

From: [McGill, Richard](#)
To: [Brown, Don](#)
Subject: PC for R18-21 (Part 214)
Date: Monday, March 26, 2018 4:07:09 PM
Attachments: [35-214ProposedChanges.docx](#)
[35-214.docx](#)

Good afternoon, Mr. Clerk:

Please add this email and two attachments to the R18-21 record as a PC from Jonathan Eastvold of JCAR staff.

Please indicate in the docket entry that this concerns Part 214.

If you have any questions, please let me know. Thank you.

From: Eastvold, Jonathan C. [mailto:JonathanE@ilga.gov]
Sent: Monday, March 26, 2018 3:49 PM
To: McGill, Richard <Richard.McGill@illinois.gov>
Subject: [External] 35 IAC 214

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| <u>Line</u> | <u>Citation</u> | <u>Change</u> |
|-------------|---------------------|---|
| 1. | 710 214.181 | "U.S.C." to "USC" |
| 2. | 767 214.185 | "forseeable" to "foreseeable" |
| 3. | 856 214.202 | "U.S.C.A." to "USCA" |
| 4. | 1441 214.600 | Add space before "means" |
| 5. | 1879 214.Appendix A | Change "Appendix A" to "Section 214.Appendix A" |
| 6. | 1883 214.Appendix B | Change "Appendix A" to "Section 214.Appendix B" |
| 7. | 1888 214.Appendix C | Change "Appendix A" to "Section 214.Appendix C" |
| 8. | 1925 214.Appendix D | Change "Appendix A" to "Section 214.Appendix D" |

1 TITLE 35: ENVIRONMENTAL PROTECTION
2 SUBTITLE B: AIR POLLUTION
3 CHAPTER I: POLLUTION CONTROL BOARD
4 SUBCHAPTER c: EMISSION STANDARDS AND LIMITATIONS
5 FOR STATIONARY SOURCES
6

7 PART 214
8 SULFUR LIMITATIONS
9

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120
121 AUTHORITY: Implementing Section 10 and authorized by Section 27 of the Environmental
122 Protection Act [415 ILCS 5/10 and 27].

123
124 SOURCE: Adopted as Chapter 2: Air Pollution, Rule 204: Sulfur Emission Standards and
125 Limitations, R71-23, 4 PCB 191, filed and effective April 14, 1972; amended in R74-2 and R75-
126 5, 32 PCB 295, at 3 Ill. Reg. 5, p. 777, effective February 3, 1979; amended in R74-2, R75-5, 38
127 PCB 129, at 4 Ill. Reg. 28, p. 417, effective June 26, 1980; amended in R78-17, 40 PCB 291, at 5
128 Ill. Reg. 1892, effective February 17, 1981; amended in R77-15, 44 PCB 267, at 6 Ill. Reg. 2146,
129 effective January 28, 1982; amended and renumbered in R80-22(A) at 7 Ill. Reg. 4220, effective
130 March 28, 1983; codified at 7 Ill. Reg. 13597; amended in R80-22(B) at 8 Ill. Reg. 6172,
131 effective April 24, 1984; amended in R84-28 at 10 Ill. Reg. 9806, effective May 20, 1986;
132 amended in R86-31 at 12 Ill. Reg. 17387, effective October 14, 1988; amended in R86-30 at 12
133 Ill. Reg. 20778, effective December 5, 1988; amended in R87-31 at 15 Ill. Reg. 1017, effective
134 January 15, 1991; amended in R02-21 at 27 Ill. Reg. 12101, effective July 11, 2003; amended in
135 R04-12/20 at 30 Ill. Reg. 9671, effective May 15, 2006; amended in R15-21 at 39 Ill. Reg.
136 16174, effective December 7, 2015.

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138 SUBPART A: GENERAL PROVISIONS

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Section 214.100 Scope and Organization

- a) This Part sets standards and limitations for emission of sulfur from stationary sources.
- b) Permit for sources subject to this Part may be required pursuant to 35 Ill. Adm. Code 201.
- c) Notwithstanding the provisions of this Part, the air quality standards contained in 35 Ill. Adm. Code 243 may not be violated.
- d) This Part is divided into Subparts which are grouped as follows:
 - 1) Subpart A: General Provisions
 - 2) Subparts B - J: Fuel Combustion Emission Sources and Incinerators
 - 3) Subparts K - M: Process Emission Sources
 - 4) Subparts N - End: Industry and site specific rules.
- e) These rules have been grouped for the convenience of the public; the scope of each is determined by its language and history.

(Source: Added and codified at 7 Ill. Reg. 13597)

Section 214.101 Measurement Methods

A determination of non-compliance based on any subsection of this Section shall not be refuted by evidence of compliance with any other subsection.

- a) Sulfur Dioxide Measurement. Measurement of sulfur dioxide emissions from stationary sources shall be made according to an applicable method specified in 40 CFR 60, appendix A, Method 6, 6A, 6B, or 6C, incorporated by reference in Section 214.104(a), or by measurement procedures established pursuant to 40 CFR 60.8(b), incorporated by reference in Section 214.104(b), or by an installed certified continuous emissions monitoring system, or by an alternative monitoring method available under 40 CFR 75, incorporated by reference in Section 214.104(e).
- b) Sulfuric Acid Mist and Sulfur Trioxide Measurement. Measurement of sulfuric acid mist and sulfur trioxide shall be according to the barium-thorin titration method specified in 40 CFR 60, appendix A, Method 8, incorporated by reference in Section 214.104(a), or a controlled condensate method approved in writing by the Agency.

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- c) Solid Fuel Averaging Measurement Daily Analysis Method. This subsection applies to sources at plants with total solid fuel-fired heat input capacity exceeding 439.5 MW (1500 mmBtu/hr). If daily fuel analysis is used to demonstrate compliance or non-compliance with Sections 214.122, 214.141, 214.142(a) 214.162, 214.186 and 214.421, the sulfur dioxide emission rate to be compared to the emission limit shall be considered to be the result of averaging daily samples taken over any consecutive two-month period provided no more than 5 percent of the sample values are greater than 20 percent above the sample average. If samples from a source cannot meet this statistical criterion, each individual daily sample analysis for such source shall be compared to the source's emission limit to determine compliance. The specific ASTM procedures, incorporated by reference in Section 214.104(c), shall be used for solid fuel sampling, sulfur, and heating value determinations.
- d) Weekly Analysis Method. This subsection applies to sources at plants with total solid fuel-fired heat input capacity exceeding 146.5 MW (500 mmBtu/hr) but not exceeding 439.5 MW (1500 mmBtu/hr). These plants shall demonstrate compliance or non-compliance with Sections 214.122, 214.141, 214.142(a), 214.162, 214.186 and 214.421 by either an analysis of calendar weekly composites of daily fuel samples or by compliance with subsection (c), at the option of the plant. The specific ASTM procedures incorporated by reference in Section 214.104(c), shall be used for sulfur and heating value determinations.
- e) Monthly Analysis Method. This subsection applies to sources at plants with total fuel-fired heat input capacity exceeding 14.65 MW (50 mmBtu/hr) but not exceeding 146.5 MW (500 mmBtu/hr). These plants shall demonstrate compliance or non-compliance with Sections 214.122, 214.141, 214.142(a), 214.162, 214.186 and 214.421 by either an analysis of calendar monthly composites of daily fuel samples or by compliance with subsection (c), at the option of the plant. ASTM procedures incorporated by reference in Section 214.104(c), shall be used for sulfur and heating value determinations.
- f) Small Source Alternative Method. This subsection applies to sources at plants with total solid fuel-fired heat input capacity not exceeding 14.65 MW (50 mmBtu/hr). Compliance or non-compliance with Sections 214.122, 214.141, 214.142(a), 214.162, 214.186 and 214.421 shall be demonstrated by a calendar month average sulfur dioxide emission rate.
- g) Exemptions. Subsections (c) through (f) shall not apply to sources controlling sulfur dioxide emissions by flue gas desulfurization equipment or by sorbent injection.
- h) Hydrogen Sulfide Measurement. For purposes of determining compliance with Section 214.382(c), the concentration of hydrogen sulfide in petroleum refinery fuel gas shall be measured using the Tutwiler Procedure specified in 40 CFR

231 60.648, incorporated by reference in Section 214.104(d).

232

233 (Source: Amended at 39 Ill. Reg. 16174, effective December 7, 2015)

234

235 **Section 214.102 Abbreviations and Units**

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237 a) The following abbreviations are used in this Part:

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| | |
|------------|--|
| BTU or btu | British thermal units |
| ft | foot |
| gr | grains |
| J | Joule |
| kg | kilogram |
| kg/MW-hr | kilograms per megawatt-hour |
| km | kilometer |
| lbs | pounds |
| lbs/mmBtu | pounds per million Btu |
| m | meter |
| mg | milligram |
| Mg | megagram, metric ton or tonne |
| mi | mile |
| mmBtu | million British thermal units |
| mmBtu/hr | million British thermal units per hour |
| MW | megawatt; one million watts |
| MW-hr | megawatt-hour |
| ng | nanogram; one billionth of a gram |
| ng/J | nanograms per Joule |
| ppm | parts per million |
| scf | standard cubic foot |
| scm | standard cubic meter |
| T | English ton |

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240 b) The following conversion factors have been used in this Part:

241

| English | Metric |
|------------|----------------|
| 2.205 lb | 1 kg |
| 1 T | 0.907 Mg |
| 1 lb/T | 0.500 kg/Mg |
| mmBtu/hr | 0.293 MW |
| 1 lb/mmBtu | 1.548 kg/MW-hr |
| 1 mi | 1.61 km |
| 1 gr/scf | 2289 mg/scm |

242

243 (Source: Amended at 39 Ill. Reg. 16174, effective December 7, 2015)

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245 **Section 214.103 Definitions**

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Unless otherwise indicated, the definitions of 35 Ill. Adm. Code 201 and 211 apply to this Part.

(Source: Amended at 39 Ill. Reg. 16174, effective December 7, 2015)

Section 214.104 Incorporations by Reference

The following materials are incorporated by reference. These incorporations do not include any later amendments or editions.

- a) 40 CFR 60, Appendix A (2014):
 - 1) Method 1: Sample and Velocity Traverses for Stationary Sources;
 - 2) Method 2: Determination of Stack Gas Velocity and Volumetric Flow Rate;
 - 3) Method 3: Gas Analysis for the Determination of Dry Molecular Weight;
 - 4) Method 4: Determination of Moisture Content in Stack Gases;
 - 5) Method 6: Determination of Sulfur Dioxide Emissions From Stationary Sources;
 - 6) Method 6A: Determination of Sulfur Dioxide, Moisture, and Carbon Dioxide Emissions From Fossil Fuel Combustion Sources;
 - 7) Method 6B: Determination of Sulfur Dioxide and Carbon Dioxide Daily Average Emissions From Fossil Fuel Combustion Sources;
 - 8) Method 6C: Determination of Sulfur Dioxide Emissions From Stationary Sources (Instrumental Analyzer Procedure);
 - 9) Method 8: Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions From Stationary Sources;
 - 10) Method 19: Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, and Nitrogen Oxide Emission Rates.
- b) 40 CFR 60.8(b) (2014), Performance Tests.
- c) American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103:
 - 1) For solid fuel sampling:

292 ASTM D-2234 (1989)

293

294 ASTM D-2013 (1986)

295

296 2) For sulfur determinations:

297

298 ASTM D-3177 (1984)

299

300 ASTM D-2622 (1987)

301

302 ASTM D-3180 (1984)

303

304 ASTM D-4239 (1985)

305

306 3) For heating value determinations:

307

308 ASTM D-2015 (1985)

309

310 ASTM D-3286 (1985)

311

312 d) Tutwiler Procedure for hydrogen sulfide, 40 CFR 60.648 (2014).

313

314 e) 40 CFR 75 (2014).

315

316 f) USEPA's Emission Measurement Center Guideline Document (GD-042),
317 Preparation and Review of Site-Specific Emission Test Plans, Revised March
318 1999.

319

320 (Source: Amended at 39 Ill. Reg. 16174, effective December 7, 2015)

321

322 SUBPART B: NEW FUEL COMBUSTION EMISSION SOURCES

323

324 **Section 214.120 Scope**

325

326 Subparts B through F contain general rules for sulfur emissions from fuel combustion emission
327 sources. These may be modified by industry and site specific rules in Subparts N et seq.

328

329 (Source: Added and codified at 7 Ill. Reg. 13597)

330

331 **Section 214.121 Large Sources**

332

333 This Section applies to new fuel combustion emission sources with actual heat input greater than
334 73.2 MW (250 mmBtu/hr).

335

336 a) Solid Fuel Burned Exclusively. No person shall cause or allow the emission of
337 sulfur dioxide into the atmosphere in any one hour period from any new fuel

338 combustion emission source greater than 73.2 MW (250 mmBtu/hr), burning solid
339 fuel exclusively, to exceed 1.86 kg of sulfur dioxide per MW-hr of actual heat
340 input (1.2 lbs/mmBtu).

341
342 (BOARD NOTE: This Section was invalidated in Commonwealth Edison v.
343 PCB, 25 Ill. App.3d 271, 62 Ill.2d 494, 43 N.E.2d 459, 323 N.E.2d 84, Ashland
344 Chemical Corp. v. PCB, 64 Ill. App.3d 169, and Illinois State Chamber of
345 Commerce v. PCB, 67 Ill. App.3d 839, 384 N.E.2d 922, 78 Ill.2d 1, 398 N.E.2d
346 9.)

347
348 b) Liquid Fuel Burned Exclusively.

349
350 1) Prior to January 1, 2017, no person shall cause or allow the emission of
351 sulfur dioxide into the atmosphere in any one hour period from any new
352 fuel combustion emission source with actual heat input greater than 73.2
353 MW (250 mmBtu/hr), burning liquid fuel exclusively, to exceed the
354 following:

355
356 A) 1.2 kg of sulfur dioxide per MW-hr of actual heat input when
357 residual fuel oil is burned (0.8 lbs/mmBtu); and

358
359 B) 0.46 kg of sulfur dioxide per MW-hr of actual heat input when
360 distillate fuel oil is burned (0.3 lbs/mmBtu);

361
362 2) On and after January 1, 2017, the owner or operator of a new fuel
363 combustion emission source with actual heat input greater than 73.2 MW
364 (250 mmBtu/hr), burning liquid fuel exclusively, must comply with the
365 following:

366
367 A) The sulfur content of all residual fuel oil used by the fuel
368 combustion emission source must not exceed 1000 ppm;

369
370 B) The sulfur content of all distillate fuel oil used by the fuel
371 combustion emission source must not exceed 15 ppm; and

372
373 C) The owner or operator must:

374
375 i) Maintain records demonstrating that the fuel oil used by the
376 fuel combustion emission source complies with the
377 requirements in subsections (b)(2)(A) and (b)(2)(B), such
378 as records from the fuel supplier indicating the sulfur
379 content of the fuel oil;

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381 ii) Retain the records for at least 5 years, and provide copies of
382 the records to the Agency within 30 days after receipt of a
383 request by the Agency; and

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- iii) Notify the Agency within 30 days after discovery of deviations from any of the requirements in this subsection (b)(2). At minimum, and in addition to any permitting obligations, the notification must include a description of the deviations, a discussion of the possible cause of the deviations, any corrective actions taken, and any preventative measures taken.

(Source: Amended at 39 Ill. Reg. 16174, effective December 7, 2015)

Section 214.122 Small Sources

This Section applies to new fuel combustion emission sources with actual heat input smaller than, or equal to, 73.2 MW (250 mmBtu/hr).

- a) Solid Fuel Burned Exclusively. No person shall cause or allow the emission of sulfur dioxide into the atmosphere in any one hour period from any new fuel combustion source with actual heat input smaller than, or equal to, 73.2 MW (250 mmBtu/hr), burning solid fuel exclusively, to exceed 2.79 kg of sulfur dioxide per MW-hr of actual heat input (1.8 lbs/mmBtu).
- b) Liquid Fuel Burned Exclusively.
 - 1) Prior to January 1, 2017, no person shall cause or allow the emission of sulfur dioxide into the atmosphere in any one hour period from any new fuel combustion emission source with actual heat input smaller than, or equal to, 73.2 MW (250 mmBtu/hr), burning liquid fuel exclusively, to exceed the following:
 - A) 1.55 kg of sulfur dioxide per MW-hr of actual heat input when residential fuel oil is burned (1.0 lbs/mmBtu); and
 - B) 0.46 kg of sulfur dioxide per MW-hr of actual heat input when distillate fuel oil is burned (0.3 lbs/mmBtu);
 - 2) On and after January 1, 2017, the owner or operator of a new fuel combustion emission source with actual heat input smaller than, or equal to, 73.2 MW (250 mmBtu/hr), burning liquid fuel exclusively, must comply with the following:
 - A) The sulfur content of all residual fuel oil used by the fuel combustion emission source must not exceed 1000 ppm;
 - B) The sulfur content of all distillate fuel oil used by the fuel combustion emission source must not exceed 15 ppm; and

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- C) The owner or operator must:
 - i) Maintain records demonstrating that the fuel oil used by the fuel combustion emission source complies with the requirements in subsections (b)(2)(A) and (b)(2)(B), such as records from the fuel supplier indicating the sulfur content of the fuel oil;
 - ii) Retain the records for at least 5 years, and provide copies of the records to the Agency within 30 days after receipt of a request by the Agency; and
 - iii) Notify the Agency within 30 days after discovery of deviations from any of the requirements in this subsection (b)(2). At minimum, and in addition to any permitting obligations, the notification must include a description of the deviations, a discussion of the possible cause of the deviations, any corrective actions taken, and any preventative measures taken.

(Source: Amended at 39 Ill. Reg. 16174, effective December 7, 2015)

**SUBPART C: EXISTING SOLID FUEL
COMBUSTION EMISSION SOURCES**

Section 214.140 Scope

This Subpart contains rules which establish general sulfur emissions standards for existing solid fuel emission sources. These may be modified by industry and site-specific rules in Subparts N, et seq.

(Source: Added at 10 Ill. Reg. 9806, effective May 20, 1986)

Section 214.141 Sources Located in Metropolitan Areas

Except as otherwise provided in this Part, no person shall cause or allow the emission of sulfur dioxide into the atmosphere in any one hour period from any existing fuel combustion source, burning solid fuel exclusively, located in the Chicago, St. Louis (Illinois) or Peoria major metropolitan areas, to exceed 1.8 pounds of sulfur dioxide per mmBtu of actual heat input (774 nanograms per joule).

- a) Sources located in Kankakee or McHenry Counties shall not exceed 6.8 pounds of sulfur dioxide per mmBtu of actual heat input (2,924 nanograms per joule) in any one hour period.

- 476 b) Existing industrial sources, not equipped with flue gas desulfurization systems as
477 of December 1, 1980, located in the Peoria major metropolitan area, shall not
478 exceed 5.5 pounds of sulfur dioxide per mmBtu of actual heat input (2,365
479 nanograms per joule) in any one hour period, provided the emissions from any
480 such source located in the City of Peoria exit from a stack which is at least 154
481 feet (47 meters) in height.
482
- 483 c) Sections 214.122 and 214.101(c) shall not apply to any fuel combustion emission
484 sources equipped with flue gas desulfurization systems as of December 1, 1980,
485 and located in the City of East Peoria as the city boundaries were then defined.
486 No person shall cause or allow the emission of sulfur dioxide into the atmosphere
487 in any one hour period from any such sources to exceed 1.4 pounds of sulfur
488 dioxide per mmBtu of actual heat input (602 nanograms per joule).
489
- 490 d) Sections 214.122 and 214.101(c) shall not apply to any fuel combustion emission
491 sources which are capable of firing solid fuel at a heat input of more than 125
492 mmBtu per hour (36.6 megawatts) and which as of December 1, 1980, are
493 equipped with flue gas desulfurization systems and are located in Hollis
494 Township, Peoria County, as the township boundaries were then defined. No
495 person shall cause or allow the emission of sulfur dioxide into the atmosphere in
496 any one hour period from any such sources to exceed 1.1 pounds of sulfur dioxide
497 per mmBtu of actual heat input (473 nanograms per joule).
498

499 (Source: Amended at 10 Ill. Reg. 9806, effective May 20, 1986)
500

501 **Section 214.142 Small Sources Located Outside Metropolitan Areas** 502

503 This section applies to existing fuel combustion sources with actual heat input less than, or equal
504 to, 73.2 MW (250 mmbtu/hr) located outside the Chicago, St. Louis (Illinois) or Peoria major
505 metropolitan areas. No person shall cause or allow the emission of sulfur dioxide into the
506 atmosphere in any one hour period from any existing fuel combustion source with actual heat
507 input less than, or equal to, 73.2 MW (250 mmbtu/hr), burning solid fuel exclusively, located
508 outside the Chicago, St. Louis (Illinois) or Peoria major metropolitan areas, to exceed either of
509 the following, whichever such person determines shall apply:
510

- 511 a) 10.5 kg of sulfur dioxide per MW-hr of actual heat input (6.8 lbs/mmbtu),
512 provided such owner or operator complies with all applicable provisions of
513 Section 214.186, or
514
- 515 b) The emission limit provided by Subpart E.
516

517 (Source: Amended at 4 Ill. Reg. 28, p. 217, effective June 26, 1980)
518

519 **Section 214.143 Large Sources Located Outside Metropolitan Areas** 520

521 This section applies to existing fuel combustion sources with actual heat input greater than 73.2

522 MW (250 mmbtu/hr) located outside the Chicago, St. Louis (Illinois) or Peoria major
523 metropolitan areas. No person shall cause or allow the emission of sulfur dioxide into the
524 atmosphere in any one hour period from any existing fuel combustion source with actual heat
525 input greater than 73.2 MW (250 mmbtu/hr), burning solid fuel exclusively, located outside the
526 Chicago, St. Louis (Illinois) or Peoria major metropolitan areas, to exceed the emission limit
527 provided by Subpart E.

528

529 (Source: Amended at 4 Ill. Reg. 28, p. 417, effective June 26, 1980)

530

531 SUBPART D: EXISTING LIQUID OR MIXED FUEL
532 COMBUSTION EMISSION SOURCES

533

534 **Section 214.161 Liquid Fuel Burned Exclusively**

535

536 a) Prior to January 1, 2017, no person shall cause or allow the emission of sulfur
537 dioxide into the atmosphere in any one hour period from any existing fuel
538 combustion emission source, burning liquid fuel exclusively, to exceed the
539 following:

540

541 1) 1.55 kg of sulfur dioxide per MW-hr of actual heat input when residual
542 fuel oil is burned (1.0 lbs/mmBtu); and

543

544 2) 0.46 kg of sulfur dioxide per MW-hr of actual heat input when distillate
545 fuel oil is burned (0.3 lbs/mmBtu).

546

547 b) Except as provided in subsections (c) and (d), on and after January 1, 2017, the
548 owner or operator of an existing fuel combustion emission source, burning liquid
549 fuel exclusively, must comply with the following:

550

551 1) The sulfur content of all residual fuel oil used by the fuel combustion
552 emission source must not exceed 1000 ppm;

553

554 2) The sulfur content of all distillate fuel oil used by the fuel combustion
555 emission source must not exceed 15 ppm; and

556

557 3) The owner or operator must:

558

559 A) Maintain records demonstrating that the fuel oil used by the fuel
560 combustion emission source complies with the requirements in
561 subsections (b)(1) and (b)(2), such as records from the fuel
562 supplier indicating the sulfur content of the fuel oil;

563

564 B) Retain the records for at least 5 years, and provide copies of the
565 records to the Agency within 30 days after receipt of a request by
566 the Agency; and

567

- 568 C) Notify the Agency within 30 days after discovery of deviations
569 from any of the requirements in this subsection (b). At minimum,
570 and in addition to any permitting obligations, the notification must
571 include a description of the deviations, a discussion of the possible
572 cause of the deviations, any corrective actions taken, and any
573 preventative measures taken.
574
- 575 c) The sulfur content limitation for distillate fuel oil in subsection (b)(2) does not
576 apply to existing electric generating units at Midwest Generation's Joliet station
577 (located at or near 1800 Channahon Road, Joliet IL), Powerton station (located at
578 or near 13082 E. Manito Road, Pekin IL), Waukegan station (located at or near
579 401 E. Greenwood Avenue, Waukegan IL), and Will County station (located at or
580 near 529 E. 135th, Romeoville IL). The owner or operator of such electric
581 generating units must instead comply with the following:
582
- 583 1) From January 1, 2016 through December 31, 2018, the sulfur content of
584 all distillate fuel oil purchased for use by such electric generating units
585 must not exceed 15 ppm;
586
- 587 2) From January 1, 2017 through December 31, 2018, the sulfur content of
588 all distillate fuel oil used by such electric generating units must not exceed
589 500 ppm;
590
- 591 3) On and after January 1, 2019, the sulfur content of all distillate fuel oil
592 used by such electric generating units must not exceed 15 ppm;
593
- 594 4) The owner or operator must:
595
- 596 A) Maintain records demonstrating that the distillate fuel oil
597 purchased from January 1, 2016 through December 31, 2018 for
598 use by the electric generating units complies with the requirements
599 in subsection (c)(1), such as records from the fuel supplier
600 indicating the sulfur content of the fuel oil, and maintain records
601 indicating the date of purchase of the fuel oil;
602
- 603 B) Maintain records demonstrating that the distillate fuel oil used
604 from January 1, 2017 through December 31, 2018, by the electric
605 generating units, complies with the requirements in subsection
606 (c)(2), such as records from the fuel supplier indicating the sulfur
607 content of the fuel oil;
608
- 609 C) On and after January 1, 2019, maintain records demonstrating that
610 the distillate fuel oil used by the electric generating units complies
611 with the requirements in subsection (c)(3), such as records from
612 the fuel supplier indicating the sulfur content of the fuel oil;
613

- 614 D) Retain all records required by this subsection (c) for at least 5
615 years, and provide copies of the records to the Agency within 30
616 days after receipt of a request by the Agency; and
617
- 618 E) Notify the Agency within 30 days after discovery of deviations
619 from any of the requirements in this subsection (c). At minimum,
620 and in addition to any permitting obligations, the notification must
621 include a description of the deviations, a discussion of the possible
622 cause of the deviations, any corrective actions taken, and any
623 preventative measures taken.
624
- 625 d) The sulfur content limitation for distillate fuel oil in subsection (b)(2) does not
626 apply to existing fuel combustion emission sources at Caterpillar's Montgomery
627 facility (located at or near 325 South Route 31, Montgomery IL). The owner or
628 operator of the fuel combustion emission sources must instead comply with the
629 following:
630
- 631 1) On and after January 1, 2016:
632
- 633 A) The sulfur content of all distillate fuel oil purchased for use by the
634 fuel combustion emission sources must not exceed 15 ppm; and
635
- 636 B) The sulfur content of all distillate fuel oil used by the fuel
637 combustion emission sources must not exceed 500 ppm;
638
- 639 2) The owner or operator must:
640
- 641 A) Maintain records demonstrating that the distillate fuel oil
642 purchased on and after January 1, 2016 for use by the fuel
643 combustion emission sources complies with the requirements in
644 subsection (d)(1)(A), such as records from the fuel supplier
645 indicating the sulfur content of the fuel oil, and maintain records
646 indicating the date of purchase of the fuel oil;
647
- 648 B) Maintain records demonstrating that the distillate fuel oil used on
649 and after January 1, 2016 by the fuel combustion emission sources
650 complies with the requirements in subsection (d)(1)(B), such as
651 records from the fuel supplier indicating the sulfur content of the
652 fuel oil;
653
- 654 C) Retain all records required by this subsection (d) for at least 5
655 years, and provide copies of the records to the Agency within 30
656 days after receipt of a request by the Agency; and
657
- 658 D) Notify the Agency within 30 days after discovery of deviations
659 from any of the requirements in this subsection (d). At minimum,

660 and in addition to any permitting obligations, the notification must
661 include a description of the deviations, a discussion of the possible
662 cause of the deviations, any corrective actions taken, and any
663 preventative measures taken.
664

665 (Source: Amended at 39 Ill. Reg. 16174, effective December 7, 2015)
666

667 **Section 214.162 Combination of Fuels**
668

- 669 a) No person shall cause or allow the emission of sulfur dioxide into the atmosphere
670 in any one hour period from any fuel combustion emission source burning
671 simultaneously any combination of solid, liquid and gaseous fuels to exceed the
672 allowable emission rate determined by the following equation:
673

$$E = S_S H_S + S_d H_d + S_R H_R$$

- 674 b) Symbols in the equation mean the following:
675

E = allowable sulfur dioxide emission rate;
S_S = solid fuel sulfur dioxide emission standard which is
applicable;
S_d = distillate oil sulfur dioxide emission standard determined
from the table in subsection (d);
S_R = residual fuel oil sulfur dioxide emission standard;
H_S = actual heat input from solid fuel;
H_d = actual heat input from distillate fuel oil;
H_R = actual heat input from residual fuel oil.

- 676 c) That portion of the actual heat input that is derived:
677
678

- 679 1) From the burning of gaseous fuels produced by the gasification of solid
680 fuels shall be included in H_S;
681
682 2) From the burning of gaseous fuels produced by the gasification of
683 distillate fuel oil shall be included in H_d;
684
685 3) From the burning of gaseous fuels produced by the gasification of residual
686 fuel oil shall be included in H_R;
687
688 4) From the burning of gaseous fuels produced by the gasification of any
689 other liquid fuel shall be included in H_R; and
690
691 5) From the burning of by-product gases such as those produced from a blast
692 furnace or a catalyst regeneration unit in a petroleum refinery shall be
693 included in H_R.
694

695 d) Metric or English units may be used in the equation of subsection (a) as follows:
696

| <u>Parameter</u> | <u>Metric</u> | <u>English</u> |
|--|-----------------|-----------------|
| E | kg/hr | lbs/hr |
| S _s , S _R | kg/MW-hr | lbs/mmBtu |
| S _d prior to January 1, 2017 | 0.46 kg/MW-hr | 0.3 lbs/mmBtu |
| S _d on and after January 1, 2017 | 0.0023 kg/MW-hr | 0.0015 lb/mmBtu |
| H _s , H _d , H _R | MW | mmBtu |

697
698 (Source: Amended at 39 Ill. Reg. 16174, effective December 7, 2015)
699

700 **SUBPART E: AGGREGATION OF SOURCES**
701 **OUTSIDE METROPOLITAN AREAS**

702
703 **Section 214.181 Dispersion Enhancement Techniques**
704

705 No owner or operator of an existing fuel combustion emission source shall comply with the
706 emission standards of this Subpart by the use of dispersion enhancement techniques. Dispersion
707 enhancement techniques shall include, but not be limited to, an intermittent control system or an
708 increase of: stack height in excess of good engineering practice necessary to prevent downwash
709 or fumigation conditions, stack diameter, exit gas velocity, or exit gas temperature, except as
710 provided by Section 123 of the Clean Air Act (42 [USC U.S.C.](#) 7423) and regulations promulgated
711 thereunder. Flue gas may be reheated where air pollution control equipment results in a
712 reduction of flue gas temperature, provided that the degree of reheat does not exceed the
713 temperature drop across such air pollution control equipment.

714
715 (Source: Amended at 3 Ill. Reg. 5, p. 777, effective February 3, 1979)
716

717 **Section 214.182 Prohibition**
718

719 No person shall cause or allow the total emissions of sulfur dioxide into the atmosphere in any
720 one hour period from all fuel combustion emission sources, located outside of the Chicago, St.
721 Louis (Illinois) or Peoria major metropolitan areas, owned or operated by such person and
722 located within a one mile radius (1.6 km) from the center point of any such fuel combustion
723 emission source to exceed the emissions determined by the following Sections 214.183 through
724 214.185, whichever is applicable.
725

726 **Section 214.183 General Formula**
727

728 a) The general formula is:
729

$$\frac{E = (H_A)^{0.11} (H_E)^2}{128} \quad (\text{in English units})$$

730
$$E = 0.04347(H_A)^{0.11}(H_E)^2 \quad (\text{in Metric units})$$

731
732
733

b) Symbols used in the general formula mean the following:

- E = Total allowable emission of sulfur dioxide (in lbs/hr or kg/hr) into the atmosphere in any one-hour period from all fuel combustion emission sources owned or operated by such person and located within a 1.6 km (1 mile) radius from the center point of any such emission source.
- H_A = Average actual stack height as determined by method outlined in Appendix C.
- H_E = Effective height of effluent release as determined by method outlined in Appendix C.

734
735
736

(Source: Amended at 30 Ill. Reg. 9671, effective May 15, 2006)

737 **Section 214.184 Special Formula**

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a) If the maximum total emissions of sulfur dioxide into the atmosphere in any one hour period from all fuel combustion emission sources owned or operated by any person and located within a 1 mile (1.6 km) radius from the center point of any such fuel combustion emission sources exceed, during normal cyclical variations in firing rate and fuel, the emissions allowed under Section 214.183 but, as of April 1, 1978, were in compliance with either the formula detailed below or a Pollution Control Board (Board) order, then the owner or operator of the emission sources shall not cause or allow such emissions to exceed the emissions allowed under Section 214.183 or the formula detailed below, whichever the owner or operator of the emission sources determines shall apply.

b)
$$E = 20,000 \left(\frac{H_s}{300} \right)^2 \quad (\text{in English units})$$

750

$$E = 4.8824 \times 20,000 \left(\frac{H_s}{300} \right)^2 \quad (\text{in Metric units})$$

751

$$H = P_1 H_1 + P_2 H_2 + \dots P_n H_n$$

752

753

(Note: P₁ + P₂ . . . P_n = 1)

754

755

c) As used in these equations, symbols mean the following:

756

- E = total emission of sulfur dioxide in lbs/hr or kg/hr into the atmosphere in any one hour period from all fuel combustion emission sources owned or operated by such person and located within a 1 mile (1.6 km) radius from the center point of any such emission source;
- P_i = (for i = 1, 2, . . . ,n) percentage of total emissions E emitted from source i expressed as decimal equivalents (e.g., 21% = 0.21); and
- H_i = (for i = 1, 2, . . . ,n) physical height (in feet or meters) above grade of stack

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(Source: Amended at 30 Ill. Reg. 9671, effective May 15, 2006)

Section 214.185 Alternative Emission Rate

Any owner or operator of a fuel combustion emission source may petition the Board for approval of an emission rate applicable to any one hour period for all fuel combustion emission sources owned or operated by such person and located within a one mile (1.6 km) radius from the center point of any such fuel combustion emission source. Such person shall prove in an adjudicative hearing before the Board that the proposed emission rate will not under any foreseeable~~foreseeable~~ operating conditions and potential meteorological conditions cause or contribute to a violation of any applicable primary or secondary sulfur dioxide ambient air quality standard or violate any applicable prevention of significant deterioration (PSD) increment. An emission rate approved pursuant to this Section shall be a substitute for that standard determined by Section 214.183 or 214.184.

- a) Every owner or operator of a fuel combustion emission source petitioning the Board for approval of an emission standard pursuant to this Section shall follow the applicable procedures described in 35 Ill. Adm. Code Subtitle A, Chapter I.
- b) Any emission standard approved pursuant to this Section shall be included as a condition to operating permits issued pursuant to 35 Ill. Adm. Code 201. Any owner or operator of a fuel combustion emission source who receives Board approval of an emission standard pursuant to this Section shall apply to the Illinois Environmental Agency (Agency) within 30 days of approval of such standard for a revision of its operating permit for such source.
- c) The Agency shall impose as a condition to a permit to operate a source pursuant to an emission standard approved pursuant to this Section an ambient sulfur dioxide monitoring and dispersion modeling program designed to verify that such emission standard will not cause or contribute to violations of any applicable primary or secondary sulfur dioxide ambient air quality standard. Such ambient monitoring and dispersion modeling program shall be operated for at least one year commencing no later than 6 months after the date of approval of an emission rate pursuant to this Section.
- d) No more than 15 months after the commencement of the ambient monitoring and dispersion modeling program of subsection (c) the owner or operator shall apply for a new operating permit. The owner or operator shall submit, at the time of the application, a report containing the results of the ambient monitoring and dispersion modeling program.

(Source: Amended at 4 Ill. Reg. 28, p. 417, effective June 26, 1980)

Section 214.186 New Operating Permits

802
803 No owner or operator of a fuel combustion emission source whose sulfur dioxide emission
804 limitation is determined by Section 214.142, 214.183 or 214.184 shall cause or allow the total
805 emissions of sulfur dioxide into the atmosphere from all fuel combustion emission sources
806 owned or operated by such person and located within 1 mile radius (1.6 km) from the center
807 point of any such fuel combustion source to exceed the level of sulfur dioxide emission allowed
808 under the previous Rule 204 (effective April 14, 1972 until December 14, 1978) without first
809 obtaining a new operating permit from the Agency. The application for a new operating permit
810 shall include a demonstration that such total emissions will not violate any applicable PSD
811 increment.

812
813 (Source: Amended at 4 Ill. Reg. 28, p. 417, effective June 26, 1980)

814
815 **SUBPART F: ALTERNATIVE STANDARDS FOR**
816 **SOURCES INSIDE METROPOLITAN AREAS**

817
818 **Section 214.201 Alternative Standards for Sources in Metropolitan Areas**

819
820 Any owner or operator of an existing fuel combustion emission source located in the Chicago,
821 St. Louis (Illinois) or Peoria major metropolitan areas may petition the Board for approval of an
822 alternate emission rate specified in emissions of pounds of sulfur dioxide per mmBtu of actual
823 heat input for any such fuel combustion emission source, up to a maximum of 6.8 pounds of
824 sulfur dioxide per mmBtu of actual heat input (10.5 kg/MW-hr). Such person shall prove in an
825 adjudicative hearing before the Board that the proposed emission rate will not, under predictable
826 worst case conditions cause or contribute to a violation of any applicable primary or secondary
827 sulfur dioxide ambient air quality standard or of any applicable prevention of significant
828 deterioration increment. An emission rate approved pursuant to this Section shall be a substitute
829 for that standard otherwise required by this Part. Nothing in this Section, however, excuses a
830 source subject to Subpart AA from complying with the requirements set forth in that Subpart.

- 831
- 832 a) Every owner or operator of an existing fuel combustion emission source so
833 petitioning the Board for approval of an emission standard shall follow the
834 applicable procedures described in 35 Ill. Adm. Code, Subtitle A, Chapter I.
835
 - 836 b) Any emission standard so approved shall be included as a condition in operating
837 permits issued pursuant to 35 Ill. Adm. Code 201. Any owner or operator of a
838 fuel combustion emission source who receives Board approval of such an
839 emission standard shall apply to the Agency within 30 days after approval of that
840 standard for a revision of its operating permit for the source.
841
 - 842 c) No owner or operator of an existing fuel combustion emission source shall seek
843 an alternate emission rate under this Section, or comply with an alternate emission
844 rate granted under this Section, by the use of dispersion enhancement techniques
845 referred to in Section 214.202.

846
847 (Source: Amended at 39 Ill. Reg. 16174, effective December 7, 2015)

848

849 **Section 214.202 Dispersion Enhancement Techniques**

850

851 No owner or operator of an existing fuel combustion emission source shall comply with the
852 emission standards of this Subpart by the use of dispersion enhancement techniques. Dispersion
853 enhancement techniques shall include, but not be limited to, an intermittent control system or an
854 increase of: stack height in excess of good engineering practice necessary to prevent downwash
855 or fumigation conditions, stack diameter, exit gas velocity, or exit gas temperature, except as
856 provided by Section 123 of the Clean Air Act (42 [USCA U.S.C.A.](#) 7423) and regulations
857 promulgated thereunder. Flue gas may be reheated where air pollution control equipment results
858 in a reduction of flue gas temperature, provided that the degree of reheat does not exceed the
859 temperature drop across such air pollution control equipment.

860

861 (Source: Amended at 7 Ill. Reg. 4219, effective March 28, 1983)

862

863 **SUBPART K: PROCESS EMISSION SOURCES**

864

865 **Section 214.300 Scope**

866

867 Subpart K contains general rules for sulfur emissions from process sources. These may be
868 modified by industry and site specific rules in other Subparts of this Part. Subpart K also
869 contains sulfur content limitations for fuel oil used by process emission sources. These sulfur
870 content limitations apply regardless of industry and site specific rules set forth in other Subparts
871 of this Part.

872

873 (Source: Amended at 39 Ill. Reg. 16174, effective December 7, 2015)

874

875 **Section 214.301 General Limitation**

876

877 Except as further provided by this Part, no person shall cause or allow the emission of sulfur
878 dioxide into the atmosphere from any process emission source to exceed 2000 ppm.

879

880 (Source: Amended at 7 Ill. Reg. 4219, effective March 28, 1983)

881

882 **Section 214.302 Exception for Air Pollution Control Equipment**

883

884 Section 214.301 shall not apply to processes designed to remove sulfur compounds from the flue
885 gases of fuel combustion emission sources.

886

887 (Source: Amended at 7 Ill. Reg. 4219, effective March 28, 1983)

888

889 **Section 214.303 Use of Sulfuric Acid**

890

891 With the exception of fuel combustion emission sources and acid manufacturing, no person using
892 sulfuric acid shall cause or allow the emission of sulfuric acid and/or sulfur trioxide from all
893 other similar emission sources at a plant or premises to exceed:

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- a) 45.4 grams in any one hour period for sulfuric acid usage less than 1180 Mg/yr (100 percent acid basis) (0.10 lbs/hr up to 1300 T/yr);
- b) 250 grams per metric ton of acid used for sulfuric acid usage greater than or equal to 1180 Mg/yr (100 percent acid basis) (0.50 lbs/T over 1300 T/yr).

(Source: Amended at 7 Ill. Reg. 4219, effective March 28, 1983)

Section 214.304 Fuel Burning Process Emission Source

The emissions from the burning of fuel at process emission sources located in the Chicago or St. Louis (Illinois) major metropolitan areas shall comply with applicable Subparts B through F, except as follows: No person shall cause or allow the emissions of sulfur into the atmosphere in any one hour period from burning tea leaves as fuel to exceed 0.70 pounds of sulfur dioxide per mmbtu of actual heat input.

(Source: Added at 7 Ill. Reg. 4219, effective March 28, 1983)

Section 214.305 Fuel Sulfur Content Limitations

- a) Except as provided in subsections (b), (c), and (d), on and after January 1, 2017, the owner or operator of a process emission source must comply with the following:
 - 1) The sulfur content of all residual fuel oil used by the process emission source must not exceed 1000 ppm;
 - 2) The sulfur content of all distillate fuel oil used by the process emission source must not exceed 15 ppm; and
 - 3) The owner or operator must:
 - A) Maintain records demonstrating that the fuel oil used by the process emission source complies with the requirements in subsections (a)(1) and (a)(2), such as records from the fuel supplier indicating the sulfur content of the fuel oil;
 - B) Retain the records for at least 5 years, and provide copies of the records to the Agency within 30 days after receipt of a request by the Agency; and
 - C) Notify the Agency within 30 days after discovery of deviations from any of the requirements in this subsection (a). At minimum, and in addition to any permitting obligations, such notification must include a description of the deviations, a discussion of the

940 possible cause of the deviations, any corrective actions taken, and
941 any preventative measures taken.

942

943 b) The sulfur content limitation for distillate fuel oil in subsection (a)(2) does not
944 apply to distillate fuel oil used by "TC-F/TC-L/TCL Wing 5" and "TC-F/TC-L
945 Alternative" at Caterpillar Technical Center (located at or near 1311 E. Cedar
946 Hills Dr., Mossville IL) for purposes of research and development or testing of
947 equipment intended for sale outside of Illinois. This exemption is limited to a
948 combined total of 150,000 gallons of distillate fuel oil per calendar year. The
949 sulfur content of the fuel oil must not exceed 500 ppm. The owner or operator of
950 the process emission sources described in this subsection must also comply with
951 the following:

952

953 1) Maintain records indicating the amount of distillate fuel oil used by the
954 process emission sources each calendar year for purposes of research and
955 development or testing of equipment for sale outside of Illinois, as well as
956 records demonstrating that the fuel oil complies with the requirements in
957 this subsection (b), such as records from the fuel supplier indicating the
958 sulfur content of the fuel oil;

959

960 2) Retain the records for at least 5 years, and provide copies of the records to
961 the Agency within 30 days after receipt of a request by the Agency; and

962

963 3) Notify the Agency within 30 days after discovery of deviations from any
964 of the requirements in this subsection (b). At minimum, and in addition to
965 any permitting obligations, the notification must include a description of
966 the deviations, a discussion of the possible cause of the deviations, any
967 corrective actions taken, and any preventative measures taken.

968

969 c) The sulfur content limitation for distillate fuel oil in subsection (a)(2) does not
970 apply to existing process emission sources at Caterpillar's Montgomery facility
971 (located at or near 325 South Route 31, Montgomery IL). The owner or operator
972 of these process emission sources must instead comply with the following:

973

974 1) On and after January 1, 2016:

975

976 A) The sulfur content of all distillate fuel oil purchased for use by the
977 process emission sources must not exceed 15 ppm; and

978

979 B) The sulfur content of all distillate fuel oil used by the process
980 emission sources must not exceed 500 ppm;

981

982 2) The owner or operator must:

983

984 A) Maintain records demonstrating that the distillate fuel oil
985 purchased on and after January 1, 2016, for use by the process

- 986 emission sources, complies with the requirements in subsection
987 (c)(1)(A), such as records from the fuel supplier indicating the
988 sulfur content of the fuel oil, and maintain records indicating the
989 date of purchase of the fuel oil;
990
991 B) Maintain records demonstrating that the distillate fuel oil used on
992 and after January 1, 2016, by the process emission sources,
993 complies with the requirements in subsection (c)(1)(B), such as
994 records from the fuel supplier indicating the sulfur content of the
995 fuel oil;
996
997 C) Retain all records required by this subsection (c) for at least 5
998 years, and provide copies of the records to the Agency within 30
999 days after receipt of a request by the Agency; and
1000
1001 D) Notify the Agency within 30 days after discovery of deviations
1002 from any of the requirements in this subsection (c). At minimum,
1003 and in addition to any permitting obligations, the notification must
1004 include a description of the deviations, a discussion of the possible
1005 cause of the deviations, any corrective actions taken, and any
1006 preventative measures taken.
1007
1008 d) The sulfur content limitation for distillate fuel oil in subsection (a)(2) does not
1009 apply to existing electric generating units at Midwest Generation's Fisk station
1010 (located at or near 1111 W. Cermak Road, Chicago IL) or Waukegan station
1011 (located at or near 401 E. Greenwood Avenue, Waukegan IL). The owner or
1012 operator of these electric generating units must instead comply with the
1013 following:
1014
1015 1) From January 1, 2016 through December 31, 2018, the sulfur content of
1016 all distillate fuel oil purchased for use by these electric generating units
1017 must not exceed 15 ppm;
1018
1019 2) From January 1, 2017 through December 31, 2018, the sulfur content of
1020 all distillate fuel oil used by these electric generating units must not
1021 exceed 500 ppm;
1022
1023 3) On and after January 1, 2019, the sulfur content of all distillate fuel oil
1024 used by these electric generating units must not exceed 15 ppm;
1025
1026 4) The owner or operator must:
1027
1028 A) Maintain records demonstrating that the distillate fuel oil
1029 purchased from January 1, 2016 through December 31, 2018, for
1030 use by the electric generating units, complies with the requirements
1031 in subsection (d)(1), such as records from the fuel supplier

- 1032 indicating the sulfur content of the fuel oil, and maintain records
1033 indicating the date of purchase of the fuel oil;
1034
1035 B) Maintain records demonstrating that the distillate fuel oil used
1036 from January 1, 2017 through December 31, 2018, by the electric
1037 generating units, complies with the requirements in subsection
1038 (d)(2), such as records from the fuel supplier indicating the sulfur
1039 content of the fuel oil;
1040
1041 C) On and after January 1, 2019, maintain records demonstrating that
1042 the distillate fuel oil used by the electric generating units complies
1043 with the requirements in subsection (d)(3), such as records from
1044 the fuel supplier indicating the sulfur content of the fuel oil;
1045
1046 D) Retain all records required by this subsection (d) for at least 5
1047 years, and provide copies of the records to the Agency within 30
1048 days after receipt of a request by the Agency; and
1049
1050 E) Notify the Agency within 30 days after discovery of deviations
1051 from any of the requirements in this subsection (d). At minimum,
1052 and in addition to any permitting obligations, the notification must
1053 include a description of the deviations, a discussion of the possible
1054 cause of the deviations, any corrective actions taken, and any
1055 preventative measures taken.
1056

1057 (Source: Added at 39 Ill. Reg. 16174, effective December 7, 2015)
1058

1059 SUBPART O: PETROLEUM REFINING, PETROCHEMICAL
1060 AND CHEMICAL MANUFACTURING
1061

1062 **Section 214.380 Scope**
1063

- 1064 a) This Subpart contains rules which modify the general sulfur emission rules of
1065 Subparts A through M as applied to a given industry or at a given site. General
1066 rules include:
1067
1068 1) Subparts B through I, fuel combustion emission sources and incinerators;
1069
1070 2) Subparts K through M, process emission sources.
1071
1072 b) These rules have been grouped for the convenience of the public; the scope of
1073 each is determined by its language and history. Rules placed in this Subpart
1074 include those which appear to be primarily directed at the following major
1075 industry groups:
1076
1077 1) Chemicals and allied products;

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- 2) Petroleum refining and related industries;
- 3) Rubber and miscellaneous plastics products.

(Source: Added and codified at 7 Ill. Reg. 13597)

Section 214.381 Sulfuric Acid Manufacturing

- a) No person shall cause or allow the emission of sulfuric dioxide into the atmosphere from any new sulfuric acid manufacturing plant to exceed 4.0 pounds of sulfur dioxide per ton of acid produced (2.0 kg/Mg).
- b) No person shall cause or allow the emission of sulfuric acid mist into the atmosphere from any process emission source to exceed 0.15 pounds of acid mist per ton of acid manufactured (75 g/Mg).
- c) No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any sulfuric acid manufacturing process in the City of Chicago to exceed 500 ppm.

(Source: Amended at 7 Ill. Reg. 4219, effective March 28, 1983)

Section 214.382 Petroleum and Petrochemical Processes

- a) Section 214.301 shall not apply to existing processes designed to remove sulfur compounds from the flue gases of petroleum and petrochemical processes.
- b) No person shall cause or allow the emission of more than 1,000 ppm of sulfur dioxide into the atmosphere from any new process emission source in the St. Louis (Illinois) major metropolitan area designed to remove sulfur compounds from the flue gases of petroleum and petrochemical processes.
- c) The following limitations apply to any petroleum refinery in the Village of Roxana:
 - 1) No person shall cause or allow the combustion of refinery flasher pitch containing more than 3.0% (three percent) sulfur by weight. This shall be demonstrated by daily sampling of refinery flasher pitch.
 - 2) No person shall burn petroleum refinery fuel gas in any fuel gas combustion device if that refinery fuel gas contains more than 39 grains hydrogen sulfide per 100 dry standard cubic feet (893 mg/scm). This shall be demonstrated by sampling the refinery fuel gas once every eight hours, pursuant to the Tutwiler Procedure (Section 214.104(c)).

- 1124 3) No person shall cause or allow the total emission of sulfur dioxide into the
1125 atmosphere from the following source groupings to exceed the following
1126 amounts:
1127
- 1128 A) All process heaters at distilling unit No. 1 – 459 lbs/hr (208 kg/hr).
1129
- 1130 B) All process heaters at distilling unit No. 2 – 1260 lbs/hr (571
1131 kg/hr).
1132
- 1133 C) All gas plant process heaters – 159 lbs/hr (72.1 kg/hr).
1134
- 1135 D) All vacuum flasher unit heaters – 378 lbs/hr (171 kg/hr).
1136
- 1137 E) All process heaters at the alkylation, benzene extraction unit and
1138 catalytic feed hydrotreating units – 346 lbs/hr (157 kg/hr).
1139
- 1140 F) All boilers generating steam for general plant use – 2,400 lbs/hr
1141 (1,090 kg/hr).
1142
- 1143 G) All heaters serving the hydrocracker unit catalytic reformer No. 1,
1144 and the saturates gas plant – 1,660 lbs/hr (753 kg/hr).
1145
- 1146 H) All process heaters at the aromatics east process – 768 lbs/hr (348
1147 kg/hr).
1148
- 1149 I) All catalytic cracking units – 3,430 lbs/hr (1,560 kg/hr).
1150
- 1151 J) All asphalt converters, distilling unit No. 1, the aromatics east
1152 process, all boilers generating steam for general plant use, and all
1153 gas plant process heaters – 2,710 lbs/hr (1,230 kg/hr).
1154
- 1155 d) Compliance with the emission limitations of subsections (b) and (c)(3) of this
1156 Section shall be demonstrated on a three-hour block average basis. Such
1157 demonstrations shall require, as a permit condition, that data as required by the
1158 Illinois Environmental Protection Agency (Section 201.161) be maintained in
1159 order to adequately determine the sulfur dioxide emission rate from each source
1160 operations group.
1161
- 1162 e) Sources in the Village of Roxana are not subject to the emission limitations of
1163 Section 214.162 when burning refinery flasher pitch or refinery fuel gas.
1164
- 1165 f) Individual process emission sources in the Village of Roxana are still subject to
1166 the emission limitation of Section 214.301 notwithstanding their inclusion in a
1167 source operations group.
1168
- 1169 g) Notwithstanding the provisions of 35 Ill. Adm. Code 201.102 of this Chapter, any

1170 physical change in any emission source subject to subsection (b), (c), (d), or (e) of
1171 this Section which alters the height of release, temperature or volumetric flow rate
1172 of the effluent gases of such source, or alters the diameter of the exit stack, shall
1173 be deemed a modification for the purposes of 35 Ill. Adm. Code 201.142 of this
1174 Chapter.

1175

1176 (Source: Amended at 12 Ill. Reg. 20778, effective December 5, 1988)

1177

1178 **Section 214.383 Chemical Manufacturing**

1179

1180 Section 214.301 shall not apply to existing hydrogen sulfide flares at a chemical manufacturing
1181 plant provided:

1182

1183 a) Said flares are operative on existing batch type processes; and

1184

1185 b) The hydrogen sulfide emissions being flared are not, as of September 11, 1975,
1186 passed through existing processes designed to remove sulfur compounds from the
1187 flue gases as provided in Section 214.382(a); and

1188

1189 c) The emission of sulfur dioxide into the atmosphere from said flares does not
1190 exceed 500 pounds per hour and 3500 pounds per eight-hour period (230 kg/hr
1191 and 1590 kg/8 hrs); and

1192

1193 d) Provided, however, that if emission controls for said flares become economically
1194 reasonable and technically feasible the owner/operator of such hydrogen sulfide
1195 flares shall install such controls.

1196

1197 (Source: Amended at 7 Ill. Reg. 4219, effective March 28, 1983)

1198

1199 **Section 214.384 Sulfate and Sulfite Manufacturing**

1200

1201 Section 214.301 shall not apply to sodium aluminum sulfate and sodium sulfite manufacturing
1202 process emission sources in the St. Louis (Illinois) major metropolitan area.

1203

1204 (Source: Adopted at 7 Ill. Reg. 4219, effective March 28, 1983)

1205

1206 SUBPART P: STONE, CLAY, GLASS
1207 AND CONCRETE PRODUCTS

1208

1209 **Section 214.400 Scope**

1210

1211 a) This Subpart contains rules which modify the general sulfur emission rules of
1212 Subparts A through M as applied to a given industry or at a given site. General
1213 rules include:

1214

1215 1) Subparts B through I, fuel combustion emission sources and incinerators;

- 1216
1217 2) Subparts K through M, process emission sources.
1218
1219 b) These rules have been grouped for the convenience of the public; the scope of
1220 each is determined by its language and history. Rules placed in this Subpart
1221 include those which appear to be primarily directed at the following major
1222 industry group: stone, clay, glass and concrete products.
1223

1224 **Section 214.401 Glass Melting and Heat Treating**

1225
1226 Section 214.301 shall not apply to:

- 1227
1228 a) Glass melting furnaces in the Chicago or St. Louis (Illinois) major metropolitan
1229 areas.
1230
1231 b) Glass heat treating with sulfur dioxide in the St. Louis (Illinois) major
1232 metropolitan area.
1233

1234 (Source: Adopted at 7 Ill. Reg. 4219, effective March 28, 1983)
1235

1236 **Section 214.402 Lime Kilns**

1237
1238 Section 214.304 notwithstanding, lime kilns (Standard Industrial Code 32) are not subject to
1239 limitations for sulfur dioxide emission.
1240

1241 (Source: Adopted at 7 Ill. Reg. 4219, effective March 28, 1983)
1242

1243 SUBPART Q: PRIMARY AND SECONDARY
1244 METAL MANUFACTURING
1245

1246 **Section 214.420 Scope**

- 1247
1248 a) This Subpart contains rules which modify the general sulfur emission rules of
1249 Subparts A through M as applied to a given industry or at a given site. General
1250 rules include:
1251
1252 1) Subparts B through I, fuel combustion emission sources and incinerators;
1253
1254 2) Subparts K through M, process emission sources.
1255
1256 b) These rules have been grouped for the convenience of the public; the scope of
1257 each is determined by its language and history. Rules placed in this Subpart
1258 include those which appear to be primarily directed at the following major
1259 industry groups:
1260
1261 1) Primary metal industries (including primary and secondary production of

1262 ferrous and nonferrous metals);

1263

1264 2) Fabricated metal products.

1265

1266 (Source: Added and codified at 7 Ill. Reg. 13597)

1267

1268 **Section 214.421 Combination of Fuels at Steel Mills in Metropolitan Areas**

1269

1270 a) Section 214.162 notwithstanding, no person shall cause or allow the emission of
1271 sulfur dioxide into the atmosphere in any one hour period from any existing fuel
1272 combustion emission source at a steel mill located in the Chicago or St. Louis
1273 (Illinois) major metropolitan area burning any solid, liquid or gaseous fuel, or any
1274 combination thereof, to exceed the allowable emission rate determined by the
1275 following equation:

1276

$$E = S_s H_s + S_d H_d + S_R H_R + S_G H_G$$

1277

1278

1279 b) Symbols in the equation mean the following:

1280

- E = allowable sulfur dioxide emission rate;
- S_s = solid fuel sulfur dioxide emission standard which is applicable;
- S_d = distillate oil sulfur dioxide emission standard determined from the table in subsection (d);
- S_R = residual oil sulfur dioxide emission standard which is applicable;
- S_G = maximum by-product gas sulfur dioxide emissions which would result if the applicable by-product gas which was burned had been burned alone at any time during the 12 months preceding the latest operation, on or before March 28, 1983, of an emission source using any by-product gas;
- H_s = actual heat input from solid fuel;
- H_d = actual heat input from distillate fuel oil;
- H_R = actual heat input from residual fuel oil;
- H_G = actual heat input from by-product gases, such as those produced from a blast furnace.

1281

1282 c) That portion of the actual heat input that is derived:

1283

1284 1) From the burning of gaseous fuels produced by the gasification of solid
1285 fuels shall be included in H_s;

1286

1287 2) From the burning of gaseous fuels produced by the gasification of
1288 distillate fuel oil shall be included in H_d;

1289

1290 3) From the burning of gaseous fuels produced by the gasification of residual
1291 fuel oil shall be included in H_R; and

1292

1293 4) From the burning of gaseous fuels produced by the gasification of any
1294 other liquid fuel shall be included in H_G.

1295
1296 d) Metric or English units may be used in the equation of subsection (a) as follows:
1297

| <u>Parameter</u> | <u>Metric</u> | <u>English</u> |
|---|-----------------|-----------------|
| E | kg/hr | lbs/hr |
| S _S , S _R , S _G | kg/MW-hr | lbs/mmBtu |
| S _d prior to January 1, 2017 | 0.46 kg/MW-hr | 0.3 lbs/mmBtu |
| S _d on and after January 1, 2017 | 0.0023 kg/MW-hr | 0.0015 lb/mmBtu |
| H _S , H _d , H _R , H _G | MW | mmBtu |

1298
1299 (Source: Amended at 39 Ill. Reg. 16174, effective December 7, 2015)
1300

1301 **Section 214.422 Secondary Lead Smelting in Metropolitan Areas**

1302
1303 Section 214.301 shall not apply to secondary lead smelting process emission sources in the
1304 Chicago or St. Louis (Illinois) major metropolitan areas.

1305
1306 (Source: Adopted at 7 Ill. Reg. 4219, effective March 28, 1983)
1307

1308 **Section 214.423 Slab Reheat Furnaces in St. Louis Area**

1309
1310 Section 214.304 notwithstanding, slab reheat furnaces in the St. Louis (Illinois) major
1311 metropolitan area with fuel burning capacities in excess of 650 mmbtu/hr and burning any
1312 residual fuel shall not be subject to the applicable Subpart B through F so long as the total sulfur
1313 dioxide emissions resulting from the burning of residual fuel oil in all such furnaces at any one
1314 steel mill do not exceed 730 lbs/hr.

1315
1316 (Source: Adopted at 7 Ill. Reg. 4219, effective March 28, 1983)
1317

1318 SUBPART V: ELECTRIC POWER PLANTS

1319 1320 **Section 214.521 Winnetka Power Plant (Repealed)**

1321
1322 ~~Notwithstanding Sections 214.101 and 214.141, the Village of Winnetka Electric Utility Plant~~
1323 ~~shall not cause or allow the emission of sulfur dioxide into the atmosphere in any one hour~~
1324 ~~period from its existing fuel combustion sources, burning solid fuel exclusively, to exceed 5.7~~
1325 ~~pounds of sulfur dioxide per mmbtu of actual heat input (8.8 kg/MW hour). Compliance with~~
1326 ~~this limitation shall be demonstrated on the basis of a daily average.~~

1327
1328 (Source: Added at 8 Ill. Reg. 6172, effective April 24, 1984)
1329

1330 SUBPART X: UTILITIES

1331

1332 **Section 214.560 Scope**

1333

1334 a) This Subpart contains rules which modify the general sulfur emission rules of
1335 Subparts A through M as applied to a given industry or at a given site. General
1336 rules include:

1337

1338 1) Subparts B through I: Fuel Combustion emission sources and incinerators;

1339

1340 2) Subparts K through M: Process emission sources.

1341

1342 b) These rules have been grouped for the convenience of the public; the scope of
1343 each is determined by its language and history. Rules placed in this Subpart
1344 include those which appear to be primarily directed at the following major
1345 industry groups: electric, gas and sanitary services.

1346

1347 (Source: Added at 10 Ill. Reg. 9806, effective May 20, 1986)

1348

1349 **Section 214.561 E. D. Edwards Electric Generating Station (Repealed)**

1350

1351 ~~Sulfur dioxide emissions from Boiler Nos. 1, 2, and 3 at the Edwards Station may not exceed the~~
1352 ~~limits listed in this Section. CILCO must determine compliance with these limits on a daily~~
1353 ~~basis using the sulfur dioxide methodology of the Phase II Acid Rain Program set forth in 40~~
1354 ~~CFR 75.~~

1355

1356 a) ~~The average sulfur dioxide emissions from Boiler Nos. 1, 2, and 3, as a group~~
1357 ~~may not exceed 4.71 pounds per million British thermal units (lb/mmBtu) of~~
1358 ~~actual heat input;~~

1359

1360 b) ~~The average sulfur dioxide emissions from any one boiler may not exceed 6.6~~
1361 ~~lb/mmBtu of actual heat input; and~~

1362

1363 c) ~~Sulfur dioxide emissions for all three boilers, as a group, may not exceed 34,613~~
1364 ~~pounds per hour, on a 24 hour average basis.~~

1365

1366 (Source: Amended at 27 Ill. Reg. 12101, effective July 11, 2003)

1367

1368 **Section 214.562 Coffeen Generating Station**

1369

1370 a) The emission standards of this subsection shall apply only if the requirements of
1371 subsections (b), (c), and (d) are fulfilled. Notwithstanding any other limitation
1372 contained in this Part, whenever the coal burned is mined exclusively from the
1373 mine that is presently known as Monterey Coal Company's No. 1 Mine located
1374 south of Carlinville, emission of sulfur dioxide from Units 1 and 2 at the Central
1375 Illinois Public Service Company's (CIPS) Coffeen Generating Station (Coffeen),
1376 located in Montgomery County, shall not exceed either of the following emission
1377 standards:

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- 1) 29,572 kilograms of sulfur dioxide in any one hour (65,194 lbs/hr); and
 - 2) 11.29 kilograms of sulfur dioxide per megawatt-hour of heat input (7.29 lbs/mmbtu).
- b) CIPS shall conduct an ambient sulfur dioxide monitoring and dispersion modeling program designed to demonstrate that the emission standards of subsection (a) will not cause or contribute to violations of any applicable primary or secondary sulfur dioxide ambient air quality standard as set forth in Section 243.122. Such ambient monitoring and dispersion modeling program shall be operated for at least one year commencing no later than 6 months after Coffeen is legally able and begins to operate at an emission rate greater than 55,555 pounds of sulfur dioxide per hour.
- c) No more than 15 months after the commencement of the ambient monitoring and dispersion modeling program of subsection (b), CIPS shall apply for a new operating permit. CIPS shall submit to the Environmental Protection Agency (Agency), at the time of the application, a report containing the results of the ambient monitoring and dispersion modeling program of subsection (b) and the results of all relevant stack tests conducted prior to the report's submission.
- d) No later than six months after Coffeen is legally able and begins to operate at an emission rate greater than 55,555 pounds of sulfur dioxide per hour, a stack test shall be conducted in accordance with Section 214.101(a), in order to determine compliance with emission standards set forth in subsection (a). After the stack test is conducted, the results shall be submitted to the Agency within 90 days. The requirements of this subsection do not preclude the Agency from requiring additional stack tests.

1408 (Source: Added at 12 Ill. Reg. 17387, effective October 14, 1988)

1409
1410 **SUBPART AA: REQUIREMENTS FOR CERTAIN SO₂ SOURCES**

1411
1412 **Section 214.600 Definitions**

1413
1414 For purposes of this Subpart, the following definitions apply. Unless a different meaning for a
1415 term is clear from its context, all terms not defined in this Section have the meanings given to
1416 them in the Illinois Environmental Protection Act and in 35 Ill. Adm. Code 201 and 211.

1417
1418 "Agency" means the Illinois Environmental Protection Agency.

1419
1420 "Aventine Renewable Energy" means the ethanol production source located at or
1421 near 1300 S. 2nd Street, Pekin IL.

1422

1423 "Illinois Power Resources Generating E.D. Edwards" means the electrical power
1424 generation source located at or near 7800 S. Cilco Lane, Bartonville IL.

1425
1426 "Ingredion Bedford Park" means the corn wet milling source located at or near
1427 6400 S. Archer Road, Bedford Park IL.

1428
1429 "Midwest Generation Joliet" means the electrical power generation source located
1430 at or near 1800 Channahon Road, Joliet IL.

1431
1432 "Midwest Generation Powerton" means the electrical power generation source
1433 located at or near 13082 E. Manito Road, Pekin IL.

1434
1435 "Midwest Generation Will County" means the electrical power generation source
1436 located at or near 529 E. 135th, Romeoville IL.

1437
1438 "Owens Corning" means the asphalt and roofing products manufacturing source
1439 located at or near 5824 S. Archer Road, Summit IL.

1440
1441 "Oxbow Midwest Calcining" means the petroleum coke product source located at
1442 or near 12308 S. New Avenue, Lemont IL.

1443
1444 (Source: Added at 39 Ill. Reg. 16174, effective December 7, 2015)

1445
1446 **Section 214.601 Applicability**

1447
1448 a) This Subpart applies to the following sources:

- 1449
1450 1) Aventine Renewable Energy;
1451
1452 2) Illinois Power Resources Generating E.D. Edwards;
1453
1454 3) Ingredion Bedford Park;
1455
1456 4) Midwest Generation Joliet;
1457
1458 5) Midwest Generation Powerton;
1459
1460 6) Midwest Generation Will County;
1461
1462 7) Owens Corning; and
1463
1464 8) Oxbow Midwest Calcining.

1465
1466 b) Once a source is subject to this Subpart, it is always subject to this Subpart,
1467 regardless of change in ownership or unit designation, or any other modification
1468 at the source.

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- c) Nothing in this Subpart relieves a source of the obligation to comply with the air quality standards set forth in 35 Ill. Adm. Code 243, or with any other applicable requirement set forth in this Part.

(Source: Added at 39 Ill. Reg. 16174, effective December 7, 2015)

Section 214.602 Compliance Deadline

On and after January 1, 2017, the owner or operator of a source identified in Section 214.601(a) must comply with the provisions in this Subpart.

(Source: Added at 39 Ill. Reg. 16174, effective December 7, 2015)

Section 214.603 Emission Limitations

The owner or operator of a source must comply with the following emission limitations, as applicable, expressed in terms of pounds of SO₂ emitted per clock hour.

| a) | Aventine Renewable Energy | lb/hr |
|-----|---|-------|
| 1) | Cyclone East controlling First Germ Drying System | 0.27 |
| 2) | Cyclone West controlling First Germ Drying System | 0.37 |
| 3) | Second Germ Drying System | 0.01 |
| 4) | Gluten Dryer 4 | 3.12 |
| 5) | Gluten Dryer 9 | 10.50 |
| 6) | Germ Dryer 1 | 4.98 |
| 7) | Germ Dryer 3 | 4.26 |
| 8) | Yeast Dryer | 1.50 |
| 9) | Scrubber controlling Steep Acid Tower | 1.79 |
| 10) | Biogas Flare | 0.001 |
| 11) | Boiler A | 0.00 |

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|------|-----|-------------------------------------|---------|
| 1515 | 12) | Boiler B | 0.00 |
| 1516 | | | |
| 1517 | 13) | Boiler C | 0.00 |
| 1518 | | | |
| 1519 | b) | Illinois Power Resources Generating | |
| 1520 | | E.D. Edwards | lb/hr |
| 1521 | | | |
| 1522 | 1) | Units 1 and 2 combined | 2100.00 |
| 1523 | | | |
| 1524 | 2) | Unit 3 | 2756.00 |
| 1525 | | | |
| 1526 | 3) | Unit 3, if both Units 1 and 2 | 4000.00 |
| 1527 | | permanently shut down | |
| 1528 | | | |
| 1529 | c) | Ingredion Bedford Park | lb/hr |
| 1530 | | | |
| 1531 | 1) | Feed Transport System | 24.38 |
| 1532 | | | |
| 1533 | 2) | Wet Milling: Inside In-Process | 107.26 |
| 1534 | | Tanks | |
| 1535 | | | |
| 1536 | 3) | Wet Milling: Molten Sulfur Burner | 7.01 |
| 1537 | | and Absorption System | |
| 1538 | | | |
| 1539 | 4) | Wet Milling: Outside In-Process | 2.69 |
| 1540 | | Tanks | |
| 1541 | | | |
| 1542 | 5) | Germ Processing Facility Channel 1 | 13.36 |
| 1543 | | System | |
| 1544 | | | |
| 1545 | 6) | Germ Processing Facility Channel 2 | 7.07 |
| 1546 | | System | |
| 1547 | | | |
| 1548 | 7) | Germ Processing Facility Channel 3 | 7.07 |
| 1549 | | System | |
| 1550 | | | |
| 1551 | 8) | Germ Processing Facility Channel 4 | 7.07 |
| 1552 | | System | |
| 1553 | | | |
| 1554 | d) | Midwest Generation Joliet | lb/hr |
| 1555 | | | |
| 1556 | 1) | Joliet 9: Unit 6 | 189.82 |
| 1557 | | | |
| 1558 | 2) | Joliet 29: Unit 7 | 323.29 |
| 1559 | | | |
| 1560 | 3) | Joliet 29: Unit 8 | 342.15 |

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- e) Midwest Generation Powerton lb/hr
- 1) Boilers 51, 52 (Unit 5) and 61, 62 (Unit 6) combined 3452.00
 - 2) The owner or operator must comply with the emission limitation set forth in subsection (e)(1) on a 30-operating day rolling average basis. For purposes of this Subpart, an operating day is a calendar day in which any emission unit addressed in subsection (e)(1) combusts any fuel;
 - 3) Within 24 hours after the end of each averaging period, the owner or operator must use the following equation to determine the combined SO₂ emission rate of the emission units addressed in subsection (e)(1) for each averaging period, which concludes at the end of each operating day. The SO₂ emission rate must not exceed the limitation set forth in subsection (e)(1):

$$E_{avg} = \frac{\sum_{h=1}^n E_h}{n}$$

1579

Where:

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E_{avg} = SO₂ emission rate for the averaging period, in lb/hr.

E_h = SO₂ emission rate for stack operating hour "h" in the averaging period. For purposes of this Subpart, a stack operating hour is a clock hour in which valid data is obtained, and in which gases flow through the monitored stack or duct for the emission units addressed in subsection (e)(1) (either for part of the hour or for the entire hour) while at least one of the units is combusting fuel.

n = Number of stack operating hours in the averaging period in which valid data is obtained.

- 4) The SO₂ emission rate for the emission units addressed in subsection (e)(1) must not exceed 6,000 lb/hr in more than 5% of the stack operating hours ("n" in the equation in subsection (e)(3)) in any averaging period.

1600
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- f) Midwest Generation Will County lb/hr
- 1) Unit 3 145.14
 - 2) Unit 4 5000.00

| | | | |
|------|----|--|--------|
| 1605 | | | |
| 1606 | g) | Owens Corning | lb/hr |
| 1607 | | | |
| 1608 | 1) | Preheater Incinerator System 1, including | 44.69 |
| 1609 | | emissions from: Storage Tanks 9, 9A, 10, | |
| 1610 | | 10A, 11, 17, 18, 19, 20, 40, 41, 42, and 43; | |
| 1611 | | Loading Racks 1, 2, and 9; and Convertors | |
| 1612 | | 10 and 11 | |
| 1613 | | | |
| 1614 | 2) | Preheater Incinerator System 3, including | 27.23 |
| 1615 | | emissions from: Convertors 8, 9, 12, | |
| 1616 | | 13, 14, and 15; and Loading Racks 1, 2, | |
| 1617 | | and 9 | |
| 1618 | | | |
| 1619 | 3) | Regenerative Thermal Oxidizer 3 | 4.33 |
| 1620 | | controlling: Storage Tanks 27, 28, 31, | |
| 1621 | | 32, 33, 34, 35, and 36 | |
| 1622 | | | |
| 1623 | 4) | Regenerative Thermal Oxidizer 4 | 6.38 |
| 1624 | | controlling: Storage Tank 98; Loading | |
| 1625 | | Rack PV1 | |
| 1626 | | | |
| 1627 | 5) | Coating Operations combined | 0.15 |
| 1628 | | | |
| 1629 | h) | Oxbow Midwest Calcining | lb/hr |
| 1630 | | | |
| 1631 | | All Calcining Units combined | 187.00 |
| 1632 | | | |

(Source: Added at 39 Ill. Reg. 16174, effective December 7, 2015)

Section 214.604 Monitoring and Testing

- 1633
- 1634
- 1635
- 1636
- 1637 a) The owner or operator of a source must, for each emission unit at the source that
- 1638 is addressed in Section 214.603, demonstrate compliance with the applicable
- 1639 emission limitations in Section 214.603 via the monitoring and testing
- 1640 requirements set forth in this Section.
- 1641
- 1642 b) The owners or operators of the following sources must, for each emission unit at
- 1643 the source that is addressed in Section 214.603, install, calibrate, maintain, and
- 1644 operate a continuous emissions monitoring system for the measurement of SO₂
- 1645 emissions in accordance with 40 CFR 75 (except 40 CFR 75.31 through 34),
- 1646 incorporated by reference in Section 214.104, and subsection (d), or utilize an
- 1647 alternative monitoring method available to the emission unit under 40 CFR 75:
- 1648
- 1649 1) Illinois Power Resources Generating E.D. Edwards;
- 1650

- 1651 2) Midwest Generation Joliet;
1652
1653 3) Midwest Generation Powerton; and
1654
1655 4) Midwest Generation Will County.
1656
- 1657 c) The owner or operator of all sources not addressed in subsection (b) must, for
1658 each emission unit at the source that is addressed in Section 214.603, either
1659 conduct performance testing in accordance with subsection (e) or install, calibrate,
1660 maintain, and operate a continuous emissions monitoring system for the
1661 measurement of SO₂ emissions in accordance with 40 CFR 60 or 40 CFR 75
1662 (except 40 CFR 75.31 through 34), incorporated by reference in Section 214.104,
1663 and subsection (d) of this Section.
1664
- 1665 d) The owner or operator of a source with an emission unit demonstrating
1666 compliance through the use of a continuous emissions monitoring system must
1667 comply with the following for each unit:
1668
- 1669 1) If two or more of the emission units addressed in Section 214.603 are
1670 served by a common stack, the owner or operator may utilize a single
1671 continuous emissions monitoring system for those units;
1672
- 1673 2) If the owner or operator of an emission unit subject to Section 214.604(c)
1674 changes the method of demonstrating compliance for that unit from
1675 performance testing to use of a continuous emissions monitoring system,
1676 the owner or operator must install, calibrate, and begin operating the
1677 continuous emissions monitoring system on or before the performance
1678 testing deadline determined in accordance with subsection (e)(2); and
1679
- 1680 3) The provisions in 40 CFR 75.31 through 34 regarding missing data
1681 substitution must not be used for purposes of demonstrating compliance
1682 with the requirements set forth in this Subpart.
1683
- 1684 e) The owner or operator of a source with an emission unit demonstrating
1685 compliance through performance testing must comply with the following for each
1686 unit. All testing done pursuant to this Section must be conducted at the owner's or
1687 operator's own expense:
1688
- 1689 1) Conduct an initial performance test after January 1, 2015 and prior to
1690 January 1, 2017. If the owner or operator of an emission unit subject to
1691 Section 214.604(c) changes the method of demonstrating compliance for
1692 that unit from use of a continuous emissions monitoring system to
1693 performance testing, the owner or operator must demonstrate compliance
1694 by conducting an initial performance test prior to discontinuing the
1695 continuous emissions monitoring system;
1696

- 1697 2) Conduct subsequent performance tests at least once every 5 years from the
1698 date of the last performance test. The date of the initial performance test
1699 conducted pursuant to subsection (e)(1) begins the 5-year period;
1700
- 1701 3) Conduct additional performance testing when, in the opinion of the
1702 Agency or USEPA, that testing is necessary to demonstrate compliance
1703 with the requirements in Section 214.603. The test must be conducted
1704 within 90 days after receipt of a notice to test from the Agency or USEPA,
1705 unless the notice specifies an alternative testing deadline;
1706
- 1707 4) Submit a testing protocol as described in USEPA's Emission Measurement
1708 Center Guideline Document (GD-042), incorporated by reference in
1709 Section 214.104, to the Agency at least 45 days prior to a scheduled
1710 emissions test, unless that deadline is waived in writing by the Agency;
1711
- 1712 5) Submit a written notification of a scheduled emissions test to the Agency
1713 at least 30 days prior to the test date and again 5 days prior to testing,
1714 unless those deadlines are waived in writing by the Agency. If, after the
1715 30 days' notice of a test is sent, there is a delay in conducting the test as
1716 scheduled (e.g., due to operational problems), the owner or operator must
1717 notify the Agency as soon as practicable of the delay, either by providing
1718 at least 7 days' notice of the rescheduled test date or by arranging a new
1719 test date with the Agency by mutual agreement;
1720
- 1721 6) Conduct each performance test using Method 1, 2, 3, 4, 6, 6A, 6B, 6C, or
1722 19, incorporated by reference in Section 214.104, or other alternative
1723 USEPA methods approved by the Agency. Each test must consist of at
1724 least 3 separate runs, each lasting a minimum of 60 minutes, and must be
1725 conducted during conditions representative of maximum SO₂ emissions.
1726 Compliance with the applicable limitation in Section 214.603 must be
1727 determined in accordance with 35 Ill. Adm. Code 283;
1728
- 1729 7) If the unit has combusted more than one type of fuel in the prior year, a
1730 separate performance test is required for each fuel; and
1731
- 1732 8) Subsequent to each performance test used to demonstrate compliance,
1733 continue operating the emission unit within the parameters enumerated in
1734 the testing results submitted to the Agency for each test, and monitor the
1735 parameters regularly to ensure ongoing compliance.
1736

1737 (Source: Added at 39 Ill. Reg. 16174, effective December 7, 2015)
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1739 **Section 214.605 Recordkeeping and Reporting**
1740

- 1741 a) By January 1, 2017, the owner or operator of a source must submit to the Agency
1742 the following:

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- 1) A certification that the source will be in compliance with the provisions in this Subpart by January 1, 2017;
 - 2) For a source with an emission unit demonstrating compliance through performance testing:
 - A) The results of the initial performance test conducted pursuant to Section 214.604(e)(1);
 - B) The calculations necessary to demonstrate that the emission unit will be in initial compliance; and
 - C) A description of the measures the source will take to ensure the emission unit continues to operate within the parameters enumerated in the testing results submitted to the Agency for each test used to demonstrate compliance, including how those parameters will ensure ongoing compliance with the applicable limitation in Section 214.603 and the specific monitoring procedures that will be implemented for each parameter;
 - 3) For a source with an emission unit demonstrating compliance through the use of a continuous emissions monitoring system, a certification of the installation and operation of the continuous emissions monitoring system and the monitoring data necessary to demonstrate that the emission unit will be in initial compliance;
 - 4) For a source with an emission unit demonstrating compliance through the use of an alternative monitoring method under 40 CFR 75, a description of the alternative monitoring method being used and the monitoring data necessary to demonstrate that the emission unit will be in initial compliance; and
 - 5) A description of the method or methods the source will use to comply with all applicable emission limitations in Section 214.603, including a description of all control devices used and, for sources with emission units demonstrating compliance through performance testing, the operating parameters for those devices.
- b) The owner or operator of a source must keep and maintain records that demonstrate ongoing compliance with the requirements of this Subpart. The records must include the following:
- 1) The calendar date of the record;

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- 2) Reports for all performance tests conducted pursuant to Section 214.604(e), including the date of the test and the results;
 - 3) A log of the date, time, nature, and results of all parametric monitoring conducted pursuant to Section 214.604(e)(8);
 - 4) For each SO₂ continuous emissions monitoring system, a log indicating any periods when the device was not in service, maintenance and inspection activities performed on the device, and all information necessary to demonstrate compliance with the monitoring requirements in Section 214.604;
 - 5) The date, time, and duration of any malfunction in the operation of an emission unit addressed in Section 214.603 or any SO₂ control equipment for that unit, if the malfunction causes an exceedance of any applicable emission limitation in Section 214.603, and the date, time, and duration of any malfunction in the operation of any SO₂ emissions monitoring equipment for that unit. The records must include a description of the malfunction, the probable cause of the malfunction, the date and nature of the corrective action taken, and any preventative action taken to avoid future malfunctions;
 - 6) A log of all inspections, cleaning, maintenance, and repair activities performed on SO₂ control equipment for an emission unit addressed in Section 214.603, including the date and nature of those activities. The log must indicate any changes made to the control equipment, including removal or replacement of the equipment; and
 - 7) For emission units subject to the emission limitation in Section 214.603(e), the SO₂ emission rate of the units for each averaging period and supporting calculations.
- c) Except as otherwise indicated in this Subpart, the owner or operator of a source with an emission unit demonstrating compliance through performance testing must submit the results of all tests conducted pursuant to Section 214.604(e) within 60 days after completion of the test.
- d) The owner or operator of a source must notify the Agency at least 30 days prior to changing the method of demonstrating compliance for an emission unit addressed in Section 214.603. The owner or operator must also comply with the following, as applicable:
- 1) For an emission unit changing the method of demonstrating compliance from performance testing to use of a continuous emissions monitoring system, submit to the Agency a certification of the installation and operation of the continuous emissions monitoring system and the

- 1834 monitoring data necessary to demonstrate compliance. The submittal
1835 must be made within 30 days after beginning operation of the continuous
1836 emissions monitoring system, and on or before the performance testing
1837 deadline determined in accordance with Section 214.604(e)(2);
1838
1839 2) For an emission unit changing the method of demonstrating compliance
1840 from use of a continuous emissions monitoring system to performance
1841 testing, submit to the Agency the following. The submittal must be made
1842 prior to discontinuing operation of the continuous emissions monitoring
1843 system:
1844
1845 A) The results of the initial performance test conducted pursuant to
1846 Section 214.604(e)(1);
1847
1848 B) The calculations necessary to demonstrate compliance; and
1849
1850 C) A description of the measures the source will take to ensure the
1851 emission unit continues to operate within the parameters
1852 enumerated in the testing results submitted to the Agency for each
1853 test used to demonstrate compliance, including how the parameters
1854 will ensure ongoing compliance with the applicable limitation in
1855 Section 214.603 and the specific monitoring procedures that will
1856 be implemented for each parameter;
1857
1858 3) For an emission unit changing the method of demonstrating compliance
1859 from use of a continuous emissions monitoring system to an alternative
1860 monitoring method under 40 CFR 75, submit to the Agency a description
1861 of the alternative monitoring method being used and the monitoring data
1862 necessary to demonstrate compliance. The submittal must be made prior
1863 to discontinuing operation of the continuous emissions monitoring system.
1864
1865 e) The owner or operator of a source must notify the Agency within 30 days after
1866 discovery of deviations from any of the requirements in this Subpart or any
1867 exceedance of an applicable emission limitation in Section 214.603. At
1868 minimum, and in addition to any permitting obligations, the notification must
1869 include a description of the deviations or exceedances, a discussion of the
1870 possible cause of the deviations or exceedances, any corrective actions taken, and
1871 any preventative measures taken.
1872
1873 f) The owner or operator of a source must maintain all records required by this
1874 Section at the source for a minimum of 5 years, and provide copies of the records
1875 to the Agency within 30 days after receipt of a request by the Agency.
1876

1877 (Source: Added at 39 Ill. Reg. 16174, effective December 7, 2015)
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| <u>R80-22</u> | <u>Old Chapter 2</u> | <u>Part 214</u> |
|---------------|----------------------|---------------------|
| 204(a) | 204(a) | 214.121 |
| 204(b) | 204(b) | 214.122 |
| 204(c) | 204(c)(1)(B) | 214.142 |
| 204(d) | 204(c)(1)(C) | 214.143 |
| 204(e)(intro) | 204(e)(intro) | 214.182 |
| 204(e)(1) | 204(e)(1) | 214.183, Appendix C |
| 204(e)(2) | 204(e)(2) | 214.184 |
| 204(e)(3) | 204(e)(3) | 214.185 |
| 204(e)(4) | 204(e)(4) | 214.186 |
| 204(f)(intro) | 204(c)(1)(A) | 214.141 |
| 204(f)(1) | – | 214.141(a) |
| 204(f)(2) | – | 214.141(b) |
| 204(g) | – | 214.201 |
| 204(h) | 204(c)(2)(A) and (B) | 214.161 |
| 204(i)(1) | 204(d) | 214.162 |
| 204(i)(2) | – | 214.421 |
| 204(j)(intro) | – | 214.304 |
| 204(j)(1) | – | 214.423 |
| 204(j)(2) | – | 214.304 |
| 204(j)(3) | – | 214.402 |
| 204(k)(intro) | 204(f)(1)(A) | 214.301 |
| 204(k)(1)(A) | 204(f)(1)(C) | 214.302 |
| 204(k)(1)(B) | 204(f)(1)(D) | 214.382(a) |
| 204(k)(1)(C) | 204(f)(1)(E) | 214.383 |
| 204(k)(1)(D) | – | 214.384(a) |
| 204(k)(1)(E) | – | 214.384(b) |
| 204(k)(1)(F) | – | 214.422 |
| 204(k)(1)(G) | – | 214.401(a) |
| 204(k)(1)(H) | – | 214.401(b) |
| 204(k)(2) | – | 214.382(b) |
| 204(k)(3) | – | 214.381(c) |
| 204(k)(4) | 204(f)(1)(B) | 214.381(a) |
| 204(l)(1) | 204(f)(2)(A) | 214.381(b) |
| 204(l)(2) | 204(f)(2)(B) | 214.303 |
| 204(m) | 204(g) | 214.101 |
| 204(n) | 204(n) | Appendix D |
| 204(o) | 204(i) | 214.181, 212.202 |

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Section 214, APPENDIX B Section into Rule Table

| <u>Part 214</u> | <u>Old Chapter 2</u> | <u>R80-22</u> |
|-----------------|----------------------|-----------------------|
| 214.100 | – | Added in Codification |

| | | |
|------------|------------------|-----------------------|
| 214.101 | 204(g) | 204(m) |
| 214.102 | – | Added in Codification |
| 214.103 | – | Added in Codification |
| 214.104 | – | Added in Codification |
| 214.120 | – | Added in Codification |
| 214.121 | 204(a) | 204(a) |
| 214.122 | 204(b) | 204(b) |
| 214.141 | 204(c)(1)(A) | 204(f) |
| 214.142 | 204(c)(1)(B) | 204(c) |
| 214.143 | 204(c)(1)(C) | 204(d) |
| 214.161 | 204(c)(2)(A)&(B) | 204(h) |
| 214.162 | 204(d) | 204(i)(1) |
| 214.181 | 204(i) | 204(o) |
| 214.182 | 204(e)(intro) | 204(e)(intro) |
| 214.183 | 204(e)(1) | 204(e)(1) |
| 214.184 | 204(e)(2) | 204(e)(2) |
| 214.185 | 204(e)(3) | 204(e)(3) |
| 214.186 | – | 204(e)(4) |
| 214.201 | – | 204(g) |
| 214.202 | – | 204(o) |
| 214.300 | – | Added in Codification |
| 214.301 | 204(f)(1)(A) | 204(k)(intro) |
| 214.302 | 204(f)(1)(C) | 204(k)(1)(A) |
| 214.303 | 204(f)(2)(B) | 204(l)(2) |
| 214.304 | – | 204(j)(intro)&(2) |
| 214.380 | – | Added in Codification |
| 214.381(a) | 204(f)(1)(B) | 204(k)(4) |
| 214.381(b) | 204(f)(2)(A) | 204(l)(1) |
| 214.381(c) | – | 204(k)(3) |
| 214.382(a) | 204(f)(1)(D) | 204(k)(1)(B) |
| 214.382(b) | – | 204(k)(2) |
| 214.383 | 204(f)(1)(E) | 204(k)(1)(C) |
| 214.384 | – | 204(k)(1)(D)&(E) |
| 214.400 | – | Added in Codification |
| 214.401 | – | 204(k)(1)(G)&(H) |
| 214.402 | – | 204(j)(3) |
| 214.420 | – | Added in Codification |
| 214.421 | – | 204(i)(2) |
| 214.422 | – | 204(k)(1)(F) |
| 214.423 | – | 204(j)(1) |

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|-----------------|----------------------|-----------------------|
| <u>Part 214</u> | <u>Old Chapter 2</u> | <u>R80-22</u> |
| Appendix A | – | Added in Codification |
| Appendix B | – | Added in Codification |
| Appendix C | 204(e)(1) | 204(e)(1) |
| Appendix D | 204(n) | 204(n) |

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1888 **Section 214.** APPENDIX C Method used to Determine Average Actual Stack Height and
 1889 **Effective Height of Effluent Release**
 1890

Q = Heat emission rate (in btu/sec or Kcal/sec as determined by method outlined below).

ΔH = Plume rise (in feet or meters).

H = Physical height (in feet or meters) above grade of each stack, except that for purposes of this calculation the value used for such stack height shall not exceed good engineering practice as defined by Section 123 of the Clean Air Act and Regulations promulgated thereunder, unless the owner or operator of the source demonstrates to the Agency that a greater height is necessary to prevent downwash or fumigation conditions.

T = Exit temperature of stack gases (in degrees Rankine or degrees Kelvin) from each source during operating conditions which would cause maximum emissions.

V = Exit velocity of stack gases (in feet/sec or meters/sec from each source under operating conditions which would cause maximum emissions).

D = Diameter of stack (in feet or meters).

P = Percentage of total emissions expressed as decimal equivalents emitted from each source. (Example: 21% = 0.21.) NOTE: The sum of $P_1 + P_2 \dots + P_n = 1$. The emission values to be used are those which occur during operating conditions which would cause maximum emissions.

H_A = Average actual stack height (in feet or meters).

H_E = Effective height of effluent release (in feet or meters).

1891
 1892 STEP 1: Determine weighted average stack parameters utilizing the following formulae:
 1893

$$D = P_1 D_1 + P_2 D_2 + \dots + P_n D_n$$

$$V = P_1 V_1 + P_2 V_2 + \dots + P_n V_n$$

$$T = P_1 T_1 + P_2 T_2 + \dots + P_n T_n$$

$$H_A = P_1 H_1 + P_2 H_2 + \dots + P_n H_n$$

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NOTE:

$P_1, D_1, V_1, T_1,$ and H_1 are the percentage of total emissions, stack diameter, exit velocity of gases, exit temperature of stack gases, and physical stack height, respectively, for the first source; $P_2, D_2, V_2, T_2,$ and H_2 are the respective values for the second source; similarly, $P_n, D_n, V_n, T_n,$ and H_n are the respective values for the nth source, where n is the number of the last source.

STEP 2: Calculate heat emission rate utilizing the following formula and the weighted average stack parameters obtained in Step 1:

$$Q_H = 7.54D^2V \frac{(T-515)}{T} \quad (\text{in English units})$$

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$$Q_H = 66.8D^2V \frac{(T-286)}{T} \quad (\text{in Metric units})$$

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STEP 3: Calculate plume rise utilizing the appropriate formula given below and the total heat emission rate obtained in Step 2:

$$\Delta H = \frac{2.58(Q_H)^{0.6}}{(H_A)^{0.11}} \quad (\text{in English units for } Q_H \geq 6000 \text{ btu/sec})$$

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$$\Delta H = \frac{1.58(Q_H)^{0.6}}{(H_A)^{0.11}} \quad (\text{in Metric units for } Q_H \geq 1500 \text{ kcal/sec})$$

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$$\Delta H = \frac{0.718(Q_H)^{0.75}}{(H_A)^{0.11}} \quad (\text{in English units for } Q_H < 6000 \text{ btu/sec})$$

1911

$$\Delta H = \frac{0.54(Q_H)^{0.75}}{(H_A)^{0.11}} \quad (\text{in Metric units for } Q_H < 1500 \text{ kcal/sec})$$

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STEP 4: Calculate the weighted average facility effective height of effluent release utilizing the plume rise obtained in Step 3, the average stack height obtained in Step 1, and the formula given below:

$$H_E = H_A + \Delta H$$

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STEP 5: Calculate the total facility hourly emission limitation utilizing the weighted actual stack height obtained in Step 1, the effective stack height given in Step 4, and the following formula:

$$E = \frac{(H_A)^{0.11} (H_E)^2}{\dots} \quad (\text{in English units})$$

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$$E = 0.04347(H_A)^{0.11} (H_E)^2 \quad (\text{in Metric units})$$

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(Source: Amended at 30 Ill. Reg. 9671, effective May 15, 2006)

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1926**Section 214.APPENDIX D Past Compliance Dates**

| <u>Rule</u> | <u>Type of Source</u> | <u>Compliance Date</u> |
|-------------------|---|---|
| 204(b) | New fuel combustion emission sources. | April 14, 1972 |
| 204(c) | St. Louis (Illinois) and Peoria MMA's with actual heat input less than, or equal to, 250 million Btu per hour | |
| | (a) Sources determining that the 6.8 lbs/MMBTU standard shall apply | December 14, 1978 |
| | (b) Sources determining that Rule 204(e) shall apply | See Rule 204(e) |
| 204(d) | Existing sources outside the Chicago, St. Louis (Illinois) and Peoria MMA's with actual heat input greater than 250 million Btu per hour | See Rule 204(e) |
| 204(e)(1) and (2) | Fuel combustion sources located outside Chicago, St. Louis (Illinois) and Peoria MMA's which obtain an alternate emission rate | December 14, 1978 |
| | (a) If source is in compliance with the previous Rule 204(e) (effective April 14, 1972 until December 14, 1978) prior to December 14, 1978 | Date of commencement of monitoring and modeling pursuant to Rule 204(e)(3)(C) |
| | (b) If source is not in compliance with the previous Rule 204(e) (effective from April 14, 1972 until December 14, 1978) prior to December 14, 1978 | Date of approval of alternate standard |
| 204(f) | Existing sources in the Chicago, St. Louis (Illinois) or Peoria MMA's burning solid fuel exclusively burning solid fuel exclusively which obtain an alternate emission rate | March 28, 1983 |
| 204(g) | Existing sources in the Chicago, St. Louis (Illinois) or Peoria MMA's burning solid fuel exclusively which obtain an alternate | Date of approval of alternate standard |

| | | |
|-----------|---|-------------------|
| | emission rate | |
| 204(h) | Existing sources burning liquid fuel exclusively | May 30, 1975 |
| 204(i) | Combination of fuels sources except at a steel mill | April 14, 1972 |
| | Combination of fuels sources at a steel mill | March 28, 1983 |
| 204(j) | Fuel burning process emission sources | March 28, 1983 |
| 204(k)(1) | Process emission sources | |
| (a)-(C) | Existing sources | December 31, 1973 |
| | New sources | December 14, 1978 |
| 204(k)(1) | Process emission sources | March 28, 1983 |
| (D)-(H) | | |
| 204(k)(2) | New sources in the St. Louis (Illinois) | March 28, 1983 |
| and (3) | MMA designed to remove sulfur compounds from the flue gases of petroleum and petrochemical processes and sulfuric acid manufacturing processes in the City of Chicago | |
| 204(l) | Sources having emissions of sulfuric acid mist | |
| | Existing sources | December 31, 1973 |
| | New sources | December 14, 1978 |

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