Montana Department of
ENVIRONMENTAL QUALITY

Steve Bullock, Governor
Tracy Stone-Manning, Director

P. O. Box 200901 Helena, MT 59620-0901 (406) 444-2544 Website: www.deq.mt.gov

November 1, 2013

Scott Siddoway
Colstrip Energy Limited Partnership
Rosebud Power Plant
1087 West River Street, Suite 200
Boise, Idaho 83702

Dear Mr. Siddoway:

Montana Air Quality Permit #2035-06 is deemed final as of October 31, 2013, by the Department of Environmental Quality (Department). This permit is for a coal-fired power generation facility and associated equipment. All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,

Julie Merkel
Air Permitting Program Supervisor
Air Resources Management Bureau
(406) 444-3626

Doug Kuenzli
Environmental Science Specialist
Air Resources Management Bureau
(406) 444-4267

JM:DCK
Enclosure

Montana Department of Environmental Quality
Permitting and Compliance Division

Montana Air Quality Permit #2035-06

Colstrip Energy Limited Partnership
Rosebud Power Plant
1087 West River Street, Suite 200
Boise, Idaho 83702

October 31, 2013

MONTANA AIR QUALITY PERMIT

Issued To: Colstrip Energy Limited Partnership
Rosebud Power Plant
1087 West River Street, Suite 200
Boise, Idaho 83702

MAQP: #2035-06
Administrative Amendment (AA) Request Received: 09/04/2013
Department's Decision on AA: 10/15/2013
Permit Final: 10/31/2013
AFS #: 087-0007

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Colstrip Energy Limited Partnership (CELP), pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq*., as amended, for the following:

SECTION I: Permitted Facilities

A. Plant Location

CELP operates a coal-fired power generation facility located approximately 6 miles north of Colstrip, Montana. The plant site is located on North 1/2, Section 32, Township 3 North, Range 41 East in Rosebud County, Montana.

B. Current Permit Action

On September 4, 2013, the Montana Department of Environmental Quality – Air Resources Management Bureau (Department) received a de minimis change notice and AA request from Bison Engineering, Inc. (Bison) proposing the inclusion of a 25,000 ton open coal storage pile at the Colstrip Energy Limited Partnership (CELP) facility. This storage pile will serve as a readily accessible stockpile of suitable coal during periods when dry coal is not available from the mine. The current permit action incorporates the de minimis coal storage pile and updates language and rule references were applicable.

SECTION II: Conditions and Limitations

A. Emission Limitations

1. Coal haul trucks are to be covered during hauling operations (ARM 17.8.749).

2. The routine unloading of coal, not placed in the outdoor storage pile, shall occur in the enclosed truck dump structure and be controlled by a baghouse. Particulate matter less than 10 microns (PM_{10}) emissions from the baghouse shall not exceed 0.005 grains/dry standard cubic foot (gr/dscf) (ARM 17.8.752).

3. Particulate emissions from the routine enclosed coal crushing, screening, and associated enclosed transfer operations shall be controlled by a baghouse. PM_{10} emissions from the baghouse shall not exceed 0.006 gr/dscf (ARM 17.8.752).

4. The enclosed coal storage bunker shall be controlled by two baghouses. PM_{10} emissions from each baghouse shall not exceed 0.01 gr/dscf (ARM 17.8.752).

5. CELP may maintain a single open coal storage pile in accordance with the following (ARM 17.8.749);

   a. Storage capacity of the open coal storage pile shall not to exceed 25,000 tons.

   b. Annual throughput shall not exceed 150,000 tons per year (TPY).

6. Limestone truck unloading, handling, and storage shall be controlled by a baghouse. PM_{10} emissions from the baghouse shall not exceed 0.01 gr/dscf (ARM 17.8.752).

7. Fly ash conveying and storage shall be controlled by a baghouse. PM_{10} emissions from the baghouse shall not exceed 0.004 gr/dscf (ARM 17.8.752).

8. Bed ash conveying and storage shall be controlled by a baghouse. PM_{10} emissions from the baghouse shall not exceed 0.004 gr/dscf (ARM 17.8.752).

9. Ash storage silo unloading shall be controlled by a baghouse and covered haul trucks. PM_{10} emissions from the baghouse shall not exceed 0.01 gr/dscf (ARM 17.8.752).

10. CELP shall comply with all applicable requirements, including emission limitations, monitoring, notification, recordkeeping, reporting, and testing requirements, of 40 Code of Federal Regulation (CFR) 60, Subpart Da – *Standards of Performance for Electric Utility Steam Generating Units* (ARM 17.8.340 and 40 CFR 60, Subpart Da).

11. CELP shall comply with all applicable requirements, including emission limitations, monitoring, notification, recordkeeping, reporting, and testing requirements, of 40 CFR 60, Subpart Y – *Standards of Performance for Coal Preparation and Processing Plants* (ARM 17.8.340 and 40 CFR 60, Subpart Y).

12. CELP shall comply with all applicable requirements, including emission limitations, monitoring, notification, recordkeeping, reporting, and testing requirements, of 40 CFR 63, Subpart UUUUU – *National Emissions Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units* (ARM 17.8.342 and 40 CFR 63, Subpart UUUUU).

13. CELP shall operate and maintain a baghouse on the Circulating Fluidized Bed (CFB) boiler. The CFB boiler's emissions for the pollutants listed below shall not exceed the following for the times identified (ARM 17.8.749):

Pollutant	Annual	Daily	3-hour	1-hour
SO_2	1,840 tons	5.04 tons	432 lbs/hr	574 lbs
NO_x	1,435 tons	7,864 lbs		328 lbs
CO	232 tons	1,272 lbs		53 lbs
PM_{10}	26.28 tons	144.0 lbs		6.0 lbs

14. CELP shall burn fuel containing more than 25%, by weight, coal refuse on an annual basis (ARM 17.8.749).

15. CELP shall use water spray to control fugitive emissions of particulate matter from the ash disposal area. Ash at the disposal site shall not be handled in such a manner as to create emissions in excess of 20% opacity (ARM 17.8.752).

16. If a portion of the ash disposal area is inactive and the Department determines it to be necessary, CELP shall provide mitigative measures, including, but not limited to, revegetation, to control wind-blown emissions from the area. The Department shall determine the necessity of the control measures above on the basis of Department observation, results of ambient air quality monitoring, complaints, or any combination of the above (ARM 17.8.752).

17. The Department shall notify CELP when a change is made to the Cooperative Enforcement Agreement between Montana and EPA Region VIII concerning the enforcement guidelines for continuous emission monitors. The current agreement is dated March 30, 1993 (ARM 17.8.749).

18. CELP shall maintain the stacks at the specified heights (ARM 17.8.749):

    a. The coal dump baghouse 40 feet above the ground;

    b. The coal crushing baghouse 40 feet above the ground; and

    c. The fly ash and bed ash storage baghouse/cartridge 22 feet above the ground.

19. The exhaust from the CFB boiler shall be discharged from a two hundred foot stack (ARM 17.8.749).

20. CELP shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any sources installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).

21. CELP shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).

22. CELP shall treat all unpaved portions of the haul roads, access roads, parking lots, or general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.20 (ARM 17.8.749).

23. Beginning January 1, 2010, emissions of mercury from the boiler shall not exceed 0.9 pounds per trillion British thermal units (lb/TBtu), calculated as a rolling 12-month average (ARM 17.8.771).

24. CELP shall install a mercury control system that oxidizes and sorbs emission of mercury. CELP shall implement the operation and maintenance of the mercury control system on or before January 1, 2010 (ARM 17.8.771).

25. CELP shall comply with all applicable standards and limitations, and the applicable operating, reporting, recordkeeping, and notification requirements contained in 40 CFR Part 75 (ARM 17.8.771 and ARM 17.8.749).

26. CELP shall operate and maintain the mercury oxidizer/sorbent handling system, including the bin vent filter system, to provide the maximum air pollution control for that which the system was designed (ARM 17.8.749).

B. Testing Requirements

1. Compliance with applicable emission limits contained in Section II.A.13 and 40 CFR 60, shall be determined by utilizing data taken from continuous emission monitors (CEMS) or approved test methods contained in the Montana Source Test Protocol and Procedures Manual. Opacity compliance may be determined via EPA Method 9 by a qualified observer. The above does not relieve CELP from meeting any applicable requirements of 40 CFR Part 60. Reporting requirements shall be as specified in 40 CFR 60 and Sections II.B and II.D of this permit (ARM 17.8.749 and ARM 17.8.340).

2. Enforcement of Section II.A.23, where applicable, shall be determined by utilizing data taken from a Mercury Emissions Monitoring System (MEMS). The MEMS shall be comprised of equipment as required in 40 CFR 75.81(a) and defined in 40 CFR 72.2. The above does not relieve CELP from meeting any applicable requirements of 40 CFR Part 75. Testing requirements shall be as specified in 40 CFR Part 75 and Sections II.B and II.E of MAQP #2035-06 (ARM 17.8.771).

3. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

4. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. CELP shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the emission inventory contained in the permit analysis.

   Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information may be used to calculate operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

2. CELP shall notify the Department of any construction or improvement project conducted, pursuant to ARM 17.8.745, that would include ***the addition of a new emissions unit***, change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation. The notice must be submitted to the Department, in writing, 10 days prior to startup or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(l)(d) (ARM 17.8.745).

3. All records compiled in accordance with this permit must be maintained by CELP as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).

4. CELP shall report to the Department within 30 days after the end of each calendar quarter, as described in Attachment 3 (ARM 17.8.749):

   a. The monthly average lb/TBtu mercury emissions rate, for each month of the quarter;

   b. The 12-month rolling average lb/TBtu mercury emission rate for each month of the reporting quarter; and

   c. The number of operating hours that the MEMS was unavailable or not operating within quality assurance limits (monitor downtime).

The first quarterly report must be received by the Department by April 30, 2010, but shall not include 12-month rolling averages. The first quarter report to include 12-month rolling averages must be received by the Department by January 30, 2011 (ARM 17.8.749).

D. Continuous Emissions Monitoring Systems

The following monitors shall be installed and operated on the boiler stack outlet: SO_2, oxides of nitrogen (NO_x), opacity, carbon monoxide (CO), and oxygen (O_2) or carbon dioxide (CO_2). Said monitors shall comply with the applicable provisions of 40 CFR 60, Subpart A, Part 60.7 through 60.13; Appendix B, Specifications 1, 2, 3 and 4; and Appendix F. The monitors shall also conform, but not be limited to, requirements as outlined in Attachment 2 (ARM 17.8.340 and 40 CFR 17.8.749).

E. Mercury Emissions Monitoring Systems

An MEMS shall be installed, certified, and operating on the boiler stack outlet on or before January 1, 2010. The MEMS shall also comply with the applicable provisions of 40 CFR Part 75 and the requirements included in Attachment 3 (ARM 17.8.771).

SECTION III: General Conditions

A. Inspection – CELP shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS/CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.

B. Waiver – The permit and the terms, conditions, and matters stated herein shall be deemed accepted if CELP fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving CELP of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq*. (ARM 17.8.756).

D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties, or other enforcement action as specified in Section 75-2-401, *et seq*., MCA.

E. Appeals – Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefor, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.

F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by the Department at the location of the source.

G. Permit Fee – Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by CELP may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.

H. Duration of Permit – Construction or installation must begin or contractual obligations entered into that would constitute substantial loss within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall expire (ARM 17.8.762).

Attachment 2 (CEMS)

1. Continuous Opacity Monitoring System (COMS)

a. Colstrip Energy Limited Partnership (CELP) shall install, calibrate, maintain, and operate continuous opacity monitoring systems (COMS) to monitor and record the opacity of the gases discharged into the atmosphere from the boiler.

(1) The span of these systems shall be set at 100% opacity.

(2) The COMS shall conform to all applicable requirements of 40 Code of Federal Regulation (CFR) 60, Appendix B, Performance Specification 1 - Specifications and Test Procedures for Opacity Continuous Emission Monitoring Systems in Stationary Sources (PS1).

(3) The COMS data will be used to demonstrate compliance with the 20% opacity limitation in Section II.A.20 or applicable limit promulgated under 40 CFR Part 60. CELP shall maintain compliance with the applicable opacity limitation, as demonstrated by the COMS.

b. CELP shall submit a written report of all excess opacity emissions quarterly. Periods of excess emissions shall be defined as those averaged over a 6-minute period for which the average is greater than 20% opacity, except for one 6-minute period per hour of not more than 27%. The report shall be in the format contained in Attachment 2 and include, as a minimum, the following:

(1) The magnitude of excess emissions and the date and time of commencement and completion of each time period of excess emissions.

(2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.

(3) The date and time identifying each period during which the COMS was inoperative except for zero and span checks. The nature of the system repairs or adjustments must also be reported.

(4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

(5) The percentage of time the COMS was operating shall be calculated during the reporting period as follows:

$$\left(1 - \frac{hours\ of\ CEMS\ downtime}{hours\ the\ source\ operated}\right) x\ 100$$

**All time required for calibration and to perform preventative maintenance must be included in COMS downtime.*

This shall be reported as percent monitor availability during plant operation. CELP shall maintain a minimum of 95% monitor availability during plant operation on a quarterly basis.

Nothing in this section shall preclude enforcement action for data availability that is less than 100 percent but equal to or greater than 95% if the conditions in Section 5 of this attachment are not satisfied.

(6) The percentage of time the COMS indicated compliance. This shall be calculated during the reporting period as:

$$\left(1 - \frac{total\ hours\ of\ excess\ emissions}{total\ hours\ the\ source\ operated}\right) x\ 100$$

This shall be reported as percent compliance. CELP shall maintain compliance with the applicable opacity limitation, as demonstrated by the COMS.

(7) The excess emission reports shall be submitted within 30 days following the end of the reporting period (January-March, April-June, July-September, and October-December).

c. CELP shall inspect and audit the COMS quarterly, using neutral density filters. CELP shall conduct these audits using the appropriate procedures and forms in the EPA Technical Assistance Document: Performance Audit Procedures for Opacity Monitors (EPA-600/8-87-025, April 1987). The results of these inspections and audits shall be included in the quarterly excess emission report.

d. CELP shall maintain a file of all measurements from the COMS performance testing measurements; all COMS performance evaluations; all COMS or monitoring device calibration checks and audits; adjustments and maintenance performed on these systems or devices recorded in a permanent form suitable for inspection. The file shall be retained on site for at least 5 years following the date of such measurements and reports. CELP shall supply these records to the Department upon request.

2. <u>CEMS - SO_2</u>

a. CELP shall install, calibrate, maintain, and operate CEMS to monitor and record the SO_2 concentrations of the gases discharged into the atmosphere from the boiler.

(1) The span of this system shall be set as required in 40 CFR 60.49Da.

(2) The CEMS shall conform to all applicable requirements of 40 CFR 60, Subpart Da - Standards of Performance for Electric Utility Steam Generation Units; Appendix B, Performance Specification 2 - Specifications and Test Procedures for SO_2 and NO_x Continuous Emission Monitoring Systems in Stationary Sources (PS2); and Appendix F, Quality Assurance Procedures.

(3) The CEMS data will be used to demonstrate compliance with the limitations contained in Section II.A.13 and 40 CFR 60.43Da. CELP shall maintain compliance with the limitations, as demonstrated by the CEMS.

b. CELP shall submit a written report of all excess emissions quarterly. Periods of excess emissions shall be defined as those emissions calculated on an hourly, 3-hour, calendar day, annual, and rolling 30-day basis which are greater than the limitations. The report shall be in the format contained in Attachment 2 and including, as a minimum, the following:

(1) The magnitude of excess emissions and the date and time of commencement and completion of each time period of excess emissions.

(2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.

(3) The date and time identifying each period during which the CEMS was inoperative except for zero and span checks. The nature of the system repairs or adjustments must also be reported.

(4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

(5) The percentage of time the CEMS was operating. This shall be calculated during the reporting period as

$$\left(1 - \frac{hours\ of\ CEMS\ downtime}{hours\ the\ source\ operated}\right) x\ 100$$

**All time required for calibration and to perform preventative maintenance must be included in CEMS downtime.*

This shall be reported as percent monitor availability during plant operation. CELP shall maintain a minimum of 95% monitor availability during plant operation on a quarterly basis.

Nothing in this section shall preclude enforcement action for data availability that is less than 100%, but equal to or greater than 95% if the conditions in Section 5 of this attachment are not satisfied.

(6) The percentage of time the CEMS indicated compliance. This shall be calculated for the reporting period as:

$$\left(1 - \frac{total\ hours\ of\ excess\ emissions}{total\ hours\ the\ source\ operated}\right) x\ 100$$

This shall be reported as percent compliance. CELP shall maintain compliance with the limitations, as demonstrated by the CEMS.

(7) The excess emission reports shall be submitted within 30 days following the end of the reporting period (January-March, April-June, July-September, and October-December).

c. CELP shall inspect and audit the CEMS quarterly to meet the requirement contain in 40 CFR 60 Appendix F. CELP shall conduct these audits using the appropriate procedures. The results of these inspections and audits shall be included in the quarterly excess emission report.

d. CELP shall maintain a file of all measurements from the CEMS and performance testing measurements; all CEMS performance evaluations; all CEMS or monitoring device calibration checks and audits; adjustments and maintenance performed on these systems

or devices recorded in a permanent form suitable for inspection. The file shall be retained on site for at least 5 years following the date of such measurements and reports. CELP shall supply these records to the Department upon request.

3. CEMS - NO_x

a. CELP shall install, calibrate, maintain, and operate CEMS to monitor and record the NO_x concentrations of the gases discharged into the atmosphere from the boiler.

(1) The span of this system shall be set at 1,000 ppm.

(2) The CEMS shall conform to all requirements of 40 CFR 60, Appendix B, Performance Specification 2 - Specifications and Test Procedures for SO_2 and NO_x Continuous Emission Monitoring Systems in Stationary Sources (PS2) and Appendix F, Quality Assurance Procedures.

(3) The CEMS data will be used to demonstrate compliance with the limitations contained in Section II.A.13 and 40 CFR 60.44Da. CELP shall maintain compliance with the limitations, as demonstrated by the CEMS.

b. CELP shall submit a written report of all excess emissions quarterly. Periods of excess emissions shall be defined as those emissions calculated on an hourly, calendar day, and annual basis which are greater than the limitations. The report shall be in the format contained in Attachment 2 and including, as a minimum, the following:

(1) The magnitude of excess emissions and the date and time of commencement and completion of each time period of excess emissions.

(2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.

(3) The date and time identifying each period during which the CEMS was inoperative except for zero and span checks. The nature of the system repairs or adjustments must also be reported.

(4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

(5) The percentage of time the CEMS was operating. This shall be calculated for the reporting period as:

$$\left(1 - \frac{hours\ of\ CEMS\ downtime}{hours\ the\ source\ operated}\right) x\ 100$$

**All time required for calibration and to perform preventative maintenance must be included in CEMS downtime.*

This shall be reported as percent monitor availability during plant operation. CELP shall maintain a minimum of 95% monitor availability during plant operation on a quarterly basis.

Nothing in this section shall preclude enforcement action for data availability that is less than 100% but equal to or greater than 95% if the conditions in Section 5 of this attachment are not satisfied.

(6) The percentage of time the CEMS indicated compliance. This shall be calculated for the reporting period as:

$$\left(1 - \frac{total\ hours\ of\ excess\ emissions}{total\ hours\ the\ source\ operated}\right) x\ 100$$

This shall be reported as percent compliance. CELP shall maintain compliance with the limitations, as demonstrated by the CEMS.

(7) The excess emission reports shall be submitted within 30 days following the end of the reporting period (January-March, April-June, July-September, and October-December).

c. CELP shall inspect and audit the CEMS quarterly using Certified Gas Audits or Relative Accuracy Audits (RAA). CELP shall conduct these audits using the appropriate procedures. The results of these inspections and audits shall be included in the quarterly excess emission report.

d. CELP shall maintain a file of all measurements from the CEMS and performance testing measurements; all CEMS performance evaluations; all CEMS or monitoring device calibration checks and audits; adjustments and maintenance performed on these systems or devices recorded in a permanent form suitable for inspection. The file shall be retained on site for at least 5 years following the date of such measurements and reports. CELP shall supply these records to the Department upon request.

4. <u>CEMS - CO and O_2 or CO_2</u>

a. CELP shall install, calibrate, maintain, and operate CEMS to monitor and record CO and O_2 or CO_2 of the gases discharged into the atmosphere from the boiler.

(1) The CEMS shall conform to all applicable requirements of 40 CFR 60; Appendix B, Performance Specification 3 - Specifications and Test Procedures for O_2 and CO_2 Continuous Emission Monitoring Systems in Stationary Sources (PS3) and Performance Specification 4 -Specifications and Test Procedures for CO Continuous Emission Monitoring Systems in Stationary Sources (PS4); and Appendix F, Quality Assurance Procedures.

(2) The CEMS shall conform to all applicable requirements of 40 CFR 60.49a.

5. In addition to complying with the minimum quarterly data recovery rates specified in this attachment, CELP shall undertake its best efforts to strive for and achieve the highest average quarterly data recovery rate which is practical. The determination of what is practical and, therefore, acceptable data loss shall be made consistent with Section 6 of this attachment.

6. Regarding quarterly data recovery rate requirements specified in this attachment, the determination of what is practical and, therefore, acceptable data loss shall consider whether:

   a. CELP has properly operated and maintained the continuous emission monitors and associated data acquisition systems, including the performance of preventative maintenance, the maintenance of the spare parts inventory and the conduct of the quality assurance requirements.

   b. CELP has taken immediate and appropriate action to correct a malfunction in the continuous emission monitors and associated data acquisitions systems.

Attachment 3 (MEMS)

Mercury Emission Monitoring System (MEMS)

a. Colstrip Energy Limited Partnership (CELP) shall install, calibrate, certify, maintain, and operate a MEMS to monitor and record the rate of mercury emissions discharged into the atmosphere from all mercury emitting generating units (units) as defined in ARM 17.8.740.

   (1) The MEMS shall be comprised of equipment as required in 40 Code of Federal Regulation (CFR) 75.81(a) and defined in 40 CFR 72.2.

   (2) The MEMS shall conform to all applicable requirements of 40 CFR Part 75.

   (3) The MEMS data will be used to demonstrate compliance with the emission limitations contained in Section II.A.23.

b. CELP shall prepare, maintain and submit a written MEMS Monitoring Plan to the Department.

   (1) The monitoring plan shall contain sufficient information on the MEMS and the use of data derived from these systems to demonstrate that all the gaseous mercury stack emissions from each unit are monitored and reported.

   (2) Whenever CELP makes a replacement, modification, or change in a MEMS or alternative monitoring system under 40 CFR 75 subpart E, including a change in the automated data acquisition and handling system (DAHS) or in the flue gas handling system, that affects information reported in the monitoring plan (e.g. a change to a serial number for a component of a monitoring system), then the owner or operator shall update the monitoring plan.

   (3) If any monitoring plan information requires an update pursuant to Section b.(2), submission of the written monitoring plan update shall be completed prior to or concurrent with the submittal of the quarterly report required in c. below for the quarter in which the update is required.

   (4) The initial submission of the Monitoring Plan to the Department shall include a copy of a written Quality Assurance/Quality Control (QA/QC) Plan as detailed in 40 CFR 75 Appendix B, Section 1. Subsequently, the QA/QC Plan need only be submitted to the Department when it is substantially revised. Substantial revisions can include items such as changes in QA/QC processes resulting from rule changes, modifications in the frequency or timing of QA/QC procedures, or the addition/deletion of equipment or procedures.

   (5) The Monitoring Plan shall include, at a minimum, the following information:

      (a) Facility summary, including:

         (i) A description of each mercury emitting generating unit at the facility.

         (ii) Maximum and average loads (in megawatts (MW)) with fuels combusted and fuel flow rates at the maximum and average loads for each unit.

         (iii) A description of each unit's air pollution control equipment and a description of the physical characteristics of each unit's stack.

      (b) Mercury emission control summary including a description of control strategies, equipment, and design process rates.

(c) MEMS description, including:

(i) Identification and description of each monitoring component in the MEMS including manufacturer and model identifications; monitoring method descriptions; and normal operating scale and units descriptions. Descriptions of stack flow, diluent gas, and moisture monitors (if used) in the system must be described in addition to the mercury monitor or monitors.

(ii) A description of the normal operating process for each monitor including a description of all QA/QC checks.

(iii) A description of the methods that will be employed to verify and maintain the accuracy and precision of the MEMS calibration equipment.

(iv) Identification and description of the DAHS, including major hardware and software components, conversion formulas, constants, factors, averaging processes, and missing data substitution procedures.

(v) A description of all initial certification and ongoing recertification tests and frequencies; as well as all accuracy auditing tests and frequencies.

(d) The Maximum Potential Concentration (MPC), Maximum Expected Concentration (MEC), span value, and range value as applicable and as defined in 40 CFR 75 Appendix A, 2.1.7.

(e) Examples of all data reports required in c. below.

c. CELP shall submit written, Quarterly Mercury Monitoring Reports. The reports shall be received by the Department within 30 days following the end of each calendar quarter, and shall include, at a minimum, the following:

(1) Mercury emissions. The reports shall include:

(a) The monthly average pounds per trillion British thermal units (lb/TBtu) mercury emission rate for each month of the quarter;

(b) The 12-month rolling average lb/TBtu emission rate for each month of the reporting quarter. The rolling 12-month basis is an average of the last 12 individual calendar monthly averages, with each monthly average calculated at the end of each calendar month; and

(c) The total heat input to the boiler (in TBtu) for each 12-month rolling period of the quarter.

(2) Mercury excess emissions. The report shall describe the magnitude of excess mercury emissions experienced during the quarter, including:

(a) The date and time of commencement and completion of each period of excess emissions. Periods of excess emissions shall be defined as those emissions calculated on a rolling 12-month basis which are greater than the limitation established in II.A.23.

(b) The nature and cause of each period of excess emissions and the corrective action taken or preventative measures adopted in response.

(c) If no periods of excess mercury emissions were experienced during the quarter, the report shall state that information.

(3) MEMS performance. The report shall describe:

(a) The number of operating hours that the MEMS was unavailable or not operating within quality assurance limits (monitor downtime) during the reporting quarter, broken down by the following categories:

- Monitor equipment malfunctions;
- Non-Monitor equipment malfunctions;
- Quality assurance calibration;
- Other known causes; and
- Unknown causes.

(b) The percentage of unit operating time that the MEMS was unavailable or not operating within quality assurance limits (monitor downtime) during the reporting quarter. The percentage of monitor downtime in each calendar quarter shall be calculated according to the following formula:

$$MEMSDowntime\% = \left(\frac{MEMSDownHours}{OpHours} \right) \times 100 \quad \text{where}$$

MEMSDowntime%	=	Percentage of unit operating hours classified as MEMS monitor downtime during the reporting quarter.
MEMSDownHours	=	Total number of hours of MEMS monitor downtime during the reporting quarter.
OpHours	=	Total number of hours the unit operated during the reporting quarter.

(c) For any reporting quarter in which monitor downtime exceeds 10%, a description of each time period during which the MEMS was inoperative or operating in a manner defined in 40 CFR Part 75 as “out of control.” Each description must include the date, start and end times, total downtime (in hours), the reason for the system downtime, and any necessary corrective actions that were taken. In addition, the report shall describe the values used for any periods when missing data substitution was necessary as detailed in 40 CFR 75.30, *et seq*.

(4) The quarterly report shall include the results of any QA/QC audits, checks, or tests conducted to satisfy the requirements of 40 CFR Part 75 Appendices A, B or K.

(5) Compliance certification. Each quarterly report shall contain a certification statement signed by the facility’s responsible official based on reasonable inquiry of those persons with primary responsibility for ensuring that all of the unit's emissions are correctly and fully monitored. The certification shall indicate:

(a) Whether the monitoring data submitted were recorded in accordance with the applicable requirements of 40 CFR Part 75 including the QA/QC procedures and specifications of that part and its appendices, and any such requirements, procedures and specifications of an applicable excepted or approved alternative monitoring method as represented in the approved Monitoring Plan.

(b) That for all hours where data are substituted in accordance with 40 CFR 75.38, the add-on mercury emission controls were operating within the range of parameters listed in the quality-assurance plan for the unit, and that the substitute values do not systematically underestimate mercury emissions.

(6) The format of each component of the quarterly report may be negotiated with the Department's representative to accommodate the capabilities and formats of the facility's DAHS.

(7) Each quarterly report must be received by the Department within 30 days following the end of each calendar reporting period (January-March, April-June, July-September, and October-December).

(8) The electronic data reporting detailed in 40 CFR Part 75 shall not be required unless Montana is able to receive and process data in an electronic format.

d. CELP shall maintain a file of all measurements and performance testing results from the MEMS; all MEMS performance evaluations; all MEMS or monitoring device calibration checks and audits; and records of all adjustments and maintenance performed on these systems or devices recorded in a permanent form suitable for inspection. The file shall be retained on site for at least 5 years following the date of such measurements and reports. CELP shall make these records available for inspection by the Department and shall supply these records to the Department upon request.

Montana Air Quality Permit Analysis
Colstrip Energy Limited Partnership
Montana Air Quality Permit (MAQP) #2035-06

I. Introduction/Process Description

Colstrip Energy Limited Partnership (CELP) owns and operates a coal fired power generation facility. The facility is located approximately six miles north of Colstrip, Montana. The plant site is located on North 1/2, Section 32, Township 3 North, Range 41 East in Rosebud County, Montana.

A. Permitted Equipment

The general facilities for the coal fired power generator are listed below:

1. Coal truck dump, hoppers, and crushers with associated baghouse particulate control.
2. Coal conveyors and storage silos.
3. 25,000 ton open coal storage pile.
4. Steam turbine (1).
5. Circulation fluidized bed (CFB) boiler (1).
6. Air Cool Condenser (ACC) unit.
7. Ash disposal consisting of silo and landfill operations.
8. Two hundred foot stack on the CFB Boiler.
9. Limestone handling facilities.
10. Sorbent Handling System.

B. Source Description

The electric generating facility was designed to burn low-British thermal unit (BTU) waste coal. The facility uses a CFB boiler with a design steam flow of approximately 355,000 pounds per hour (lbs/hr) at 1300 pound-force per square inch gauge (PSIG) and 955 degrees Fahrenheit (°F). Limestone is injected into the fluidized bed to control sulfur dioxide emissions.

Coal is delivered to the facility by trucks and trailers and crushed at the facility. Limestone is delivered to the facility in trucks and trailers, but does not require crushing or screening. Ash from the boiler is discharged as either bed ash or fly ash. Both types of ash are collected in separate systems and conveyed to a common silo. The ash is transported to an on-site disposal area.

C. Permit History

The original **MAQP #2035-00** was issued to AEM Corporation (AEM) for the construction and operation of a coal-fired power generation facility and a coal liquefaction-cogeneration facility from the Montana Department of Health and Environmental Sciences, Air Quality Bureau (predecessor to the Montana Department of Environmental Quality (Department)) on September 10, 1985. The application was received on April 26, 1985, and deemed complete on June 25, 1985.

The coal-fired power generation facility was identified as a major stationary source as defined in the Administrative Rules of Montana (ARM) 16.8.921(22)(a). Therefore, a Prevention of Significant Deterioration (PSD) review was conducted for the permit application.

Coal for the facility comes from the nearby Western Energy mine or other nearby mines. The coal used is called culm, which is a refuse coal whose uses are somewhat limited. AEM planned to utilize 364,000 ton per year (TPY) of refuse coal, 220,752 TPY of PDF (char),

359,400 barrels (Bbl) of oil, 390,000,000 cubic feet per year (ft^3/yr) of noncondensible gases, 59,568 TPY of water, and use 11,000 TPY of dolomite lime as supplemental boiler sulfur dioxide (SO_2) control to produce 30.65 megawatts (MW) of power.

The first change to the permit was given **MAQP #2035-A** and was issued on December 22, 1987. This permit was issued to Montana One Partners (MOP) of LaJolla, California who took over ownership from AEM Corporation. The change requested was to allow the company to construct only the power generation portion of the process and to produce 39 gross megawatts (GMW).

The MOP changed the project description. MOP planned to utilize 306,600 TPY of refuse coal to produce 39 GMW of electrical power. A circulating fluidized bed combustion boiler with a heat rating of 485 million BTU's per hour is used in conjunction with a limestone injection for SO_2 emission control. Approximately 27,000 TPY of limestone is used. Only one steam turbine was planned for the project under this application. A baghouse was installed to control particulate emissions. All other equipment involved with the project (e.g., coal handling, crushing and conveying) remained the same as originally proposed in MAQP #2035-00. The emissions from the handling and crushing are controlled by a baghouse.

MAQP #2035-02 issued on April 15, 1994, was requested by CELP who was the current owner of the facility. The name on the permit was changed from Montana One Partners to Colstrip Energy Limited Partners. The ownership transfer occurred on June 10, 1988.

The purpose of the revision was to include limitations in the permit to protect the PSD increment for the 3-hour SO_2 standard and the Montana ambient air quality 1-hour standard for nitrogen dioxide (NO_2). The emission limitations [as oxides of nitrogen (NO_x)] were included in Section II.F. and G. These changes did not change the annual allowable emissions from the plant or the daily SO_2 and NO_x limitations. The limitations were added to the rolling 30-day averages required under 40 Code of Federal Regulation (CFR) 60, Subpart Da. Modeling was done to determine the amount of increment consumed as a result of these changes to the emission limitations. These changes resulted in changes in the reporting requirements and compliance demonstrations.

The emission limitations in Section II.F. were developed based on the Department's review of information supplied by CELP. CELP proposed SO_2 limits of 450 pounds per hour (lbs/hour) on a three-hour average and 590 lbs/hour on a one hour average and a NO_x limit of 500 lbs/hour on a one-hour average. The Department determined that the appropriate SO_2 limits should be 432 lbs/hour on a three-hour average and 574 lbs/hour on a one-hour average. These limits were arrived at based on the data submitted by CELP with the elimination of the data for June 12, 1992, based on concerns about the representativeness of the data. After review of the Continuous Emission Monitoring System CEMS data submitted, the Department and CELP determined the NO_x limit should be 328 lbs/hour, which was the number modeled in the original application.

The Department also made several other changes to the permit. The CEMS installation, operation, and reporting requirements have been clarified. All references to the coal liquefaction-cogeneration facility were removed since the facility was not constructed.

After the preliminary determination (PD) of MAQP #2035-02 was issued, CELP provided comments on the PD dated February 15, 1994. As a result of these comments, the Department made a number of changes. The changes were completed as requested by CELP, except that the Department did not change the continuous emission monitor availability requirement. The continuous emission monitor availability remained at 95%. The Department also included a condition in the permit which required the Department to notify CELP when a change is made

to the Cooperative Enforcement Agreement between the State of Montana and United States Environmental Protection Agency (EPA) Region VIII concerning the enforcement guidelines for continuous emission monitors. The Department did not change the general condition Section IV.H or the wording in Section II. R. For clarity, however, the issuance of MAQP #2035-02 did not authorize any new construction at the facility.

CELP proposed in **MAQP Application #2035-03** the removal of the plant-wide emission limits in Section II.F of MAQP #2035-02 and the establishment of emission limits for point sources at the facility. The permit application did not seek any physical or operational changes to any process equipment at the facility. CELP also proposed removing from the permit the reference in Section II.S to the Hydrometrics letter, eliminating the ambient monitoring required in the permit, and clarifying language in Section II.J regarding sulfur content of waste coal.

CELP presented MAQP Application #2035-03 as a major modification of this major stationary source. A major modification means any physical change in, or change in the method of operations of, a major stationary source. The permit application does not propose any physical or operational changes at the facility; however, MAQP #2035-03 required a PSD review because the proposed particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) emission limits should have been addressed in PSD Permit Application #2035-00. Establishing PM_{10} emission limits on a point source basis results in an allowable emissions increase of 17.94 TPY of PM_{10}. This is a significant emissions increase under PSD. The Department does not anticipate that actual emissions from the facility will change, since there will be no operational changes occurring.

MAQP #2035-03 establishes emission limits for point sources at the facility and eliminates the total plant emission limits. Total plant emission limits for SO_2, NO_x, and carbon monoxide (CO) in Section II.F of MAQP #2035-02 have been placed on the CFB boiler only. The CFB boiler is the only significant source of SO_2, NO_x, and CO at the facility. The opacity limitation has been placed in a condition and is applicable to all equipment at the facility. PM_{10} emission limitations were established on the CFB boiler. PM-10 emission limitations were also established for all equipment, transfer points, and storage facilities currently controlled by a baghouse. The PM_{10} emission limitation in the form of a grains per dry standard cubic foot (gr/dscf) limitations for these facilities was based on manufacturer's data submitted by CELP in the permit application.

MAQP #2035-02 required that CELP handle ash disposed on site in accordance with the provisions specified in the Hydrometrics letter of April 24, 1985. The Hydrometrics letter contained provisions that moisture be added to the ash to prevent blowing and the disposal site be operated in a cut and fill operation. The letter also outlines in detail the soil handling and revegetation operations.

The Department's concern with the ash disposal area is that compliance be maintained with applicable requirements during operation of the disposal area and when the disposal area is inactive for any extended period of time. Therefore, MAQP #2035-03 requires that water spray be used when ash is being deposited to control fugitive emissions. The permit also includes a provision requiring mitigative measures, including revegetation for the disposal area during inactive periods. This condition is intended to apply during extended inactive periods or closure.

Attachment 1 in MAQP #2035-02 required CELP to monitor PM_{10}, SO_2, and ambient wind speed and direction. The current ambient monitoring site is located on the northwestern edge of the facility. The primary wind directions at the facility are from the southwest, west, and northwest. The Department believes the ambient monitoring site does not monitor a representative portion of the emissions from the facility. In order for the ambient monitors to

be exposed to the average annual emissions from the facility, the monitoring site should be situated downwind of the power plant and ash disposal area. This would require that the monitoring site, in general, be located to the north of the CFB boiler stack and east to northeast of the ash disposal area.

Consequently, the Department has determined that completely eliminating the ambient monitoring network operated by CELP would be inappropriate. The Department has determined that the ambient monitoring site should be moved to the east of the facility at a location to be determined by the Department. MAQP #2035-03 requires that CELP monitor PM-10; however, ambient SO_2 monitoring at the facility will not be required. The Department is able to monitor the SO_2 emitted from the CFB boiler; if CELP demonstrates compliance with their SO_2 emission limits, SO_2 ambient standards should not be violated.

Section II.J of MAQP #2035-02 required that the sulfur content of waste coal not exceed 3% as received. The Department removed this condition from MAQP #2035-03 because the Department has conditions and limitations which protect NAAQS for SO_2.

MAQP #2035-03 replaced MAQP #2035-02.

The Department received written comments on the PD of MAQP #2035-03 from the Northern Cheyenne Tribe and CELP. As a result of these comments the Department made several changes requested by CELP. CELP requested that the Department reword all operations referred to as “coal” to “coal/waste coal.” The Department responded that coal is a broad enough term to include all varieties of coal CELP is permitted to use at the facility. However, in a meeting on March 4, 1998, CELP explained they were concerned that it could be construed that CELP’s operations referred to as coal where not permitted to process coal refuse. The Department stated that the facility is permitted in Section II.A.15 to burn coal refuse. The Department agreed to state in the permit analysis that the facility is permitted to process coal refuse at the facility. The equipment referred to as coal including the truck dump, hoppers, crushers, conveyors, and storage silos and all associated control equipment are permitted to process coal refuse. The meaning of the terms coal and coal refuse for MAQP #2035-03 are defined in 40 CFR 60, Subpart Da.

The Department also agreed in the March 4, 1998, meeting to clarify language in Attachment 1 that discusses where the new ambient monitoring site will be located. The Department stated in the meeting that the intention is for the new location to be downwind of the power plant and the ash disposal area. This would require that the monitor be in a location generally north of the CFB boiler stack and east to northeast of the current ash disposal area.

The Department also agreed to correct typographic errors in the daily SO_2 limit and 1-hour NO_x limit in Section II.A.10 that had been made from MAQP #2035-02 to MAQP #2035-03. The Department lengthened the time from 90 to 180 days required for CELP to increase the stack heights specified in Section II.A.21. The Department changed the word “facility” in Sections II.B.1 and 2 to “CFB boiler stack.” In Attachment 1 the language in the first sentence of paragraph 3 was changed from requiring CELP to start air monitoring at the new location within 90 days after MAQP #2035-03 is final to requiring CELP to begin air monitoring at the new location within 90 days after the Department has approved a location.

Several other changes were requested by CELP and were not made to the PD. One of the requested changes was to eliminate Section III.H which refers to commencement of construction; the facility did not believe it applied to this permit. MAQP #2035-03 does not authorize any new construction at the facility besides the increase of the stack heights for the coal dump baghouse, coal crushing baghouse, and the fly ash and bed ash storage baghouse/cartridge.

On April 15, 2008, the Department received a request to remove the ambient air quality monitoring requirements from MAQP #2035-03. This permit action removed those requirements as well as updated the permit to reflect current permit format, language, and rule references. **MAQP #2035-04** replaced MAQP #2035-03.

On December 30, 2008, the Department received an application from CELP to modify MAQP #2035-04. This requested modification is to establish a mercury emission limit of 0.9 pounds per trillion British thermal units (lb/TBtu) for the Rosebud Power Plant, pursuant to ARM 17.8.771, and to provide an analysis of potential mercury control options. These control options include, but are not limited to, boiler technology, mercury emission control technology, and any other mercury control practices. On January 30, 2009, the Department requested additional information to support CELP's proposed mercury emission control strategy. This information was submitted to the Department on March 31, 2009 and includes additional control technology testing results conducted at the Rosebud Power Plant. Based on mercury sampling conducted at the facility, current mercury emissions are estimated to range from approximately 11.4 lb/TBtu to 20.2 lb/TBtu. Therefore, in order to meet the mercury emission limit specified in ARM 17.8.771, a reduction in mercury emissions of approximately 92% to 96% is estimated to be required for this facility. **MAQP #2035-05** establishes a mercury emission limit and associated operating requirements for the Rosebud Power Plant in order to comply with ARM 17.8.771. MAQP #2035-05 replaced MAQP #2035-04.

D. Current Permit Action

On September 4, 2013, the Department received a de minimis change notice and AA request from Bison Engineering, Inc. (Bison) proposing the inclusion of a 25,000 ton open coal storage pile at the CELP facility. This storage pile will serve as a readily accessible stockpile of suitable coal during periods when dry coal is not available from the mine. The current permit action incorporates the de minimis coal storage pile and updates language and rule references were applicable. **MAQP #2035-06** replaces MAQP #2035-05.

E. Additional Information

Additional information, such as applicable rules and regulations, Best Available Control Technology (BACT)/Reasonably Available Control Technology (RACT) determinations, air quality impacts, and environmental assessments, is included in the analysis associated with each change to the permit.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the ARM and are available, upon request, from the Department. Upon request, the Department will provide references for location of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8, Subchapter 1 – General Provisions, including but not limited to:

1. <u>ARM 17.8.101 Definitions</u>. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.

3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq*., Montana Code Annotated (MCA).

   CELP shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.

5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2 – Ambient Air Quality, including, but not limited to the following:

1. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
2. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
3. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
4. ARM 17.8.213 Ambient Air Quality Standards for Ozone (O_3)
5. ARM 17.8.214 Ambient Air Quality Standards for Hydrogen Sulfide (H_2S)
6. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter (PM)
7. ARM 17.8.221 Ambient Air Quality Standard for Visibility
8. ARM 17.8.222 Ambient Air Quality Standard for Lead (Pb)
9. ARM 17.8.223 Ambient Air Quality Standard for PM_{10}

CELP must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 – Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.

2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, CELP shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.

3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.

4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.

5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. (4) Commencing July 1, 1972, no person shall burn liquid or solid fuels containing sulfur in excess of 1 pound of sulfur per million Btu fired. (5) Commencing July 1, 1971, no person shall burn any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet of gaseous fuel, calculated as hydrogen sulfide at standard conditions.

6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank is equipped with a vapor loss control device as described in (1) of this rule.

7. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). CELP is considered an NSPS affected facility under 40 CFR Part 60 and is subject to the requirements of the following subparts.

   a. 40 CFR 60, Subpart A – General Provisions apply to all equipment or facilities subject to an NSPS Subpart as listed below:

   b. 40 CFR 60, Subpart Da – Standard of Performance for Electric Utility Steam Generation Units. This subpart applies is each electric utility steam generating unit that is capable of combusting more than 73 MW (250 million British thermal units per hour (MMBtu/hr)) heat input of fossil fuel (either alone or in combination with any other fuel) and for which construction, modification, or reconstruction is commenced after September 18, 1978.

      The NO_x emission limitations and monitoring requirements contained in Subpart Da do not apply to CELP since the facility burns more than 25%, by weight, refuse coal (40 CFR 60.44Da(a)(1)).

   c. 40 CFR 60, Subpart Y - Standards of Performance for Coal Preparation Plants. This subpart applies to any of the following affected facilities in coal preparation plants which process more than 181 Mg (200 tons) per day: Thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), coal storage systems, and coal transfer and loading systems that commences construction or modification after October 24, 1974.

8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. This rule incorporates, by reference, 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories. CELP shall comply with the requirements of 40 CFR Part 63, as applicable.

   a. 40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to a NESHAPs Subpart as listed below:

b. 40 CFR 63, Subpart UUUUU – National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units. This subpart applies to a coal-fired and oil-fired combustion unit of more than 25 MW electric that serves a generator that produces electricity for sale or a cogeneration unit that supplies more than one-third of its potential electric output capacity and more than 25 MW electric output to any utility power distribution for sale.

D. ARM 17.8, Subchapter 4 – Stack Height and Dispersion Techniques, including, but not limited to:

1. ARM 17.8.401 Definitions. This rule includes a list of definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.402 Requirements. CELP must demonstrate compliance with the ambient air quality standards with a stack height that does not exceed Good Engineering Practices (GEP).

E. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. The current permit action is considered an administrative amendment; therefore an application fee was not required.

2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit (excluding an open burning permit) issued by the Department. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

   An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that prorate the required fee amount.

F. ARM 17.8, Subchapter 7 – Permit, Construction, and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit modification to construct, modify, or use any air contaminant sources that have the potential to emit (PTE) greater than 25 TPY of any pollutant. CELP has a PTE greater than 25 TPY of PM_{10}, SO_2, NO_x, CO, and volatile organic compound (VOC); therefore, an air quality permit is required.

3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.

4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.

5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. The current permit action is considered an administrative amendment; therefore a permit application was not required. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. Public notification is not required for an administrative permit action.

6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.

7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The required BACT analysis is included in Section III of this permit analysis.

8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.

9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving CELP of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq*.

10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.

11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or modified source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.

12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).

13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not

requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.

14. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of intent to transfer, including the names of the transferor and the transferee, is sent to the Department.

15. ARM 17.8.771 Mercury Emission Standards for Mercury-Emitting Generating Units. This rule identifies mercury emission limitation requirements, mercury control strategy requirements, and application requirements for mercury-emitting generating units.

G. ARM 17.8, Subchapter 8 – Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.

2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a listed source, but emissions are greater than or equal to 250 tons per year; therefore, the facility is major. This modification will not cause a net emission increase greater than significant levels and, therefore, does not require a New Source Review analysis. An increase in $PM_{2.5}$/PM_{10}/PM emissions will result from the construction of the open coal storage pile, however emissions are well below the major modification emission levels.

H. ARM 17.8, Subchapter 12 – Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any source having:

a. PTE > 100 TPY of any pollutant;

b. PTE > 10 TPY of any one hazardous air pollutant (HAP), PTE > 25 TPY of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or

c. PTE > 70 TPY of PM_{10} in a serious PM_{10} nonattainment area.

2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing MAQP #2035-06 for CELP, the following conclusions were made:

a. The facility's PTE is greater than 100 TPY for any pollutant.

b. The facility's PTE is less than 10 TPY for any one HAP and less than 25 TPY for all HAPs.

c. This source is not located in a serious PM_{10} nonattainment area.

d. This facility is subject to NSPS under 40 CFR 60, Subparts Da and Y.

e. This facility is subject to NESHAP under 40 CFR 63, Subpart UUUUU

f. This source is not a Title IV affected source, or a solid waste combustion unit.

g. This source is not an EPA designated Title V source.

Based on these facts, the Department determined that CELP is a major source of emissions as defined under Title V. The proposed change constitutes a significant modification to CELP's Title V operating permit. As such, CELP's Title V operating permit will be modified to reflect the conditions associated with this permit action.

III. BACT Determination

A BACT determination is required for each new or modified source. CELP shall install on the new or modified source the maximum air pollution control capability which is technically practicable and economically feasible, except that BACT shall be utilized.

A BACT analysis was not required for the current permit action because the action is considered an administrative permit change.

IV. Emission Inventory

The following table presents the total potential emissions authorized under MAQP #2035-06. A complete emission inventory is available from the Department.

Total Facility PTE Summary					
PM	PM_{10}	CO	NO_x	SO_2	VOC
72.94	46.17	232	1435	1840	15.94

V. Existing Air Quality

CELP is located in the North ½ Section 32, Township 3 North, Range 41 East in Rosebud County, Montana. The air quality of this area is classified as better than National Standards or unclassifiable/attainment for the National Ambient Air Quality Standards (NAAQS) for criteria pollutants.

VI. Ambient Air Impact Analysis

The Department determined that the impacts from this permitting action will be minor as the emission increase is below de minimis thresholds. The Department believes it will not cause or contribute to a violation of any ambient air quality standard.

VII. Taking or Damaging Implication Analysis

As required by 2-10-105, MCA, the Department conducted the following private property taking and damaging assessment.

YES	NO	
✓		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	✓	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	✓	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	✓	4. Does the action deprive the owner of all economically viable uses of the property?
	✓	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	✓	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	✓	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	✓	7a. Is the impact of government action direct, peculiar, and significant?
	✓	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	✓	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?
	✓	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

Based on this analysis, the Department determined there are no taking or damaging implications associated with this permit action.

VII. Environmental Assessment

This permitting action will not result in a significant increase of emissions from the facility and is considered an administrative permit action; therefore, an environmental assessment is not required.

Analysis Prepared By: D. Kuenzli
Date: October 7, 2013