R 325.51868 Medical surveillance generally; applicability of subrules (1) and (2).
Rule 18. (1) This subrule applies only to general industry and agricultural operations. An employer shall institute a medical surveillance program as follows:
(a) For all employees who are or may be exposed to cadmium at or above the action level, unless the employer can demonstrate that the employee is not, and will not be, exposed at or above the action level on 30 or more days during a 12-consecutive-month period.
(b) For all employees who, before the effective date of these rules, might previously have been exposed to cadmium at or above the action level by the employer, unless the employer can demonstrate that the employee, before the effective date of these rules, did not work for the employer in jobs with exposure to cadmium for an aggregated total of more than 60 months.
(c) To determine an employee's fitness for wearing a respirator, an employer shall provide the limited medical examination specified by R325.51873(1) and (2).
(2) This subrule applies only to the construction industry. An employer shall institute a medical surveillance program as follows:
(a) For all employees who are or may be exposed at or above the action level.
(b) For all employees who perform any of the following tasks, operations, or jobs:
(i) Electrical grounding with cadmium welding.
(ii) Cutting, brazing, burning, grinding, or welding on surfaces that are painted with cadmium-containing paints.
(iii) Electrical work using cadmium-coated conduit.
(iv) Use of cadmium-containing paints.
(v) Cutting and welding cadmium-plated steel.
(vi) Brazing or welding with cadmium alloys.
(vii) Fusing of reinforced steel by cadmium welding.
(viii) Maintaining or retrofitting cadmium-coated equipment.
(ix) Wrecking and demolition where cadmium is present.
(c) For all employees who previously might have been exposed to cadmium by the employer before the effective date of these rules in tasks listed in subdivision (b) of this subrule, unless the employer can demonstrate that the employee, in the years before the effective date of these rules, did not work in those tasks for the employer with exposure to cadmium for an aggregated total of more than 12 months.
(d) To determine an employee's fitness for wearing a respirator, an employer shall provide the limited medical examination specified by R 325.51873(1) and (2).
(e) A medical surveillance program is not required if an employer can demonstrate that both of the following provisions apply:
(i) An employee is not currently exposed by the employer to airborne concentrations of cadmium at or above the action level on 30 or more days during a 12-consecutive-month period.
(ii) An employee is not currently exposed by the employer in those tasks listed in subdivision (b) of this

subrule on 30 or more days during a 12-consecutive-month period.
(3) An employer shall ensure that all medical examinations and procedures that are required by these rules are performed by or under the supervision of a licensed physician who has read, and is familiar with, all of the following:
(a) The health effects section of appendix A.
(b) The regulatory text of these rules.
(c) The protocol for sample handling and laboratory selection in appendix F.
(d) The questionnaire in appendix D.
All medical surveillance, examinations, tests, and procedures shall be provided without cost to the employee and at a time and place that is reasonable and convenient for employees.
(4) An employer shall ensure that the collection and handling of biological samples of cadmium in urine (CdU), cadmium in blood (CdB), and beta-2 microglobulin in urine (2-M) taken from employees is done in a manner that ensures the integrity and reliability of the samples and that analysis of the samples is performed in laboratories that have a demonstrated proficiency for the particular analyte. See appendix F.
History: 1993 MR 9, Eff. Sept. 17, 1993; 1998 MR 2, Eff. Mar. 1, 1998.

R 325.51869
Source: 1993 AACS.

R 325.51870 Initial biological monitoring; medical removal; applicability of subrules (4) and (5).
Rule 20. (1) If the results of the initial biological monitoring tests specified in R 325.51869(2)(b) show the employee's CdU level to be at or below 3 g/g Cr, the 2-M level to be at or below 300 g/g Cr, and the CdB level to be at or below 5 g/lwb, then the employer shall comply with the following provisions, as applicable:
(a) For currently exposed employees who are subject to medical surveillance pursuant to the provisions of R 325.51868(1)(a) or (2)(a) and (b), an employer shall provide the minimum level of periodic medical surveillance in accordance with the requirements in R 325.51871.
(b) For previously exposed employees who are subject to medical surveillance pursuant to the provisions of R 325.51868(1)(b) or (2)(c), an employer shall provide biological monitoring for CdU, 2-M, and CdB 1 year after the initial biological monitoring and then the employer shall comply with the requirements of R 325.51871(4). (2) For all employees who are subject to medical surveillance pursuant to the provisions of R 325.51868(1) or (2), if the results of the initial biological monitoring tests show the level of CdU to be more than 3 g/g Cr, the level of 2-M to be more than 300 g/g Cr, or the level of CdB to be more than 5 g/lwb, then an employer shall comply with all of the following provisions:
(a) Within 2 weeks after receipt of biological monitoring results, reassess the employee's occupational exposure to cadmium as follows:
(i)Reassess the employee's work practices and personal hygiene.
(ii) Reevaluate the employee's respirator use, if any, and the respirator program.
(iii) Review the hygiene facilities required pursuant to the provisions of R 325.51866.
(iv) Reevaluate the maintenance and effectiveness of the relevant engineering controls.
(v) Assess the employee's smoking history and status.
(b) Within 30 days after the exposure reassessment specified in subdivision (a) of this subrule, take reasonable steps to correct any deficiencies found in the reassessment that may be responsible for the employee's excess exposure to cadmium.
(c) Within 90 days after receipt of biological monitoring results, provide a full medical examination to the employee in accordance with the requirements of R 325.51871(2). After completing the medical examination, the examining physician shall determine, in a written medical opinion, whether to medically remove the employee. If the physician determines that medical removal is not necessary, then until the employee's CdU level falls to or below 3 g/g Cr, the 2-M level falls to or below 300 g/gCr, and the CdB level falls to or below 5 g/lwb, an employer shall do both of the following:
(i) Provide biological monitoring in accordance with the provisions of R 325.51869(2)(b) on a semiannual basis.
(ii) Provide annual medical examinations in accordance with the provisions of R 325.51871(2).
(3) For all employees who are subject to medical surveillance pursuant to the provisions of R 325.51868(1) or

(2), if the results of the initial biological monitoring tests show the level of CdU to be more than 15 g/g Cr, or the level of CdB to be more than 15 g/lwb, or the level of 2-M to be more than 1,500 g/g Cr, then an employer shall comply with the requirements of subrule (2)(a) and (b) of this rule. Within 90 days after receipt of biological monitoring results, the employer shall provide a full medical examination to the employee in accordance with the requirements of R 325.51871(2). After completing the medical examination, the examining physician shall determine, in a written medical opinion, whether to medically remove the employee. However, if the initial biological monitoring results and the biological monitoring results obtained during the medical examination both show the level of CdU to be more than 15 g/g Cr, the level of CdB to be more than 15 g/lwb, or the level of 2-M to be more than 1500g/gCr and, in addition, the level of CdU is more than 3 g/g Cr or CdB is more than 5g/lwb, then the physician shall medically remove the employee from exposure to cadmium at or above the action level. If the second set of biological monitoring results obtained during the medical examination does not show that a mandatory removal trigger level has been exceeded, then the employee is not required to be removed by the mandatory provisions of this subrule. If the employee is not required to be removed by the mandatory provision of this subrule or by the physician's determination, then until the employee's CdU level falls to or below 3 g/g Cr, the 2-M level falls to or below 300 g/g Cr, and the CdB level falls to or below 5 g/lwb, an employer shall do all of the following:

(a) Periodically reassess the employee's occupational exposure to cadmium.

(b) Provide biological monitoring in accordance with the provisions of R 325.51869(2)(b) on a quarterly basis.

(c) Provide semiannual medical examinations in accordance with the provisions of R325.51871(2).

(4) This subrule applies only to general industry and agricultural operations. Beginning on January 1, 1999, for all employees to whom medical surveillance is provided, an employer shall comply with all of the following provisions rather than subrules (1) to (3) of this rule:

(a) If the results of the initial biological monitoring tests show the employee's CdU level to be at or below 3 g/g Cr, the 2-M level to be at or below 300 g/g Cr, and the CdB level to be at or below 5 g/lwb, then, for currently exposed employees, an employer shall comply with the requirements of subrule (1)(a) of this rule, and, for previously exposed employees, the employer shall comply with the requirements of subrule(1)(b) of this rule.

(b) If the results of the initial biological monitoring tests show the level of CdU to be more than 3 g/g Cr, the level of 2-M to be more than 300g/g Cr, or the level of CdB to be more than 5 g/lwb, then an employer shall comply with the requirements of subrule (2) of this rule.

(c) If the results of the initial biological monitoring tests show the level of CdU to be more than 7 g/g Cr, or the level of CdB to be more than 10 g/lwb, or the level of 2-M to be more than 750g/gCr, then an employer shall do all of the following, if applicable:

(i) Comply with the requirements of subrule (2)(a) and (b) of this rule and, within 90 days after receipt of biological monitoring results, provide a full medical examination for the employee in accordance with the requirements of R 325.51871(2).

(ii) After completing the medical examination, the examining physician shall determine, in a written medical opinion, whether to medically remove the employee.

(iii) If the initial biological monitoring results and the biological monitoring results obtained during the medical examination both show that the level of CdU is more than 7 g/g Cr, the level of CdB is more than 10 g/lwb, or the level of 2-M is more than 750g/g Cr and, in addition, the level of CdU is more than 3 g/g Cr or the level of CdB is more than 5 g/lwb, then the physician shall medically remove the employee from exposure to cadmium at or above the action level.

(iv) If the second set of biological monitoring results obtained during the medical examination does not show that a mandatory removal trigger level has been exceeded, then the employee is not required to be removed by the mandatory provisions of this subrule.

(v) If the employee is not required to be removed by the mandatory provisions of this subrule or by the physician's determination, then until the employee's CdU level falls to or below 3 g/g Cr, the 2-M level falls to or below 300g/g Cr, and the CdB level falls to or below 5 g/lwb, an employer shall do all of the following:

(A) Periodically reassess the employees's occupational exposure to cadmium.

(B) Provide biological monitoring in accordance with the provisions of R 325.51869(2) every 3 months.

(C) Provide semiannual medical examinations in accordance with the provisions of R325.51871(2).

(5) This subrule applies only to the construction industry. Beginning on January 1, 1999, for all employees to

whom medical surveillance is provided, an employer shall comply with all of the following provisions rather than the provisions of subrules (1) to (3) of this rule:
(a) If the results of initial biological monitoring tests show the employee's CdU level to be more than 7 g/g Cr, or the 2-M level to be more than 750g/g Cr, or the CdB level to be more than 10 g/lwb, an employer shall comply with the requirements of subrule (2) of this rule.
(b) Within 90 days after receipt of biological monitoring results, an employer shall provide a full medical examination to the employee in accordance with the requirements of R 325.51871(2).
(c) After completing the medical examination, the examining physician shall determine, in a written medical opinion, whether to medically remove the employee.
(d) If the initial biological monitoring results and the biological monitoring results obtained during the medical examination both show that the level of CdU is more than 7 g/g Cr, the level of CdB is more than 10 g/lwb, or the level of 2-M is more than 750g/g Cr and, in addition, the level of CdU is more than 3 g/g Cr or the level of CdB is more than 5g/lwb, then the physician shall medically remove the employee from exposure to cadmium at or above the action level.
(e) If the second set of biological monitoring results obtained during the medical examination does not show that a mandatory removal trigger level has been exceeded, then the employee is not required to be removed by the mandatory provisions of this subrule.
(f) If the employee is not required to be removed by the mandatory provisions of this subrule or by the physician's determination, then until the employee's CdU level falls to or below 3 g/g Cr, the 2-M level falls to or below 300 g/g Cr, and the CdB level falls to or below 5 g/lwb, an employer shall do all of the following:
(i) Periodically reassess the employee's occupational exposure to cadmium.
(ii) Provide biological monitoring in accordance with the provisions of R 325.51869(2) every 3 months.
(iii) Provide semiannual medical examinations in accordance with the provisions of R325.51871(2).
History: 1993 MR 9, Eff. Sept. 17, 1993; 1998 MR 2, Eff. Mar. 1, 1998.

R 325.51871
Source: 1993 AACS.

R 325.51872 Actions triggered by medical examinations; applicability of subrules (1) and (2).

Rule 22. (1) This subrule applies only to general industry and agricultural operations. If the results of a medical examination carried out in accordance with these rules indicate any laboratory or clinical finding consistent with cadmium toxicity that does not require employer action required by R325.51869 to R 325.51871, then an employer shall, within 30 days, reassess the employee's occupational exposure to cadmium and take all of the following corrective actions until the physician determines they are no longer necessary:
(a) Periodically reassess all of the following:
(i) The employee's work practices and personal hygiene.
(ii) The employee's respirator use.
(iii) The employee's smoking history and status.
(iv) The respiratory protection program.
(v) The hygiene facilities.
(vi) The maintenance and effectiveness of the relevant engineering controls.
(b) Within 30 days after the reassessment, take all reasonable steps to correct the deficiencies found that may be responsible for the employee's excess exposure to cadmium.
(c) Provide medical reexaminations every 6 months to evaluate the abnormal clinical signs of cadmium toxicity until the results are normal or the employee is medically removed.
(d) If the results of tests for total proteins in urine are abnormal, provide a more detailed medical evaluation of the toxic effects of cadmium on the employee's renal system.
(2) This subrule applies only to the construction industry. If the results of a medical examination carried out in accordance with these rules indicate any laboratory or clinical finding consistent with cadmium toxicity that does not require employer action required by R325.51869 to R 325.51871, an employer shall take all of the following actions and continue to take them until the physician determines that they are no longer necessary:

(a) Periodically reassess all of the following:
(i) The employee's work practices and personal hygiene.
(ii) The employee's respirator use.
(iii) The employee's smoking history and status.
(iv) The respiratory protection program.
(v) The hygiene facilities.
(vi) The maintenance and effectiveness of the relevant engineering controls.
The employer shall take all reasonable steps to correct the deficiencies discovered by this reassessment that may be responsible for the employee's excess exposure to cadmium.
(b) Provide medical reexaminations every 6 months to evaluate the abnormal clinical signs of cadmium toxicity until the results are normal or the employee is medically removed.
(c) If the results of tests for total proteins in urine are abnormal, provide a more detailed medical evaluation of the toxic effects of cadmium on the employee's renal system.
History: 1993 MR 9, Eff. Sept. 17, 1993; 1998 MR 2, Eff. Mar. 1, 1998.

R 325.51873
Source: 1993 AACS.

R 325.51874
Source: 1993 AACS.

R 325.51875 Medical removal protection (MRP); applicability of subrule (1) (d) and (e).
Rule 25. (1) All of the following provisions pertain to the removal of an employee from work that exposes the employee to cadmium:
(a) An employer shall temporarily remove an employee from work if the exposure level exceeds the action level on each occasion that medical removal is required by the provisions of R 325.51870, R325.51871, or R 325.51873(1) and (2) and on each occasion that a physician determines, in a written medical opinion, that the employee should be removed from such exposure. The physician's determination may be based on any of the following factors:
(i) Biological monitoring results.
(ii) Inability to wear a respirator.
(iii) Evidence of illness.
(iv) Other signs or symptoms of cadmium-related dysfunction or disease.
(v) Any other reason deemed medically sufficient by the physician.
(b) An employer shall medically remove an employee in accordance with the provisions of subdivision (a) of this subrule regardless of whether or not a job is available into which the removed employee may be transferred.
(c) If an employee is medically removed pursuant to the provisions of this subrule, then an employer shall transfer the removed employee to a job where the exposure to cadmium is at or below the permissible levels specified in this subrule as soon as a job becomes available.
(d) This subdivision applies only to general industry and agricultural operations. For an employee who is medically removed pursuant to the provisions of subdivision (a) of this subrule, an employer shall provide follow-up biological monitoring in accordance with the provisions of R325.51869(2)(b) at least once every 3 months and follow-up medical examinations at least once every 6 months until, in a written medical opinion, the examining physician determines that either the employee may be returned to his or her former job status as specified pursuant to the provisions of subrules (3) and (4) of this rule or the employee must be permanently removed from excess cadmium exposure.
(e) This subdivision applies only to the construction industry. For any employee who is medically removed pursuant to the provisions of subdivision (a) of this subrule, an employer shall provide follow-up medical examinations once every 6 months until, in a written medical opinion, the examining physician determines that either the employee may be returned to his or her former job status or the employee must be permanently removed from excess cadmium exposure.
(f) An employer shall not return an employee who has been medically removed for any reason to his or her

former job status until a physician determines, in a written medical opinion, that continued medical removal is no longer necessary to protect the employee's health.

(2) If an employee is found to be unfit to wear a respirator pursuant to the provisions of R 325.51873(2)(a), then an employer shall remove the employee from work if exposure to cadmium is above the PEL. If removal is based on any reason other that the employee's inability to wear a respirator, then an employer shall remove the employee from work if exposure to cadmium is at or above the action level.

(3) Except as specified in subrule (4) of this rule, an employee who was removed because his or her level of CdU, CdB, or 2-M exceeded the medical removal trigger levels in R 325.51870 and R 325.51871 shall not be returned to work if there is an exposure to cadmium at or above the action level until the employee's level of CdU falls to or below 3g/g Cr, the level of CdB falls to or below 5 g/lwb, and the level of 2-M falls to or below 300 g/g Cr.

(4) If in the examining physician's opinion continued exposure to cadmium will not pose an increased risk to the employee's health and there are special circumstances that make continued medical removal an inappropriate remedy, the physician shall fully discuss these matters with the employee and then, in a written determination, may return a worker to his or her former job status despite what would otherwise be unacceptably high biological monitoring results. Thereafter, the returned employee shall continue to be provided with medical surveillance as if he or she was still on medical removal until the employee's level of CdU falls to or below 3 g/g Cr, the level of CdB falls to or below 5 g/lwb, and the level of 2-M falls to or below 300 g/g Cr. Until these biological monitoring levels are achieved, the employee is not subject to mandatory medical removal. Subsequent questions regarding the employee's medical removal shall be decided solely by a final medical determination.

(5) If an employer, although not required by the provisions of subrules (1) and (2) of this rule to do so, removes an employee from exposure to cadmium or otherwise places limitations on an employee due to the effects of cadmium exposure on the employee's medical condition, then the employer shall provide the same medical removal protection benefits to that employee, as required by R 325.51876, as would have been provided had the removal been required by the provisions of this rule.

History: 1993 MR 9, Eff. Sept. 17, 1993; 1998 MR 2, Eff. Mar. 1, 1998.

R 325.51876
Source: 1993 AACS.

R 325.51877
Source: 1993 AACS.

R 325.51878
Source: 1993 AACS.

R 325.51879 Communication of cadmium hazards to employees.

Rule 29. (1) In communications to employees concerning cadmium hazards, an employer shall comply with the requirements of the occupational safety and health administration (OSHA) hazard communication standard, being 29 C.F.R. 1910.1200, which is incorporated by section 14a of Act No. 154 of the Public Acts of 1974, as amended, being 408.1014a of the Michigan Compiled Laws. In addition to section 14a of Act No. 154 of the Public Acts of 1974, as amended, an employer shall comply with, the requirements of the amended occupational safety and health administration (OSHA) hazard communication standards for general industry or the construction industry, being 29 C.F.R. 1910.1200 and 29 C.F.R. 1926.59, which were adopted by reference in R 325.77001 et seq. of the Michigan Administrative Code. The hazard communication requirements include labels, material safety data sheets (MSDS), and employee information and training.

(2) Warning signs shall be provided and displayed in regulated areas. In addition, warning signs shall be posted at all approaches to regulated areas so that an employee may read the signs and take the necessary protective steps before entering the regulated area. Both of the following provisions pertain to warning signs:

(a) Warning signs shall bear the following legend:

DANGER

CADMIUM
CANCER HAZARD
CAN CAUSE LUNG AND KIDNEY DISEASE
AUTHORIZED PERSONNEL ONLY
RESPIRATORS REQUIRED IN THIS AREA

(b) An employer shall ensure that warning signs that are required by this subrule are illuminated, cleaned, and maintained as necessary so that the legend is readily visible.
(3) An employer shall comply with the labeling requirements of 29 C.F.R.
1910.1200 and 29 C.F.R.1926.59 and shall ensure that all shipping and storage containers that contain cadmium, cadmium compounds, or cadmium-contaminated clothing, equipment, waste, scrap, or debris bear appropriate warning labels. At a minimum, a warning label shall include all of the following information:

DANGER
CONTAINS CADMIUM
CANCER HAZARD
AVOID CREATING DUST
CAN CAUSE LUNG AND KIDNEY DISEASE

Also, where feasible, installed cadmium products shall have a visible label or other indication that cadmium is present.
History: 1993 MR 9, Eff. Sept. 17, 1993; 1998 MR 2, Eff. Mar. 1, 1998.

R 325.51880 Employee information and training; applicability of subrule (4).

Rule 30. (1) An employer shall institute a training program for all employees who may be exposed to cadmium, assure employee participation in the program, and maintain a record of the contents of the program. Employee training shall be provided before or at the time of initial assignment to a job that involves potential exposure to cadmium and at least annually thereafter.
(2) An employer shall make the training program understandable to the employee and shall ensure that each employee is informed of all of the following:
(a) The health hazards associated with cadmium exposure, with special attention to the type of information provided in appendix A.
(b) The quantity, location, manner of use, release, and storage of cadmium in the workplace and the specific nature of operations that could result in exposure to cadmium, especially exposure above the PEL.
(c) The engineering controls and work practices associated with the employee's job assignment.
(d) The measures employees can take to protect themselves from exposure to cadmium, including modification of smoking and personal hygiene habits, and the specific procedures the employer has implemented to protect employees from exposure to cadmium, such as appropriate work practices, emergency procedures, and the provision of personal protective equipment.
(e) The purpose, proper selection, fitting, proper use, and limitations of respirators and protective clothing.
(f) The purpose and a description of the medical surveillance program required pursuant to the provisions of R 325.51868 to R325.51878.
(g) The contents of these rules and the appendices to these rules.
(h) The employee's right of access to records as provided by the provisions of R325.3460 to R 325.3471 and R 325.3473.
(3) An employer shall make a copy of these rules and the appendices to these rules readily available without cost to all affected employees and shall provide a copy if requested. Also, an employer shall provide to the director, upon request, all materials relating to the employee information and training program.
(4) This subrule applies only to the construction industry. In a multiemployer workplace, an employer who produces, uses, or stores cadmium in a manner that may expose employees of other employers to cadmium shall notify the other employers of the potential hazards in accordance with the provisions of 29C.F.R. 1926.59(4)(2)(i)-(iii), which is referenced in R 325.51879(1).
History: 1993 MR 9, Eff. Sept. 17, 1993; 1998 MR 2, Eff. Mar. 1, 1998.

R 325.51881
Source: 1993 AACS.

R 325.51882
Source: 1993 AACS.

R 325.51883 Compliance dates.

Rule 33. (1) All of the requirements of these rules that apply to general industry And agricultural operations shall commence on the effective date of these rules, except as follows:

(a) Except for small businesses that have 19 or fewer employees, initial monitoring that is required by the provisions of R 325.51855 shall be completed as soon as possible, but not later than 60 days after the effective date of these rules. For small businesses, initial monitoring shall be completed as soon as possible, but not later than 120 days after the effective date of these rules.

(b) Except for small businesses that have 19 or fewer employees, regulated areas that are required by the provisions of R 325.51857 shall be established as soon as possible after the results of exposure monitoring are known, but not later than 90 days after the effective date of these rules. For small businesses, required regulated areas shall be established as soon as possible after the results of exposure monitoring are known, but not later than 150 days after the effective date of these rules.

(c) Except for small businesses that have 19 or fewer employees, respiratory protection that is required by the provisions of R325.51862 and R 325.51863 shall be provided as soon as possible, but not later than 90 days after the effective date of these rules. For small businesses, respiratory protection shall be provided as soon as possible, but not later than 150 days after the effective date of these rules.

(d) Written compliance programs that are required by the provisions of R 325.51858(7) shall be completed and available for inspection and copying as soon as possible, but not later than 1 year after the effective date of these rules.

(e) The engineering controls that are required by the provisions of R 325.51858(1) to (6) shall be implemented as soon as possible, but not later than 2 years after the effective date of these rules. Work practice controls shall be implemented as soon as possible. Work practice controls that are directly related to engineering controls to be implemented in accordance with the compliance plan shall be implemented as soon as possible after the engineering controls are implemented.

(f) Permanent or temporary hand-washing facilities shall be provided as soon as possible, but not later than 60 days after the effective date of these rules.

(g) Change rooms, showers, and lunchroom facilities shall be provided as soon as possible, but not later than 1 year after the effective date of these rules.

(h) Except for small businesses that have 19 or fewer employees, the employee information and training that is required by the provisions of R 325.51880 shall be provided as soon as possible, but not later than 90 days after the effective date of these rules. For small businesses, employee information and training shall be provided as soon as possible, but not later than 180 days after the effective date of these rules.

(i) Except for small businesses that have 19 or fewer employees, initial medical examinations that are required by the provisions of R325.51869 shall be provided as soon as possible, but not later than 90 days after the effective date of these rules. For small businesses, initial medical examinations shall be provided as soon as possible, but not later than 180 days after the effective date of these rules.

(2) All of the requirements of these rules that apply to the construction industry shall commence on the effective date of these rules, except as follows:

(a) Except for small businesses that have 19 or fewer employees, initial monitoring that is required by the provisions of R 325.51855 shall be completed as soon as possible, but not later than 60 days after the effective date of these rules. For small businesses, initial monitoring shall be completed as soon as possible, but not later than 120 days after the effective date of these rules.

(b) Except for small businesses that have 19 or fewer employees, an employer shall comply with the PEL established pursuant to the provisions of R 325.51853 as soon as possible, but not later than 90 days after the effective date of these rules. For small businesses, an employer shall comply with the PEL as soon as possible, but not later than 150 days after the effective date of these rules.

(c) Except for small businesses that have 19 or fewer employees, regulated areas that are required by the

provisions of R 325.51857 shall be established as soon as possible after the results of exposure monitoring are known, but not later than 90 days after the effective date of these rules. For small businesses, regulated areas shall be set up as soon as possible after the results of exposure monitoring are known, but not later than 150 days after the effective date of these rules.
(d) Except for small businesses that have 19 or fewer employees, respiratory protection that is required by the provisions of R 325.51862 and R 325.51863 shall be provided as soon as possible, but not later than 90 days after the effective date of these rules. For small businesses, respiratory protection shall be provided as soon as possible, but not later than 150 days after the effective date of these rules.
(e) Except for small businesses that have 19 or fewer employees, written compliance programs that are required by the provisions of R325.51861(1) shall be completed and available as soon as possible, but not later than 90 days after the effective date of these rules. For small businesses, written compliance programs shall be completed and available as soon as possible, but not later than 180 days after the effective date of these rules.
(f) Except for small businesses that have 19 or fewer employees, the engineering controls that are required by the provisions of R325.51859(1) to (4) shall be implemented as soon as possible, but not later than 120 days after the effective date of these rules. For small businesses, the engineering controls shall be implemented as soon as possible, but not later than 240 days after the effective date of these rules. Work practice controls shall be implemented as soon as possible. Work practice controls that are directly related to engineering controls to be implemented shall be implemented as soon as possible after the engineering controls are implemented.
(g) Except for small businesses that have 19 or fewer employees, hand-washing facilities, showers, change rooms, and eating facilities that are required by the provisions of R 325.51866, whether permanent or temporary, shall be provided as soon as possible, but not later than 60 days after the effective date of these rules. For small businesses, hand-washing facilities, showers, change rooms, and eating facilities, whether permanent or temporary, shall be provided as soon as possible, but not later than 120 days after the effective date of these rules.
(h) Except for small businesses that have 19 or fewer employees, employee information and training that is required by the provisions of R 325.51880 shall be provided as soon as possible, but not later than 90 days after the effective date of these rules. For small businesses, employee information and training shall be provided as soon as possible, but not later than 180 days after the effective date of these rules.
(i) Except for small businesses that have 19 or fewer employees, initial medical examinations that are required by the provisions of R325.51869 shall be provided as soon as possible, but not later than 90 days after the effective date of these rules. For small businesses, initial medical examinations shall be provided as soon as possible, but not later than 180 days after the effective date of these rules.
History: 1993 MR 9, Eff. Sept. 17, 1993; 1998 MR 2, Eff. Mar, 1 1998.

R 325.51884
Source: 1993 AACS.

R 325.51885 Appendices.
Rule 35. Appendices A, B, D, E, and F to these rules are informational only and are not intended to create any additional obligations or requirements not otherwise imposed or to detract from any established obligations and requirements.
History: 1993 MR 9, Eff. Sept. 17, 1993; 1998 MR 2, Eff. Mar. 1, 1998; 1999 MR 4, Eff. Apr. 21, 1999.

R 325.51886 Availability of rules and appendices; permission to copy.
Rule 36. (1) Copies of these rules and appendices are available at no cost from the Michigan Department of Consumer and Industry Services, MIOSHA Standards Division, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan 48909.
(2) Permission to copy any of these documents in full is granted by the director.
History: 1993 MR 9, Eff. Sept. 17, 1993; 1998 MR 2, Eff. Mar. 1, 1998.

LEAD

R 325.51901 Scope and application.

Rule 1. These rules apply to all occupational exposures to lead, except that they do not apply to construction work or to agricultural operations.

History: 1979 ACS 5, Eff. Jan. 21, 1981; 1987 MR 7, Eff. Aug. 4, 1987; 1998 MR 2, Eff. Mar. 5, 1998.

R 325.51902 Definitions.

Rule 2. (1) As used in these rules:

(a) "Act" means Act No. 154 of the Public Acts of 1974, as amended, being 408.1001 et seq. of the Michigan Compiled Laws.

(b) "Action level" means employee exposure, without regard to the use of respirators, to an airborne concentration of lead of 30 micrograms per cubic meter (30 ug/m3) of air averaged over an 8-hour period.

(c) "Chelate" means a compound that will inactivate a metallic ion by forming an inner ring structure in the molecule whereby the metal ion becomes a member of the ring and the original ion is effectively out of action.

(d) "Department" means the department of consumer and industry services.

(e) "Director" means the director of the department or his or her designee.

(f) "Lead" means metallic lead, all inorganic lead compounds, and organic lead soaps. Lead does not include any other organic lead compound.

(g) "O.H. rule" means an occupational health rule incorporated by reference under section 14 of the act or promulgated under section 24 of the act. Copies of O.H. rules are available from the department.

(h) "Zinc protoporphyrin or ZPP" means the metabolite formed when a zinc molecule instead of an iron molecule combines with the protoporphyrin molecule. ZPP gives an indication of the biological effect of lead absorption on heme synthesis. Heme is the basic component of both hemoglobin, which functions in the transportation of oxygen from the lungs to the body cells, and the cytochromes, which function in the respiration of the individual cells.

(2) The terms defined in the act have the same meanings when used in these rules.

History: 1979 ACS 5, Eff. Jan. 21, 1981; 1987 MR 7, Eff. Aug. 4, 1987; 1998 MR 2, Eff. Mar. 5, 1998.

R 325.51903 Airborne concentrations; permissible employee exposure limits.

Rule 3. (1) An employer shall assure that an employee will not be exposed to lead at a concentration of more than 50 micrograms per cubic meter (50 ug/m3) of air, averaged over an 8-hour period.

(2) If an employee is exposed to lead for more than 8 hours in any workday, then the permissible employee exposure limit as a time-weighted average for that day shall be reduced in accordance with formula A.

(3) Formula A reads as follows:

Maximum permissible employee exposure limit (in ug/m3) = 400 hours - hours worked in the day.

History: 1979 ACS 5, Eff. Jan. 21, 1981; 1987 MR 7, Eff. Aug. 4, 1987; 1998 MR 2, Eff. Mar. 5, 1998.

R 325.51904 Permissible employee exposure limit; use of respirators.

Rule 4. If respirators are used to supplement engineering and work practice controls to comply with the permissible employee exposure limit, and if all of the requirements of R 325.51917 have been met, then employee exposure, for the purpose of determining if an employer has complied with the permissible employee exposure limit, may be considered to be at the level provided by the protection factor of the respirator for those periods the respirator is worn. Those periods the respirator is worn may be averaged with exposure levels during periods when respirators are not worn to determine an employee's daily time-weighted average exposure to lead.

History: 1979 ACS 5, Eff. Jan. 21, 1981; 2000 MR 16, Eff. Oct. 12, 2000.

R 325.51905 Exposure monitoring generally.

Rule 5. (1) For purposes of this rule and R 325.51906 to R 325.51913, employee exposure to lead shall be the exposure that might occur if an employee did not use a respirator.

(2) Except for exposure monitoring under R 325.51907, an employer shall collect personal samples that are representative of the full shift exposure for each worker for each shift in each work area in accordance with

recognized industrial hygiene practices. As used in this subrule, full shift means not less than 7 continuous hours.
(3) Personal samples shall be representative of a monitored employees regular daily exposure to lead.
History: 1979 ACS 5, Eff. Jan. 21, 1981; 1987 MR 7, Eff. Aug. 4, 1987; 1998 MR 2, Eff. Mar. 5, 1998.

R 325.51906 Exposure monitoring; initial determination.
Rule 6. An employer who has a workplace or work operation subject to these rules shall determine if an employee might be exposed to lead at or above the action level.
History: 1979 ACS 5, Eff. Jan. 21, 1981; 1987 MR 7, Eff. Aug. 4, 1987; 1998 MR 2, Eff. Mar. 5, 1998.

R 325.51907
Source: 1981 AACS.

R 325.51908 Exposure monitoring; positive initial determination.
Rule 8. (1) If a determination conducted under R 325.51906 and R 325.51907 shows the possibility of employee exposure to lead at or above the action level, Then an employer shall conduct monitoring that is representative of the exposure for each employee in the workplace who is exposed to lead.
(2) Measurements of airborne lead concentrations made in the preceding 12 months may be used to satisfy the requirement to monitor under subrule (1) of this rule if the sampling and analytical methods used meet the accuracy and confidence levels required by R 325.51913.
History: 1979 ACS 5, Eff. Jan. 21, 1981; 1987 MR 7, Eff. Aug. 4, 1987; 1998 MR 2, Eff. Mar. 5, 1998..

R 325.51909
Source: 1981 AACS.

R 325.51910
Source: 1981 AACS.

R 325.51911
Source: 1981 AACS.

R 325.51912
Source: 1981 AACS.

R 325.51913
Source: 1981 AACS.

R 325.51914 Methods of compliance; engineering and work practice controls.
Rule 14. (1) If an employee is exposed to lead above the permissible exposure limit for more than 30 days each year, then the employer shall implement engineering and work practice controls, including administrative controls, to reduce and maintain employee exposure to at or below 50 ug/m3; except employers in the brass and bronze ingot manufacture industry and small non-ferrous foundries, who must reduce and maintain employee exposure to at or below 75 ug/m3 in accordance with Table 1 of this rule, except to the extent that the employer can demonstrate that the controls are not feasible. If the engineering and work practice controls that can be instituted are not sufficient to reduce employee exposure to at or below the permissible exposure limit, then the employer shall use the controls to reduce exposures to the lowest feasible level and shall supplement the controls by using respiratory protection that is in compliance with the requirements of R 325.51917.
(2) If an employee is exposed to lead above the permissible exposure limit for 30 days or less each year, then the employer shall implement engineering controls to reduce exposures to at or below 200 ug/m3, but thereafter may implement any combination of engineering, work practice, including administrative controls, and respiratory controls to reduce and maintain employee exposure to lead to at or below 50 ug/m3.
(3) Table 1 reads as follows:

TABLE 1 - Implementation Schedule

Industry	Compliance Dates		
	50 ug/m^3	75 ug/m^3	200 ug/m^3
Large Non-Ferrous Foundries	7/19/96[1]	N/A	N/A
Small Non-Ferrous Foundries	N/A	7/19/96[1]	N/A
Brass and Bronze Ingot Manufacture	N/A	6 years[2]	3/1/79[3]

[1]Large non-ferrous foundries that have 20 or more employees shall achieve 50 ug/m^3 by means of engineering and work practice controls. Small non-ferrous foundries that have fewer than 20 employees, however, are only required to achieve 75 ug/m^3 by means of engineering and work practice controls.
[2]Expressed as the number of years from the date on which the court lifts the stay on the implementation of paragraph 1910.1025(e)(1) of the Code of Federal Regulations for this industry for employers to achieve a lead-in-air concentration of 75 ug/m^3. Compliance with paragraph 1910.1025(e)(1) in this industry is determined by a compliance directive that incorporates the elements from the settlement agreement between OSHA and industry representatives.
[3]7/28/84. This continues an obligation from table G-2 of O.H. rule 2103, which had been in effect since 1974, but which was deleted upon the effectiveness of this rule.

1 Large non-ferrous foundries that have 20 or more employees shall achieve 50 ug/m3 by means of engineering and work practice controls. Small non-ferrous foundries that have fewer than 20 employees, however, are only required to achieve 75 ug/m3 by means of engineering and work practice controls.
2 Expressed as the number of years from the date on which the court lifts the stay on the implementation of paragraph 1910.1025(e)(1) of the Code of Federal Regulations for this industry for employers to achieve a lead-in-air concentration of 75 ug/m3. Compliance with paragraph 1910.1025(e)(1) in this industry is determined by a compliance directive that incorporates the elements from the settlement agreement between OSHA and industry representatives.
3 7/28/84. This continues an obligation from table G-2 of O.H. rule 2103, which had been in effect since 1974, but which was deleted upon the effectiveness of this rule.
(4) If engineering and work practice controls do not reduce employee exposure to at or below the 50 micrograms per cubic meter (50 ug/m3) of air permissible employee exposure limit, then an employer shall supplement the controls with respirators in accordance with the provisions of R 325.51917.
History: 1979 ACS 5, Eff. Jan. 21, 1981; 1984 MR 7, Eff. July 28, 1984; 1987 MR 7, Eff. Aug. 4, 1987; 1998 MR 2, Eff. Mar. 5, 1998; 2000 MR 16, Eff. Oct. 12, 2000.

R 325.51915
Source: 1984 AACS.

R 325.51916 Rescinded.
History: 1979 ACS 5, Eff. Jan. 21, 1981; 1984 MR 7, Eff. July 28, 1984; rescinded 1998 MR 2, Eff. Mar. 5, 1998.

R 325.51916a
Source: 1984 AACS.

R 325.51916b
Source: 1984 AACS.

R 325.51917 Respiratory protection.

Rule 17. (1) An employer shall provide respirators that comply with the requirements of these rules, for employees who use respirators required by this subrule. An employer shall ensure that an employee uses a respirator during all of the following:
(a) Periods necessary to install or implement engineering or work practice controls.
(b) Work operations for which engineering and work practice controls are not sufficient to reduce employee exposures to or below the permissible employee exposure limit.
(c) Periods when an employee requests a respirator.
(2) An employer shall implement a respiratory protection program in accordance with 29 C.F.R. 1910.134 (b) to (d) and (f) to (m), except for (d)(1)(iii), as adopted by reference in the respiratory protection standard, being R 325.60051 et seq. of the Michigan Administrative Code.
(3) If an employee has breathing difficulty during fit testing or respirator use, then the employer shall provide the employee with a medical examination in accordance with R 325.51937(c) to determine whether or not the employee can use a respirator while performing the required duty.
(4) An employer shall select the appropriate respirator or combination of respirators as set forth in table 2.

Table 2
Respiratory Protection for Lead Aerosols

Airborne Concentration of Lead Or Condition of Use	Required Respirator[1]
Not more than 500 ug/m^3 (10 x PEL)	Half-mask, air-purifying respirator equipped with high-efficiency filters.[2,3]
Not more than 2500 ug/m^3 (50 x PEL)	Full facepiece, air-purifying respirator with high-efficiency filters.[3]
Not more than 50,000 ug/m^3 (1000 x PEL)	(1) Any powered, air-purifying respirator with high-efficiency filters.[3] (2) Half-mask, supplied-air respirator operated in positive pressure mode.[2]
Not more than 100,000 ug/m^3 (2000 x PEL)	Supplied-air respirators with full facepiece, hood, helmet, or suit operated in positive pressure mode.
More than 100,000 ug/m^3, unknown concentration, or fire fighting	Full facepiece, self-contained breathing apparatus operated in positive pressure mode.

[1] Respirators specified for high concentrations may be used at lower concentrations of lead.
[2] A full facepiece is required if the lead aerosols cause eye or skin irritation at the use concentrations.
[3] A high-efficiency particulate filter means 99.97% efficient against 0.3 micron size particles. N, R, or P--100 designated filters are acceptable.

1 Respirators specified for high concentrations may be used at lower concentrations of lead.
2 A full facepiece is required if the lead aerosols cause eye or skin irritation at the use concentrations.
3 A high-efficiency particulate filter means 99.97% efficient against 0.3 micron size particles. N, R, or P--100 designated filters are acceptable.

(5) An employer shall provide a powered, air-purifying respirator instead of the respirator specified in table 2 of this rule when an employee chooses to use this type of respirator and such a respirator provides adequate protection to the employee.
History: 1979 ACS 5, Eff. Jan. 21, 1981; 1988 MR 5, Eff. June 1, 1988; 1990 MR 2, Eff. Mar. 31, 1990; 1998 MR 2, Eff. Mar. 5, 1998; 2000 MR 16, Eff. Oct. 12, 2000.
Editor's note: R 325.51917 of the Michigan Administrative Code, appearing on page 436 of the 1988 Annual Supplement to the 1979 Michigan Administrative Code, is reprinted in this publication to correct an obvious error pursuant to the provisions of section 56 of Act No. 306 of the Public Acts of 1969, as amended, being S24.256 of the Michigan Compiled Laws. R 325.51917(a) contained a typographical error which has been corrected, in pertinent part, to read as follows: "...wear a negative-presssure respirator..."

R 325.51918 Rescinded.
History: 1979 ACS 5, Eff. Jan. 21, 1981; 1988 MR 5, Eff. June 1, 1988; 1998 MR 2, Eff. Mar. 5, 1998; rescinded 2000 MR 16, Eff. Oct. 12, 2000.

R 325.51919 Rescinded.
History: 1979 ACS 5, Eff. Jan. 21, 1981; 1998 MR 2, Eff. Mar. 5, 1998; 2000 MR 16, Eff. Oct. 12, 2000.

R 325.51920 Rescinded.
History: 1979 ACS 5, Eff. Jan. 21, 1981; 1987 MR 7, Eff. Aug. 4, 1987; 1988 MR 5, Eff. June 1, 1988; rescinded 1998 MR 2, Eff. Mar. 5, 1998.

R 325.51921 Filter elements and employee washing.
Rule 21. (1) An employer shall permit an employee who uses a filter respirator to change the filter elements when an increase in breathing resistance is detected. An employer shall maintain an adequate supply of filter elements for this purpose.
(2) An employer shall permit an employee who wears a respirator to leave work areas to wash his or her face and respirator facepiece when necessary to prevent skin irritation associated with respirator use.
History: 1979 ACS 5, Eff. Jan. 21, 1981; 2000 MR 16, Eff. Oct. 12, 2000.

R 325.51922
Source: 1981 AACS.

R 325.51923
Source: 1981 AACS.

R 325.51924
Source: 1988 AACS.

R 325.51925
Source: 1981 AACS.

R 325.51926
Source: 1981 AACS.

R 325.51927 Rescinded.
History: 1979 ACS 5, Eff. Jan. 21, 1981; rescinded 1984 MR 7, Eff. July 28, 1984.

R 325.51928

Source: 1981 AACS.

R 325.51929 Hygiene facilities; change rooms.

Rule 29. (1) An employer shall provide clean change rooms for employees who work in areas where airborne exposures to lead are greater than the permissible employee exposure limit prescribed by R 325.51903, without regard to the use of respirators.

(2) An employer shall equip change rooms with separate storage or locker facilities for protective work clothing and equipment under R 325.51922 and for street clothes that prevent cross-contamination.

History: 1979 ACS 5, Eff. Jan. 21, 1981; 1984 MR 7, Eff. July 28, 1984; 1987 MR 7, Eff. Aug. 4, 1987; 1998 MR 2, Eff. Mar. 5, 1998.

R 325.51930 Hygiene facilities; showers.

Rule 30. (1) An employer shall ensure that employees who work in areas where airborne exposures to lead are greater than the permissible employee exposure limit prescribed by R 325.51903, without regard to the use of respirators, shower at the end of each work shift.

(2) An employer shall provide shower facilities in accordance with O.H. rule 4201 (4)(c), sanitation.

(3) An employer shall ensure that an employee who is required to shower under subrule (1) of this rule does not leave the workplace wearing any of the protective work clothing or equipment required under R 325.51922 or other significantly contaminated clothing.

History: 1979 ACS 5, Eff. Jan. 21, 1981; 1984 MR 7, Eff. July 28, 1984; 1987 MR 7, Eff. Aug. 4, 1987; 1998 MR 2, Eff. Mar. 5, 1998; 2000 MR 16, Eff. Oct. 12, 2000.

R 325.51931

Source: 1988 AACS.

R 325.51931a Washing facilities.

Rule 31a. An employer shall provide an adequate number of washing facilities that are in compliance with O.H. rule 4201(4)(a) and (b).

History: 1984 MR 7, Eff. July 28, 1984; 1987 MR 7, Eff. Aug. 4, 1987; 1998 MR 2, Eff. Mar. 5, 1998.

R 325.51932 Medical surveillance generally.

Rule 32. (1) An employer shall institute a medical surveillance program for each employee who is or may be exposed to concentrations of lead greater than the action level for more than 30 days a year.

(2) A licensed physician or someone under the supervision of a licensed physician shall establish procedures for, and shall perform, medical examinations.

(3) An employer shall provide the required medical surveillance at a convenient time and place, without cost to employees.

(4) An employer shall give priority for biological monitoring and medical examinations shall be provided to employees who the employer believes are at the greatest risk from continued exposure to lead.

History: 1979 ACS 5, Eff. Jan. 21, 1981; 1987 MR 7, Eff. Aug. 4, 1987; 1998 MR 2, Eff. Mar. 5, 1998.

R 325.51933

Source: 1988 AACS.

R 325.51934 Medical surveillance; biological monitoring follow-up blood sampling tests.

Rule 34. If the results of a blood level test indicate that an employee's blood lead level exceeds the numerical criterion for medical removal under R 325.51943, then an employer shall provide a second (follow-up) blood sampling test within 2 weeks after the results of the first blood sampling test are received.

History: 1979 ACS 5, Eff. Jan. 21, 1981; 1998 MR 2, Eff. Mar. 5, 1998.

R 325.51935

Source: 1981 AACS.

R 325.51936

Source: 1981 AACS.

R 325.51937
Source: 1981 AACS.

R 325.51938
Source: 1981 AACS.

R 325.51938a
Source: 1988 AACS.

R 325.51939
Source: 1981 AACS.

R 325.51940
Source: 1981 AACS.

R 325.51941
Source: 1984 AACS.

R 325.51942
Source: 1981 AACS.

R 325.51943 Medical removal protection; temporary medical removal; elevated blood lead levels.

Rule 43. (1) An employer shall remove an employee from work who has an exposure to lead at or above the action level on each occasion that a periodic blood sampling test and a follow-up blood sampling test conducted under these rules indicate that the employees blood lead level is at or above 60 micrograms per 100 grams (60 ug/l00 g) of whole blood. (2) An employer shall remove an employee from work if the employee has an exposure to lead at or above the action level on each occasion that the averageof the last 3 blood sampling tests conducted under these rules, or the average of all blood sampling tests conducted over the previous 6 months, whichever is longer, indicates that the employee's blood lead level is at or above 50 micrograms per 100 grams (50 ug/l00 g) of whole blood. However, an employee shall not be required to be removed if the last blood sampling test indicates a blood lead level at or below 40 micrograms per 100 grams (40 ug/l00 g) of whole blood.
History: 1979 ACS 5, Eff. Jan. 21, 1981; 1987 MR 7, Eff. Aug. 4, 1987; 1998 MR 2, Eff. Mar. 5, 1998.

R 325.51944
Source: 1981 AACS.

R 325.51945
Source: 1981 AACS.

R 325.51946
Source: 1981 AACS.

R 325.51947
Source: 1981 AACS.

R 325.51948
Source: 1981 AACS.

R 325.51949 Employee information and training; training program.

Rule 49. (1) An employer who has a workplace in which there is a potential exposure to airborne lead at any level shall inform employees of the contents of Appendices A to 29 C.F.R. 1910.1025, Substance Data Sheet for Occupational Exposure to Lead, and B to 29 C.F.R. 1910.1025, Employee Standard Summary.

Appendices A and B are adopted by reference in R 325.51958.
(2) An employer shall institute a training program for, and assure participation by, all employees who are subject to exposure to lead at or above the action level or for whom the possibility of skin or eye irritation exists from exposure to lead.
(3) An employer shall provide initial training in accordance with both of the following provisions:
(a) Within 180 days from the effective date of these rules for employees subject to subrule (2) of this rule.
(b) For new employees who subsequently become subject to subrule (2) of this rule, before the time of initial job assignment.
(4) The training program shall be repeated at least annually for each employee.
(5) An employer shall assure that each employee is informed of all of the following information:
(a) The contents of these rules and appendices.
(b) The specific nature of the operations that could result in exposure to lead above the action level.
(c) The purpose, proper selection, fitting, use, and limitations of respirators.
(d) The purpose and a description of the medical surveillance program and the medical removal protection program, including information regarding adverse health effects associated with excessive exposures to lead, with particular attention to the adverse reproductive effects on both males and females.
(e) The engineering controls and work practices associated with the employee's job assignment.
(f) The contents of any compliance plan in effect.
(g) Instructions to employees that chelating agents shall not routinely be used to remove lead from their bodies and shall not be used at all except under the direction of a licensed physician.
History: 1979 ACS 5, Eff. Jan. 21, 1981; 1987 MR 7, Eff. Aug. 4, 1987 1998 MR 2, Eff. Mar. 5, 1998.

R 325.51950
Source: 1981 AACS.

R 325.51950a
Source: 1984 AACS.

R 325.51950b
Source: 1984 AACS.

R 325.51951
Source: 1981 AACS.

R 325.51952
Source: 1981 AACS.

R 325.51953
Source: 1981 AACS.

R 325.51954
Source: 1981 AACS.

R 325.51955
Source: 1981 AACS.

R 325.51956
Source: 1981 AACS.

R 325.51957
Source: 1981 AACS.

R 325.51958 Adoption of appendices by reference; availability of rules and appendices; permission to reproduce.

Rule 58. (1) The provisions of Appendixes A and B to 29 C.F.R. §§1910.1025 are adopted by reference in these rules. Appendices A and B to these rules are exact copies of appendices A and B to 29 C.F.R.

§§1910.1025.
(2) The provisions of appendix C is informational and not intended to create any additional obligations not otherwise imposed or to detract from any existing obligations.
(3) A copy of these rules and related appendices, which are titled "Appendix A—Substance Data Sheet for Occupational Exposure to Lead," "Appendix B—Employee Standard Summary," and "Appendix C—Medical Surveillance Information," are available to affected employers and employees at no cost as of the time of adoption of these rules from the Michigan Department of Consumer and Industry Services, 7150 Harris Drive, P. O. Box 30643, Lansing, Michigan 48909-8143. Copies of appendices A and B of 29 C. F. R. §§1910.1025 may also be obtained from the United States Department of Labor, OSHA Area Office, 801 S. Waverly Road, Lansing, Michigan 48917, at no cost as of the time of adoption of these rules.
(4) Permission to reproduce any of these documents in full is granted by the director.
History: 1979 ACS 5, Eff. Jan. 21, 1981; 1998 MR 2, Eff. Mar. 5, 1998; 2000 MR 16, Eff. Oct. 12, 2000.

LEAD EXPOSURE IN CONSTRUCTION

R 325.51991
Source: 1993 AACS.

R 325.51992 Adoption by reference of federal regulations.

Rule 2. (1) The federal occupational safety and health administration's regulations on lead exposure in construction that have been promulgated by the United States department of labor and codified at 29 C.F.R. §1926.62, which were published in the Federal Register on May 4, 1993, and which have an effective date of June 3, 1993, are adopted by reference in these rules as of the effective date of these rules. The regulations were amended on January 8, 1998, 29 C.F.R. §1926.62, volume 63, no. 5, pp. 1296 to 1297.
(2) The adopted federal regulations specified in subrule (1) of this rule have the same force and effect as a rule promulgated under 1974 PA 154, MCL 408.1001 et seq.
(3) All of the following provisions apply as of the effective date of these rules:
(a) A reference to 29 C.F.R. §1926.59, hazard communication, means occupational health rules for hazard communication, being R 325.77001 et seq. Of the Michigan Administrative Code and construction safety standard Part 42. Hazard Communication, being R 408.44201 et seq. of the Michigan Administrative Code.
(b) A reference to 29 C.F.R. §1910.133, eye and face protection, means occupational health rules for personal protective equipment, being R 325.60001 et seq. of the Michigan Administrative Code, general industry safety standard Part 33. Personal Protective Equipment, being R 408.13301 et seq. Of the Michigan Administrative Code, and construction safety standard Part 6. Personal Protective Equipment, being R 408.40601 et seq. of the Michigan Administrative Code.
(c) A reference to 29 C.F.R. §1910.20, access to employee exposure and medical records, means occupational health rules for employee medical records and trade secrets, being R 325.3451 et seq. of the Michigan Administrative Code.
(4) The adopted federal regulations specified in subrule (1) of this rule are available without cost as of the time of adoption of these rules from the United States Department of Labor, OSHA, 801 South Waverly, Room 306, Lansing, Michigan 48917, or from the Michigan Department of Consumer and Industry Services, Standards Division, Post Office Box 30643, Lansing, Michigan 48909.
History: 1993 MR 10, Eff. Nov. 3, 1993; 1999 MR 10, Eff. Nov. 4, 1999.

HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE

R 325.52101
Source: 1991 AACS.

R 325.52102 Application.

Rule 2. (1) These rules apply to all of the following operations when employees are exposed, or have a reasonable possibility of exposure, to safety or health hazards:

(a) Cleanup operations which are required by a governmental body, whether a federal, state, local, or other body, which involve hazardous substances, and which are conducted at uncontrolled hazardous waste sites. Such sites include any of the following:
(i) Sites on the environmental protection agency's (EPA) national priority site list (NPL).
(ii) Sites on state priority site lists.
(iii) Sites recommended for the EPA NPL.
(iv) Sites which are government-identified and are undergoing initial investigation conducted before the presence or absence of hazardous substances has been determined.
(b) Corrective actions that involve cleanup operations at sites covered by the provisions of the resource conservation and recovery act of 1976 (RCRA), as amended, 42 U.S.C. §6901 et seq.
(c) Voluntary cleanup operations at sites recognized by federal, state, local, or other governmental bodies as uncontrolled hazardous waste sites.
(d) Operations which involve hazardous wastes and which are conducted at treatment, storage, and disposal (TSD) facilities regulated by the provisions of 40 C.F.R. parts 264 and 265 pursuant to RCRA, by agencies under agreement with EPA to implement RCRA regulations, or by the provisions of sections 5, 11, 13, 13a, 15a, 19, 22a, 30, 30a, 32a, 32b, and 32c of Act No. 641 of the Public Acts of 1978, as amended, being §§299.405, 299.411, 299.413, 299.413a, 299.415a, 299.419, 299.422a, 299.430, 299.430a, 299.432a, 299.432b, and 299.432c of the Michigan Compiled Laws.
(e) An emergency response operation that involves the release of, or a substantial threat of the release of, hazardous substances, without regard to the location of the hazard.
(2) All of the requirements of the Michigan occupational health and safety act (MIOSHA) occupational health rules and occupational safety rules for both general industry and construction apply, pursuant to their terms, to operations specified in subrule (1) of this rule, whether mentioned in these rules or not. Where there is a conflict or overlap between these and other rules, the requirement that is more protective of employee health and safety shall apply without regard to O.H. rule 1106(3)(a). (3) All of these rules, except for R 325.52129 to R 325.52135, apply to hazardous substance cleanup operations covered by the provisions of subrule (1)(a), (b), and (c) of this rule.
(4) Only the provisions of R 325.52129 apply to operations at TSD facilities covered by the provisions of subrule (1)(d) of this rule. All of the following provisions apply to this subrule:
(a) All of the provisions of R 325.52129 apply to any TSD operation which is regulated by the provisions of 40 C.F.R. parts 264 and 265 or by Michigan law authorized under RCRA and which is required to have a permit or interim status from EPA pursuant to the provisions of 40 C.F.R. §270.1 or from a Michigan agency pursuant to the provisions of RCRA.
(b) Employers who are not required to have a permit or interim status because they are conditionally exempt small quantity generators under the provisions of 40 C.F.R. §261.5 or are generators who qualify under the provisions of 40 C.F.R. §262.34 for exemptions from regulation under the provision of 40 C.F.R. parts 264, 265, and 270 need not comply with the provisions of subrules R 325.52129 (1) to (8). Excepted employers who are required by the EPA or a Michigan agency to have their employees engage in emergency response or who direct their employees to engage in emergency response shall comply with the provisions of R 325.52129(9). Excepted employers who are not required to have employees engage in emergency response, who direct their employees to evacuate in the case of emergencies, and who meet the requirements of R 325.52129 (9)(a) and (b) are exempt from the rest of the provisions of R 325.52129.
(c) If an area is used primarily for treatment, storage, or disposal, any emergency response operation in that area shall be in compliance with the requirements of R 325.52129(9). In other areas that are not used primarily for treatment, storage, or disposal, any emergency response operation shall be in compliance with the requirements of R 325.52130 to R 325.52135. Compliance with the requirements of R 325.52130 to R 325.52135 shall be deemed to be in compliance with the requirements of R 325.52129(9).
(5) An emergency response operation which involves the release of, or a substantial threat of a release of, hazardous substances and which is not covered by subrule (1)(a) to (d) of this rule shall be in compliance with only the requirements of R 325.52130 to R 325.52135.
History: 1991 MR 10, Eff. Oct. 31, 1991; 2000 MR 2, Eff. Feb. 23, 2000.

R 325.52103 Definitions.

Rule 3. As used in these rules:
(a) "Buddy system" means a system of organizing employees into work groups in such a manner that each employee of the work group is designated to be observed by at least 1 other employee in the work group. The purpose of the buddy system is to provide rapid assistance to employees in the event of an emergency.
(b) "Cleanup operation" means an operation where hazardous substances are removed, contained, incinerated, neutralized, stabilized, cleared up, or in any other manner processed or handled with the ultimate goal of making the site safer for people and the environment.
(c) "Decontamination" means the removal of hazardous substances from employees and their equipment to the extent necessary to prevent the occurrence of foreseeable adverse health effects.
(d) "Emergency response" or "responding to emergencies" means a response effort by employees from outside the immediate release area or by other designated responders, for example, mutual-aid groups or local fire departments, to an occurrence which results, or is likely to result, in an uncontrolled release of a hazardous substance. Responses to incidental releases of hazardous substances where the substance can be absorbed, neutralized, or otherwise controlled at the time of release by employees in the immediate release area or by maintenance personnel are not considered to be emergency responses within the scope of these rules. Responses to releases of hazardous substances where there is no potential safety or health hazards, such as, fire, explosion, or chemical exposure, are not considered to be emergency responses.
(e) "Facility" means any of the following:
(i) A building.
(ii) A structure.
(iii) An installation.
(iv) Equipment.
(v) A pipe or pipeline, including a pipe into a sewer or publicly owned treatment works.
(vi) A well.
(vii) A pit.
(viii) A pond.
(ix) A lagoon.
(x) An impoundment.
(xi) A ditch.
(xii) A storage container.
(xiii) A motor vehicle.
(xiv) Rolling stock.
(xv) Aircraft.
(xvi) A site or area where a hazardous substance has been deposited, stored, disposed of, placed, or otherwise caused to be located.
(xvii) Facility does not mean any consumer product in consumer use or any waterborne vessel.
(f) "Hazardous material response (HAZMAT) team" means an organized group of employees which is designated by the employer and which is expected to perform work to handle and control actual or potential leaks or spills of hazardous substances that may require coming into close proximity to the substance. The team members perform responses to releases or potential releases of hazardous substances to control or stabilize a release or potential release. A HAZMAT team is nota fire brigade nor is a typical fire brigade a HAZMAT team. A HAZMAT team, however, may be a separate component of a fire brigade or fire department.
(g) "Hazardous substance" means any of the following substances, exposure to which results or may result in adverse effects on the health and safety of employees:
(i) Any substance defined under section 101(14) of the comprehensive environmental response, compensation, and liability act, 42 U.S.C. §9601(14).
(ii) Any biological agent and other disease-causing agent which, after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any person, either directly from the environment or indirectly by ingestion through food chains, will, or may reasonably be anticipated to, cause any of the following in such persons or their offspring:
(A) Death.
(B) Disease.

(C) Behavioral abnormalities.
(D) Cancer.
(E) Genetic mutation.
(F) Physiological malfunctions, including malfunctions in reproduction.
(G) Physical deformations in such persons or their offspring.
(iii) Any substance that is listed by the United States department of transportation as a hazardous material under the provisions of 49 C.F.R. §172.101 and appendices, which are adopted herein by reference. The provisions of 49 C.F.R. §172.101 and appendices are available from the Superintendent of Documents, United States Government Printing Office, Washington, DC 20402, at a cost at the time of adoption of these rules of $27.00, or from the Michigan Department of Consumer and Industry Services, Standards Division, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan 48909, at a cost at the time of adoption of these rules of $10.00.
(iv) Hazardous waste.
(h) "Hazardous waste" means either of the following:
(i) A waste or combination of wastes as defined in the provisions of 40 C.F.R. §261.3, which are adopted herein by reference. The provisions of 40 C.F.R. §261.3 are available from the Superintendent of Documents, United States Government Printing Office, Washington, DC 20402, at a cost at the time of adoption of these rules of $22.00, or from the Michigan Department of Consumer and Industry Services, Standards Division, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan 48909, at a cost at the time of adoption of these rules of $2.00.
(ii) Those substances defined as hazardous waste in the provisions of 49 C.F.R. §171.8, which are adopted herein by reference. The provisions of 49 C.F.R. §171.8 are available from the Superintendent of Documents, United States Government Printing Office, Washington, DC 20402, at a cost at the time of adoption of these rules of $27.00, or from the Michigan Department of Consumer and Industry Services, Standards Division, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan 48909, at a cost at the time of adoption of these rules of $1.00.
(i) "Hazardous waste operation" means any operation to which these rules apply according with the provisions of R 325.52102.
(j) "Hazardous waste site" or "site" means any facility or location at which hazardous waste operations take place and to which these rules apply.
(k) "Health hazard" means a stress due to a physical condition, chemical exposure, or a pathogen for which there is statistically significant evidence, based on at least 1 study conducted in accordance with established scientific principles, that acute or chronic health effects may occur in exposed employees. The term "health hazard" includes all of the following:
(i) Chemicals which are carcinogens.
(ii) Toxic or highly toxic agents.
(iii) Reproductive toxins.
(iv) Irritants.
(v) Corrosives.
(vi) Sensitizers.
(vii) Hepatotoxins.
(viii) Nephrotoxins.
(ix) Neurotoxins.
(x) Agents which act on the hematopoietic system.
(xi) Agents which damage the lungs, skin, eyes, or mucous membranes.
(xii) High or low body temperatures.
(xiii) High noise levels.
(xiv) Ionizing or nonionizing radiation.
Further definition of terms used in this subdivision can be found in appendix A to 29 C.F.R. §1910.1200, which was incorporated by reference in section 14a of Act No. 154 of the Public Acts of 1974, as amended, being §408.1014a of the Michigan Compiled Laws.
(l) "IDLH" or "immediately dangerous to life or health" means an atmospheric concentration of any toxic, corrosive, or asphyxiant substance that poses an immediate threat to life, would cause irreversible or

delayed adverse health effects, or would interfere with a person's ability to escape from a dangerous atmosphere.

(m) "Oxygen deficiency" means that concentration of oxygen, by volume, in the atmosphere below which air-supplying respiratory protection shall be provided. An oxygen deficiency exists in atmospheres where the percentage of oxygen, by volume, is less than 19.5%.

(n) "Permissible exposure limit" or "PEL" means the inhalation or dermal permissible exposure limits of chemical substances specified or referenced in the air contaminants standard tables G-1-A, G-2, and G-3 of R 325.51108.

(o) "Postemergency response" means that portion of an emergency response which is performed after the immediate threat of a release has been stabilized or eliminated and cleanup of the site has begun. If postemergency response is performed by an employer's own employees as a continuation of initial emergency response, it is considered to be part of the initial response and not postemergency response. However, if a group of an employer's own employees that is separate from the group that provides the initial response performs the cleanup operation, the separate group of employees is considered to be performing postemergency response and is subject to the provisions of R 325.52135.

(p) "Published exposure level" means the exposure limits specified in the publication entitled "NIOSH Recommendations for Occupational Health Standards," 1986, which are adopted in these rules by reference, or, if no limit is specified, the threshold limit values published by the American conference of governmental industrial hygienist (ACGIH) in the publication entitled "Threshold Limit Values and Biological Exposure Indices for 1990-1991," 1990, which are adopted in these rules by reference. These 2 documents may be inspected at the Lansing office of the department. The NIOSH publication may be obtained from the National Institute for Occupational Safety and Health, Publications Dissemination Division, Cincinnati, Ohio 45226, or from the Michigan Department of Consumer and Industry Services, Standards Division, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan 48909, at no cost. The ACGIH publication is available from the American Conference of Governmental Industrial Hygienist, 6500 Glenway Avenue, Bldg. D-7, Cincinnati, Ohio 45211-4438, or from the Michigan Department of Consumer and Industry Services, Standards Division, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan 48909. The cost at the time of adoption of these rules is $6.00.

(q) "Qualified person" means a person who has specific training, knowledge, and experience in the area for which the person has responsibility and the authority to control operations.

(r) "Site safety and health supervisor" or "official" means an individual who is located on a hazardous waste site, who is responsible to the employer, and who has the authority and knowledge necessary to implement the site safety and health plan and verify compliance with applicable safety and health requirements.

(s) "Small quantity generator" means a generator of hazardous waste who, in any calendar month, generates not more than 1,000 kilograms (2,205 pounds) of hazardous waste.

(t) "Uncontrolled hazardous waste site" means an area where an accumulation of hazardous wastes creates a threat to the health and safety of individuals or the environment, or both. Such sites can be on public lands or on privately owned property. Normal operations at TSD sites are not included in this definition.

History: 1991 MR 10, Eff. Oct. 31, 1991; 2000 MR 2, Eff. Feb. 23, 2000.

R 325.52104
Source: 1991 AACS.

R 325.52105
Source: 1991 AACS.

R 325.52106
Source: 1991 AACS.

R 325.52107
Source: 1991 AACS.

R 325.52108
Source: 1991 AACS.

R 325.52109
Source: 1991 AACS.

R 325.52110
Source: 1991 AACS.

R 325.52111
Source: 1991 AACS.

R 325.52112
Source: 1991 AACS.

R 325.52113 Medical surveillance.

Rule 13. (1) Employers that are engaged in the operations described in R 325.52102(1)(a)to(c)and employers with a hazardous material response (HAZMAT) team shall establish a medical surveillance program, in accordance with the provisions of this rule, for all of the following employees:

(a) All employees who are or may be exposed, for 30 days or more a year, to hazardous substances or health hazards at or above permissible exposure limits (PEL) or, if there is no PEL, above the published exposure levels or these substances without regard to the use of respirators.

(b) All employees who wear a respirator for 30 or more days a year or as required by the respiratory protection standard, R 325.60051 et seq. of the Michigan Administrative Code.

(c) All employees who are injured, become ill, or develop signs or symptoms due to the possible overexposure to hazardous substances or health hazards from an emergency response or hazardous waste operation.

(d) All employees on a HAZMAT team.

(2) Medical examinations and consultations shall be made available by the employer at no cost to the employee, without a loss of pay, and at a reasonable time and place for each employee covered by the provisions of subrule (1) of this rule pursuant to the following provisions, as applicable:

(a) For employees who are covered under the provisions of subrule (1)(a),(b), and(d)of this rule, the following schedule applies:

(i) Before assignment to hazardous waste or emergency response operations.

(ii) At least once every 12 months for each covered employee, unless the responsible physician believes a longer interval is appropriate. The interval shall not be more than 2 years.

(iii) At termination of employment or reassignment to an area where the employee will not be covered, unless the employee has had an examination within the last 6 months.

(iv) As soon as possible upon notification by an employee that the employee has developed signs or symptoms indicating possible overexposure to hazardous substances or health hazards or that the employee has been injured or exposed above the permissible exposure limits or published exposure levels in an emergency situation.

(v) At more frequent times if the examining physician determines that an increased frequency of examination is medically necessary.

(b) For employees who are covered under the provisions of subrule (1)(c) of this rule and for all employees, including those of employees who are covered by the provisions of R 325.52102(1)(e), who may have been injured, received a health impairment, developed signs or symptoms which may have resulted from exposure to hazardous substances resulting from an emergency incident, or been exposed during an emergency incident to hazardous substances at concentrations above the permissible exposure limits or the published exposure levels without the necessary personal protective equipment being used, the following schedule applies:

(i) As soon as possible after the emergency incident or development of signs or symptoms.

(ii) At additional times if the examining physician determines that follow-up examinations or consultations are medically necessary.

History: 1991 MR 10, Eff. Oct. 31, 1991; 2000 MR 2, Eff. Feb. 23, 2000.

R 325.52114 Medical examinations, consultations, and procedures to be performed by or under supervision of physician; content of examinations and consultations; copies of rules and

information to be provided by employer.

Rule 14. (1) All medical examinations, consultations, and procedures shall be performed by or under the supervision of a licensed physician, preferably a physician who is knowledgeable in occupational medicine.
(2) Medical examinations required by the provisions of R 325.52113(2) shall include a medical and work history or updated history if one is in the employee's file, with a special emphasis on the symptoms related to the handling of hazardous substances and health hazards and on fitness for duty, including the ability to wear any required personal protective equipment (PPE) under conditions that may be expected at the work site.
(3) The content of medical examinations or consultations pursuant to the provisions of R 325.52113(2) shall be determined by the attending physician. (See R 325.52137 for availability of appendix D, reference no. 10)
(4) An employer shall provide a copy of these rules and appendices to the attending physician and all of the following information for each employee who is to be examined:
(a) A description of an employee's duties as they relate to the employee's exposures.
(b) The employee's exposure levels or anticipated exposure levels.
(c) A description of any personal protective equipment used or to be used.
(d) Information from previous medical examinations of the employee which is not readily available to the examining physician.
(e) Information required pursuant to the provisions of the respiratory protection standard, R 325.60051 et seq. of the Michigan Administrative Code.
History: 1991 MR 10, Eff. Oct. 31, 1991; 2000 MR 2, Eff. Feb. 23, 2000.

R 325.52115
Source: 1991 AACS.

R 325.52116
Source: 1991 AACS.

R 325.52117
Source: 1991 AACS.

R 325.52118 Personal Protective Equipment (PPE)

Rule 18. (1) Personal protective equipment (PPE) shall be selected and used to protect employees from the hazards and potential hazards they are likely to encounter as identified during the site characterization and analysis.
(2) Personal protective equipment selection shall be based on an evaluation of the performance characteristics of the PPE relative to the requirements and limitations of the site, the task-specific conditions and duration, and the hazards and potential hazards identified at the site.
(3) Positive-pressure, self-contained breathing apparatus or positive-pressure, air line respirators that are equipped with an escape air supply shall be used when chemical exposure levels will create a substantial possibility of immediate death or immediate serious illness or injury or will impair the ability to escape.
(4) Totally encapsulating chemical protective suits (protection equivalent to level A protection as recommended in appendix B) shall be used in conditions where skin absorption of a hazardous substance may result in a substantial possibility of immediate death or immediateserious illness or injury or may impair the ability to escape.
(5) The level of protection provided by PPE selection shall be increased when additional information on site conditions indicates that increased protection is necessary to reduce employee exposures below permissible exposure limits and published exposure levels for hazardous substances and health hazards. (See R 325.52137 for availability of appendix B pertaining to selecting PPE ensembles.) The level of employee protection provided may be decreased when additional information or site conditions show that decreased protection will not result in hazardous exposures to employees.
(6) Personal protective equipment shall be selected, provided at no cost to the employee, and used in accordance with the requirements of the personal protective equipment standard, R 325.60001 et seq.; the respiratory protection standard, R 325.60051 et seq.; general industry safety standard Part 33, personal protective equipment, R 408.13301 et seq.; and construction safety standard Part 6. personal protective

equipment, R 408.40601 et seq. of the Michigan Administrative Code.
(7) All of the following provisions pertain to the use of totally encapsulating chemical protective suits.
(a) Totally encapsulating suits shall be selected to protect employees from the particular hazards which are identified during site characterization and analysis.
(b) Totally encapsulating suits shall be capable of maintaining a positive air pressure. Appendix A, referenced in R 325.53137, shall be consulted for a test method to evaluate this air pressure requirement.
(c) Totally encapsulating suits shall be capable of preventing inward test gas leakage of more than 0.5%. See appendix A for a test method.
(8) An employer shall establish a written personal protective equipment(PPE) program which is part of the safety and health program required by the provisions of R 325.52104 or R 325.52129. This program is also a part of the site-specific safety and health plan specified in R 325.52104. The personal protective equipment program shall address all of the following elements if applicable:
(a) PPE selection based on site hazards.
(b) PPE use and limitations.
(c) Work duration.
(d) PPE maintenance and storage.
(e) PPE decontamination and disposal.
(f) PPE training and proper fitting.
(g) PPE donning and doffing procedures.
(h) PPE inspection before and after use.
(i) PPE proper use.
(j) Evaluation of the effectiveness of the PPE program.
(k) Limitations during temperature extremes and other appropriate medical considerations.
Manufacturer instructions relating to the subjects specified in subdivisions (d)to(h)of this subrule may be incorporated into the PPE program.
History: 1991 MR 10, Eff. Oct. 31, 1991; 2000 MR 2, Eff. Feb 23, 2000.

R 325.52119
Source: 1991 AACS.

R 325.52120
Source: 1991 AACS.

R 325.52121
Source: 1991 AACS.

R 325.52122
Source: 1991 AACS.

R 325.52123
Source: 1991 AACS.

R 325.52124
Source: 1991 AACS.

R 325.52125 Emergency operations at hazardous waste sites.
Rule 25 (1) An emergency response plan shall be developed and implemented by all employees within the scope of R 325.52102(1)(a) and (b) to handle anticipated emergencies before start-up of hazardous waste operations. The plan shall be in writing and available for inspection and copying by employees, their representatives, Michigan occupational safety and health program personnel, and other federal and state government personnel with relevant responsibilities. An employer who will evacuate its employees from the danger area when an emergency occurs and who does not permit any of its employees to respond to assist in handling the emergency is exempt from the requirements of this rule if the employer provides an emergency action plan that is in compliance with the provisions of general industry safety standard Part 6. fire exits, R 408.10601 et seq. and construction safety standard Part 18. fire protection and prevention, R 408.41801 et

seq. of the Michigan Administrative Code. The provisions of these standards may be inspected and copies obtained at the Lansing office of the Michigan Department of Consumer and Industry Services, Standards Division, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan 48909, at no cost.
(2) The emergency response plan shall address all of the following topics:
(a) Pre-emergency planning.
(b) Personnel roles, lines of authority, training, and communication.
(c) Emergency recognition and prevention.
(d) Safe distances and places of refuge.
(e) Site security and control.
(f) Evacuation routes and procedures.
(g) Decontamination.
(h) Emergency medical treatment and first aid.
(i) Emergency alerting and response procedures.
(j) A critique of response and follow-up.
(k) PPE and emergency equipment.
(3) In addition to the topics for the emergency response plan specified in subrule (2) of this rule, both of the following elements shall be included in an emergency response plan for a hazardous waste cleanup site:
(a) Site topography, layout, and prevailing weather conditions.
(b) Procedures for reporting incidents to local, state, and federal governmental agencies.
(4) The emergency response plan shall be a separate section of the site-specific safety and health plan and shall be compatible and integrated with disaster, fire, or emergency response plans of local, state, and federal agencies.
(5) The emergency response plan shall be rehearsed regularly as part of the overall training program for site operations and shall be reviewed periodically and amended, as necessary, to keep it current with new or changing site conditions or information.
(6) An employee alarm system shall be installed in accordance with the provisions of general industry safety standard Part 6. fire exits, R 408.10601 et seq. of the Michigan Administrative Code to notify employees of an emergency situation, to stop work activities if necessary, to lower background noise in order to enhance communication, and to begin emergency procedures. The provisions of this standard may be inspected and copies obtained at the Lansing office of the Michigan Department of Consumer and Industry Services, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan 48909, at no cost. (7) Based upon the information available at the time of an emergency, an employer shall evaluate the incident and site response capabilities and proceed with the appropriate steps to implement the site emergency response plan.
History: 1991 MR 10, Eff. Oct. 31, 1991; 2000 MR 2, Eff. Feb. 23, 2000.

R 325.52126
Source: 1991 AACS.

R 325.52127
Source: 1991 AACS.

R 325.52128
Source: 1991 AACS.

R 325.52129 Operations at treatment, storage, and disposal (TSD) facilities; establishment of written safety and health program, hazard communication program, medical surveillance program, decontamination procedures, procedures for introduction of new and innovative equipment, procedures for handling drums or containers, training program, and emergency response program.

Rule 29. (1) All provisions of this rule apply to employers who conduct operations at treatment, storage, and disposal (TSD) facilities specified in R 325.52102(1)(d), except for employers that may be exempted in accordance with the provisions of R 325.52102(4)(a)to(c).
(2) An employer shall develop and implement a written safety and health program for employees who are involved in hazardous waste operations. This written program shall be available for inspection by

employees, employees' representatives, and Michigan occupational safety and health program (MIOSHA) personnel. The program shall be designed to identify, evaluate, and control safety and health hazards in the employer's facilities for the purpose of employee protection and shall provide for emergency response that is in compliance with the requirements of this rule. The program shall address, as appropriate, all of the following areas:
(a) Site analysis.
(b) Engineering controls.
(c) Maximum exposure limits.
(d) Hazardous waste handling procedures.
(e) Uses of new technologies.
(3) An employer shall implement a hazard communication program that is in compliance with the requirements of sections 14a to 14k of Act No. 154 of the Public Acts of 1974, as amended, being §§408.1014a to 408.1014k of the Michigan Compiled Laws.
(4) An employer shall develop and implement a medical surveillance program in accordance with the provisions of R 325.52113 to R 325.52116.
(5) An employer shall develop and implement decontamination procedures in accordance with the provisions of R 325.52124.
(6) An employer shall develop and implement procedures for the introduction of new and innovative equipment into the workplace in accordance with the provisions of R 325.52128.
(7) An employer shall develop and implement procedures for handling drums or containers in accordance with the provisions of R 325.52121 (2)(a)to(g)and R 325.52122 before starting work that involves the handling of drums or containers.
(8) An employer shall develop and implement, in accordance with all of the following provisions, a training program, which is part of the employers health and safety program, for employees who are exposed to health hazards or hazardous substances of TSD operations to enable the employees to perform their assigned duties and functions in a safe and healthy manner so as not to endanger themselves or other employees:
(a) The initial training program of new employees shall be a program of 24 hours of training. A certificate of such training shall be issued to each employee who successfully completes this training.
(b) Initial training need not be provided for current employees for whom it can be shown that their previous work experience or training is equivalent to the training requirement of subdivision (a) of this subrule.
(c) All employees shall be given 8 hours of refresher training annually.
(d) Trainers who provide the initial training specified in subdivision(a)of this subrule shall have satisfactorily completed a program for teaching the subjects they teach or shall have academic credentials and instruction experience to demonstrate a satisfactory degree of competency in the subjects they teach.
(9) An employer shall develop and implement an emergency response program in accordance with all of the following provisions:
(a) An emergency response plan shall be developed and implemented. The emergency response plan need not duplicate any of the subjects fully addressed in the employer's contingency planning required by permits, such as those issued by the United States environmental protection agency, if the contingency plan is made part of the emergency response plan. The emergency response plan shall be a written portion of the safety and health program required by subrule (2) of this rule.
(b) An employer who will evacuate its employees from the worksite when an emergency occurs and who does not permit any of its employees to assist in handling the emergency is exempt from the requirements of this subrule if the employer provides an emergency action plan in accordance with the provisions of general industry safety standard Part 6. fire exits, R 408.10601 et seq. and construction safety standard Part 18. fire protection and prevention, R 408.41801 et seq. of the Michigan Administrative Code as required in R 325.52125(1).
(c) The emergency response plan shall address all of the following topics to the extent that they are not addressed in any specific program required in this rule:
(i) Preemergency planning and coordination with outside parties.
(ii) Personnel roles, lines of authority, and communication.
(iii) Emergency recognition and prevention.
(iv) Safe distances and places of refuge.

(v) Site security and control.
(vi) Evacuation routes and procedures.
(vii) Decontamination procedures.
(viii) Emergency medical treatment and first aid.
(ix) Emergency alerting and response procedures.
(x) Critique of response and follow-up.
(xi) PPE and emergency equipment.
(d) An employer shall provide and complete training for emergency response employees before they become involved in actual emergency operations. Such training shall include all of the following:
(i) Elements of the emergency response plan.
(ii) Standard operating procedures for emergency response operations.
(iii) Personal protective equipment available and use and limitations of each.
(iv) Procedures for handling emergency incidents.
(v) Both exceptions to the training requirements of this subdivision are as follows:
(A) An employer need not train all employees to the degree specified if the employer divides the work force so that a sufficient number of employees who are responsible for controlling emergencies have the training specified and so that all other employees who might initially respond to an emergency incident have sufficient awareness training to recognize that an emergency response situation exists and that they are instructed in that case to summon the fully trained employees and not attempt control activities for which they are not trained.
(B) An employer need not train all employees to the degree specified if arrangements have been made in advance for an outside, fully trained emergency response team to respond in a reasonable period and all employees who might initially respond to the incident have sufficient awareness training to recognize that an emergency response situation exists and they have been instructed to call the designated outside, fully trained emergency response team for assistance.
(vi) Employee members of TSD facility emergency response organizations shall be trained to a level of competence in the recognition of health and safety hazards to protect themselves and other employees. This includes training in all of the following areas:
(A) The methods used to minimize the risk from safety and health hazards.
(B) The safe use of control equipment.
(C) Selection and use of appropriate PPE.
(D) Safe operating procedures to be used at the incident scene.
(E) Techniques of coordination with other employees to minimize risks.
(F) Appropriate response to overexposure to health hazards or injury to themselves or others.
(G) Recognition of subsequent symptoms which may result from overexposure.
(vii) An employer shall certify that each covered employee has attended and successfully completed the training required in this subdivision or shall certify the employee's competency at least yearly. The method used to demonstrate competency for certification of training shall be recorded and maintained by the employer.
(e) All of the following provisions pertain to the procedures for handling emergency incidents:
(i) In addition to the elements for the emergency response plan required by subdivision (c) of this subrule, the following elements shall be included in emergency response plans to the extent that they do not repeat any information already contained in the emergency response plan:
(A) Site topography, layout, and prevailing weather conditions.
(B) (B) Procedures for reporting incidents to local, state, and federal governmental agencies.
(ii) The emergency response plan shall be compatible and integrated with the disaster, fire, and emergency response plans of local, state, and federal agencies.
(iii) The emergency response plan shall be rehearsed regularly as part of the overall training program for site operations.
(iv) The site emergency response plan shall be reviewed periodically and, as necessary, be amended to keep it current with new or changing site conditions or information.
(v) An employee alarm system shall be installed in accordance with the provisions of general industry safety standard Part 6. fire exits, R 408.10601 et seq. of the Michigan Administrative Code to notify employees of

an emergency situation, to stop work activities if necessary, to lower background noise to aid communication, and to begin emergency procedures.
(vi) Based upon the information available at the time of the emergency, an employer shall evaluate the incident and the site response capabilities and proceed with the appropriate steps to implement the site emergency response plan.
History: 1991 MR 10, Eff. Oct. 31, 1991; 2000 MR 2, Eff. Feb. 23, 2000.

R 325.52130 Emergency response to hazardous substances releases; emergency response plan.

Rule 30. (1) This rule and R 325.52131 to R 325.52135 apply to employers whose employees are engaged in emergency response wherever it occurs, except in operations specified in the provisions of R 325.52102(1)(a)to(d).
(2) Emergency response organizations that have developed and implemented programs equivalent to the requirements of this rule and R 325.52131 to R 325.52135 for handling releases of hazardous substances pursuant to the provisions of section 303 of the emergency planning and community right-to-know act of 1986, 42 U.S.C. §11003, shall be deemed to have met the requirements of this rule and R 325.52131 to R 325.52135.
(3) An emergency response plan shall be developed and implemented to handle anticipated emergencies before the commencement of emergency response operations.
The plan shall be in writing and available for inspection and copying by employees, their representatives, and Michigan occupational safety and health program (MIOSHA) personnel. An employer who will evacuate its employees from the danger area when an emergency occurs and who does not permit any of its employees to assist in handling the emergency is exempt from the requirements of this subrule and subrule (4)of this rule if the employer provides an emergency action plan in accordance with the provisions of general industry safety standard Part 6. fire exits, R 408.10601 et seq. and construction safety standard Part 18. fire protection and prevention, R 408.41801 et seq. of the Michigan Administrative Code.
(4) An employer shall develop an emergency response plan which shall address all of the following to the extent that they are not addressed elsewhere:
(a) Preemergency planning and coordination with outside parties.
(b) Personnel roles, lines of authority, training, and communication.
(c) Emergency recognition and prevention.
(d) Safe distances and places of refuge.
(e) Site security and control.
(f) Evacuation routes and procedures.
(g) Decontamination.
(h) Emergency medical treatment and first aid.
(i) Emergency alerting and response procedures.
(j) Critique of response and follow-up.
(k) PPE and emergency equipment.
(5) Emergency response organizations may use the local emergency response plan or the state emergency response plan, or both, as part of their emergency response plan to avoid duplication. Those items of the emergency response plan that are properly addressed by the local and state emergency plans may be substituted into an employer's emergency plan or otherwise kept together for use by employers and employees use.
History: 1991 MR 10, Eff. Oct. 31, 1991; 2000 MR 2, Eff. Feb. 23, 2000.

R 325.52131 Emergency response procedures.

Rule 31. (1) he senior emergency response official who responds to an emergency shall become the individual in charge of a site-specific incident command system (ICS). All emergency responders and their communications shall be coordinated and controlled through the individual in charge of the ICS, and shall be assisted by the senior official present for each employer. (2) The senior official at an emergency response is the most senior official on the site who is responsible for controlling the operation at the site. Initially, it is the senior officer on the first piece of responding emergency apparatus to arrive on the incident scene who is the senior official. As more senior officers arrive, such as the battalion chief, fire chief, state law

enforcement official, or site coordinator, the position of senior official is passed up the line of authority which has been previously established. (3) The individual in charge of the ICS shall identify, to the extent possible, all hazardous substances or conditions present and shall address, as appropriate, all of the following:
(a) Site analysis.
(b) Use of engineering controls.
(c) Maximum exposure limits.
(d) Hazardous substance handling procedures.
(e) The use of any new technologies.
(4) Based on the hazardous substances or conditions present, the individual in charge of the ICS shall implement appropriate emergency operations and assure that the personal protective equipment worn is appropriate for the hazards to be encountered. However, personal protective equipment shall meet the criteria contained in the occupational safety standards for general industry, Part 73. Fire Brigades, being R 408.17301 et seq. of the Michigan Administrative Code, when worn while performing fire fighting operations beyond the incipient stage for any incident.
(5) Employees who are engaged in emergency response and who are exposed to hazardous substances that present an inhalation hazard or potential inhalation hazard shall wear positive-pressure, self-contained breathing apparatus while engaged in emergency response and until such time that the individual in charge of the ICS determines, through the use of air monitoring, that a decreased level of respiratory protection will not result in hazardous exposures to employees. (6) The individual in charge of the ICS shall limit the number of emergency response personnel at the emergency site in those areas of potential or actual exposure to incident or site hazards to those who are actively performing emergency operations. However, operations in hazardous areas shall be performed using the buddy system in groups of 2 or more.
(7) Back-up personnel shall stand by with equipment ready to provide assistance or rescue. Qualified emergency medical service personnel shall also stand by with medical equipment and transportation capability.
(8) The individual in charge of the ICS shall designate a safety official, who is knowledgeable in the operations being implemented at the emergency response site, with specific responsibility for identifying and evaluating hazards and for providing direction with respect to the safety of operations for the emergency.
(9) When activities are judged by the safety official to be an IDLH or imminent danger condition, the safety official shall have the authority to alter, suspend, or terminate those activities. The safety official shall immediately inform the individual in charge of the ICS of any actions taken to correct these hazards at an emergency scene.
(10) After emergency operations have terminated, the individual in charge of the ICS shall implement appropriate decontamination procedures. (11) Approved self-contained, compressed air breathing apparatus may, if necessary, be used with approved cylinders from other approved self-contained, compressed air breathing apparatus if such cylinders are of the same capacity and pressure rating. All compressed air cylinders that are used with self-contained breathing apparatus shall meet the criteria of the United States department of transportation and national institute for occupational safety and health, which are adopted in these rules by reference. The criteria are set forth in the provisions of 30 C.F.R. part 84 and 49 C.F.R. parts 173 and 178, which may be inspected at the Lansing office of the department of consumer and industry services and may be purchased from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, or from the Michigan Department of Consumer and Industry Services, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan 48909, at a cost at the time of adoption of these rules of $20.00 for copies of 30 C.F.R. part 84 and at a cost at the time of adoption of these rules of $24.00 for copies of 49 C.F.R. parts 173 and 178.
History: 1991 MR 10, Eff. Oct. 31, 1991, 2000 MR 2, Eff. Feb 23, 2000.

R 325.52132
Source: 1991 AACS.

R 325.52133
Source: 1991 AACS.

R 325.52134
Source: 1991 AACS.

R 325.52135 Postemergency response operations.

Rule 35. (1) Upon completion of the emergency response, if it is determined that it is necessary to remove hazardous substances, health hazards, and materials contaminated with them, such as contaminated soil or other elements of the natural environment, from the site of the incident, the employer who conducts the cleanup shall comply with either of the following provisions:
(a) Meet all of the requirements of R 325.52104 to R 325.52128. (b) Where the cleanup is done on plant property using plant or workplace employees, such employees shall have completed the training requirements of all of the following:
(i) The provisions of general industry safety standard Part 6. fire exits, R 408.10601 et seq. and construction safety standard Part 18. fire protection and prevention, R 408.41801 et seq. of the Michigan Administrative Code as required in R 325.52125(1)
(ii) The provisions of 29 §1910.1200(h).
(iii) The provisions of the respiratory protection standard, R 325.60051 et seq. of the Michigan Administrative Code.
(iv) Other appropriate safety and health training appropriate to the tasks. (2) All equipment that is to be used in the cleanup of the site of an incident shall be in serviceable condition and shall have been inspected before use.
History: 1991 MR 10, Eff. Oct. 31, 1991; 2000 MR 2, Eff. Feb. 23, 2000.

R 325.52136
Source: 1991 AACS.

R 325.52137 Availability of rules and appendices; permission to copy.

Rule 37. (1) Copies of these rules and related appendices are available, at no cost, from the Michigan Department of Consumer and Industry Services, Standards Division, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan 48909.
(2) Permission to copy any of these documents in full is granted by the director of the department of consumer and industry services.
History: 1991 MR 10, Eff. Oct. 31, 1991; 2000 MR 2, Eff. Feb. 23, 2000.

PERSONAL PROTECTIVE EQUIPMENT

R 325.60001 Scope.

Rule 1. (1) These rules apply to personal protective equipment for eyes, face, hands, and respiratory protection, except that R 325.60005 and R 325. 60006 do not apply to respiratory protection. Safety standards relating to eye and face protection, head protection, foot protection, and electrical protective equipment are found in R 408.13301 et seq. of the Michigan Administrative Code. Rules applying to personal protective equipment for hearing conservation are found in R 325.60121 et seq of the Michigan Administrative Code.
(2) These rules replace occupational health rule 3501.
History: 1995 MR 6, Eff. June 20, 1995; 1998 MR 2, Eff. Mar. 1, 1998.

R 325.60002
Source: 1995 AACS.

R 325.60003
Source: 1995 AACS.

R 325.60004
Source: 1995 AACS.

R 325.60005 Hazard assessment and equipment selection.

Rule 5. (1) An employer shall assess the workplace to determine if hazards are present, or are likely to be present, that necessitate the use of personal protective equipment. If hazards are present, or are likely to be present, and if the employer cannot eliminate the hazards by feasible engineering controls, then the employer shall do all of the following:
(a) Select, and have each affected employee use, the types of personal protective equipment that will protect the affected employee from the hazards identified in the hazard assessment.
(b) Communicate selection decisions to each affected employee.
(c) Select personal protective equipment that properly fits each affected employee.
(2) An employer shall verify, through a written certification that is identified as a certification of hazard assessment, that the required workplace hazard assessment has been performed. The certification shall identify all of the following:
(a) The workplace evaluated.
(b) The person certifying that the evaluation has been performed.
(c) The date of the hazard assessment.
(3) An employer shall not permit defective or damaged personal protective equipment to be used.
History: 1995 MR 6, Eff. June 20, 1995; 1998 MR 2, Eff. Mar. 1, 1998; 1999 MR 4, Eff. Apr. 21, 1999.

R 325.60006
Source: 1995 AACS.

R 325.60007 Applicability of requirements for hazard assessments and training.
Rule 7. R 325.60005 and R 325.60006 apply only to face, eye, and hand protection. R 325.60005 and R 325.60006 do not apply to O.H. rule 325.60051 et seq., Part 451. respiratory protection.
History: 1995 MR 6, Eff. June 20, 1995; 2000 MR 15, Eff. Sept. 28, 2000.

R 325.60008 Face and eye protection generally.
Rule 8. (1) An employer shall ensure that each affected employee shall use appropriate eye or face protection when exposed to eye or face hazards from any of the following:
(a) Flying particles.
(b) Molten metal.
(c) Liquid chemicals.
(d) Corrosive materials.
(e) Air contaminants.
(f) Radiation.
Table 1 of this rule, and table 1, face and eye protector selection chart of R 408.13312, shall be used to select the proper eye and face protection.
(2) An employer shall ensure that each affected employee shall use eye protection that provides side protection when there is a hazard from flying objects. Detachable side protectors, such as clip-on or slide-on side shields, that are in compliance with the applicable requirements of this rule are acceptable.
(3) An employer shall ensure that each affected employee who wears prescription lenses while engaged in operations that involve eye hazards wears eye protection that incorporates the prescription in its design or wears eye protection that can be worn over the prescription lenses without disturbing theproper position of the prescription lenses or the protective lenses.
(4) An employer shall ensure that eye and face personal protective equipment is distinctly marked to facilitate identification of the manufacturer.
(5) An employer shall ensure that each affected employee uses equipment that has filter lenses which have a shade number appropriate for the work being performed for protection from injurious light radiation. Table 1 is a listing of appropriate shade numbers for various operations.
(6) Table 1 reads as follows:

TABLE 1
FILTER LENSES FOR PROTECTION AGAINST RADIANT ENERGY

Operations	Electrode Size 1/32 In.	Arc Current	Minimum* Protective Shade
Shield metal	Less than 3	Less than 60	7
arc welding	3 to 5	60 to 160	8
	More than 5 to 8	161 to 250	10
	More than 8	251 to 550	11
Gas metal arc		Less than 60	7
welding and flux		60 to 160	10
cored arc welding		161 to 250	10
		251 to 500	10
Gas tungsten arc		Less than 50	8
welding		50 to 150	8
		151 to 500	10
Air carbon	(Light)	Less than 500	10
Arc cutting	(Heavy)	500 to 1000	11
Plasma arc welding		Less than 20	6
		20 to 100	8
		101 to 400	10
		401 to 800	11
Torch brazing			3
Torch soldering			2
Carbon arc welding			14
Operations	Plate Thickness (Inches	Plate Thickness (mm)	Minimum* Protective Shade
Gas Welding:			
Light	Under 1/8	Under 3.2	4
Medium	1/8 to 1/2	3.2 to 12.7	5
Heavy	Over 1/2	Over 12.7	6
Oxygen Cutting:			
Light	Under 1	Under 25	3
Medium	1 to 6	25 to 150	4
Heavy	Over 6	Over 150	5

* As a rule of thumb, start with a shade that is too dark to see the weld zone. Then go to a lighter shade that gives a sufficient view of the weld zone without going below the minimum. In oxyfuel gas welding or cutting where the torch produces a high yellow light, it is desirable to use a filter lens that absorbs the yellow or sodium line in the visible light of the (spectrum) operation.

** These values apply where the actual arc is clearly seen. Experience has shown that light filters may be used when the arc is hidden by the workpiece.

History: 1995 MR 6, Eff. June 20, 1995; 1998 MR 2, Eff. Mar. 1, 1998.

R 325.60009 Face and eye protection; criteria.

Rule 9. (1) Protective eye and face devices purchased after July 5, 1994, shall be in compliance with American national standards institute standard Z87.1-1989, entitled "American National Standard Practice for Occupational and Educational Eye and Face Protection," or shall be demonstrated by the employer to be equally effective. The standard is adopted by reference in these rules and is available from

the American National Standards Institute, 11 West 42nd Street, New York, New York 10036, or from the Michigan Department of Consumer and Industry Services, Division of Occupational Health, P.O. Box 30649, Lansing, Michigan 48909, at a cost as of the time of adoption of these rules of $18.00.
(2) Eye and face protective devices purchased before July 5, 1994, shall be in compliance with American national standards institute standard Z87.1-1968, entitled "USA Standard for Occupational and Educational Eye and Face Protection," or shall be demonstrated by the employer to be equally effective. The standard is available from the American National Standards Institute, 11 West 42nd Street, New York, New York 10036, or from the Michigan Department of Consumer and Industry Services, Division of Occupational Health, P.O. Box 30649, Lansing, Michigan 48909, at a cost as of the time of adoption of these rules of $18.00.
History: 1995 MR 6, Eff. June 20, 1995; 1998 MR 2, Eff. Mar. 1, 1998.

R 325.60010
Source: 1995 AACS.

R 325.60011
Source: 1995 AACS.

R 325.60012
Source: 1995 AACS.

R 325.60013 Availability of rules and appendices; permission to copy.
Rule 13. (1) Copies of these rules and related appendices are available at no cost from the Michigan Department of Consumer and Industry Services, Division of Occupational Health, P.O. Box 30649, Lansing, Michigan 48909.
(2) Permission to copy any of these documents in full is granted by the director of the department of consumer and industru services.
History: 1995 MR 6, Eff. June 20, 1995.

R 325.60022 Rescission of OH rule 3302.
Rule 22. OH rule 3302 which was incorporated by reference pursuant to section 14 of 1974 PA 154, MCL 408.1014, is rescinded.
History: 2000 MR 19, Eff. Nov. 30, 2000.

R 325.60051 Scope and application.
Rule 1. (1) In the control of occupational diseases caused by breathing air contaminated with harmful dusts, fog, fumes, mists, gases, smokes, spray, or vapors, the primary objective shall be to prevent atmospheric contamination. The prevention of atmospheric contamination shall be accomplished, as far as feasible, by accepted engineering control measures. When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used pursuant to these rules.
(2) These rules replace occupational health rule 3502(1) to (7).
History: 1999 MR 4, Eff. Apr. 21, 1999.

R 325.60052 Adoption by reference of federal standard.
Rule 2. (1) The federal occupational safety and health administration's regulations on respiratory protection promulgated by the United States department of labor and codified at 29 C.F.R. §1910.134, respiratory protection, January 8, 1998, and corrections appearing in the Federal Register on pp. 20098 to 20099, April 23, 1998, are adopted by reference in these rules as of the effective date of these rules.
(2) The adopted federal regulations shall have the same force and effect as a rule promulgated under Act No. 154 of the Public Acts of 1974, as amended, being §408.1001 et seq. of the Michigan Compiled Laws.
(3) The adopted federal regulations are available without cost as of the time of adoption of these rules from the United States Department of Labor, OSHA, 801 South Waverly, Room 306, Lansing, Michigan 48917, or from the Michigan Department of Consumer and Industry Services, MIOSHA Standards Division, P.O. Box 30643, Lansing, Michigan 48909.

History: 1999 MR 4, Eff. Apr. 21, 1999.

OCCUPATIONAL NOISE EXPOSURE

R 325.60101
Source: 1986 AACS.

R 325.60102
Source: 1986 AACS.

R 325.60103
Source: 1986 AACS.

R 325.60104
Source: 1986 AACS.

R 325.60105
Source: 1986 AACS.

R 325.60106
Source: 1986 AACS.

R 325.60107
Source: 1986 AACS.

R 325.60108
Source: 1986 AACS.

R 325.60109
Source: 1986 AACS.

R 325.60110
Source: 1986 AACS.

R 325.60111
Source: 1986 AACS.

R 325.60112
Source: 1986 AACS.

R 325.60113
Source: 1986 AACS.

R 325.60114
Source: 1986 AACS.

R 325.60115
Source: 1993 AACS.

R 325.60116
Source: 1986 AACS.

R 325.60117
Source: 1986 AACS.

R 325.60118
Source: 1986 AACS.

R 325.60119
Source: 1993 AACS.

R 325.60120
Source: 1993 AACS.

R 325.60121
Source: 1993 AACS.

R 325.60122
Source: 1993 AACS.

R 325.60123
Source: 1986 AACS.

R 325.60124
Source: 1986 AACS.

R 325.60125
Source: 1993 AACS.

R 325.60126
Source: 1986 AACS.

R 325.60127
Source: 1993 AACS.

R 325.60128
Source: 1993 AACS.

DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES

DIRECTOR'S OFFICE

OCCUPATIONAL HEALTH STANDARDS--NOISE EXPOSURE FOR CONSTRUCTION

Filed with the Secretary of State on September 20, 2000.
This rule takes effect 15 days after filing with the Secretary of State

(By authority conferred on the director of the department of consumer and industry services by section 24 of 1974 PA 154, MCL 408.1024, and Executive Reorganization Orders Nos. 1996-1 and 1996-2, MCL 330.3101 and 445.2001)

R 325.60131 is added to the Michigan Administrative Code as follows:

R 325.60131 Noise exposure; conservation program.

Rule 1. (1) An employer shall ensure that protection against the effects of noise exposure is provided when the sound levels exceed those shown in Table D-2 of this rule when measured on the A-scale of a standard sound level meter at slow response. [1926.52(a)]

(2) An employer shall utilize feasible administrative or engineering controls if employees are subjected to sound levels exceeding those listed in Table D-2 of this rule. If the controls fail to reduce sound levels within the levels of the table, then an employer shall ensure that personal protective equipment is provided and used to reduce sound levels within the levels of the table. [1926.52(b)]

(a) An employer shall ensure that ear protective devices inserted in the ear are fitted or determined individually by competent persons. [1926.101(b)]

(b) An employer shall ensure that plain cotton is not used as a protective device. [1926.101(c)]

(3) If the variations in noise level involve maxima at intervals of 1 second or less, then it is to be considered continuous. [1926.52(c)]
(4) An employer shall implement a continuous and effective hearing conservation program if sound levels exceed the values shown in Table D-2. [1926.52(d)(1)]

TABLE D-2--PERMISSIBLE NOISE EXPOSURES

Duration per day, hours:	Sound Level dBA Slow Response
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
2-Jan	110
1/4 or less	115

(a) If the daily noise exposure is composed of 2 or more periods of noise exposure of different levels, then an employer shall consider their combined effect rather than the individual effect of each. An employer shall compute exposure to different levels for various periods of time according to the formula set forth in subdivision (b) of this subrule. [1926.52(d)(2)(i)]
(b) $F_e = \frac{T_1}{L_1} + \frac{T_2}{L_2} + \ldots + \frac{T_n}{L_n}$
where:
F_e = The equivalent noise exposure factor.
T = The period of noise exposure at any essentially constant level.
L = The duration of the permissible noise exposure at the constant level (from Table D-2).
If the value of F_e exceeds unity (1), then the exposure exceeds permissible levels. [1926.52(d)(2)(ii)]
(c) A sample computation showing an application of the formula in subdivision (b) of this subrule is as follows. An employee is exposed at these levels for these periods:
110 dBA for 1/4 hour.
100 dBA for 1/2 hour.
90 dBA for 1 1/2 hours.

$F_e = \frac{1/4}{1/2} + \frac{1/2}{2} + \frac{1\ 1/2}{8}$
$F_e = 0.500 + 0.25 + 0.188$
$F_e = 0.938$
Since the value of F_e does not exceed unity, the exposure is within permissible limits. [1926.52(d)(2)(iii)]
(5) An employer shall ensure that exposure to impulsive or impact noise is not more than 140 dB peak sound pressure level. [1926.52(e)]
(6) This rule rescinds and replaces occupational health construction rule 6501(2)(a) to (c) and rule 6260.
History: 2000 MR 15, Eff. Sept. 20, 2000

AGRICULTURAL FIELD SANITATION

R 325.61751—R 325.61757
Source: 1997 AACS.

UNDERGROUND CONSTRUCTION, CAISSONS, COFFERDAMS, AND COMPRESSED AIR

R 325.62991 Underground construction; adoption of regulations by reference; exceptions.

Rule 1. (1) The federal occupational safety and health administrations regulations on underground construction that have been promulgated by the United States department of labor and codified at 29 C.F.R. 1926.800, are adopted by reference in these rules as of the effective date of these rules, except for the following regulations and except as provided in subrule (2) of this rule:

(a) Section 1926.800(b)(1) to (3).

(b) Section 1926.800(c).

(c) Section 1926.800(d).

(d) Section 1926.800(3)(2).

(e) Section 1926.800(f)(1) to (5).

(f) Section 1926.800(g)(1) to (5).

(g) Section 1926.800(i) (4) and (5).

(h) Section 1926.800(j)(1)(viii) and (2)(iv) and (v).

(i) Section 1926.800(m)(1) to (8) and (10) to (12).

(j) Section 1926.800(n)(2).

(k) Section 1926.800(o)(1) and (2), (3)(i) to (iv), and (4)(i) and (ii).

(l) Section 1926.800(p).

(m) Section 1926.800(q).

(n) Section 1926.800®(1) to (3), (5), (6)(i)(a) and (c), (7)(1) to (13i), and (14) to (17).

(o) Section 1926.800(s)(1) to (2).

(p) Section 1926.800(t)(1)(ii), (1)(iv) (a) and (b), (vi), (2), (3)(i),(ii), and (viii), (ix), (xi), (xviii) to (xxiii), (4)(ii) to (iv), and (vii).

(2) The following references in 29 C.F.R. 1926.800 have the following meanings:

(a) A reference to 29 C.F.R. 1926.650 to 1926.652, subpart P, excavations, means construction safety standard Part 9. Excavation, Trenching, and Shoring, being R 408.40901 et seq. of the Michigan Administrative Code.

(b) A reference to 29 C.F.R. 1926.950 to 1926.652, subpart V, power transmission and distribution, means construction safety standard Part 16. Power Transmission and Distribution, being R 408.41601 et seq. of the Michigan Administrative Code.

(c) A reference to 29 C.F.R. 1926.103, respiratory protection, in subpart E means occupational health rule 6501(3), personal protective equipment.

(d) A reference to 29 C.F.R. 1926.352, fire prevention, in subpart J means construction safety standard Part 18. Fire Protection and Prevention, being R 408.41801 et seq. of the Michigan Administrative Code.

(e) A reference to 29 C.F.R. 1926.55, gases, vapors, fumes, dusts, and mists, in subpart D means occupational health rule 6201, gases, vapors, dusts, and mists.

(f) A reference to 29 C.F.R. 1926.65, hazardous waste operations and emergency response, in subpart D means the occupational health standard entitled hazardous waste operations and emergency response, being R 325.52101 et seq. of the Michigan Administrative Code. (g) A reference to 29 C.R.R. 1926.56, illumination, in subpart D means occupational health rule 6605, illumination, and R 408.40133 of the Michigan Administrative Code.

(h) A reference to 29 C.F.R. 1926.150 to 1926.155, subpart F, fire prevention and protection, means construction safety standard Part 18. Fire Protection and Prevention, being R 408.41801 et seq.of the Michigan Administrative Code.

(i) A reference to 29 C.F.R. 1926.350 to 1926.354, subpart J, welding and cutting, means construction safety standard Part 7. Welding and Cutting, being R 408.40701 et seq. of the Michigan Administrative Code.

(j) A reference to 29 C.F.R. 1926.400, subpart K, electrical, means construction safety standard Part 17. Electrical Installations, being R 408.41701 et seq. of the Michigan Administrative Code.

(k) A reference to 29 C.F.R. 1926.900 to 1926.914, subpart U, blasting and use of explosives, means construction safety standard Part 27. Blasting and Use of Explosives, being R 408.42701 et seq. of the Michigan Administrative Code.

(l) A reference to 29 C.F.R. 1926.500 to 1926.550, subpart N, cranes, derricks, hoists, elevators, and conveyors, means construction safety standard Part 10. Lifting and Digging Equipment, being R 408.41001a et seq. of the Michigan Administrative Code.
(m) A reference to 29 C.F.R. 1926.550, cranes and derricks, in subpart N means construction safety standard Part 10. Lifting and Digging Equipment, being R 408.41001a et seq. of the Michigan Administrative Code.
(n) A reference to 29 C.F.R. 1926.552, material hoists, personnel hoists and elevators, in subpart N means construction safety standard Part 10. Lifting and Digging Equipment, being R 408.41065a et seq. of the Michigan Administrative Code.
(3) The adopted federal regulations shall have the same force and effect as a rule promulgated under Act No. 154 of the Public Acts of 1974, as amended, being 408.1001 et seq. of the Michigan Compiled Laws.
History: 1995 MR 10, Eff. Oct. 25, 1995; 1998 MR 2, Eff. Mar. 1, 1998.

R 325.62992 Caissons; adoption of regulations by reference.

Rule 2. (1) The federal occupational safety and health administrations regulations on caissons that have been promulgated by the United States department of labor and codified at 29 C.F.R. 1926.801 are adopted by reference in these rules as of the effective date of these rules, except for the following sections:
(a) 1926.801(b).
(b) 1926.801(c).
(2) The adopted federal regulations shall have the same force and effect as a rule promulgated under Act No. 154 of the Public Acts of 1974, as amended, being 408.1001 et seq. of the Michigan Compiled Laws.
History: 1995 MR 10, Eff. Oct. 25, 1995; 1998 MR 2, Eff. Mar. 1, 1998.

R 325.62993 Rescinded.

History: 1995 MR 10, Eff. Oct. 25, 1995; rescinded 1998 MR 2, Eff. Mar. 1, 1998.

R 325.62994 Compressed air; adoption of regulations by reference.

Rule 4. (1) The federal occupational safety and health administrations regulations on compressed air that have been promulgated by the United States department of labor and codified at 29 C.F.R. 1926.803 are adopted by reference in these rules as of the effective date of these rules.
(2) The following references in 29 C.F.R. 1926.803 have the following meanings:
(a) A reference to 29 C.F.R. 1926.800, subpart D, occupational health and environmental controls, means occupational health construction rules.
(b) A reference to 29 C.F.R. 1926.900 to 1926.914, subpart U, blasting and use of explosives, means construction safety standard Part 27. Blasting and Use of Explosives, being R 408.42701 et seq. of the Michigan Administrative Code.
(c) A reference to 29 C.F.R. 1926.500 to 1926.503, subpart M, fall protection, means construction safety standard Part 45. Fall Protection, being R 408.44501 et seq. of the Michigan Administrative Code.
(d) A reference to 29 C.F.R. 1926.800, subpart S, underground construction, caissons, cofferdams, and compressed air, means construction safety standard Part 14. Tunnels, Shafts, Caissons, and Cofferdams, being R 408.41401 et seq. of the Michigan Administrative Code and occupational health standard Underground Construction, Caissons, Cofferdams, and Compressed Air, being R 325.62991 et seq. of the Michigan Administrative Code.
(3) The adopted federal regulations shall have the same force and effect as a rule promulgated under Act No. 154 of the Public Acts of 1974, as amended, being 408.1001 et seq. of the Michigan Compiled Laws.
History: 1995 MR 10, Eff. Oct. 25, 1995; 1998 MR 2, Eff. Mar. 1, 1998.

R 325.62995
Source: 1995 AACS.

R 325.62996 Availability of documents.

Rule 6. The federal regulations adopted by reference in these rules are available without cost as of the time of adoption of these rules from the United States Department of Labor, OSHA, 801 South Waverly, Room 306, Lansing, Michigan 48917, or from the Michigan Department of Consumer and Industry Services,

MIOSHA Standards Division, P. O. Box 30643, Lansing, Michigan 48909.
History: 1995 MR 10, Eff. Oct. 25, 1995; 1998 MR 2, Eff. Mar. 1, 1998.

PERMIT-REQUIRED CONFINED SPACES

R 325.63001 Scope.

Rule 1. (1) These rules establish the minimum requirements for practices and procedures to be used for confined space entry in all places of employment, except as provided in subrule (2) of this rule.
(2) The regulations adopted under R 325.63002 do not apply to the construction industry, agricultural operations, or shipyard employment.
History: 1993 MR 10, Eff. Nov. 2, 1993; 1999 MR 10, Eff. Nov. 8, 1999.

R 325.63002 Adoption by reference of federal standard.

Rule 2. (1) The federal occupational safety and health administration's regulations on permit-required confined spaces that have been promulgated by the United States department of labor and codified at 29 C.F.R. §§1910.146, with an effective date of April 15, 1993, and Federal Register amendments of June 29, 1993, and December 1, 1998, pp. 66038 to 66040, are adopted by reference in these rules.
(2) The adopted federal regulations in subrule (1) of this rule have the same force and effect as a rule promulgated pursuant under 1974 PA 154, being S408.1001 et seq.
(3) The adopted federal regulations in subrule (1) of this rule are available without cost as of the time of adoption of these rules from the United States Department of Labor, OSHA, 801 South Waverly, Room 306, Lansing, Michigan 48917, or from the Michigan Department of Consumer and Industry Services, Standards Division, 7150 Harris Drive, P.O. 30643 Lansing, Michigan 48909.
History: 1993 MR 10, Eff. Nov. 2, 1993; 1999 MR 10, Eff. Nov. 8, 1999.

R 325.63049 Rescissions.

Rule 49. (1) R 325.2430 of the Michigan Administrative Code, appearing on pages 1950 and 1951 of the 1979 Michigan Administrative Code, is rescinded.
(2) Occupational health rule for general industry O.H. rule 3301 is rescinded.
(3) Occupational health rule for general industry O.H. rule 3303 is amended by deleting subsection (2)(a) and (b)(i) to (v).
History: 1993 MR 10, Eff. Nov. 2, 1993; 1999 MR 10, Eff. Nov. 8, 1999.

BLOODBORNE INFECTIOUS DISEASES

R 325.70001
Source: 1993 AACS.

R 325.70002
Source: 1996 AACS.

R 325.70003
Source: 1993 AACS.

R 325.70004
Source: 1996 AACS.

R 325.70005
Source: 1996 AACS.

R 325.70006
Source: 1993 AACS.

R 325.70007

Source: 1996 AACS.

R 325.70008
Source: 1996 AACS.

R 325.70009
Source: 1996 AACS.

R 325.70010
Source: 1993 AACS.

R 325.70011
Source: 1993 AACS.

R 325.70012
Source: 1996 AACS.

R 325.70013
Source: 1996 AACS.

R 325.70014
Source: 1993 AACS.

R 325.70015
Source: 1996 AACS.

R 325.70016
Source: 1996 AACS.

R 325.70017
Source: 1996 AACS.

R 325.70018
Source: 1996 AACS.

HAZARDOUS WORK IN LABORATORIES

R 325.70101
Source: 1992 AACS.

R 325.70102
Source: 1992 AACS.

R 325.70103
Source: 1992 AACS.

R 325.70104
Source: 1992 AACS.

R 325.70105
Source: 1992 AACS.

R 325.70106
Source: 1992 AACS.

R 325.70107
Source: 1992 AACS.

R 325.70108
Source: 1992 AACS.

R 325.70109
Source: 1992 AACS.

R 325.70110
Source: 1992 AACS.

R 325.70111
Source: 1992 AACS.

R 325.70112
Source: 1992 AACS.

R 325.70113
Source: 1992 AACS.

R 325.70114
Source: 1992 AACS.

HAZARD COMMUNICATION

R 325.77001
Source: 1995 AACS.

R 325.77002
Source: 1995 AACS.

R 325.77003
Source: 1995 AACS.

BENZENE

R 325.77101
Source: 1989 AACS.

R 325.77102
Source: 1989 AACS.

R 325.77103
Source: 1989 AACS.

R 325.77104
Source: 1989 AACS.

R 325.77105
Source: 1989 AACS.

R 325.77106
Source: 1989 AACS.

R 325.77107
Source: 1989 AACS.

R 325.77108
Source: 1989 AACS.

R 325.77109
Source: 1989 AACS.

R 325.77110
Source: 1989 AACS.

R 325.77111
Source: 1989 AACS.

R 325.77112
Source: 1989 AACS.

R 325.77113
Source: 1989 AACS.

R 325.77114
Source: 1989 AACS.

R 325.77115
Source: 1989 AACS.