

1 **Appendix 1: Regulatory Impact Summary Table\***

<b>Fiscal Costs</b>	FY 2018	FY 2019	FY 2020
State Government	\$0	\$0	\$0
Local Government	\$0	\$0	\$0
Small Businesses	\$0	\$0	\$0
Non-Small Businesses	\$0	\$0	\$0
Other Person	\$0	\$0	\$0
<b>Total Fiscal Costs:</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Fiscal Benefits</b>			
State Government	\$0	\$0	\$0
Local Government	\$0	\$0	\$0
Small Businesses	\$0	\$0	\$0
Non-Small Businesses	\$0	\$0	\$0
Other Persons	\$0	\$0	\$0
<b>Total Fiscal Benefits:</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Net Fiscal Benefits:	\$0	\$0	\$0

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\*This table only includes fiscal impacts that could be measured. If there are inestimable fiscal impacts, they will not be included in this table. Inestimable impacts for State Government, Local Government, Small Businesses and Other Persons are described above. Inestimable impacts for Non-Small Businesses are described below.

## Appendix 2: Regulatory Impact to Non-Small Businesses

For a complete listing of NAICS codes used in this analysis, please contact the agency. It is possible that these businesses could experience a fiscal cost associated with the inclusion of ammonia as a precursor to PM<sub>2.5</sub>. The full impact to these non-small businesses cannot be estimated because: the data necessary to determine how emission sources contribute to ammonia levels is still being studied. It is unclear at this time what controls would be required in the future, what the costs of those controls would be, or what sources would be affected.

The costs and benefits related to State, Local budgets, as well as small business and individuals are inestimable for the same reasons identified above.

The Executive Director of the Department of Environmental Quality, Alan Matheson, has reviewed and approved this fiscal analysis.

### R307. Environmental Quality, Air Quality.

#### R307-101. General Requirements.

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#### R307-101-2. Definitions.

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

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

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

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

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

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

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

66 "Air pollutant" means a substance that qualifies as an air  
67 pollutant as defined in 42 U.S.C. Sec. 7602.

68 "Air Pollutant Source" means private and public sources of  
69 emissions of air pollutants.

70 "Air Pollution" means the presence of an air pollutant in the  
71 ambient air in such quantities and duration and under conditions and  
72 circumstances, that are injurious to human health or welfare, animal  
73 or plant life, or property, or would unreasonably interfere with the  
74 enjoyment of life or use of property as determined by the standards,  
75 rules and regulations adopted by the Air Quality Board (Section  
76 19-2-104).

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

82 "Ambient Air" means that portion of the atmosphere, external  
83 to buildings, to which the general public has access. (Section

84 19-2-102(4)).

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

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

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

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

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

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

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

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

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

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

119 (1) Carbon monoxide;

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

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

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

134 "Clean Air Act" means federal Clean Air Act as found in 42 U.S.C.  
135 Chapter 85.

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

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

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

153 "Coating" means a material that can be applied to a substrate  
154 and which cures to form a continuous solid film for protective,  
155 decorative, or functional purposes. Such materials include, but are  
156 not limited to, paints, varnishes, sealants, adhesives, caulks,  
157 maskants, inks, and temporary protective coatings.

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

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

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

168 "Composite vapor pressure" means the sum of the partial pressures  
169 of the compounds defined as VOCs.

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

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

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

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

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

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

187 "Division" means the Division of Air Quality.

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

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

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

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

205 (2) Information necessary to determine the identity, amount,  
206 frequency, concentration, or other characteristics (to the extent  
207 related to air quality) of any air pollutant which, under an applicable  
208 standard or limitation, the source operation was authorized to emit  
209 (including, to the extent necessary for such purposes, a description  
210 of the manner or rate of operation of the source operation), or any  
211 combination of the foregoing; and

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

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

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

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

232 "EPA" means Environmental Protection Agency.

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

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

239 "Existing Installation" means an installation, construction of

240 which began prior to the effective date of any regulation having  
241 application to it.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

307 (i) Salt Lake County, effective on the date that EPA approves  
308 the maintenance plan that was adopted by the Board on December 2,  
309 2015; and

310 (ii) Utah County, effective on the date that EPA approves the  
311 maintenance plan that was adopted by the Board on December 2, 2015;  
312 and

313 (iii) Ogden City, effective on the date that EPA approves the  
314 maintenance plan that was adopted by the Board on December 2, 2015.

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

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

330 (1) routine maintenance, repair and replacement;

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

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

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

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

340 (a) which the source was capable of accommodating before January  
341 6, 1975, unless such change would be prohibited under any enforceable  
342 permit condition; or

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

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

347 (7) any change in ownership at a source

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

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

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

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

364 (a) the Utah State Implementation Plan; and

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

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

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

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

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

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

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

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

396 sources:

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

398 (b) Kraft pulp mills;

399 (c) Portland cement plants;

400 (d) Primary zinc smelters;

401 (e) Iron and steel mills;

402 (f) Primary aluminum or reduction plants;

403 (g) Primary copper smelters;

404 (h) Municipal incinerators capable of charging more than 250

405 tons of refuse per day;

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

407 (j) Petroleum refineries;

408 (k) Lime plants;

409 (l) Phosphate rock processing plants;

410 (m) Coke oven batteries;

411 (n) Sulfur recovery plants;

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

413 (p) Primary lead smelters;

414 (q) Fuel conversion plants;

415 (r) Sintering plants;

416 (s) Secondary metal production plants;

417 (t) Chemical process plants;

418 (u) Fossil-fuel boilers (or combination thereof) totaling more

419 than 250 million British Thermal Units per hour heat input;

420 (v) Petroleum storage and transfer units with a total storage

421 capacity exceeding 300,000 barrels;

422 (w) Taconite ore processing plants;

423 (x) Glass fiber processing plants;

424 (y) Charcoal production plants;

425 (z) Fossil fuel-fired steam electric plants of more than 250

426 million British Thermal Units per hour heat input;

427 (aa) Any other stationary source category which, as of August

428 7, 1980, is being regulated under section 111 or 112 of the federal

429 Clean Air Act.

430 "Modification" means any planned change in a source which results

431 in a potential increase of emission.

432 "National Ambient Air Quality Standards (NAAQS)" means the

433 allowable concentrations of air pollutants in the ambient air

434 specified by the Federal Government (Title 40, Code of Federal

435 Regulations, Part 50).

436 "Net Emissions Increase" means the amount by which the sum of

437 the following exceeds zero:

438 (1) any increase in actual emissions from a particular physical

439 change or change in method of operation at a source; and

440 (2) any other increases and decreases in actual emissions at

441 the source that are contemporaneous with the particular change and

442 are otherwise creditable. For purposes of determining a "net

443 emissions increase":

444 (a) An increase or decrease in actual emissions is

445 contemporaneous with the increase from the particular change only

446 if it occurs between the date five years before construction on the

447 particular change commences; and the date that the increase from the

448 particular change occurs.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

500 Air Act.

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

504 "PM2.5 Precursor" means any chemical compound or substance which,  
505 after it has been emitted into the atmosphere, undergoes chemical  
506 or physical changes that convert it into particulate matter,  
507 specifically PM2.5[, and has been identified in the applicable  
508 ~~implementation plan for PM2.5 as significant for the purpose of~~  
509 ~~developing control measures. Specifically, PM2.5 precursors include~~  
510 ~~SO<sub>2</sub>, NO<sub>x</sub>, and VOC].~~

511 (1) Specifically, Sulfur dioxide, Nitrogen oxides, Volatile organic  
512 compounds and Ammonia are precursors to PM2.5 in any PM2.5  
513 nonattainment area, except where a demonstration satisfying 40 CFR  
514 51.1006(a)(3) has, for a particular PM2.5 nonattainment area,  
515 determined otherwise.

516 (2) The following subparagraphs denote specific nonattainment areas  
517 (as defined in the July 1, 2017 version of 40 CFR 81.345), within  
518 which certain pollutants identified in paragraph (1) are exempted  
519 from the definition of PM2.5 precursor for the purposes of 40 CFR  
520 51.165

521 (a) In the Logan UT-ID PM2.5 nonattainment area - Ammonia is exempted.

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

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

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

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

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

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

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

548 (3) A permanent clean coal technology demonstration project  
549 conducted under Title II, sec. 101(d) of the Further Continuing  
550 Appropriations Act of 1985 (sec. 5903(d) of title 42 of the United  
551 States Code), or subsequent appropriations, up to a total amount of

552 \$2,500,000,000 for commercial demonstration of clean coal technology,  
553 or similar projects funded through appropriations for the  
554 Environmental Protection Agency; or

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

604 Stationary Sources;

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

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

612 (i) Any pollutant subject to requirements under Section 112(j)  
613 of the Act, Equivalent Emission Limitation by Permit. If the  
614 Administrator fails to promulgate a standard by the date established  
615 pursuant to Section 112(e) of the Act, any pollutant for which a subject  
616 source would be major shall be considered to be regulated on the date  
617 18 months after the applicable date established pursuant to Section  
618 112(e) of the Act;

619 (ii) Any pollutant for which the requirements of Section  
620 112(g)(2) of the Act (Construction, Reconstruction and Modification)  
621 have been met, but only with respect to the individual source subject  
622 to Section 112(g)(2) requirement.

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

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

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

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

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

655 (2) Exclude, in calculating any increase in emissions that

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

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

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

681 "Road" means any public or private road.

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

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

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

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

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

705 "Significant" means:

706 (1) In reference to a net emissions increase or the potential  
707 of a source to emit any of the following pollutants, a rate of emissions

708 that would equal or exceed any of the following rates:

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

710 Nitrogen oxides: 40 tpy;

711 Sulfur dioxide: 40 tpy;

712 PM10: 15 tpy;

713 PM2.5: 10 tpy;

714 Particulate matter: 25 tpy;

715 Ozone: 40 tpy of volatile organic compounds;

716 Lead: 0.6 tpy.

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

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

722 "Source" means any structure, building, facility, or  
723 installation which emits or may emit any air pollutant subject to  
724 regulation under the Clean Air Act and which is located on one or  
725 more continuous or adjacent properties and which is under the control  
726 of the same person or persons under common control. A building,  
727 structure, facility, or installation means all of the  
728 pollutant-emitting activities which belong to the same industrial  
729 grouping. Pollutant-emitting activities shall be considered as part  
730 of the same industrial grouping if they belong to the same "Major  
731 Group" (i.e. which have the same two-digit code) as described in the  
732 Standard Industrial Classification Manual, 1972, as amended by the  
733 1977 Supplement (US Government Printing Office stock numbers 4101-0065  
734 and 003-005-00176-0, respectively).

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

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

741 "State" means Utah State.

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

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

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

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

759 "Total Suspended Particulate (TSP)" means minute separate

760 particles of matter, collected by high volume sampler.

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

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

769 "VOC content" means the weight of VOC per volume of material  
770 and is calculated by the following equation in gram/liter (or  
771 alternately in pound/gallon, or pound/pound):

772 Grams of VOC per Liter of Material =  $W_s - W_w - W_{es} / V_m$

773 Where:

774  $W_s$  = weight of volatile organic compounds

775  $W_w$  = weight of water

776  $W_{es}$  = weight of exempt compounds

777  $V_m$  = volume of material

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

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

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

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791 **KEY: air pollution, definitions**

792 **Date of Enactment or Last Substantive Amendment: [~~December 6,~~**  
793 **~~2017~~2018**

794 **Notice of Continuation: May 8, 2014**

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

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