



State of Utah

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Department of
Environmental Quality

Alan Matheson
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

DAQ-005-16

MEMORANDUM

TO: Air Quality Board

THROUGH: Bryce C. Bird, Executive Secretary

FROM: Joel Karmazyn, Environmental Scientist

DATE: January 21, 2016

SUBJECT: FINAL ADOPTION: 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, the 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 that committed to revising the rules. The Board proposed amendments that would satisfy that commitment on October 7, 2015. The amendments are described below.

Amendments to R307-101-2: The definition of PM_{2.5} included a description of all PM_{2.5} precursors, with the exception of ammonia. The amendment removed the PM_{2.5} precursors from the definition of PM_{2.5}.

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

Amendments to R307-328-4: The rule stated that gasoline loading shall be performed by "submerged filling or alternative equivalent methods." The amendment removed "alternative equivalent methods" because filling should be performed via submerged delivery to reduce the volatile organic compound generation.

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A 30 day comment period was held regarding these rules, no comments were received, and a hearing was not requested.

Staff Recommendation: Staff recommends that the Board adopt the amendments to R307-101-2, R307-312-5, and R307-328-4 as proposed.

1 **R307. Environmental Quality, Air Quality.**

2 **R307-101. General Requirements.**

3 **R307-101-2. Definitions.**

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

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

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

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

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

26 (4) For an electric utility steam generating unit (other
27 than a new unit or the replacement of an existing unit) actual
28 emissions of the unit following the physical or operational change
29 shall equal the representative actual annual emissions of the
30 unit, provided the source owner or operator maintains and submits
31 to the director, on an annual basis for a period of 5 years from
32 the date the unit resumes regular operation, information
33 demonstrating that the physical or operational change did not
34 result in an emissions increase. A longer period, not to exceed
35 10 years, may be required by the director if the director
36 determines such a period to be more representative of normal
37 source post-change operations.

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

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

47 "Air Contaminant Source" means any and all sources of

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

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

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

15 "Ambient Air" means the surrounding or outside air (Section
16 19-2-102(4)).

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

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

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

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

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

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

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

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

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

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

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

7 (1) Carbon monoxide;

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

12 (3) Any pollutant that is a regulated air pollutant solely
13 because it is subject to a standard or regulation under Section
14 112(r) of the Act, Prevention of Accidental Releases.

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

22 "Clean Air Act" means federal Clean Air Act as amended in
23 1990.

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

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

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

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

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

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

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

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

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

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

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

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

23 "Division" means the Division of Air Quality.

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

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

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

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

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

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

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

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

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

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

23 "EPA" means Environmental Protection Agency.

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

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

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

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

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

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

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

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

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

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

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

20 "Hazardous Air Pollutant (HAP)" means any pollutant listed by
21 the EPA as a hazardous air pollutant in conformance with Section
22 112(b) of the Clean Air Act. A list of these pollutants is
23 available at the Division of Air Quality.

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

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

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

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

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

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

- 46 (i) Salt Lake County, effective August 18, 1997; and
47 (ii) Davis County, effective August 18, 1997.

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

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

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

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

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

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

11 (ii) Utah County, effective on the date that EPA approves
12 the maintenance plan that was adopted by the Board on July 6,
13 2005; and

14 (iii) Ogden City, effective on the date that EPA approves
15 the maintenance plan that was adopted by the Board on July 6,
16 2005.

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

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

34 (1) routine maintenance, repair and replacement;

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

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

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

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

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

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

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

4 (7) any change in ownership at a source

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

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

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

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

21 (a) the Utah State Implementation Plan; and

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

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

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

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

35 (b) any source located in Salt Lake or Davis Counties or in
36 a nonattainment area for ozone which emits, or has the potential
37 to emit, VOC or nitrogen oxides in the amounts outlined in Section
38 182 of the federal Clean Air Act with respect to the severity of
39 the nonattainment area as outlined in Section 182 of the federal
40 Clean Air Act; or

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

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

1 constitute a major source by itself;

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

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

8 (b) Kraft pulp mills;

9 (c) Portland cement plants;

10 (d) Primary zinc smelters;

11 (e) Iron and steel mills;

12 (f) Primary aluminum or reduction plants;

13 (g) Primary copper smelters;

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

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

17 (j) Petroleum refineries;

18 (k) Lime plants;

19 (l) Phosphate rock processing plants;

20 (m) Coke oven batteries;

21 (n) Sulfur recovery plants;

22 (o) Carbon black plants (furnace process);

23 (p) Primary lead smelters;

24 (q) Fuel conversion plants;

25 (r) Sintering plants;

26 (s) Secondary metal production plants;

27 (t) Chemical process plants;

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

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

32 (w) Taconite ore processing plants;

33 (x) Glass fiber processing plants;

34 (y) Charcoal production plants;

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

1 "Nonattainment Area" means an area designated by the
2 Environmental Protection Agency as nonattainment under Section
3 107, Clean Air Act for any National Ambient Air Quality Standard.
4 The designations for Utah are listed in 40 CFR 81.345.

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

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

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

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

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

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

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

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

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

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

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

39 (1) The installation of conventional or innovative pollution
40 control technology, including but not limited to advanced flue gas
41 desulfurization, sorbent injection for sulfur dioxide and nitrogen
42 oxides controls and electrostatic precipitators;

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

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

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

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

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

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

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

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

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

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

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

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

46 "Reasonable Further Progress" means annual incremental
47 reductions in emission of an air pollutant which are sufficient to

1 provide for attainment of the NAAQS by the date identified in the
2 State Implementation Plan.

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

4 "Regulated air pollutant" means any of the following:

5 (a) Nitrogen oxides or any volatile organic compound;

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

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

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

14 (e) Any pollutant subject to a standard promulgated under
15 Section 112, Hazardous Air Pollutants, or other requirements
16 established under Section 112 of the Act, including Sections
17 112(g), (j), and (r) of the Act, including any of the following:

18 (i) Any pollutant subject to requirements under Section
19 112(j) of the Act, Equivalent Emission Limitation by Permit. If
20 the Administrator fails to promulgate a standard by the date
21 established pursuant to Section 112(e) of the Act, any pollutant
22 for which a subject source would be major shall be considered to
23 be regulated on the date 18 months after the applicable date
24 established pursuant to Section 112(e) of the Act;

25 (ii) Any pollutant for which the requirements of Section
26 112(g)(2) of the Act (Construction, Reconstruction and
27 Modification) have been met, but only with respect to the
28 individual source subject to Section 112(g)(2) requirement.

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

41 (1) Repowering shall also include any oil and/or gas-fired
42 unit which has been awarded clean coal technology demonstration
43 funding as of January 1, 1991, by the Department of Energy.

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

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

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

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

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

27 "Residential Solid Fuel Burning" device means any residential
28 burning device except a fireplace connected to a chimney that
29 burns solid fuel and is capable of, and intended for use as a
30 space heater, domestic water heater, or indoor cooking appliance,
31 and has an air-to-fuel ratio less than 35-to-1 as determined by
32 the test procedures prescribed in 40 CFR 60.534. It must also
33 have a useable firebox volume of less than 6.10 cubic meters or 20
34 cubic feet, a minimum burn rate less than 5 kilograms per hour or
35 11 pounds per hour as determined by test procedures prescribed in
36 40 CFR 60.534, and weigh less than 800 kilograms or 362.9 pounds.
37 Appliances that are described as prefabricated fireplaces and are
38 designed to accommodate doors or other accessories that would
39 create the air starved operating conditions of a residential solid
40 fuel burning device shall be considered as such. Fireplaces are
41 not included in this definition for solid fuel burning devices.

42 "Road" means any public or private road.

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

47 "Secondary Emissions" means emissions which would occur as a

1 result of the construction or operation of a major source or major
2 modification, but do not come from the major source or major
3 modification itself.

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

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

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

20 "Significant" means:

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

25 Carbon monoxide: 100 ton per year (tpy);

26 Nitrogen oxides: 40 tpy;

27 Sulfur dioxide: 40 tpy;

28 PM10: 15 tpy;

29 PM2.5: 10 tpy;

30 Particulate matter: 25 tpy;

31 Ozone: 40 tpy of volatile organic compounds;

32 Lead: 0.6 tpy.

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

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

38 "Source" means any structure, building, facility, or
39 installation which emits or may emit any air pollutant subject to
40 regulation under the Clean Air Act and which is located on one or
41 more continuous or adjacent properties and which is under the
42 control of the same person or persons under common control. A
43 building, structure, facility, or installation means all of the
44 pollutant-emitting activities which belong to the same industrial
45 grouping. Pollutant-emitting activities shall be considered as
46 part of the same industrial grouping if they belong to the same
47 "Major Group" (i.e. which have the same two-digit code) as

1 described in the Standard Industrial Classification Manual, 1972,
2 as amended by the 1977 Supplement (US Government Printing Office
3 stock numbers 4101-0065 and 003-005-00176-0, respectively).

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

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

10 "State" means Utah State.

11 "Temporary" means not more than 180 calendar days.

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

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

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

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

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

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

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

41 "Waste" means all solid, liquid or gaseous material,
42 including, but not limited to, garbage, trash, household refuse,
43 construction or demolition debris, or other refuse including that
44 resulting from the prosecution of any business, trade or industry.

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

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KEY: air pollution, definitions

Date of Enactment or Last Substantive Amendment: 2015

Notice of Continuation: May 8, 2014

Authorizing, and Implemented or Interpreted Law: 19-2-104(1)(a)

1

2 **R307. Environmental Quality, Air Quality.**3 **R307-312. Aggregate Processing Operations for PM2.5 Nonattainment**
4 **Areas.**5 **R307-312-5. Hot Mix Asphalt Plants.**6 (1) The filterable PM2.5 emission rate from a hot mix
7 asphalt plant dryer shall not exceed 0.024 grains per dscf.8 (a) Filterable PM2.5 emissions shall be determined by 40 CFR
9 51, Appendix M, Method 201A.10 (2) From November 1 to March 1, a hot mix asphalt plant
11 burning a fuel other than natural gas or liquefied petroleum gas
12 (LPG) shall not produce more than 50% of its rated capacity.13 (a) Production shall be determined by scale house records,
14 belt scale records or manifest statements on a daily basis.15 (b) Compliance shall be based on either the daily amount of
16 hot mix asphalt produced averaged over the operating day or the
17 daily amount of hot mix asphalt produced while burning a fuel
18 other than natural gas or LPG averaged over the time the plant is
19 operating while burning a fuel other than natural gas or LPG each
20 day.21 (c) Compliance shall be determined by production records and
22 fuel records.

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25 **KEY: air pollution, aggregate, asphalt, concrete**26 **Date of Enactment or Last Substantive Amendment: 2015**27 **Authorizing, and Implemented or Interpreted Law: 19-2-101; 19-2-**
28 **104; 19-2-109**

1 **R307. Environmental Quality, Air Quality.**

2 **R307-328. Gasoline Transfer and Storage.**

3 **R307-328-4. Loading of Tank Trucks, Trailers, Railroad Tank Cars,**
4 **and Other Transport Vehicles.**

5 (1) No person shall load or permit the loading of gasoline
6 into any gasoline cargo tank unless the emissions from such
7 vehicle are controlled by use of a vapor collection and control
8 system and submerged or bottom filling. RACT shall be required
9 and in no case shall vapor emissions to the atmosphere exceed
10 0.640 pounds per 1,000 gallons transferred.

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

13 (3) The loading device shall not leak.

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

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

22 (6) A gasoline storage and transfer installation that
23 receives inbound loads and dispatches outbound loads ("bulk
24 plant") need not comply with R307-328-4 if it does not have a
25 daily average throughput of more than 3,900 gallons (15,000 or
26 more liters) of gasoline based upon a 30-day rolling average.
27 Such installations shall on-load and off-load gasoline by use of
28 bottom or submerged filling. The emission limitation is based on
29 operating procedures and equipment specifications using Reasonably
30 Available Control Technology as defined in EPA documents EPA
31 450/2-77-026 October 1977, "Control of Hydrocarbons from Tank
32 Truck Gasoline Loading Terminals," and EPA-450/2-77-035 December
33 1977, "Control of Volatile Organic Emissions from Bulk Gasoline
34 Plants." The design effectiveness of such equipment and the
35 operating procedures must be documented and submitted to and
36 approved by the director.

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

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

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

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

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

21

22 **KEY: air pollution, gasoline transport, ozone**

23 **Date of Enactment or Last Substantive Amendment: 2015**

24 **Notice of Continuation: February 1, 2012**

25 **Authorizing, and Implemented or Interpreted Law: 19-2-101; 19-2-**
26 **104(1)(a)**