Utah State Implementation Plan

Emission Limits and Operating Practices

Section IX, Part H.21 and Part H.23

Adopted by the Air Quality Board July 6, 2022

H.21. General Requirements: Control Measures for Area and Point Sources, Emission Limits and Operating Practices, Regional Haze Requirements

a. Except as otherwise outlined in individual conditions of this Subsection IX.H.21 listed below, the terms and conditions of this Subsection IX.H.21 shall apply to all sources subsequently addressed in Subsection IX.H.22. Should any inconsistencies exist between these two subsections, the source specific conditions listed in IX.H.22 shall take precedence.

b. The definitions contained in R307-101-2, Definitions and R307-170-4, Definitions, apply to Section IX, Part H. In addition, the following definition also applies to Section IX, Part H.21 and 22:

Boiler operating day means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the boiler. It is not necessary for fuel to be combusted for the entire 24-hour period.

c. The terms and conditions of R307-107-1 and R307-107-2 shall apply to all sources subsequently addressed in Subsection IX.H.22.

d. Any information used to determine compliance shall be recorded for all periods when the source is in operation, and such records shall be kept for a minimum of five years. All records required by IX.H.21.c shall be kept for a minimum of five years. Any or all of these records shall be made available to the Director upon request.

e. All emission limitations listed in Subsections IX.H.22 shall apply at all times, unless otherwise specified in the source specific conditions listed in IX.H.22. Each source shall submit a report of any deviation from the applicable requirements of Subsection IX.H, including those attributable to upset conditions, the probable cause of such deviations, and any corrective actions or preventive measures taken. The report shall be submitted in accordance with the requirements of R307-170, Continuous Emission Monitoring Program. Deviations due to breakdowns shall be reported according to the breakdown provisions of R307-107.

f. Stack Testing:

i. As applicable, stack testing to show compliance with the emission limitations for the sources in Subsection IX.H.22 and IX.H.23 shall be performed in accordance with the following:

A. Sample Location: The testing point shall be designed to conform to the requirements of 40 CFR 60, Appendix A, Method 1, or the most recent version of the EPA-approved test method if approved by the Director.

B. Volumetric Flow Rate: 40 CFR 60, Appendix A, Method 2, or other EPA-approved testing methods acceptable to the Director.

C. Particulate (PM): 40 CFR 60, Appendix A, Method 5B, or the other EPA-approved testing methods acceptable to the Director. A test shall consist of three runs, with each run at least 120 minutes in duration and each run collecting a minimum sample of 60 dry standard cubic feet. The back half condensables shall also be tested using Method 202. The back half condensables shall not be used for compliance demonstration but shall be used for inventory purposes.

D. Nitrogen Oxides (NOx): 40 CFR 60, Appendix A, Method 7E, or other EPA approved testing methods acceptable to the Director.

E. Calculations: To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors to give the results in the specified units of the emission limitation.

F. Notification: The Director shall be notified at least 30 days prior to conducting any required emission testing. A source test protocol shall be submitted to DAQ when the testing notification is submitted to the Director.

G. The source test protocol shall be approved by the Director prior to performing the tests. The source test protocol shall outline the proposed test methodologies, stack to be tested, and procedures to be used. A pretest conference shall be held, if directed by the Director.

H. Source Operation and Testing Frequency: The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

g. Continuous Emission and Opacity Monitoring.

i. For all continuous monitoring devices, the following shall apply:

A. Except for system breakdown, repairs, calibration checks, and zero and span adjustments required under paragraph (d) 40 CFR 60.13, the owner/operator of an affected source shall continuously operate all required continuous monitoring systems and shall meet minimum frequency of operation requirements as outlined in R307-170 and 40 CFR 60.13.

B. The monitoring system shall comply with all applicable sections of R307-170; 40 CFR 60.13; and 40 CFR 60, Appendix B – Performance Specifications.

C. For any hour in which fuel is combusted in the unit, the owner/operator of each unit shall calculate the hourly average NOx concentration in lb/MMBtu.

D. At the end of each boiler operating day, the owner/operator shall calculate and record a new 30-day rolling average emission rate in lb/MMBtu from the arithmetic average of all valid hourly emission rates

from the CEMS for the current boiler operating day and the previous 29 successive boiler operating days.

E. An hourly average NOx emission rate in lb/MMBtu is valid only if the minimum number of data points, as specified in R307-170, is acquired by the owner/operator for both the pollutant concentration monitor (NOx) and the diluent monitor (O2 or CO2).

H.23. Source Specific Emission Limitations: Regional Haze Requirements, Reasonable Progress Controls

a. Ash Grove Cement Company – Leamington Cement Plant

i. Emissions from the Kiln 1/Raw Mill Stack shall not exceed the following:

A. 0.07 lbs filterable PM per ton of clinker

B. 2.8 lbs NO_x per ton clinker based upon a 30-day rolling average, and 1,347.2 tons per rolling 12-month period

ii. The PM emission rate from the Kiln 1/Raw Mill Stack shall be determined by stack test. Stack testing shall be performed at least once annually.

iii. Emissions of NO_x shall be determined by CEM as outlined in IX.H.21.g.A and B.

b. Graymont Western US Incorporated - Cricket Mountain Plant

i. Emissions of PM_{10} from the listed emission points shall not exceed the following limits:

A. Kiln #1 Baghouse Stack: 6.0 lb/hr

B. Kiln #2 Baghouse Stack: 6.58 lb/hr

C. Kiln #3 Baghouse Stack: 7.54 lb/hr

D. Kiln #4 Baghouse Stack: 13.7 lb/hr

E. Kiln #5 Baghouse Stack: 11.7 lb/hr

F. Briquetter and Crusher Baghouse (D-488) Stack: 0.15 lb PM10 (filterable)/hr

c. Intermountain Power Service Corporation – Intermountain Generation Station

i. Conditions on Units #1 and #2.

A. The owner/operator shall permanently close and cease operation of Intermountain Generation Station units #1 and #2 by December 31, 2027. The owner/operator shall notify the Director of the permanent closure of units #1 and #2 by no later than January 31, 2028.

B. Until such time as units #1 and #2 are shut down as outlined above, the following shall apply:

I. Emissions of PM_{10} from either the unit #1 or unit #2 stack shall not exceed 0.0184 lb/MMBtu heat input.

II. Emissions of NO_x from either the unit #1 or unit #2 stack shall not exceed 0.461 lb/MMBtu heat input (based on a 30-day rolling average).

III Emissions of SO_2 from either the unit #1 or unit #2 stack shall not exceed 0.138 lb/MMBtu heat input (based on a 30-day rolling average).

IV. These limits apply at all times except for periods of startup, shutdown, malfunction (NO_x or PM_{10} only), or emergency conditions (SO_2 only).

d. PacifiCorp – Hunter Plant

i. The annual NO_x emissions for the entire Hunter Plant from all point and fugitive sources shall not exceed 11,041 tons/year based on a 12-month rolling total.

ii. As of January 1, 2025, the annual NOx emissions for the entire Hunter Plant from all point and fugitive sources shall not exceed 10,442 tons/year based on a 12-month rolling total.

iii. As of January 1, 2028, the annual NOx emissions for the entire Hunter Plant from all point and fugitive sources shall not exceed 9,843 tons/year based on a 12-month rolling total.

iv. The above NO_x limits shall be monitored in accordance with the procedures outlined in 40 CFR Part 52.21(aa)(12) and at a minimum shall be done by summing up emissions as follows:

A. For Units #1, #2 and #3 main boiler stacks, PacifiCorp's reporting to EPA's Acid Rain Emissions data base for NO_x in pounds per hour obtained from the boilers' CEM data shall be used to calculate NO_x emission rates.

B. For Units #1, #2 and #3 emergency diesel-fired equipment, emissions shall be calculated by multiplying the NO_x emission factor from the latest edition of EPA's emission factors compilation AP-42 and hours of operation. Records documenting equipment usage shall be kept in a log, and they shall show the date the equipment was used and the duration in hours of operation.

C. For the record keeping requirements of each limit, PacifiCorp shall comply with 40 CFR Subpart 52.21(aa)(13).

D. For record submittal, PacifiCorp shall comply with 40 CFR Subpart 52.21(aa)(14).

v. To determine compliance with the 12-month rolling NO_x limits, the owner/operator shall calculate new 12-month total NO_x emissions by the 20th day of each month using data from the previous 12 months. Records of emissions shall be kept for all periods when the plant is in operation.

vi. Emissions of SO_2 from Unit #1 and Unit #2 shall not exceed the following limits:

A. 1.2 lb/MMBtu heat input for any 3-hour period

B. 0.12 lb/MMBtu heat input based on a 30-day rolling average

vii. Emissions of SO_2 from Unit #3 shall not exceed 1.2 lb/MMBtu heat input for any 3-hour period

viii. The SO_2 emissions shall be determined by CEM as outlined in IX.H.21.g.

e. PacifiCorp – Huntington Plant

i. The annual NO_x emissions for the entire Huntington Plant from all point and fugitive sources shall not exceed 6,604 tons/year based on a 12-month rolling total.

ii. As of January 1, 2025, the annual NOx emissions for the entire Huntington Plant from all point and fugitive sources shall not exceed 6,422 tons/year based on a 12-month rolling total

iii. As of January 1, 2028, the annual NOx emissions for the entire Huntington Plant from all point and fugitive sources shall not exceed 6,240 tons/year based on a 12-month rolling total.

iv. The above NO_x limits shall be monitored in accordance with the procedures outlined in 40 CFR Part 52.21(aa)(12) and at a minimum shall be done by summing up emissions as follows:

A. For Units #1 and #2 main boiler stacks, PacifiCorp's reporting to EPA's Acid Rain Emissions data base for NO_x in pounds per hour obtained from the boilers' CEM data shall be used to calculate NO_x emission rates.

B. For Units #1 and #2 emergency diesel-fired equipment, emissions shall be calculated by multiplying the NO_x emission factor from the latest edition of EPA's emission factors compilation AP-42 and hours of operation. Records documenting equipment usage shall be kept in a log, and they shall show the date the equipment was used and the duration in hours of operation.

C. For the record keeping requirements of each limit, PacifiCorp shall comply with 40 CFR Subpart 52.21(aa)(13).

D. For record submittal, PacifiCorp shall comply with 40 CFR Subpart 52.21(aa)(14).

v. To determine compliance with the 12-month rolling NO_x limits, the owner/operator shall calculate new 12-month total NO_x emissions by the 20th day of each month using data from the previous 12 months. Records of emissions shall be kept for all periods when the plant is in operation.

vi. Emissions of SO_2 from Unit #1 shall not exceed 0.12 lb/MMBtu heat input (595 lb/hr) on a 30-day rolling average.

vii. Emissions of SO_2 from Unit #2 shall not exceed 0.12 lb/MMBtu heat input for any 24-hour block average.

viii. The SO_2 emissions shall be determined by CEM as outlined in IX.H.21.g.

f. Sunnyside Cogeneration Facility

i. Emissions of NO_x (during normal boiler operation not including startup, shutdown and malfunction) shall not exceed 0.25 lb per MMBtu heat input on a 30-day rolling average.

ii. Emissions of NO_x (including startup, shutdown and malfunction) shall not exceed 0.6 lb per 10^6 BTU heat input on a 30-day rolling average.

iii. Emissions of SO_2 (during normal boiler operation not including startup, shutdown and malfunction) shall not exceed 0.42 lb per MMBtu heat input on a 30-day rolling average and 462 lb per hour on a 3-hour block average.

iv. Emissions of SO_2 (including startup, shutdown and malfunction) shall not exceed 1.2 lb per 10^6 BTU heat input on a 30-day rolling average.

v. The NOx and SO2 emissions shall be determined by CEM as outlined in IX.H.21.g.

g. US Magnesium LLC - Rowley Plant

i. The owner/operator shall install and operate a flue gas recirculation (FGR) system on the 60 MMBtu/hr (Riley) boiler no later than January 1, 2028.

ii. Following installation of the FGR system, total annual NO_x emissions from the Riley boiler shall not exceed 22.6 tons per rolling 12-month period.

iii. The emission rate from the Riley boiler shall be determined by stack test. Stack testing shall be performed at least once annually.

iv. To determine compliance with the 12-month rolling NO_x limit, the owner/operator shall calculate new 12-month total NO_x emissions by the 20th day of each month using data from the previous 12 months. Records of emissions shall be kept for all periods when the plant is in operation. To calculate the monthly NO_x emissions, the owner/operator shall multiply the lb/hr NO_x emission rate from the most recent stack test by the hours of operation of the Riley boiler for each month.

v. Emissions of NOx from the following Lithium Plant emission points shall not exceed the listed limits:

A. Boilers: 0.012 lb/MMBtu

B. Burners: 0.037lb/MMBtu

vi. Stack testing to demonstrate compliance with the Lithium Plant NOx limits shall be performed at least once every five years.