State of Utah

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DAQ-056-15

M E M O R A N D U M

TO: Air Quality Board

THROUGH: Bryce C. Bird, Executive Secretary

FROM: Joel Karmazyn, Environmental Scientist

DATE: September 23, 2015

SUBJECT: PROPOSE FOR PUBLIC COMMENT: Amend R307-101-2. Definitions; R307-312-5. Hot Mix Asphalt Plants; and R307-328-4. Loading of Tank Trucks, Trailers, Railroad Tank Cars, and Other Transport Vehicles.

On August 25, 2015, the EPA proposed conditional approval of sections of Utah's $PM_{2.5}$ State Implementation Plan (SIP). As a condition for approving the SIP, EPA is requiring the state to amend R307-101-2, R307-312-5, and R307-328-4. The state sent a letter to the EPA on August 4, 2015, that committed to revising the SIP. These amendments will satisfy that commitment.

Amendments to R307-101-2: The definition of $PM_{2.5}$ includes a description of all $PM_{2.5}$ precursors, with the exception of ammonia. EPA has requested that we either add ammonia to the definition or remove the precursors from the definition. Because $PM_{2.5}$ precursors are not included in any other part of our rules, we are proposing to remove the $PM_{2.5}$ precursors from the definition of $PM_{2.5}$.

Amendments to R307-312-5: The rule states that "production shall be determined by scale house records or equivalent method on a daily basis." EPA requested three equivalent methods. We are proposing to replace "equivalent method" with "belt scale records" and "manifests statements." The rule now provides three equivalent methods as EPA requested.

Amendments to R307-328-4: The rule states that gasoline loading shall be performed by "submerged filling or alternative equivalent methods." We are proposing to remove "alternative equivalent methods" because filling should be performed via submerged delivery to reduce VOC generation.

Staff Recommendation: Staff recommends that the Board propose amendments to R307-101-2, R307-312-5, and R307-328-4 for public comment.

R307. Environmental Quality, Air Quality.
R307-101. General Requirements.
R307-101-2. Definitions.

Except where specified in individual rules, definitions in R307-101-2 are applicable to all rules adopted by the Air Quality Board.

"Actual Emissions" means the actual rate of emissions of a pollutant from an emissions unit determined as follows:

(1) In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the unit actually emitted the pollutant during a two-year period which precedes the particular date and which is representative of normal source operations. The director shall allow the use of a different time period upon a determination that it is more representative of normal source operation. Actual emissions shall be calculated using the unit's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period.

(2) The director may presume that source-specific allowable emissions for the unit are equivalent to the actual emissions of the unit.

(3) For any emission unit, other than an electric utility steam generating unit specified in (4), which has not begun normal operations on the particular date, actual emissions shall equal the potential to emit of the unit on that date.

(4) For an electric utility steam generating unit (other than a new unit or the replacement of an existing unit) actual emissions of the unit following the physical or operational change shall equal the representative actual annual emissions of the unit, provided the source owner or operator maintains and submits to the director, on an annual basis for a period of 5 years from the date the unit resumes regular operation, information demonstrating that the physical or operational change did not result in an emissions increase. A longer period, not to exceed 10 years, may be required by the director if the director determines such a period to be more representative of normal source post-change operations.

"Acute Hazardous Air Pollutant" means any noncarcinogenic hazardous air pollutant for which a threshold limit value - ceiling (TLV-C) has been adopted by the American Conference of Governmental Industrial Hygienists (ACGIH) in its "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, (2009)."

"Air Contaminant" means any particulate matter or any gas, vapor, suspended solid or any combination of them, excluding steam and water vapors (Section 19-2-102(1)).

"Air Contaminant Source" means any and all sources of

emission of air contaminants whether privately or publicly owned or operated (Section 19-2-102(2)).

"Air Pollution" means the presence in the ambient air of one or more air contaminants in such quantities and duration and under conditions and circumstances, as is or tends to be injurious to human health or welfare, animal or plant life, or property, or would unreasonably interfere with the enjoyment of life or use of property as determined by the standards, rules and regulations adopted by the Air Quality Board (Section 19-2-104).

"Allowable Emissions" means the emission rate of a source calculated using the maximum rated capacity of the source (unless the source is subject to enforceable limits which restrict the operating rate, or hours of operation, or both) and the emission limitation established pursuant to R307-401-8.

"Ambient Air" means the surrounding or outside air (Section 19-2-102(4)).

"Appropriate Authority" means the governing body of any city, town or county.

"Atmosphere" means the air that envelops or surrounds the earth and includes all space outside of buildings, stacks or exterior ducts.

"Authorized Local Authority" means a city, county, city-county or district health department; a city, county or combination fire department; or other local agency duly designated by appropriate authority, with approval of the state Department of Health; and other lawfully adopted ordinances, codes or regulations not in conflict therewith.

"Board" means Air Quality Board. See Section 19-2-102(8)(a).

"Breakdown" means any malfunction or procedural error, to include but not limited to any malfunction or procedural error during start-up and shutdown, which will result in the inoperability or sudden loss of performance of the control equipment or process equipment causing emissions in excess of those allowed by approval order or Title R307.

"BTU" means British Thermal Unit, the quantity of heat necessary to raise the temperature of one pound of water one degree Fahrenheit.

"Calibration Drift" means the change in the instrument meter readout over a stated period of time of normal continuous operation when the VOC concentration at the time of measurement is the same known upscale value.

"Carbon Adsorption System" means a device containing adsorbent material (e.g., activated carbon, aluminum, silica gel), an inlet and outlet for exhaust gases, and a system for the proper disposal or reuse of all VOC adsorbed.

"Carcinogenic Hazardous Air Pollutant" means any hazardous air pollutant that is classified as a known human carcinogen (A1)

or suspected human carcinogen (A2) by the American Conference of Governmental Industrial Hygienists (ACGIH) in its "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, (2009)."

"Chargeable Pollutant" means any regulated air pollutant except the following:

(1) Carbon monoxide;

(2) Any pollutant that is a regulated air pollutant solely because it is a Class I or II substance subject to a standard promulgated or established by Title VI of the Act, Stratospheric Ozone Protection;

(3) Any pollutant that is a regulated air pollutant solely because it is subject to a standard or regulation under Section 112(r) of the Act, Prevention of Accidental Releases.

"Chronic Hazardous Air Pollutant" means any noncarcinogenic hazardous air pollutant for which a threshold limit value - time weighted average (TLV-TWA) having no threshold limit value - ceiling (TLV-C) has been adopted by the American Conference of Governmental Industrial Hygienists (ACGIH) in its "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, (2009)."

"Clean Air Act" means federal Clean Air Act as amended in 1990.

"Clean Coal Technology" means any technology, including technologies applied at the precombustion, combustion, or post combustion stage, at a new or existing facility which will achieve significant reductions in air emissions of sulfur dioxide or oxides of nitrogen associated with the utilization of coal in the generation of electricity, or process steam which was not in widespread use as of November 15, 1990.

"Clean Coal Technology Demonstration Project" means a project using funds appropriated under the heading "Department of Energy-Clean Coal Technology," up to a total amount of $2,500,000,000 for commercial demonstration of clean coal technology, or similar projects funded through appropriations for the Environmental Protection Agency. The Federal contribution for a qualifying project shall be at least 20 percent of the total cost of the demonstration project.

"Clearing Index" means an indicator of the predicted rate of clearance of ground level pollutants from a given area. This number is provided by the National Weather Service.

"Commence" as applied to construction of a major source or major modification means that the owner or operator has all necessary pre-construction approvals or permits and either has:

(1) Begun, or caused to begin, a continuous program of actual on-site construction of the source, to be completed within a reasonable time; or

(2) Entered into binding agreements or contractual obligations, which cannot be canceled or modified without substantial loss to the owner or operator, to undertake a program of actual construction of the source to be completed within a reasonable time.

"Condensable PM2.5" means material that is vapor phase at stack conditions, but which condenses and/or reacts upon cooling and dilution in the ambient air to form solid or liquid particulate matter immediately after discharge from the stack.

"Compliance Schedule" means a schedule of events, by date, which will result in compliance with these regulations.

"Construction" means any physical change or change in the method of operation including fabrication, erection, installation, demolition, or modification of a source which would result in a change in actual emissions.

"Control Apparatus" means any device which prevents or controls the emission of any air contaminant directly or indirectly into the outdoor atmosphere.

"Department" means Utah State Department of Environmental Quality. See Section 19-1-103(1).

"Director" means the Director of the Division of Air Quality. See Section 19-1-103(1).

"Division" means the Division of Air Quality.

"Electric Utility Steam Generating Unit" means any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.

"Emission" means the act of discharge into the atmosphere of an air contaminant or an effluent which contains or may contain an air contaminant; or the effluent so discharged into the atmosphere.

"Emissions Information" means, with reference to any source operation, equipment or control apparatus:

(1) Information necessary to determine the identity, amount, frequency, concentration, or other characteristics related to air quality of any air contaminant which has been emitted by the source operation, equipment, or control apparatus;

(2) Information necessary to determine the identity, amount, frequency, concentration, or other characteristics (to the extent related to air quality) of any air contaminant which, under an applicable standard or limitation, the source operation was authorized to emit (including, to the extent necessary for such

purposes, a description of the manner or rate of operation of the source operation), or any combination of the foregoing; and

(3) A general description of the location and/or nature of the source operation to the extent necessary to identify the source operation and to distinguish it from other source operations (including, to the extent necessary for such purposes, a description of the device, installation, or operation constituting the source operation).

"Emission Limitation" means a requirement established by the Board, the director or the Administrator, EPA, which limits the quantity, rate or concentration of emission of air pollutants on a continuous emission reduction including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction (Section 302(k)).

"Emissions Unit" means any part of a stationary source which emits or would have the potential to emit any pollutant subject to regulation under the Clean Air Act.

"Enforceable" means all limitations and conditions which are enforceable by the Administrator, including those requirements developed pursuant to 40 CFR Parts 60 and 61, requirements within the State Implementation Plan and R307, any permit requirements established pursuant to 40 CFR 52.21 or R307-401.

"EPA" means Environmental Protection Agency.

"EPA Method 9" means 40 CFR Part 60, Appendix A, Method 9, "Visual Determination of Opacity of Emissions from Stationary Sources," and Alternate 1, "Determination of the opacity of emissions from stationary sources remotely by LIDAR."

"Executive Director" means the Executive Director of the Utah Department of Environmental Quality. See Section 19-1-103(2).

"Existing Installation" means an installation, construction of which began prior to the effective date of any regulation having application to it.

"Facility" means machinery, equipment, structures of any part or accessories thereof, installed or acquired for the primary purpose of controlling or disposing of air pollution. It does not include an air conditioner, fan or other similar device for the comfort of personnel.

"Filterable PM2.5" means particles with an aerodynamic diameter equal to or less than 2.5 micrometers that are directly emitted by a source as a solid or liquid at stack or release conditions and can be captured on the filter of a stack test train.

"Fireplace" means all devices both masonry or factory built units (free standing fireplaces) with a hearth, fire chamber or similarly prepared device connected to a chimney which provides the operator with little control of combustion air, leaving its fire chamber fully or at least partially open to the room.

Fireplaces include those devices with circulating systems, heat exchangers, or draft reducing doors with a net thermal efficiency of no greater than twenty percent and are used for aesthetic purposes.

"Fugitive Dust" means particulate, composed of soil and/or industrial particulates such as ash, coal, minerals, etc., which becomes airborne because of wind or mechanical disturbance of surfaces. Natural sources of dust and fugitive emissions are not fugitive dust within the meaning of this definition.

"Fugitive Emissions" means emissions from an installation or facility which are neither passed through an air cleaning device nor vented through a stack or could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.

"Garbage" means all putrescible animal and vegetable matter resulting from the handling, preparation, cooking and consumption of food, including wastes attendant thereto.

"Gasoline" means any petroleum distillate, used as a fuel for internal combustion engines, having a Reid vapor pressure of 4 pounds or greater.

"Hazardous Air Pollutant (HAP)" means any pollutant listed by the EPA as a hazardous air pollutant in conformance with Section 112(b) of the Clean Air Act. A list of these pollutants is available at the Division of Air Quality.

"Household Waste" means any solid or liquid material normally generated by the family in a residence in the course of ordinary day-to-day living, including but not limited to garbage, paper products, rags, leaves and garden trash.

"Incinerator" means a combustion apparatus designed for high temperature operation in which solid, semisolid, liquid, or gaseous combustible wastes are ignited and burned efficiently and from which the solid and gaseous residues contain little or no combustible material.

"Installation" means a discrete process with identifiable emissions which may be part of a larger industrial plant. Pollution equipment shall not be considered a separate installation or installations.

"LPG" means liquified petroleum gas such as propane or butane.

"Maintenance Area" means an area that is subject to the provisions of a maintenance plan that is included in the Utah state implementation plan, and that has been redesignated by EPA from nonattainment to attainment of any National Ambient Air Quality Standard.

(a) The following areas are considered maintenance areas for ozone:

(i) Salt Lake County, effective August 18, 1997; and

(ii) Davis County, effective August 18, 1997.

(b) The following areas are considered maintenance areas for carbon monoxide:

(i) Salt Lake City, effective March 22, 1999;

(ii) Ogden City, effective May 8, 2001; and

(iii) Provo City, effective January 3, 2006.

(c) The following areas are considered maintenance areas for PM10:

(i) Salt Lake County, effective on the date that EPA approves the maintenance plan that was adopted by the Board on July 6, 2005; and

(ii) Utah County, effective on the date that EPA approves the maintenance plan that was adopted by the Board on July 6, 2005; and

(iii) Ogden City, effective on the date that EPA approves the maintenance plan that was adopted by the Board on July 6, 2005.

(d) The following area is considered a maintenance area for sulfur dioxide: all of Salt Lake County and the eastern portion of Tooele County above 5600 feet, effective on the date that EPA approves the maintenance plan that was adopted by the Board on January 5, 2005.

"Major Modification" means any physical change in or change in the method of operation of a major source that would result in a significant net emissions increase of any pollutant. A net emissions increase that is significant for volatile organic compounds shall be considered significant for ozone. Within Salt Lake and Davis Counties or any nonattainment area for ozone, a net emissions increase that is significant for nitrogen oxides shall be considered significant for ozone. Within areas of nonattainment for PM10, a significant net emission increase for any PM10 precursor is also a significant net emission increase for PM10. A physical change or change in the method of operation shall not include:

(1) routine maintenance, repair and replacement;

(2) use of an alternative fuel or raw material by reason of an order under section 2(a) and (b) of the Energy Supply and Environmental Coordination Act of 1974, or by reason of a natural gas curtailment plan pursuant to the Federal Power Act;

(3) use of an alternative fuel by reason of an order or rule under section 125 of the federal Clean Air Act;

(4) use of an alternative fuel at a steam generating unit to the extent that the fuel is generated from municipal solid waste;

(5) use of an alternative fuel or raw material by a source:

(a) which the source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any enforceable permit condition; or

(b) which the source is otherwise approved to use;

(6) an increase in the hours of operation or in the production rate unless such change would be prohibited under any enforceable permit condition;

(7) any change in ownership at a source

(8) the addition, replacement or use of a pollution control project at an existing electric utility steam generating unit, unless the director determines that such addition, replacement, or use renders the unit less environmentally beneficial, or except:

(a) when the director has reason to believe that the pollution control project would result in a significant net increase in representative actual annual emissions of any criteria pollutant over levels used for that source in the most recent air quality impact analysis in the area conducted for the purpose of Title I of the Clean Air Act, if any, and

(b) the director determines that the increase will cause or contribute to a violation of any national ambient air quality standard or PSD increment, or visibility limitation.

(9) the installation, operation, cessation, or removal of a temporary clean coal technology demonstration project, provided that the project complies with:

(a) the Utah State Implementation Plan; and

(b) other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.

"Major Source" means, to the extent provided by the federal Clean Air Act as applicable to R307:

(1) any stationary source of air pollutants which emits, or has the potential to emit, one hundred tons per year or more of any pollutant subject to regulation under the Clean Air Act; or

(a) any source located in a nonattainment area for carbon monoxide which emits, or has the potential to emit, carbon monoxide in the amounts outlined in Section 187 of the federal Clean Air Act with respect to the severity of the nonattainment area as outlined in Section 187 of the federal Clean Air Act; or

(b) any source located in Salt Lake or Davis Counties or in a nonattainment area for ozone which emits, or has the potential to emit, VOC or nitrogen oxides in the amounts outlined in Section 182 of the federal Clean Air Act with respect to the severity of the nonattainment area as outlined in Section 182 of the federal Clean Air Act; or

(c) any source located in a nonattainment area for PM10 which emits, or has the potential to emit, PM10 or any PM10 precursor in the amounts outlined in Section 189 of the federal Clean Air Act with respect to the severity of the nonattainment area as outlined in Section 189 of the federal Clean Air Act.

(2) any physical change that would occur at a source not qualifying under subpart 1 as a major source, if the change would

constitute a major source by itself;

(3) the fugitive emissions and fugitive dust of a stationary source shall not be included in determining for any of the purposes of these R307 rules whether it is a major stationary source, unless the source belongs to one of the following categories of stationary sources:

(a) Coal cleaning plants (with thermal dryers);

(b) Kraft pulp mills;

(c) Portland cement plants;

(d) Primary zinc smelters;

(e) Iron and steel mills;

(f) Primary aluminum or reduction plants;

(g) Primary copper smelters;

(h) Municipal incinerators capable of charging more than 250 tons of refuse per day;

(i) Hydrofluoric, sulfuric, or nitric acid plants;

(j) Petroleum refineries;

(k) Lime plants;

(l) Phosphate rock processing plants;

(m) Coke oven batteries;

(n) Sulfur recovery plants;

(o) Carbon black plants (furnace process);

(p) Primary lead smelters;

(q) Fuel conversion plants;

(r) Sintering plants;

(s) Secondary metal production plants;

(t) Chemical process plants;

(u) Fossil-fuel boilers (or combination thereof) totaling more than 250 million British Thermal Units per hour heat input;

(v) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;

(w) Taconite ore processing plants;

(x) Glass fiber processing plants;

(y) Charcoal production plants;

(z) Fossil fuel-fired steam electric plants of more than 250 million British Thermal Units per hour heat input;

(aa) Any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the federal Clean Air Act.

"Modification" means any planned change in a source which results in a potential increase of emission.

"National Ambient Air Quality Standards (NAAQS)" means the allowable concentrations of air pollutants in the ambient air specified by the Federal Government (Title 40, Code of Federal Regulations, Part 50).

"Net Emissions Increase" means the amount by which the sum of the following exceeds zero:

(1) any increase in actual emissions from a particular physical change or change in method of operation at a source; and

(2) any other increases and decreases in actual emissions at the source that are contemporaneous with the particular change and are otherwise creditable. For purposes of determining a "net emissions increase":

(a) An increase or decrease in actual emissions is contemporaneous with the increase from the particular change only if it occurs between the date five years before construction on the particular change commences; and the date that the increase from the particular change occurs.

(b) An increase or decrease in actual emissions is creditable only if it has not been relied on in issuing a prior approval for the source which approval is in effect when the increase in actual emissions for the particular change occurs.

(c) An increase or decrease in actual emission of sulfur dioxide, nitrogen oxides or particulate matter which occurs before an applicable minor source baseline date is creditable only if it is required to be considered in calculating the amount of maximum allowable increases remaining available. With respect to particulate matter, only PM10 emissions will be used to evaluate this increase or decrease.

(d) An increase in actual emissions is creditable only to the extent that the new level of actual emissions exceeds the old level.

(e) A decrease in actual emissions is creditable only to the extent that:

(i) The old level of actual emissions or the old level of allowable emissions, whichever is lower, exceeds the new level of actual emissions;

(ii) It is enforceable at and after the time that actual construction on the particular change begins; and

(iii) It has approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular change.

(iv) It has not been relied on in issuing any permit under R307-401 nor has it been relied on in demonstrating attainment or reasonable further progress.

(f) An increase that results from a physical change at a source occurs when the emissions unit on which construction occurred becomes operational and begins to emit a particular pollutant. Any replacement unit that requires shakedown becomes operational only after a reasonable shakedown period, not to exceed 180 days.

"New Installation" means an installation, construction of which began after the effective date of any regulation having application to it.

"Nonattainment Area" means an area designated by the Environmental Protection Agency as nonattainment under Section 107, Clean Air Act for any National Ambient Air Quality Standard. The designations for Utah are listed in 40 CFR 81.345.

"Offset" means an amount of emission reduction, by a source, greater than the emission limitation imposed on such source by these regulations and/or the State Implementation Plan.

"Opacity" means the capacity to obstruct the transmission of light, expressed as percent.

"Open Burning" means any burning of combustible materials resulting in emission of products of combustion into ambient air without passage through a chimney or stack.

"Owner or Operator" means any person who owns, leases, controls, operates or supervises a facility, an emission source, or air pollution control equipment.

"PSD" Area means an area designated as attainment or unclassifiable under section 107(d)(1)(D) or (E) of the federal Clean Air Act.

"PM2.5" means particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers as measured by an EPA reference or equivalent method.

[~~"PM2.5 Precursor" means any chemical compound or substance which, after it has been emitted into the atmosphere, undergoes chemical or physical changes that convert it into particulate matter, specifically PM2.5, and has been identified in the applicable implementation plan for PM2.5 as significant for the purpose of developing control measures. Specifically, PM2.5 precursors include SO_2, NOx, and VOC.~~]

"PM10" means particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by an EPA reference or equivalent method.

"PM10 Precursor" means any chemical compound or substance which, after it has been emitted into the atmosphere, undergoes chemical or physical changes that convert it into particulate matter, specifically PM10.

"Part 70 Source" means any source subject to the permitting requirements of R307-415.

"Person" means an individual, trust, firm, estate, company, corporation, partnership, association, state, state or federal agency or entity, municipality, commission, or political subdivision of a state. (Subsection 19-2-103(4)).

"Pollution Control Project" means any activity or project at an existing electric utility steam generating unit for purposes of reducing emissions from such unit. Such activities or projects are limited to:

(1) The installation of conventional or innovative pollution control technology, including but not limited to advanced flue gas desulfurization, sorbent injection for sulfur dioxide and nitrogen

oxides controls and electrostatic precipitators;

(2) An activity or project to accommodate switching to a fuel which is less polluting than the fuel used prior to the activity or project, including, but not limited to natural gas or coal reburning, or the cofiring of natural gas and other fuels for the purpose of controlling emissions;

(3) A permanent clean coal technology demonstration project conducted under Title II, sec. 101(d) of the Further Continuing Appropriations Act of 1985 (sec. 5903(d) of title 42 of the United States Code), or subsequent appropriations, up to a total amount of $2,500,000,000 for commercial demonstration of clean coal technology, or similar projects funded through appropriations for the Environmental Protection Agency; or

(4) A permanent clean coal technology demonstration project that constitutes a repowering project.

"Potential to Emit" means the maximum capacity of a source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation or the effect it would have on emissions is enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.

"Primary PM2.5" means the sum of filterable PM2.5 and condensable PM2.5.

"Process Level" means the operation of a source, specific to the kind or type of fuel, input material, or mode of operation.

"Process Rate" means the quantity per unit of time of any raw material or process intermediate consumed, or product generated, through the use of any equipment, source operation, or control apparatus. For a stationary internal combustion unit or any other fuel burning equipment, this term may be expressed as the quantity of fuel burned per unit of time.

"Reactivation of a Very Clean Coal-Fired Electric Utility Steam Generating Unit" means any physical change or change in the method of operation associated with the commencement of commercial operations by a coal-fired utility unit after a period of discontinued operation where the unit:

(1) Has not been in operation for the two-year period prior to the enactment of the Clean Air Act Amendments of 1990, and the emissions from such unit continue to be carried in the emission inventory at the time of enactment;

(2) Was equipped prior to shutdown with a continuous system of emissions control that achieves a removal efficiency for sulfur dioxide of no less than 85 percent and a removal efficiency for particulates of no less than 98 percent;

(3) Is equipped with low-NOx burners prior to the time of commencement of operations following reactivation; and

(4) Is otherwise in compliance with the requirements of the Clean Air Act.

"Reasonable Further Progress" means annual incremental reductions in emission of an air pollutant which are sufficient to provide for attainment of the NAAQS by the date identified in the State Implementation Plan.

"Refuse" means solid wastes, such as garbage and trash.

"Regulated air pollutant" means any of the following:

(a) Nitrogen oxides or any volatile organic compound;

(b) Any pollutant for which a national ambient air quality standard has been promulgated;

(c) Any pollutant that is subject to any standard promulgated under Section 111 of the Act, Standards of Performance for New Stationary Sources;

(d) Any Class I or II substance subject to a standard promulgated under or established by Title VI of the Act, Stratospheric Ozone Protection;

(e) Any pollutant subject to a standard promulgated under Section 112, Hazardous Air Pollutants, or other requirements established under Section 112 of the Act, including Sections 112(g), (j), and (r) of the Act, including any of the following:

(i) Any pollutant subject to requirements under Section 112(j) of the Act, Equivalent Emission Limitation by Permit. If the Administrator fails to promulgate a standard by the date established pursuant to Section 112(e) of the Act, any pollutant for which a subject source would be major shall be considered to be regulated on the date 18 months after the applicable date established pursuant to Section 112(e) of the Act;

(ii) Any pollutant for which the requirements of Section 112(g)(2) of the Act (Construction, Reconstruction and Modification) have been met, but only with respect to the individual source subject to Section 112(g)(2) requirement.

"Repowering" means replacement of an existing coal-fired boiler with one of the following clean coal technologies: atmospheric or pressurized fluidized bed combustion, integrated gasification combined cycle, magnetohydrodynamics, direct and indirect coal-fired turbines, integrated gasification fuel cells, or as determined by the Administrator, in consultation with the Secretary of Energy, a derivative of one or more of these technologies, and any other technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of November 15, 1990.

(1) Repowering shall also include any oil and/or gas-fired

unit which has been awarded clean coal technology demonstration funding as of January 1, 1991, by the Department of Energy.

(2) The director shall give expedited consideration to permit applications for any source that satisfies the requirements of this definition and is granted an extension under section 409 of the Clean Air Act.

"Representative Actual Annual Emissions" means the average rate, in tons per year, at which the source is projected to emit a pollutant for the two-year period after a physical change or change in the method of operation of unit, (or a different consecutive two-year period within 10 years after that change, where the director determines that such period is more representative of source operations), considering the effect any such change will have on increasing or decreasing the hourly emissions rate and on projected capacity utilization. In projecting future emissions the director shall:

(1) Consider all relevant information, including but not limited to, historical operational data, the company's own representations, filings with the State of Federal regulatory authorities, and compliance plans under title IV of the Clean Air Act; and

(2) Exclude, in calculating any increase in emissions that results from the particular physical change or change in the method of operation at an electric utility steam generating unit, that portion of the unit's emissions following the change that could have been accommodated during the representative baseline period and is attributable to an increase in projected capacity utilization at the unit that is unrelated to the particular change, including any increased utilization due to the rate of electricity demand growth for the utility system as a whole.

"Residence" means a dwelling in which people live, including all ancillary buildings.

"Residential Solid Fuel Burning" device means any residential burning device except a fireplace connected to a chimney that burns solid fuel and is capable of, and intended for use as a space heater, domestic water heater, or indoor cooking appliance, and has an air-to-fuel ratio less than 35-to-1 as determined by the test procedures prescribed in 40 CFR 60.534. It must also have a useable firebox volume of less than 6.10 cubic meters or 20 cubic feet, a minimum burn rate less than 5 kilograms per hour or 11 pounds per hour as determined by test procedures prescribed in 40 CFR 60.534, and weigh less than 800 kilograms or 362.9 pounds. Appliances that are described as prefabricated fireplaces and are designed to accommodate doors or other accessories that would create the air starved operating conditions of a residential solid fuel burning device shall be considered as such. Fireplaces are not included in this definition for solid fuel burning devices.

"Road" means any public or private road.

"Salvage Operation" means any business, trade or industry engaged in whole or in part in salvaging or reclaiming any product or material, including but not limited to metals, chemicals, shipping containers or drums.

"Secondary Emissions" means emissions which would occur as a result of the construction or operation of a major source or major modification, but do not come from the major source or major modification itself.

Secondary emissions must be specific, well defined, quantifiable, and impact the same general area as the source or modification which causes the secondary emissions. Secondary emissions include emissions from any off-site support facility which would not be constructed or increase its emissions except as a result of the construction or operation of the major source or major modification. Secondary emissions do not include any emissions which come directly from a mobile source such as emissions from the tailpipe of a motor vehicle, from a train, or from a vessel.

Fugitive emissions and fugitive dust from the source or modification are not considered secondary emissions.

"Secondary PM2.5" means particles that form or grow in mass through chemical reactions in the ambient air well after dilution and condensation have occurred. Secondary PM2.5 is usually formed at some distance downwind from the source.

"Significant" means:

(1) In reference to a net emissions increase or the potential of a source to emit any of the following pollutants, a rate of emissions that would equal or exceed any of the following rates:

Carbon monoxide: 100 ton per year (tpy);

Nitrogen oxides: 40 tpy;

Sulfur dioxide: 40 tpy;

PM10: 15 tpy;

PM2.5: 10 tpy;

Particulate matter: 25 tpy;

Ozone: 40 tpy of volatile organic compounds;

Lead: 0.6 tpy.

"Solid Fuel" means wood, coal, and other similar organic material or combination of these materials.

"Solvent" means organic materials which are liquid at standard conditions (Standard Temperature and Pressure) and which are used as dissolvers, viscosity reducers, or cleaning agents.

"Source" means any structure, building, facility, or installation which emits or may emit any air pollutant subject to regulation under the Clean Air Act and which is located on one or more continuous or adjacent properties and which is under the

control of the same person or persons under common control. A building, structure, facility, or installation means all of the pollutant-emitting activities which belong to the same industrial grouping. Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same "Major Group" (i.e. which have the same two-digit code) as described in the Standard Industrial Classification Manual, 1972, as amended by the 1977 Supplement (US Government Printing Office stock numbers 4101-0065 and 003-005-00176-0, respectively).

"Stack" means any point in a source designed to emit solids, liquids, or gases into the air, including a pipe or duct but not including flares.

"Standards of Performance for New Stationary Sources" means the Federally established requirements for performance and record keeping (Title 40 Code of Federal Regulations, Part 60).

"State" means Utah State.

"Temporary" means not more than 180 calendar days.

"Temporary Clean Coal Technology Demonstration Project" means a clean coal technology demonstration project that is operated for a period of 5 years or less, and which complies with the Utah State Implementation Plan and other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.

"Threshold Limit Value - Ceiling (TLV-C)" means the airborne concentration of a substance which may not be exceeded, as adopted by the American Conference of Governmental Industrial Hygienists in its "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, (2009)."

"Threshold Limit Value - Time Weighted Average (TLV-TWA)" means the time-weighted airborne concentration of a substance adopted by the American Conference of Governmental Industrial Hygienists in its "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, (2009)."

"Total Suspended Particulate (TSP)" means minute separate particles of matter, collected by high volume sampler.

"Toxic Screening Level" means an ambient concentration of an air contaminant equal to a threshold limit value - ceiling (TLV-C) or threshold limit value -time weighted average (TLV-TWA) divided by a safety factor.

"Trash" means solids not considered to be highly flammable or explosive including, but not limited to clothing, rags, leather, plastic, rubber, floor coverings, excelsior, tree leaves, yard trimmings and other similar materials.

"Volatile Organic Compound (VOC)" means VOC as defined in 40 CFR 51.100(s), effective as of the date referenced in R307-101-3, is hereby adopted and incorporated by reference.

"Waste" means all solid, liquid or gaseous material,

including, but not limited to, garbage, trash, household refuse, construction or demolition debris, or other refuse including that resulting from the prosecution of any business, trade or industry.

"Zero Drift" means the change in the instrument meter readout over a stated period of time of normal continuous operation when the VOC concentration at the time of measurement is zero.

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R307. Environmental Quality, Air Quality.
R307-312. Aggregate Processing Operations for PM2.5 Nonattainment Areas.
R307-312-5. Hot Mix Asphalt Plants.

(1) The filterable PM2.5 emission rate from a hot mix asphalt plant dryer shall not exceed 0.024 grains per dscf.

(a) Filterable PM2.5 emissions shall be determined by 40 CFR 51, Appendix M, Method 201A.

(2) From November 1 to March 1, a hot mix asphalt plant burning a fuel other than natural gas or liquefied petroleum gas (LPG) shall not produce more than 50% of its rated capacity.

(a) Production shall be determined by scale house records, belt scale records or [~~equivalent method~~]manifest statements on a daily basis.

(b) Compliance shall be based on either the daily amount of hot mix asphalt produced averaged over the operating day or the daily amount of hot mix asphalt produced while burning a fuel other than natural gas or LPG averaged over the time the plant is operating while burning a fuel other than natural gas or LPG each day.

(c) Compliance shall be determined by production records and fuel records.

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R307. Environmental Quality, Air Quality.
R307-328. Gasoline Transfer and Storage.
R307-328-4. Loading of Tank Trucks, Trailers, Railroad Tank Cars, and Other Transport Vehicles.

(1) No person shall load or permit the loading of gasoline into any gasoline cargo tank unless the emissions from such vehicle are controlled by use of a vapor collection and control system and submerged or bottom filling. RACT shall be required and in no case shall vapor emissions to the atmosphere exceed 0.640 pounds per 1,000 gallons transferred.

(2) Such vapor collection and control system shall be properly installed and maintained.

(3) The loading device shall not leak.

(4) The loading device shall utilize the dry-break loading design couplings and shall be maintained and operated to allow no more than an average of 15 cc drainage per disconnect for 5 consecutive disconnects.

(5) All loading and vapor lines shall be equipped with fittings which make a vapor tight connection and shall automatically close upon disconnection to prevent release of the organic material.

(6) A gasoline storage and transfer installation that receives inbound loads and dispatches outbound loads ("bulk plant") need not comply with R307-328-4 if it does not have a daily average throughput of more than 3,900 gallons (15,000 or more liters) of gasoline based upon a 30-day rolling average. Such installations shall on-load and off-load gasoline by use of bottom or submerged filling [~~or alternative equivalent methods~~]. The emission limitation is based on operating procedures and equipment specifications using Reasonably Available Control Technology as defined in EPA documents EPA 450/2-77-026 October 1977, "Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals," and EPA-450/2-77-035 December 1977, "Control of Volatile Organic Emissions from Bulk Gasoline Plants." The design effectiveness of such equipment and the operating procedures must be documented and submitted to and approved by the director.

(7) Hatches of gasoline cargo tanks shall not be opened at any time during loading operations except to avoid emergency situations or during emergency situations. Pressure relief valves on storage tanks and gasoline cargo tanks shall be set to release at the highest possible pressure, in accordance with State or local fire codes and National Fire Prevention Association guidelines. Pressure in the vapor collection system shall not exceed the gasoline cargo tank pressure relief setting.

(8) Each owner or operator of a gasoline storage or dispensing installation shall conduct testing of vapor collection systems used at such installation and shall maintain records of

all tests for no less than two years. Testing procedures of vapor collection systems shall be approved by the director and shall be consistent with the procedures described in the EPA document, "Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems," EPA-450/2-78-051.

(9) Semi-annual testing shall be conducted and records maintained of such test. The frequency of tests may be altered by the director upon submittal of documentation which would justify a change.

(10) The vapor collection and vapor processing equipment shall be designed and operated to prevent gauge pressure in the gasoline cargo tank from exceeding 18 inches of water and prevent vacuum from exceeding 6 inches of water. During testing and monitoring, there shall be no reading greater than or equal to 100 percent of the lower explosive limit measured at 1.04 inches around the perimeter of a potential leak source as detected by a combustible gas detector. Potential leak sources include, but are not limited to, piping, seals, hoses, connections, pressure or vacuum vents, and vapor hoods. In addition, no visible liquid leaks are permitted during testing or monitoring.

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