



State of Utah

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Department of
Environmental Quality

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Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

DAQ-031-14

MEMORANDUM

TO: Air Quality Board

THROUGH: Bryce C. Bird, Executive Secretary

FROM: Joel Karmazyn, Environmental Scientist

DATE: March 18, 2014

SUBJECT: PROPOSE FOR PUBLIC COMMENT: Amend R307-101-2. Definitions.

EPA has advised us that certain new rules written for the PM_{2.5} State Implementation Plan (SIP) cannot be approved as reasonable available control technology (RACT) rules because the optional add-on control requirements do not define the emission capture rate. Staff and EPA have identified a solution to resolve this issue. A new definition will be added to R307-101-2 as follows:

“Optional add-on controls” within R307-344 through R307-350 and R307-352 through R307-355, refers to the overall capture and control equipment as the emission control device.

This definition clarifies that the emission control devices referenced in each of these rules include the overall capture and control for the entire emission control device.

Staff Recommendation: Staff recommends the Board propose for public comment R307-101-2 as amended

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 Board.

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

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

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

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

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

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

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

44 "Air Contaminant Source" means any and all sources of emission
45 of air contaminants whether privately or publicly owned or operated
46 (Section 19-2-102(2)).

47 "Air Pollution" means the presence in the ambient air of one or
48 more air contaminants in such quantities and duration and under
49 conditions and circumstances, as is or tends to be injurious to human
50 health or welfare, animal or plant life, or property, or would
51 unreasonably interfere with the enjoyment of life or use of property
52 as determined by the standards, rules and regulations adopted by the

1 Air Quality Board (Section 19-2-104).

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

7 "Ambient Air" means the surrounding or outside air (Section
8 19-2-102(4)).

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

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

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

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

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

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

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

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

35 "Carcinogenic Hazardous Air Pollutant" means any hazardous air
36 pollutant that is classified as a known human carcinogen (A1) or
37 suspected human carcinogen (A2) by the American Conference of
38 Governmental Industrial Hygienists (ACGIH) in its "Threshold Limit
39 Values for Chemical Substances and Physical Agents and Biological
40 Exposure Indices, (2009)."

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

43 (1) Carbon monoxide;

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

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

50 "Chronic Hazardous Air Pollutant" means any noncarcinogenic
51 hazardous air pollutant for which a threshold limit value - time
52 weighted average (TLV-TWA) having no threshold limit value - ceiling

1 (TLV-C) has been adopted by the American Conference of Governmental
2 Industrial Hygienists (ACGIH) in its "Threshold Limit Values for
3 Chemical Substances and Physical Agents and Biological Exposure
4 Indices, (2009)."

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

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

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

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

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

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

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

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

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

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

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

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

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

50 "Division" means the Division of Air Quality.

51 "Electric Utility Steam Generating Unit" means any steam electric
52 generating unit that is constructed for the purpose of supplying more

1 than one-third of its potential electric output capacity and more than
2 25 MW electrical output to any utility power distribution system for
3 sale. Any steam supplied to a steam distribution system for the purpose
4 of providing steam to a steam-electric generator that would produce
5 electrical energy for sale is also considered in determining the
6 electrical energy output capacity of the affected facility.

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

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

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

16 (2) Information necessary to determine the identity, amount,
17 frequency, concentration, or other characteristics (to the extent
18 related to air quality) of any air contaminant which, under an
19 applicable standard or limitation, the source operation was authorized
20 to emit (including, to the extent necessary for such purposes, a
21 description of the manner or rate of operation of the source operation),
22 or any combination of the foregoing; and

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

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

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

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

43 "EPA" means Environmental Protection Agency.

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

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

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

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

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

10 "Fireplace" means all devices both masonry or factory built units
11 (free standing fireplaces) with a hearth, fire chamber or similarly
12 prepared device connected to a chimney which provides the operator
13 with little control of combustion air, leaving its fire chamber fully
14 or at least partially open to the room. Fireplaces include those
15 devices with circulating systems, heat exchangers, or draft reducing
16 doors with a net thermal efficiency of no greater than twenty percent
17 and are used for aesthetic purposes.

18 "Fugitive Dust" means particulate, composed of soil and/or
19 industrial particulates such as ash, coal, minerals, etc., which
20 becomes airborne because of wind or mechanical disturbance of surfaces.

21 Natural sources of dust and fugitive emissions are not fugitive dust
22 within the meaning of this definition.

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

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

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

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

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

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

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

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

51 "Maintenance Area" means an area that is subject to the provisions
52 of a maintenance plan that is included in the Utah state implementation

1 plan, and that has been redesignated by EPA from nonattainment to
2 attainment of any National Ambient Air Quality Standard.

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

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

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

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

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

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

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

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

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

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

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

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

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

36 (1) routine maintenance, repair and replacement;

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

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

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

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

46 (a) which the source was capable of accommodating before January
47 6, 1975, unless such change would be prohibited under any enforceable
48 permit condition; or

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

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

1 (7) any change in ownership at a source

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

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

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

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

18 (a) the Utah State Implementation Plan; and

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

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

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

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

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

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

42 (2) any physical change that would occur at a source not
43 qualifying under subpart 1 as a major source, if the change would
44 constitute a major source by itself;

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

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

51 (b) Kraft pulp mills;

52 (c) Portland cement plants;

- 1 (d) Primary zinc smelters;
2 (e) Iron and steel mills;
3 (f) Primary aluminum or reduction plants;
4 (g) Primary copper smelters;
5 (h) Municipal incinerators capable of charging more than 250
6 tons of refuse per day;
7 (i) Hydrofluoric, sulfuric, or nitric acid plants;
8 (j) Petroleum refineries;
9 (k) Lime plants;
10 (l) Phosphate rock processing plants;
11 (m) Coke oven batteries;
12 (n) Sulfur recovery plants;
13 (o) Carbon black plants (furnace process);
14 (p) Primary lead smelters;
15 (q) Fuel conversion plants;
16 (r) Sintering plants;
17 (s) Secondary metal production plants;
18 (t) Chemical process plants;
19 (u) Fossil-fuel boilers (or combination thereof) totaling more
20 than 250 million British Thermal Units per hour heat input;
21 (v) Petroleum storage and transfer units with a total storage
22 capacity exceeding 300,000 barrels;
23 (w) Taconite ore processing plants;
24 (x) Glass fiber processing plants;
25 (y) Charcoal production plants;
26 (z) Fossil fuel-fired steam electric plants of more than 250
27 million British Thermal Units per hour heat input;
28 (aa) Any other stationary source category which, as of August
29 7, 1980, is being regulated under section 111 or 112 of the federal
30 Clean Air Act.
- 31 "Modification" means any planned change in a source which results
32 in a potential increase of emission.
- 33 "National Ambient Air Quality Standards (NAAQS)" means the
34 allowable concentrations of air pollutants in the ambient air specified
35 by the Federal Government (Title 40, Code of Federal Regulations, Part
36 50).
- 37 "Net Emissions Increase" means the amount by which the sum of
38 the following exceeds zero:
- 39 (1) any increase in actual emissions from a particular physical
40 change or change in method of operation at a source; and
41 (2) any other increases and decreases in actual emissions at
42 the source that are contemporaneous with the particular change and
43 are otherwise creditable. For purposes of determining a "net emissions
44 increase":
- 45 (a) An increase or decrease in actual emissions is
46 contemporaneous with the increase from the particular change only if
47 it occurs between the date five years before construction on the
48 particular change commences; and the date that the increase from the
49 particular change occurs.
- 50 (b) An increase or decrease in actual emissions is creditable
51 only if it has not been relied on in issuing a prior approval for the
52 source which approval is in effect when the increase in actual emissions

1 for the particular change occurs.

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

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

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

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

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

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

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

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

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

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

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

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

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

43 "Optional add-on controls" within R307-342, R307-344 through
44 R307-350 and R307-352 through R307-355, refers to the overall capture
45 and control equipment as the emission control device.

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

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

52 "PM2.5" means particulate matter with an aerodynamic diameter

1 less than or equal to a nominal 2.5 micrometers as measured by an EPA
2 reference or equivalent method.

3 "PM2.5 Precursor" means any chemical compound or substance which,
4 after it has been emitted into the atmosphere, undergoes chemical or
5 physical changes that convert it into particulate matter, specifically
6 PM2.5, and has been identified in the applicable implementation plan
7 for PM2.5 as significant for the purpose of developing control
8 measures. Specifically, PM2.5 precursors include SO₂, NO_x, and VOC.

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

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

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

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

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

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

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

35 (3) A permanent clean coal technology demonstration project
36 conducted under Title II, sec. 101(d) of the Further Continuing
37 Appropriations Act of 1985 (sec. 5903(d) of title 42 of the United
38 States Code), or subsequent appropriations, up to a total amount of
39 \$2,500,000,000 for commercial demonstration of clean coal technology,
40 or similar projects funded through appropriations for the
41 Environmental Protection Agency; or

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

43 (e) Any pollutant subject to a standard promulgated under Section
44 112, Hazardous Air Pollutants, or other requirements established under
45 Section 112 of the Act, including Sections 112(g), (j), and (r) of
46 the Act, including any of the following:

47 (i) Any pollutant subject to requirements under Section 112(j)
48 of the Act, Equivalent Emission Limitation by Permit. If the
49 Administrator fails to promulgate a standard by the date established
50 pursuant to Section 112(e) of the Act, any pollutant for which a subject
51 source would be major shall be considered to be regulated on the date
52 18 months after the applicable date established pursuant to Section

1 112(e) of the Act;

2 (ii) Any pollutant for which the requirements of Section
3 112(g)(2) of the Act (Construction, Reconstruction and Modification)
4 have been met, but only with respect to the individual source subject
5 to Section 112(g)(2) requirement.

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

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

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

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

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

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

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

48 "Residential Solid Fuel Burning" device means any residential
49 burning device except a fireplace connected to a chimney that burns
50 solid fuel and is capable of, and intended for use as a space heater,
51 domestic water heater, or indoor cooking appliance, and has an
52 air-to-fuel ratio less than 35-to-1 as determined by the test

1 procedures prescribed in 40 CFR 60.534. It must also have a useable
2 firebox volume of less than 6.10 cubic meters or 20 cubic feet, a minimum
3 burn rate less than 5 kilograms per hour or 11 pounds per hour as
4 determined by test procedures prescribed in 40 CFR 60.534, and weigh
5 less than 800 kilograms or 362.9 pounds. Appliances that are described
6 as prefabricated fireplaces and are designed to accommodate doors or
7 other accessories that would create the air starved operating
8 conditions of a residential solid fuel burning device shall be
9 considered as such. Fireplaces are not included in this definition
10 for solid fuel burning devices.

11 "Road" means any public or private road.

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

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

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

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

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

35 "Significant" means:

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

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

40 Nitrogen oxides: 40 tpy;

41 Sulfur dioxide: 40 tpy;

42 PM10: 15 tpy;

43 PM2.5: 10 tpy;

44 Particulate matter: 25 tpy;

45 Ozone: 40 tpy of volatile organic compounds;

46 Lead: 0.6 tpy.

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

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

52 "Source" means any structure, building, facility, or installation

1 which emits or may emit any air pollutant subject to regulation under
2 the Clean Air Act and which is located on one or more continuous or
3 adjacent properties and which is under the control of the same person
4 or persons under common control. A building, structure, facility,
5 or installation means all of the pollutant-emitting activities which
6 belong to the same industrial grouping. Pollutant-emitting activities
7 shall be considered as part of the same industrial grouping if they
8 belong to the same "Major Group" (i.e. which have the same two-digit
9 code) as described in the Standard Industrial Classification Manual,
10 1972, as amended by the 1977 Supplement (US Government Printing Office
11 stock numbers 4101-0065 and 003-005-00176-0, respectively).

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

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

18 "State" means Utah State.

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

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

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

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

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

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

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

46 "Volatile Organic Compound (VOC)" means VOC as defined in 40 CFR
47 51.100(s), effective as of the date referenced in R307-101-3, is hereby
48 adopted and incorporated by reference.

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

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

4

5

6 **KEY: air pollution, definitions**

7 **Date of Enactment or Last Substantive Amendment: August 8, 2013**

8 **Notice of Continuation: July 2, 2009**

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