



STATE OF MICHIGAN
JOCELYN BENSON, SECRETARY OF STATE
DEPARTMENT OF STATE
LANSING

April 28, 2025

NOTICE OF FILING

ADMINISTRATIVE RULES

To: Secretary of the Senate
Clerk of the House of Representatives
Joint Committee on Administrative Rules
Michigan Office of Administrative Hearings and Rules (Administrative Rule #23-011-EQ)
Legislative Service Bureau (Secretary of State Filing #25-04-12)
Department of Environment, Great Lakes, and Energy

In accordance with the provisions of Section 46 of Act No. 306 of the Public Acts of 1969, being MCL 24.246, and paragraph 16 of Executive Order 1995-6, this is to advise you that the Michigan Office of Administrative Hearings and Rules filed Administrative Rule #2023-011-EQ (Secretary of State Filing #25-04-12) on this date at 10:27 A.M. for the Department of Environment, Great Lakes, and Energy entitled, "Part 1. General Provisions".

These rules become effective immediately after filing with the secretary of state unless adopted under section 33, 44, or 45a(9) of the administrative procedures act of 1969, 1969 PA 306, MCL 24.233, 24.244, or 24.245a. Rules adopted under these sections become effective 7 days after filing with the secretary of state.

Sincerely,

Jocelyn Benson
Secretary of State

Lashana Threlkeld HPG.
Lashana Threlkeld, Departmental Supervisor
Office of the Great Seal

Enclosure



GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
LANSING

MARLON I. BROWN, DPA
DIRECTOR

April 28, 2025

The Honorable Jocelyn Benson
Secretary of State
Office of the Great Seal
Richard H. Austin Building – 1st Floor
430 W. Allegan
Lansing, MI 48909

Dear Secretary Benson:

Re: Michigan Administrative Rules #: 2023-11 EQ

The Michigan Office of Administrative Hearings and Rules received administrative rules, dated March 20, 2024 for the Department of Environment, Great Lakes and Energy **“Part 1. General Provisions”**. We are transmitting these rules to you pursuant to the requirements of Section 46 of Act No. 306 of the Public Acts of 1969, being MCL 24.246, and paragraph 16 of Executive Order 1995-6.

Sincerely,

Michigan Office of Administrative Hearings and Rules



GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
MICHIGAN OFFICE OF ADMINISTRATIVE HEARINGS AND RULES
SUZANNE SONNEBORN
EXECUTIVE DIRECTOR

MARLON I. BROWN, DPA
DIRECTOR

LEGAL CERTIFICATION OF RULES

I certify that I have examined the attached administrative rules, dated March 20, 2024, in which the Department of Environment, Great Lakes, and Energy proposes to modify a portion of the Michigan Administrative Code entitled "Air Pollution Control- Part 1. General Provisions" by:


- ◆ Amending R 336.1103, R 336.1104, R 336.1113, R 336.1116, R 336.1119, R 336.1120, and R 336.1122.

The Legislative Service Bureau has approved the proposed rules as to form, classification, and arrangement.

I approve the rules as to legality pursuant to the Administrative Procedures Act, MCL 24.201 *et seq.* and Executive Order No. 2019-6. In certifying the rules as to legality, I have determined that they are within the scope of the authority of the agency, do not violate constitutional rights, and are in conformity with the requirements of the Administrative Procedures Act.

Dated: July 31, 2024

Michigan Office of Administrative Hearings and Rules

By: 
Ashlee N. Lynn,
Attorney



GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
LANSING



PHILLIP D. ROOS
DIRECTOR

CERTIFICATE OF ADOPTION

I, Phillip D. Roos, Director of the Department of Environment, Great Lakes, and Energy, do formally adopt the attached administrative rules, by amending R 336.1103, R 336.1104, R 336.1113, R 336.1116, R 336.1119, R 336.1120, and R 336.1122 of the Michigan Administrative Code.

These rules are adopted pursuant to Sections 5503 and 5512 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, MCLs 324.5503 and 324.5512, and Executive Reorganization Order Nos. 1995-16, 2009-31, 2011-1, and 2019-1, MCLs 324.99903, 324.99919, 324.99921, and 324.99923.

July 31, 2024

Date

Phillip D. Roos, Director

MOAHR 2023-11 EQ



Since 1941

Legal Division

Kevin H. Studebaker, Director

CERTIFICATE OF APPROVAL

On behalf of the Legislative Service Bureau, and as required by section 45 of the Administrative Procedures Act of 1969, 1969 PA 306, MCL 24.245, I have examined the proposed rules of the Department of Environment, Great Lakes, and Energy dated March 20, 2024, amending R 336.1103, R 336.1104, R 336.1113, R 336.1116, R 336.1119, R 336.1120, and R 336.1122 of the Department's rules entitled "Air Pollution Control – Part 1. General Provisions." I approve the rules as to form, classification, and arrangement.

Dated: July 31, 2024

LEGISLATIVE SERVICE BUREAU

By 

Rachel M. Hughart,
Legal Counsel

DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

AIR QUALITY DIVISION

AIR POLLUTION CONTROL

Filed with the secretary of state on April 28, 2025

These rules become effective immediately after filing with the secretary of state unless adopted under section 33, 44, or 45a(9) of the administrative procedures act of 1969, 1969 PA 306, MCL 24.233, 24.244, or 24.245a. Rules adopted under these sections become effective 7 days after filing with the secretary of state.

(By authority conferred on the director of the department of environment, Great Lakes, and energy by sections 5503 and 5512 of the natural resources and environmental protection act, 1994 PA 451, MCL 324.5503 and 324.5512, and Executive Reorganization Order Nos. 1995-16, 2009-31, 2011-1, and 2019-1, MCL 324.99903, 324.99919, 324.99921, and 324.99923)

R 336.1103, R 336.1104, R 336.1113, R 336.1116, R 336.1119, R 336.1120, and R 336.1122 of the Michigan Administrative Code are amended, as follows:

PART 1. GENERAL PROVISIONS

R 336.1103 Definitions; C.

Rule 103. As used in these rules:

(a) "Calendar day" means a 24-hour time period, which normally is midnight to midnight, but may, upon written notification to the department, cover a different, consecutive 24-hour time period for a specific process.

(b) "Capacity factor" means the ratio of the average load on a machine or equipment for the period of time considered to the capacity rating of the machine or equipment.

(c) "Carcinogen" means either of the following:

(i) Belonging to a category of "carcinogenic to humans," "likely to be carcinogenic to humans," or "suggestive evidence of carcinogenic potential" using the weight of evidence narrative approach as described in United States Environmental Protection Agency's "Guidelines for Carcinogen Risk Assessment" as adopted by reference in R 336.1902.

(ii) Any chemical that has been determined to be a carcinogen using another generally accepted guideline for carcinogen risk assessment based on sound scientific and defensible evidence.

(d) "Charging period," with respect to coke ovens utilizing larry car charging methodology, means the total time taken between the point at which the coal starts flowing into the oven and the point at which the leveling door and the charging holes are closed with their respective lids after the coal from the larry car hoppers is emptied into the oven being charged through the respective charging holes and the coal has been leveled in the oven. "Charging period," with respect to coke ovens utilizing pipeline charging methodology, means the total time taken from

the time at which the coal starts flowing into an oven by opening the preheated coal inlet valve to the time at which the coal flow ends when the inlet valve is closed.

(e) "Class II finishes on hardboard paneling" means a finish that meets the specifications of voluntary product standard PS-59-73, as approved by the American National Standards Institute.

(f) "Clean air act" means chapter 360, 69 stat. 322, 42 USC 7401 to 7671q and regulations promulgated under the clean air act.

(g) "Clean charge" means furnace charge materials, including molten metal; t-bar; sow; ingot; billet; pig; alloying elements; uncoated or unpainted thermally dried metal chips; metal scrap dried at 343 degrees Celsius, 650 degrees Fahrenheit, or higher; metal scrap delacquered or decoated at 482 degrees Celsius, 900 degrees Fahrenheit, or higher; other oil and lubricant-free unpainted or uncoated gates and risers; oil and lubricant-free unpainted or uncoated scrap, shapes, or products, pistons for example, that have not undergone any process, for example, machining, coating, painting, that would cause contamination of the metal with oils, lubricants, coatings, or paints; and on-site runaround.

(h) "Clear coating" means a coating that lacks color and opacity or is transparent and uses the undercoat as a reflectant base or undertone color.

(i) "Clinical testing of pharmaceuticals" means human or animal health studies that are conducted consistent with applicable government regulations, guidelines, or directions for approval of a pharmaceutical product, such as those monitored by the United States Food and Drug Administration for the purpose of determining any of the following with respect to a drug:

(i) Pharmacological action.

(ii) Preferred route of administration.

(iii) Safe dosage range.

(iv) Optimum dosage schedule.

(v) Safety and effectiveness.

(vi) Product label indications.

(j) "Coating category" means a type of surface coating for which there is a separate emission limit specified in these rules.

(k) "Coating line" means an operation that is a single series in a coating process and is comprised of 1 or more coating applicators and any associated flash-off areas, drying areas, and ovens wherein 1 or more surface coatings are applied and subsequently dried or cured.

(l) "Coating of automobiles and light-duty trucks" means the application of prime, primer surfacer, topcoat, and final repair to sheet metal and metallic body components during assembly of a vehicle. Examples of these sheet metal and metallic body components include all of the following:

(i) Bodies.

(ii) Fenders.

(iii) Cargo boxes.

(iv) Doors.

(v) Grill openings.

(m) "Coating of cans" means exterior coating and interior spray coating in 2-piece can lines; interior and exterior coating in sheet coating lines for 3-piece cans; side seam spray coating and interior spray coating in can fabricating lines for 3-piece cans; and sealing compound application and sheet coating in end coating lines.

(n) "Coating of coils" means the coating of any flat metal sheet or strip that comes in rolls or coils.

(o) "Coating of fabric" means the application of any type of coating to flat sheets of a textile substrate, including the application of coatings by saturation or impregnation.

(p) "Coating of large appliances" means the coating of the component metal parts of residential and commercial washers, dryers, ranges, refrigerators, freezers, water heaters, dishwashers, trash compactors, air conditioners, and other associated products. Examples of these component metal parts include all of the following:

- (i) Doors.
- (ii) Cases.
- (iii) Lids.
- (iv) Panels.
- (v) Interior support parts.

(q) "Coating of metal furniture" means the coating of any furniture made of metal and includes the coating of any metal part that is or must be assembled with other metal, wood, fabric, plastic, or glass parts to form a furniture piece.

(r) "Coating of paper" means the application of any decorative, functional, or saturation coating applied across the entire width of any flat sheet or pressure-sensitive tape, regardless of substrate, or applied across a partial width of any flat sheet or pressure-sensitive tape, regardless of substrate, if this partial coverage is not considered to be an operation or series of operations that is included in the definition of graphic arts line in R 336.1107(e). These applications and substrates include paper, fabric, or plastic film; related wet-coating processes on plastic film, including typewriter ribbons, photographic film, and magnetic tape; and decorative coatings on metal foil, including gift wrapping and packaging; paperboard; and pressure sensitive tapes or labels. Coating of paper does not include coatings used in substrate formation within a papermaking system or coatings applied within all printing lines including, but not limited to, those that comply with requirements contained in R 336.1624, R 336.1624a, and R 336.1635.

(s) "Coating of plastic parts of automobiles and trucks" means the coating of any plastic part that is or can be assembled with other parts to form an automobile or truck.

(t) "Coating of plastic parts of business machines" means the coating of any plastic part that is or can be assembled with other parts to form a business machine.

(u) "Coating of vinyl" means any printing, decorative coating, or protective topcoat applied over vinyl-coated fabric or vinyl rolls or sheets. Coating of vinyl does not include the application of plastisols.

(v) "Coke battery" means a series of coke ovens arranged side by side with an integral heating system.

(w) "Coke oven" means a chamber in which coal is destructively distilled to yield coke.

(x) "Cokeside," with respect to a coke oven, means that side of the coke oven through which coke is discharged.

(y) "Coking cycle" means the time during which coal undergoes destructive distillation in a coke oven. The coking cycle commences at the end of the charging period and ends at the beginning of the pushing operation, but does not include any decarbonization periods.

(z) "Cold cleaner" means a tank containing organic solvent with a volatile organic compound content of 5 % or more, by weight, and at a temperature below its boiling point that is used to spray, brush, flush, or immerse metallic or plastic, or both metallic and plastic objects, for the purpose of cleaning or degreasing.

(aa) "Commercial location" means a publicly or privately owned place where persons are engaged in the exchange or sale of goods or services and multiple housing units designed for 3 or

more families, except for elementary and secondary schools and facilities owned and operated by this state. A separate building or group of buildings used for the exchange or sale of goods or services and having a single owner and manager constitutes a separate commercial location.

(bb) "Completed organic resin" means organic resin solids, solvents, and additives as deliverable for sale or use, including a dry organic resin.

(cc) "Compliance plan" means a description of the compliance status of a source with respect to all applicable requirements for each process or process equipment as follows:

(i) For applicable requirements with which the source is in compliance, a statement that the source will continue to comply with the requirements.

(ii) For applicable requirements that will become effective during the permit term, a statement that the source will meet the requirements on a timely basis.

(iii) For applicable requirements for which the stationary source is not in compliance at the time of permit issuance, a narrative description of how the stationary source will achieve compliance with the requirements.

(dd) "Component" means 1 of the following, but does not include a valve that is not externally regulated, that is, a valve that has no external controls and thus does not have the potential to leak a volatile organic compound:

(i) As it pertains to the provisions of R 336.1622, component means any piece of equipment that has the potential to leak a volatile organic compound and includes all of the following:

- (A) Pump seals.
- (B) Compressor seals.
- (C) Seal oil degassing vents.
- (D) Pipeline valves.
- (E) Flanges and other connections.
- (F) Pressure-relief devices.
- (G) Process drains.
- (H) Open ended pipes.

(ii) As it pertains to the provisions of R 336.1628, component means all of the following:

- (A) Compressor seals.
- (B) Process valves in light liquid or gaseous volatile organic compound service.
- (C) Pressure-relief valves in gaseous volatile organic compound service.
- (D) Seals of pumps in light liquid service.

(iii) As it pertains to the provisions of R 336.1629, component means all of the following:

- (A) Compressor seals.
- (B) Process valves.
- (C) Pressure-relief valves.
- (D) Pump seals.

(ee) "Component in field gas service" means a component that processes, transfers, or contains field gas.

(ff) "Component in gaseous volatile organic compound service" means a component that processes, transfers, or contains a volatile organic compound in the gaseous phase under actual conditions.

(gg) "Component in heavy liquid service" means a component that processes, transfers, or contains heavy liquid.

(hh) "Component in light liquid volatile organic compound service" means a component that contacts a light liquid containing more than 10% volatile organic compound by weight.

(ii) "Component in liquid volatile organic compound service" means a component that processes, transfers, or contains a volatile organic compound in the liquid phase under actual conditions.

(jj) "Condenser" means a device that effects the removal of an air contaminant from an exhaust stream by a physical change of state from a vapor to a liquid or solid form.

(kk) "Control equipment" means air pollution control equipment.

(ll) "Conventional air-atomizing spray equipment" means a device that is designed to atomize and direct fluid material solely through the use of compressed air and is capable of operating at air pressures of more than 10 pounds per square inch.

(mm) "Conveyorized cold cleaner" means any continuous system that transports metallic or plastic, or both metallic and plastic objects through a bath containing organic solvent at a temperature below its boiling point for the purpose of cleaning or degreasing.

(nn) "Conveyorized vapor degreaser" means any continuous system that transports metallic objects through or over, or through and over, a bath containing organic solvent that is heated to its boiling point for the purpose of cleaning or degreasing.

(oo) "Cycle of operation," with respect to continuous emission monitoring systems, means the total time a monitoring system requires to sample, analyze, and record an emission measurement.

R 336.1104 Definitions; D.

Rule 104. As used in these rules:

(a) "Decarbonization period," with respect to coke ovens, means the time for combusting carbon formed at the oven roof and in the standpipe assembly. The decarbonization period commences when a charging hole lid or lids or a standpipe lid or lids are removed or opened near the end of the coking cycle and ends with the initiation of the next charging period.

(b) "Delivery vessel" means any tank truck, tank-equipped trailer, railroad tank car, or any similar vessel equipped with a storage tank used for the transport of a volatile organic compound from sources of supply to any stationary vessel.

(c) "Demolition waste material" means waste building materials that result from demolition operations on houses and commercial and industrial buildings.

(d) "Department" means the director of the department of environment, Great Lakes, and energy or the director's designee.

(e) "Difficult-to-monitor component" means a component that can only be monitored by elevating the monitoring personnel more than 6 feet above a support surface.

(f) "Dispensing facility" means a location where gasoline is transferred to a motor vehicle tank from a stationary vessel.

(g) "Dry organic resin" means the organic resin solids from which all liquids have been removed, as deliverable for sale or use.

R 336.1113 Definitions; M.

Rule 113. As used in these rules:

(a) "Malfunction" means any sudden, infrequent and not reasonably preventable failure of a source, process, process equipment, or air pollution control equipment to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(b) "Market testing or market development" means the limited or general distribution of a product to the consumer to gather information concerning the demand for the product.

(c) "Material handling equipment," as referenced in table 31 of R 336.1331, means a device, contrivance, or equipment used to bag, blend, convey, crush, grind, load, mill, mix, shed, store, transfer, or unload a physical substance.

(d) "Material recovery equipment" means any equipment utilized in the transport and recovery of styrene monomer and other impurities from other products and by-products in the manufacture of polystyrene resin by continuous process, including the styrene devolatilizer unit and styrene recovery unit.

(e) "Minus water" means subtraction of water and compounds that are used as organic solvents and excluded from the definition of volatile organic compound.

(f) "Modify" means making a physical change in, or change in the method of operation of, existing process or process equipment that increases the amount of any air contaminant emitted into the outer air that is not already allowed to be emitted under the conditions of a permit or order or results in the emission of any toxic air contaminant into the outer air not previously emitted. An increase in the hours of operation or an increase in the production rate up to the maximum capacity of the process or process equipment is not considered to be a change in the method of operation unless the process or process equipment is subject to enforceable permit conditions or enforceable orders that limit the production rate or the hours of operation, or both, to a level below the proposed increase.

(g) "Motor vehicle" means any self-propelled vehicle registered for, or requiring registration for, use on the highway.

(h) "Motor vehicle material" means coatings applied to motor vehicles or motor vehicle components at facilities that are not automobile or light-duty truck assembly coating facilities.

R 336.1116 Definitions; P.

Rule 116. As used in these rules:

(a) "Packaging rotogravure printing" means rotogravure printing on a substrate that, in subsequent operations, is formed into a packaging product or label, or both.

(b) "Paint manufacturing" means the grinding or mixing of a combination of pigments, resins, and liquids to produce a surface coating as listed in standard industrial classification code 2851.

(c) "Particulate matter" means any air contaminant existing as a finely divided liquid or solid, other than uncombined water, as measured by a reference test specified in R 336.2004(5) or by an equivalent or alternative method.

(d) "Perchloroethylene dry cleaning equipment" means equipment utilized in the cleaning of fabrics for which perchloroethylene (tetrachloroethylene) is the predominant cleaning medium.

(e) "Performance test" means the taking of a source sample at a stationary source by employing department-approved methods to determine either of the following:

(i) Compliance with the department's rules, orders, or emission limitations.

(ii) Compliance with the conditions of a permit to install or renewable operating permit.

(f) "Permit to install" means a permit issued by the department authorizing the construction, installation, relocation, or alteration of any process, fuel-burning, refuse-burning, or control equipment in accordance with approved plans and specifications.

(g) "Permit to operate" means a permit issued by the department authorizing the use of any process, fuel-burning, refuse-burning, or control equipment for the period indicated after it has been demonstrated that it can be operated in compliance with these rules. The requirement to obtain a permit to operate was removed from these rules effective July 26, 1995. Permits to

operate issued before that date remain effective and legally enforceable unless they are voided pursuant to R 336.1201(6).

(h) "Person" means any of the following:

- (i) An individual person.
- (ii) Trustee.
- (iii) Court-appointed representative.
- (iv) Syndicate.
- (v) Association.
- (vi) Partnership.
- (vii) Firm.
- (viii) Club.
- (ix) Company.
- (x) Corporation.
- (xi) Business trust.
- (xii) Institution.
- (xiii) Agency.
- (xiv) Government corporation.
- (xv) Municipal corporation.
- (xvi) City.
- (xvii) County.
- (xviii) Municipality.
- (xix) District.
- (xx) Other political subdivision, department, bureau, agency, or instrumentality of federal, state, or local government.

(xxi) Other entity recognized by law as the subject of rights and duties.

(i) "Petroleum" means the crude oil removed from the earth and the oils derived from tar sands, shale, and coal gasification or liquefaction.

(j) "Petroleum refinery" means any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of petroleum or through redistillation, cracking, or the reforming of unfinished petroleum derivatives.

(k) "PM-10" means particulate matter that has an aerodynamic diameter less than or equal to a nominal 10 micrometers, as measured by a reference test specified in 40 CFR part 51, appendix M, adopted by reference in R 336.1902. PM-10 emissions must include gaseous emissions from a source or activity that condense to form particulate matter at ambient temperatures. The condensable particulate matter must be accounted for in applicability determinations and in establishing emissions limitations for PM-10.

(l) "PM 2.5" means particulate matter that has an aerodynamic diameter less than or equal to a nominal 2.5 micrometers, as measured by a reference test specified in 40 CFR part 51, appendix M, adopted by reference in R 336.1902. PM 2.5 emissions must include gaseous emissions from a source or activity that condense to form particulate matter at ambient temperatures. The condensable particulate matter must be accounted for in applicability determinations and in establishing emissions limitations for PM 2.5.

(m) "Potential emissions" means those emissions expected to occur without control equipment, unless this control equipment is, aside from air pollution control requirements, vital to production of the normal product of the source or to its normal operation. Annual potential emissions must be based on the maximum annual-rated capacity of the source, unless the source

is subject to enforceable permit conditions or enforceable orders that limit the operating rate or the hours of operation, or both. Enforceable agreements or permit conditions on the type or amount of materials combusted or processed must be used in determining the potential emission rate of a source.

(n) "Potential to emit" means the maximum capacity of a stationary source to emit an air contaminant under its physical and operational design. Any physical or operational limit on the capacity of the stationary source to emit an air contaminant, including air pollution control equipment and restrictions on the hours of operation or the type or amount of material combusted, stored, or processed, must be treated as part of its design only if the limit, or the effect it would have on emissions, is legally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source. For hazardous air pollutants that have been listed pursuant to section 112(b) of the clean air act, 42 USC 7412, quantifiable fugitive emissions must be included in determining the potential to emit of any stationary source. For all other air contaminants, quantifiable fugitive emissions must be included in determining the potential to emit of a stationary source only if the stationary source belongs to 1 of the following categories:

- (i) Coal cleaning plants that have thermal dryers.
- (ii) Kraft pulp mills.
- (iii) Portland cement plants.
- (iv) Primary zinc smelters.
- (v) Iron and steel mills.
- (vi) Primary aluminum ore reduction plants.
- (vii) Primary copper smelters.
- (viii) Municipal incinerators capable of charging more than 50 tons of refuse per day.
- (ix) Hydrofluoric, sulfuric, or nitric acid plants.
- (x) Petroleum refineries.
- (xi) Lime plants.
- (xii) Phosphate rock processing plants.
- (xiii) Coke oven batteries.
- (xiv) Sulfur recovery plants.
- (xv) Carbon black plants that have a furnace process.
- (xvi) Primary lead smelters.
- (xvii) Fuel conversion plants.
- (xviii) Sintering plants.
- (xix) Secondary metal production plants.
- (xx) Chemical process plants. The term chemical process plant does not include ethanol production facilities that produce ethanol by natural fermentation included in North American industrial classification system codes 325193 or 312140.
- (xxi) Fossil fuel boilers, or combination thereof, totaling more than 250,000,000 Btu per hour heat input.
- (xxii) Petroleum storage and transfer units that have a total storage capacity of more than 300,000 barrels or petroleum storage vessels that have a capacity of more than 40,000 gallons.
- (xxiii) Taconite ore processing plants.
- (xxiv) Glass-fiber processing plants.
- (xxv) Charcoal production plants.
- (xxvi) Fossil fuel-fired steam electric plants of more than 250,000,000 Btu per hour heat input.

- (xxvii) Asphalt concrete plants.
- (xxviii) Secondary lead smelters and refineries.
- (xxix) Sewage treatment plants.
- (xxx) Phosphate fertilizer plants.
- (xxxi) Ferroalloy production plants.
- (xxxii) Grain elevators.
- (xxxiii) Stationary gas turbines.
- (xxxiv) Stationary sources that are subject to the Federal National Emission Standards for Hazardous Air Pollutants for the following materials:
 - (A) Asbestos.
 - (B) Beryllium.
 - (C) Mercury.
 - (D) Vinyl chloride.
- (o) "PPM" means parts per million, by volume.
- (p) "Printed interior panel" means a panel that has its grain or natural surface obscured by fillers and basecoats and on which a simulated grain or decorative pattern is printed.
- (q) "Process" means an action, operation, or a series of actions or operations at a source that emits or has the potential to emit an air contaminant. Examples of a process include any of the following:
 - (i) A physical change of a material.
 - (ii) A chemical change of a material.
 - (iii) The combustion of fuel, refuse, or waste material.
 - (iv) The storage of a material.
 - (v) The handling of a material.
- (r) "Process equipment" means all equipment, devices, and auxiliary components, including air pollution control equipment, stacks, and other emission points, used in a process.
- (s) "Process unit turnaround" means the scheduled shutdown of a refinery process unit for the purpose of inspection or maintenance of the unit.
- (t) "Production equipment exhaust system" means a device for collecting and removing, from the immediate area, fugitive air contaminants from any process equipment.
- (u) "Psia" means pounds per square inch absolute.
- (v) "Publication rotogravure printing" means rotogravure printing on a substrate that is subsequently formed into any of the following:
 - (i) Book.
 - (ii) Magazine.
 - (iii) Catalogue.
 - (iv) Brochure.
 - (v) Directory.
 - (vi) Newspaper.
 - (vii) Supplement.
 - (viii) Other type of printed material.
- (w) "Pushing operation," with respect to coke ovens, means the movement of the coke from a coke oven into the coke-receiving car.
- (x) "Pushside," with respect to a coke oven, means that side of the coke oven that is adjacent to the pushing machine.

R 336.1119 Definitions; S.

Rule 119. As used in these rules:

(a) "Schedule of compliance" means, for purposes of R 336.1201 to R 336.1218, all of the following:

(i) For a source not in compliance with all applicable requirements at the time of issuance of a renewable operating permit, a schedule of remedial measures, including an enforceable sequence of actions or operations that specifies milestones, leading to compliance with an applicable requirement, and a schedule for submission of certified progress reports, not less than every 6 months. The schedule must resemble, and be as stringent as, a schedule contained in a judicial consent decree or administrative order to which the source is subject. A schedule must be supplemental to, and not sanction noncompliance with, the applicable requirement on which it is based.

(ii) For a source in compliance with all applicable requirements at the time of issuance of a renewable operating permit, a statement that the source will continue to comply with the requirements.

(iii) With respect to any applicable requirement that has a future effective compliance date that is after the date of issuance and before the date of expiration of the renewable operating permit, the schedule of compliance must contain a statement that the source will meet the requirement on a timely basis, unless the underlying applicable requirement requires a more detailed schedule.

(b) "Secondary emissions" means emissions that occur as a result of the construction or operation of a stationary source, but do not come from the stationary source itself. Secondary emissions include only emissions that are specific, well-defined, quantifiable, and impact the same general area as the stationary source which causes the secondary emissions. Secondary emissions also include emissions from any off-site support facility that would not otherwise be constructed or increase its emissions except as a result of the construction or operation of the stationary source. Examples of secondary emissions include the following:

(i) Emissions from ships or trains coming to or going from a stationary source.

(ii) Emissions from any off-site support facility that would not otherwise be constructed or increase its emissions except as a result of the construction or operation of the stationary source.

(c) "Secondary risk screening level" means the concentration of a possible, probable, or known human carcinogen in ambient air that is calculated, for regulatory purposes, according to the risk assessment procedures in R 336.1229(1), to produce an estimated upper-bound lifetime cancer risk of 1 in 100,000.

(d) "Shutdown" means the cessation of operation of a source for any purpose.

(e) "Significant" means a rate of emissions for the following air contaminants that would equal or exceed any of the following:

(i) Carbon monoxide - 100 tons per year.

(ii) Oxides of nitrogen - 40 tons per year.

(iii) Sulfur dioxide - 40 tons per year.

(iv) Particulate matter - 25 tons per year.

(v) PM-10 - 15 tons per year.

(vi) PM 2.5 - 10 tons per year, 40 tons per year of sulfur dioxide, or 40 tons per year of oxides of nitrogen.

(vii) Volatile organic compounds - 40 tons per year.

(viii) Lead - 0.6 tons per year.

(ix) Fluorides - 3 tons per year.

- (x) Sulfuric acid mist - 7 tons per year.
- (xi) Hydrogen sulfide - 10 tons per year.
- (xii) Total reduced sulfur, including hydrogen sulfide - 10 tons per year.
- (xiii) Reduced sulfur compounds, including hydrogen sulfide - 10 tons per year.
- (xiv) Municipal waste combustor organics, measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans - 3.2×10^{-6} megagrams per year or 3.2×10^{-6} tons per year.
- (xv) Municipal waste combustor metals, measured as particulate matter – 14 megagrams per year or 15 tons per year.
- (xvi) Municipal waste combustor acid gases, measured as sulfur dioxide and hydrogen chloride - 36 megagrams per year or 40 tons per year.
- (xvii) Municipal solid waste landfill emissions, measured as nonmethane organic compounds - 45 megagrams per year or 50 tons per year.
- (f) "Smoke" means small gas and airborne particles consisting essentially of carbonaceous material in sufficient numbers to be observable.
- (g) "Sour condensate" means a condensate that emits sour gas at atmospheric pressure.
- (h) "Sour crude" means a crude oil that emits sour gas at atmospheric pressure.
- (i) "Sour gas" means any gas containing more than 1 grain of hydrogen sulfide or more than 10 grains of total sulfur per 100 standard cubic feet.
- (j) "Source sample" means any raw material, fuel, product, by-product, waste material, exhaust gas, air contaminant, flora, soil, or other material existing as a gas, liquid, or solid, which is captured, retained, or collected from a stationary source.
- (k) Reserved.
- (l) "Stack" or "chimney" means a flue, conduit, or duct arranged to conduct a gas stream to the outer air.
- (m) "Standard conditions" means a gas temperature of 70 degrees Fahrenheit and a gas pressure of 29.92 inches of mercury absolute.
- (n) "Standpipe assembly," with respect to coke ovens, means the riser, standpipe lid, and the gooseneck.
- (o) "Standpipe assembly emission point," with respect to a coke oven battery equipped with a single collector main or a double collector main, means the flexible connection between the battery top and the base of the riser, the seating surface of the standpipe lid, and the second flexible connection wherever located, or another agreed upon connection that is located between the collector main and the gooseneck. With respect to a battery equipped with a charging main and a gas-offtake main in tandem, standpipe assembly emission point means the upper flange, the lower flange, the top lid, the bottom lid, the upper sand seal, the middle sand seal, and the lower base sand seal. With respect to a battery equipped with a jumper pipe ministandpipe, standpipe assembly emission point means the flexible connection between the battery top and the base of the riser, the seating surface of the standpipe lid, the flexible connection between the collector main and the gooseneck, the ministandpipe lid, and the flexible connection between the battery top and the jumper pipe ministandpipe.
- (p) "Start-up" means the setting in operation of a process or process equipment for any purpose.
- (q) "State-only enforceable" means that the limitation or condition is derived solely from the act and the air pollution control rules and is not federally enforceable. State-only enforceable requirements include R 336.1224, R 336.1225, R 336.1901, any permit requirement established solely pursuant to R 366.1201(1)(b), or another regulation that is enforceable solely under the act and is not federally enforceable.

(r) "Stationary source" means all buildings, structures, facilities, or installations that emit or have the potential to emit 1 or more air contaminants, are located at 1 or more contiguous or adjacent properties, are under the control of the same person, and have the same 2-digit major group code associated with their primary activity. In addition, a stationary source includes buildings, structures, facilities, or installations that emit or have the potential to emit 1 or more air contaminants, are located at 1 or more contiguous or adjacent properties, are under the control of the same person, and have a different 2-digit major group code, but support the primary activity. Buildings, structures, facilities, or installations are considered to support the primary activity if 50% or more of their output is dedicated to the primary activity. Major group codes and primary activities are described in the standard industrial classification manual.

Notwithstanding the provisions of this subdivision, research and development activities, as described in R 336.1118, may be treated as a separate stationary source, unless the research and development activities support the primary activity of the stationary source.

(s) "Stationary vessel" means any tank, reservoir, or container used for the storage of any volatile organic compound that is not used to transport volatile organic compounds and no manufacturing process or part thereof takes place.

(t) "Stencil coat" means a coating that is applied over a stencil to a plastic part at a thickness of 1 mil or less of coating solids. Stencil coats are most frequently letters, numbers, or decorative designs.

(u) "Styrene devolatilizer unit" means equipment performing the function of separating unreacted styrene monomer and other volatile components from polystyrene in a vacuum devolatilizer.

(v) "Styrene recovery unit" means equipment performing the function of separating styrene monomer from other less volatile components of the styrene devolatilizer unit's output. The separated styrene monomer may be reused as raw material in the manufacturing of polystyrene resin.

(w) "Submerged fill pipe" means any fill pipe that has its discharge opening entirely submerged when the liquid level is 6 inches above the bottom of the vessel or, when applied to a vessel that is loaded from the side, means either of the following:

(i) Any fill pipe that has its discharge opening entirely submerged when the liquid level is 18 inches above the bottom of the vessel.

(ii) Any fill pipe that has its discharge opening entirely submerged when the liquid level is twice the diameter of the fill pipe above the bottom of the vessel, but the top of the submerged fill pipe must not be more than 36 inches above the bottom of the vessel.

(x) "Sufficient evidence," a term of art, means either of the following:

(i) In human epidemiological studies, that the data indicates that there is a causal relationship between the agent and human cancer.

(ii) In animal studies, the data suggests that there is an increased incidence of malignant tumors or combined malignant and benign tumors in any of the following:

(A) Multiple species or strains.

(B) Multiple experiments.

(C) To an unusual degree in a single experiment with regard to high incidence, unusual site or type of tumor, or early age at onset.

(y) "Sulfuric acid plant" means any facility producing sulfuric acid by the contact process by burning elemental sulfur, alkylation acid, hydrogen sulfide, or acid sludge, but does not include

facilities where conversion to sulfuric acid is utilized primarily as a means of preventing emissions to the atmosphere of sulfur dioxide or other sulfur compounds.

(z) "Surface coating" means any paint, lacquer, varnish, ink, adhesive, or other coating material applied on a surface.

(aa) "Sweet condensate" means any condensate that is not a sour condensate.

(bb) "Sweet crude" means any crude oil that is not a sour crude.

(cc) "Sweetening facility" means a facility or process that removes hydrogen sulfide or sulfur-containing compounds, or both, from a sour gas, sour crude oil, or sour condensate stream and converts it to sweet gas, sweet crude, or sweet condensate. The term sweetening facility does not include a facility or process that operates in an enclosed system and does not emit hydrogen sulfide to the outer air.

(dd) "Sweet gas" means any gas that is not a sour gas.

(ee) "Synthetic natural gas" means any manufactured fuel gas of approximately the same composition and heating value as that obtained naturally from geological formations beneath the Earth's surface.

(ff) "Synthetic organic chemical and polymer manufacturing plant" means a stationary source where the production, as intermediates or final products, of 1 or more of the following chemicals takes place:

(i) Methyl tert-butyl ether.

(ii) Polyethylene.

(iii) Polypropylene.

(iv) Polystyrene.

(v) Synthetic organic chemicals listed in "Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry," 40 CFR part 60, subpart VV, adopted by reference in R 336.1902.

(gg) "Synthetic organic chemical and polymer manufacturing process unit" means all process equipment assembled to manufacture, as intermediates or final products, 1 or more of the chemicals listed in the definition of synthetic organic chemical and polymer manufacturing plant. A synthetic organic chemical and polymer manufacturing process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product.

R 336.1120 Definitions; T.

Rule 120. As used in these rules:

(a) "Temporary source" means a stationary source, process, or process equipment that commences operation and is located at a geographic site for not more than 12 consecutive months.

(b) "Texture coat" means a coating that is applied to a plastic part which, in its finished form, consists of discrete raised spots of the coating.

(c) "Thin particleboard" means a manufactured board that is 1/4 of an inch or less in thickness and is made of individual wood particles that have been coated with a binder and formed into flat sheets by pressure.

(d) "Thinning tank," as it pertains to R 336.1631, means any vessel that receives resin from a reactor and to which solvents or other materials are added to thin the resin.

(e) "Tileboard" means paneling that has a colored, waterproof surface coating.

(f) "Toxic air contaminant" means any air contaminant for which there is no national ambient air quality standard and is or may become harmful to public health or the environment when

present in the outdoor atmosphere in sufficient quantities and duration. For the purpose of this definition, the following substances are not considered toxic air contaminants:

(i) Acetylene.

(ii) Animal or plant materials, including extracts and concentrates thereof, used as ingredients in food products or dietary supplements in accordance with applicable regulations of the United States Food and Drug Administration.

(iii) Argon.

(iv) Calcium carbonate.

(v) Calcium hydroxide.

(vi) Calcium oxide.

(vii) Calcium silicate.

(viii) Calcium sulfate.

(ix) Carbon dioxide.

(x) Carbon monoxide.

(xi) Cellulose.

(xii) Crystalline silica emissions from any of the following processes:

(A) Extraction and processing of all metallic or non-metallic minerals.

(B) Sand production, processing, and drying.

(C) Asphalt production.

(D) Concrete production.

(E) Glass and fiberglass manufacturing.

(F) Foundries.

(G) Foundry residual recovery activities.

(xiii) Dipropylene glycol

(xiv) Emery (corundite).

(xv) Ethane.

(xvi) Graphite (synthetic).

(xvii) Grain dust.

(xvii) Helium.

(xix) Hydrogen.

(xx) Iron oxide.

(xxi) Lead.

(xxii) Liquefied petroleum gas (l.p.g.).

(xxiii) Methane.

(xxiv) Neon.

(xxv) Nitrogen.

(xxvi) Nitrogen oxides.

(xxvii) Oxygen.

(xxviii) Ozone.

(xxix) Perlite.

(xxx) Portland cement.

(xxxi) Propane.

(xxxii) Propylene glycol.

(xxxiii) Silicon.

(xxxiv) Starch.

(xxxv) Sucrose.

- (xxxvi) Sulfur dioxide.
- (xxxvii) Vegetable oil mist.
- (xxxviii) Water vapor.
- (xxxix) Zinc metal dust.

(g) "Toxicological interaction" means the simultaneous exposure to 2 or more hazardous substances that together produce a toxicological response that is greater or less than what their individual responses would be.

(h) "Transfer efficiency" means the percentage of coating solids material that leaves the coating applicator and remains on the surface of the product.

(i) "True vapor pressure" means the equilibrium partial pressure exerted by a liquid or the sum of partial pressures exerted by a mixture of liquids. For refined petroleum stock, such as gasolines and naphthas, and crude oil, the true vapor pressure may be determined in accordance with methods described in American petroleum institute MPMS C19 S2, "Manual of Petroleum Measurement Standards, Chapter 19, Evaporative Loss Measurements, Section 2, Evaporative Loss from Floating-roof Tanks," adopted by reference in R 336.1902.

R 336.1122 Definitions; V.

Rule 122. As used in these rules:

(a) "Vacuum-metalizing coatings" means topcoats and basecoats that are used in the vacuum-metalizing process.

(b) "Vacuum-producing system" means any device that creates a pressure below atmospheric, such as a pump or steam ejector with condenser, including hot wells and accumulators.

(c) "Vapor collection system," as it pertains to R 336.1627, means all piping, seals, hoses, connections, pressure-vacuum vents, and equipment between and including the delivery vessel and a stationary vessel, vapor processing unit, or vapor holder.

(d) [Reserved]

(e) "Visible emission" means any emissions that are visually detectable without the aid of instruments.

(f) "Volatile organic compound" means any compound of carbon or mixture of compounds of carbon that participates in photochemical reactions, excluding the following materials, all of which have been determined by the United States Environmental Protection Agency to have negligible photochemical reactivity:

- (i) Carbon monoxide (CAS No. 630-08-0).
- (ii) Carbon dioxide (CAS No. 124-38-9).
- (iii) Carbonic acid (CAS No. 463-79-6).
- (iv) Metallic carbides or carbonates (CAS No. not applicable).
- (v) Boron carbide (CAS No. 12069-32-8 or 60063-34-5).
- (vi) Silicon carbide (CAS No. 409-21-2 or 12327-32-1).
- (vii) Ammonium carbonate (CAS No. 10361-29-2 or 506-87-6).
- (viii) Ammonium bicarbonate (CAS No. 1066-33-7).
- (ix) Methane (CAS No. 74-82-8).
- (x) Ethane (CAS No. 74-84-0).

(xi) The methyl chloroform (CAS No. 71-55-6) portion of commercial grades of methyl chloroform, if all of the following provisions are complied with:

(A) The commercial grade of methyl chloroform is used only in a surface coating or coating line that is subject to the requirements part 6 or 7 of these rules.

(B) The commercial grade of methyl chloroform contains no stabilizers other than those listed in table 11.

(C) Compliance with the applicable limits specified in parts 6 or 7 of these rules is otherwise not technically or economically reasonable.

(D) All measures to reduce the levels of all organic solvents, including the commercial grade of methyl chloroform, from the surface coating or coating line to the lowest reasonable level, are implemented.

(E) The emissions of the commercial grade of methyl chloroform do not result in a maximum ambient air concentration exceeding any of the allowable ambient air concentrations listed in table 11.

(F) The use of the commercial grade of methyl chloroform is specifically identified and allowed by a permit to install, permit to operate, or order of the department.

(G) Table 11 reads as follows:

TABLE 11.
Commercial Grade of Methyl Chloroform -- Allowable Ambient Air Concentrations

Compound	Ppm ¹	Time ²
Methyl chloroform	3.5	1 hour
Tertiary butyl alcohol ³	1.0	1 hour
Secondary butyl alcohol ³	1.0	1 hour
Methylal ³	10.0	1 hour
1,2-butylene oxide ³	0.028 and 0.00041	1 hour annual

¹ Parts per million, by volume

² Averaging time period

³ This compound is a stabilizer

(xii) The methyl chloroform (CAS No. 71-55-6) portion of commercial grades of methyl chloroform that contain another stabilizer not listed in table 11 of this rule, if all of the following provisions are complied with:

(A) The commercial grade of methyl chloroform is used only in a surface coating or coating line that is subject to the requirements of parts 6 or 7 of these rules.

(B) Compliance with the applicable limits specified in parts 6 or 7 of these rules is otherwise not technically or economically reasonable.

(C) All measures to reduce the levels of all organic solvents, including the commercial grade of methyl chloroform, from the surface coating or coating line to the lowest reasonable level are implemented.

(D) The emissions of any compound in the commercial grade of methyl chloroform that is listed in table 11 of this rule do not result in a maximum ambient air concentration exceeding any of the allowable ambient air concentrations listed in table 11.

(E) The emission of all compounds in the commercial grade of methyl chloroform that are not listed in table 11 is demonstrated to comply with R 336.1901.

(F) The use of the commercial grade of methyl chloroform is specifically identified and allowed by a permit to install, permit to operate, or order of the department.

- (xiii) Acetone (CAS No. 67-64-1).
- (xiv) Cyclic, branched, or linear completely methylated siloxanes (CAS Nos. include 107-45-0, 107-51-7, 141-62-8, 141-63-9, 107-63-9, 63148-62-9, 541-05-9, 556-67-2, 541-02-6, 540-97-6, 69430-24-6, 17928-28-8, 3555-47-3).
- (xv) Parachlorobenzotrifluoride (CAS No. 98-56-6).
- (xvi) Perchloroethylene (CAS No. 127-18-4).
- (xvii) Trichlorofluoromethane (CFC-11) (CAS No. 75-69-4).
- (xviii) Dichlorodifluoromethane (CFC-12) (CAS No. 75-71-8).
- (xix) 1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113) (CAS No. 76-13-1).
- (xx) 1,2-dichloro 1,1,2,2-tetrafluoroethane (CFC-114) (CAS No. 76-14-2).
- (xxi) Chloropentafluoroethane (CFC-115) (CAS No. 76-15-3).
- (xxii) 1,1-dichloro 1-fluoroethane (HCFC-141b) (CAS No. 1717-00-6).
- (xxiii) 1-chloro 1,1-difluoroethane (HCFC-142b) (CAS No. 75-68-3).
- (xxiv) Chlorodifluoromethane (HCFC-22) (CAS No. 75-45-6).
- (xxv) 1,1,1-trifluoro 2,2-dichloroethane (HCFC-123) (CAS No. 306-83-2).
- (xxvi) 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124) (CAS No. 2837-89-0).
- (xxvii) Trifluoromethane (HFC-23) (CAS No. 75-46-7).
- (xxviii) Pentafluoroethane (HFC-125) (CAS No. 354-33-6).
- (xxix) 1,1,2,2-tetrafluoroethane (HFC-134) (CAS No. 359-35-3).
- (xxx) 1,1,1,2-tetrafluoroethane (HFC-134a) (CAS No. 811-97-2).
- (xxxi) 1,1,1-trifluoroethane (HFC-143a) (CAS No. 420-46-2).
- (xxxii) 1,1-difluoroethane (HFC-152a) (CAS No. 75-37-6).
- (xxxiii) 3,3-dichloro-1, 1,1,2,2-pentafluoropropane (HCFC-225ca) (CAS No. 422-56-0).
- (xxxiv) 1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb) (CAS No. 507-55-1).
- (xxxv) 1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC 43-10mee) (CAS No. 138495-42-8).
- (xxxvi) Difluoromethane (HFC-32) (CAS No. 75-10-5).
- (xxxvii) Ethyl fluoride (HFC-161) (CAS No. 353-36-6).
- (xxxviii) 1,1,1,3,3,3-hexafluoropropane (HFC-236fa) (CAS No. 690-39-1).
- (xxxix) 1,1,2,2,3-pentafluoropropane (HFC-245ca) (CAS No. 679-86-7).
- (xl) 1,1,2,3,3- pentafluoropropane (HFC-245ea) (CAS No. 24270-66-4).
- (xli) 1,1,1,2,3- pentafluoropropane (HFC-245eb) (CAS No. 431-31-2).
- (xlii) 1,1,1,3,3- pentafluoropropane (HFC-245fa) (CAS No. 460-73-1).
- (xliii) 1,1,1,2,3,3-hexafluoropropane (HFC-236ea) (CAS No. 431-63-0).
- (xliv) 1,1,1,3,3-pentafluorobutane (HFC365mfc) (CAS No. 406-58-6).
- (xlv) Chlorofluoromethane (HCFC-31) (CAS No. 593-70-4).
- (xlvi) 1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a) (CAS No. 354-23-4).
- (xlvii) 1-chlor-1-fluoroethane (HCFC-151a) (CAS No. 1615-75-4).
- (xlviii) 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy-butane (C₄F₉OCH₃ or HFE-7100) (CAS No. 163702-07-6).
- (xlix) 2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane (CAS No. 163702-08-7).
- (l) 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane (C₄F₉OC₂H₅ or HFE-7200) (CAS No. 163702-05-4).
- (li) 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane (CAS No. 163702-06-5).
- (lii) Methyl acetate (CAS No. 79-20-9).

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