

## AIR QUALITY PERMIT

Issued to: PP&L Montana, LLC  
303 North Broadway, Suite 400  
Billings, MT 59101

Permit: #0513-04  
Complete Application Submitted: 5/01/01  
Preliminary Determination Issued: 6/05/01  
Department Decision Issued: 6/21/01  
Final Permit Issued: 7/07/01  
AFS #: 087-0008

An air quality permit, with conditions, is hereby granted to PP&L Montana, LLC Colstrip (Colstrip) pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.701, *et seq.*, as amended, for the following:

### SECTION I: Permitted Facilities

#### A. Permitted Facility

PP&L Montana, LLC operates the Colstrip Units 1, 2, 3, and 4 tangential coal-fired boilers and associated equipment for the generation of electricity. The Colstrip facility is located in Section 2, Township 2 North, Range 41 East, Rosebud County, Montana, that is on Willow Avenue and Warehouse Road. A complete listing of facility equipment is found in the Permit Analysis.

#### B. Current Permit Action

On May 1, 2001, PP&L Montana, LLC submitted a complete permit application to the Department of Environmental Quality (department) proposing to add petroleum coke to the list of fuels to be used in Units 1&2, that are currently permitted to burn Syncoal and Rosebud coal. The permitting action will be an alteration to permit #0513-03 and will limit the amount of petroleum coke that may be burned in Units 1&2. The conditions that have been included in the permit for the burning of petroleum coke are Section II.A.9, 10, 11, 12, and 13, Section II.B.3 and Section II.F. Permit #0513-04 replaces permit #0513-03.

### SECTION II: Conditions and Limitations

#### A. Emission Limitations and Control Requirements

1. Colstrip shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any sources installed on or before November 23, 1968, that exhibit an opacity of 40% or greater averaged over 6 consecutive minutes (ARM 17.8.304).
2. Colstrip 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 and ARM 17.8.715).
3. Colstrip shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the truck dump and lime silo bin vent, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.715 and 40 CFR

- 60 Subpart Y).
4. Colstrip shall not cause or authorize emissions to be discharged into the atmosphere from haul roads, access roads, parking lots, or the general plant property without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308 and ARM 17.8.715).
  5. Colstrip shall treat all unpaved portions of the access roads, parking lots, and general plant area with fresh water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation (ARM 17.8.710).
  6. Colstrip shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR Part 60, Subpart Y. Subpart Y affected sources include the truck dump station, the lime silo bin vent, and any other affected source constructed or modified after October 24, 1974 (ARM 17.8.340 and 40 CFR Part 60).
  7. Colstrip shall maintain and operate the skirting, minimal volumes, and small drop distances at the off-loading system and the bin vent filter system to provide the maximum air pollution control for that it was designed (ARM 17.8.715).
  8. Units 1&2 shall be limited to a maximum of 700,800 tons of Syncoal during any rolling 12-month period (ARM 17.8.715).
  9. Units 1&2 shall be limited to a maximum of 280,320 tons of petroleum coke during any rolling 12-month period (ARM 17.8.710).
  10. The petroleum coke truck dump system particulate emissions shall be controlled by a partially enclosed dump basin, minimized dropping distances, covered conveyor belts, and an underground and enclosed feeder (ARM 17.8.710).
  11. The petroleum coke rail dump system particulate emissions shall be controlled by an underground and enclosed dump basin, minimized dropping distances, covered conveyor belts, and an underground and enclosed feeder (ARM 17.8.710).
  12. Colstrip shall maintain and operate the scrubbers to control emissions on Units 1&2 (ARM 17.8.710).
  13. Colstrip shall be limited to a maximum fuel use of 28% petroleum coke for each of the Units 1&2, based on the maximum heat input value of the units (ARM 17.8.710).
  14. Emissions of particulate matter from either Units 3 or 4 shall not exceed the following limits:
    - a. 0.05 lb/MMBtu; and
    - b. 379 lb/hr.

15. Emissions of sulfur dioxide from either Units 3 or 4 shall not exceed the following limits (these are stack emission limits; no percent sulfur reduction limit applies):
  - a. 761 lb/hr, averaged over any rolling 30-day period, calculated each day at midnight, using hourly data calculated each hour on the hour;
  - b. 0.18 lb/MMBtu heat input, averaged over any calendar-day, not to be exceeded more than once during any calendar-month;
  - c. 1363 lb/hr, averaged over any calendar-day, not to be exceeded more than once during any calendar-month; and
  - d. 1% sulfur content of the coal (as received).
16. Colstrip shall be limited to a total of 4273 lb/hr of SO<sub>2</sub>, averaged over any 3-hour rolling period from both Units 3 and 4 stacks combined (ARM 17.8.710).
17. Emissions of nitrogen oxides from either Unit 3 or 4 shall not exceed the following limits:
  - a. 0.70 lb/MMBtu heat input when burning coal. If fuel other than coal is burned, the allowable nitrogen oxide emission rate shall be determined by the following equation.

$$E = \frac{0.2x + 0.3y + 0.7z}{x + y + z}$$

Where: E is the allowable emissions in lb/MMBtu heat input

x is the fraction of total heat input derived from gaseous fuels  
 y is the fraction of total heat input derived from liquid fuels  
 z is the fraction of total heat input derived from solid fuels.

- b. 5301 lb/hr.
18. Emissions from either Unit 3 or 4 shall not exhibit an opacity of 20% or greater over any 6-minute period. The opacity provisions of 40 CFR 60.42 are applicable (ARM 17.8.340).
19. Units #3 and #4 shall each be limited to a maximum heat input of  $6.63 \times 10^7$  MMBtu over any rolling 12-month period (ARM 17.8.105).

**B. Testing Requirements**

1. Within 180 days after initial startup of the truck dump station and the lime silo bin vent, an EPA Method 9 opacity test shall be performed on the truck dump station and the lime silo bin vent to demonstrate compliance with Section II.A.3 and 6 (ARM 17.8.105 and ARM 17.8.340).
2. Colstrip shall conduct annual stack tests, or another testing/monitoring schedule as may be approved by the department, for total particulate and demonstrate compliance with the limitations in Sections II.A.14. The testing shall be conducted in accordance with 40 CFR 60.46(b)(2)(i). Demonstrations of compliance with the opacity limits, if required during these tests, shall be based on certified opacity monitors unless otherwise specified by the department (ARM

- 17.8.104 and ARM 17.8.105).
3. Colstrip shall conduct the performance testing as required by 40 CFR 60 Subpart D, within 180 days after initial startup of the use of petroleum coke in Units 1&2(ARM 17.8.105).
  4. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
  5. The department may require further testing (ARM 17.8.105).
- C. Monitoring Requirements for Units 3 and 4
1. Colstrip shall install, operate, calibrate, and maintain continuous emission monitoring systems (CEMS) for the following:
    - a. A CEMS for the measurement of sulfur dioxide shall be operated on each stack (ARM 17.8.340 and 40 CFR 60.45).
    - b. A CEMS for the measurement of nitrogen oxide shall be operated on each stack (ARM 17.8.340 and 40 CFR 60.45).
    - c. A CEMS for measurement of carbon dioxide or oxygen shall be operated on each stack (ARM 17.8.340 and 40 CFR 60.45).
    - d. A CEMS for the measurement of opacity shall be operated on each stack (ARM 17.8.340 and 40 CFR 60.45).
    - e. Continuous monitoring for stack gas temperature, stack gas moisture (where necessary), megawatt production, and Btu per hour (as a function of heat rate and megawatt production) shall be performed on each unit (40 CFR 52.21).
  2. All continuous monitors shall be operated, excess emissions reported, and performance tests conducted in accordance with the requirements of 40 CFR Part 60, Subpart D, 40 CFR 60.7, 60.8, 60.11, 60.13, and 40 CFR 60, Appendix B Performance Specifications #1, #2 and #3, subject to the following:
    - a. The requirements of 40 CFR 60.46a - Compliance Provisions (NSPS Subpart Da) shall apply to Units 3 and 4 (40 CFR 52.21).
    - b. The requirements of 40 CFR 60.47a - Emission Monitoring (NSPS Subpart Da) shall apply to Units 3 and 4 (40 CFR 52.21).
    - c. The requirements of 40 CFR 60.48a - Compliance Determination Procedures and Methods (NSPS Subpart Da) shall apply to Units 3 and 4 (40 CFR 52.21).
    - d. The requirements of 40 CFR 60.49a - Reporting Requirements (NSPS Subpart Da) shall apply to Units 3 and 4 (40 CFR 52.21).
    - e. Colstrip shall operate the required monitors in accordance with the CEMS quality assurance (QA) plan submitted to the Environmental Protection Agency (EPA) in May 1998. This plan may be revised by Colstrip with

- the approval of the department (40 CFR 52.21).
- f. Compliance requirements of 40 CFR 60.11(a) shall be amended per Section II.D (40 CFR 52.21).
  - g. Each monitor modular part (i.e., opacity, SO<sub>2</sub>, NO<sub>x</sub>, diluent, and data handling units) of a continuous monitoring system shall attain a minimal annual on-line availability time of 85% and a minimal quarterly availability time of 75% for each individual quarter. Should any given yearly or quarterly availability time drop below these respective limits, Colstrip shall, within 90 days of the end of the first unexcused year or quarter in question, cause to be delivered to the facility factory-tested and compatible monitor module(s) able to replace the monitor module(s) that had unacceptable availability times, unless Colstrip can excuse the unacceptable performance by demonstrating within 10 calendar-days of the end of such year or quarter, that the reason for the poor availability time has not caused another previous occurrence of unacceptable availability, and the reason for the particular unavailability in question will be prevented in the future by a more effective maintenance/inventory program (40 CFR 52.21).
  - h. Upon two non-overlapping periods of unexcused, unacceptable availability of a module (yearly, quarterly, or combination), Colstrip shall (within 30 days of the end of the year or quarter of the second unacceptable availability period) install, calibrate, operate, maintain, and report emission data using the second compatible module required by 2.g. above (40 CFR 52.21).
  - i. Within 60 days of the end of the year of the quarter causing the second unacceptable availability period under section 2.h., Colstrip shall conduct a complete performance evaluation of the entire CEMS for that pollutant under 40 CFR 60.13(c) showing acceptability of the entire CEMS in question unless the module was the data handling unit alone. Within 75 days of the end of the year or quarter causing the second unacceptable availability period, Colstrip shall furnish the department with a written report of such evaluations and tests demonstrating acceptability of the system (40 CFR 52.21).
  - j. In the event of a conflict between the requirements of the referenced federal regulations and the requirements of this permit, the requirements of this permit shall apply.

#### D. Compliance

- 1. Compliance with the particulate emission limits in Section II.A.14 shall be based on the source tests required by Section II.B.2 (ARM 17.8.105).
- 2. Compliance with the SO<sub>2</sub> emission limits in Section II.A.15 and 16 shall be based on the CEMS required by Section II.C.1.a and from any stack tests required by the state under the authority of ARM 17.8.104 (ARM 17.8.105 and 40 CFR 52.21).
- 3. Compliance with the SO<sub>2</sub> emission limit in Section II.A.15.d shall be based on available daily composite coal samples as measured by 40 CFR 60, Appendix A, Method 19 or another sampling schedule as approved by the department. Records

- shall be maintained according to II.E.7 (ARM 17.8.710).
4. Compliance with the NO<sub>x</sub> emission limits in Section II.A.17 shall be based on data from the CEMS required by Section II.C.1.b and from any stack tests required by the state under the authority of ARM 17.8.104 (ARM 17.8.105 and 17.8.104).
  5. Compliance with the opacity limit in Section II.A.18 shall be based on data from the opacity monitor required by Section II.C.1.d and visual emissions observations in accordance with 40 CFR, Part 60, Appendix A, Method 9 Visual Determination of Opacity of Emissions from Stationary Sources (ARM 17.8.105).
  6. Compliance with the heat input limit of Section II.A.19 shall be determined based on the total tons of coal combusted in each unit multiplied by a representative average BTU content for the coal (ARM 17.8.105).

E. Operational and Emission Inventory Reporting Requirements

1. Colstrip shall submit a written report of excess emissions and monitoring system performance as required by 40 CFR 60.7(c). For the purposes of the report, excess emissions shall be defined as any 6-minute, 3-hour, 24-hour or 30-day period, as applicable, in which the average emissions of the period of concern for opacity, NO<sub>x</sub>, or SO<sub>2</sub> as measured by the CEMS, exceed the applicable emission limitation in Section II.A. For the purposes of reporting excess emissions for the periods:
  - a. 6-minute average applies to each 6-minute non-overlapping period starting on the hour.
  - b. 3-hour period applies to any running 3-hour period containing three contiguous 1-hour periods, starting on the hour.
  - c. 24-hour period applies to any calendar-day.
  - d. 30-day period applies to any running period of 30 consecutive calendar-days.
2. Colstrip shall submit the following information along with the excess emission reports:
  - a. The fuel feed rate and associated production figures corresponding to all periods of excess emissions (40 CFR 52.21),
  - b. The proximate analysis of the weekly composite sample of the fuel fired in each unit (40 CFR 52.21), and
  - c. Date, time, and initial calibration values for each required calibration adjustment made on any monitor during the quarter, including any time that the monitor was removed or inoperable for any reason (40 CFR 52.21).
3. Colstrip shall document, by month, the total Btu value of the fuel combusted in Units 3 and 4, based on the total tons of coal combusted in each unit multiplied by a representative average BTU content for the coal. By the 25th of each month, Colstrip shall total the fuel combusted in Units 3 and 4 during the previous 12

months to verify compliance with the limitation in Section II.A.19. A written report of the compliance verification shall be submitted to the department annually. The report for the previous calendar year shall be submitted no later than March 15 and may be submitted along with the annual emission inventory (ARM 17.8.710).

4. Colstrip shall document, by month, the amount of Syncoal used. By the 25th of each month, Units 1 and 2 shall total the amount of Syncoal used during the previous 12-months to verify compliance with the limitation in Section II.A.8. A written report of the compliance verification shall be submitted to the department no later than March 15 and may be submitted along with the annual emission inventory (ARM 17.8.710).
5. Colstrip shall document, by month, the amount of petroleum coke used. By the 25th of each month, Units 1 and 2 shall total the amount of petroleum coke used during the previous 12-months to verify compliance with the limitation in Section II.A.9. A written report of the compliance verification shall be submitted to the department no later than March 15 and may be submitted along with the annual emission inventory (ARM 17.8.710).
6. Colstrip 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 for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

7. Colstrip shall submit a written report to verify compliance with the limitation in Section II.A.13. The written report shall be submitted quarterly to the department (ARM 17.8.710).
8. Colstrip shall notify the department of any construction or improvement project conducted, pursuant to ARM 17.8.705(1)(r), that would include a change of 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 or the addition of a new emission unit. 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 information requested in ARM 17.8.705(1)(r)(iv) (ARM 17.8.705).
9. All records compiled in accordance with this permit must be maintained by Colstrip 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 17.8.710).

F. Notification

Actual start-up date of the use of petroleum coke in Units 1&2 within 15 days after the actual start up.

G. Ambient Monitoring Requirements

Colstrip shall conduct ambient air monitoring for Colstrip as described in Attachment 1 (ARM 17.8.204).

SECTION III: General Conditions

- A. Inspection - Colstrip 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 all the terms, conditions, and matters stated herein shall be deemed accepted if Colstrip fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations - Nothing in this permit shall be construed as relieving Colstrip of the responsibility for complying with any applicable federal or Montana statute, rule or standard, except as specifically provided in ARM 17.8.701, *et seq.* (ARM 17.8.717).
- D. Enforcement - Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement 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 department's decision on the application is not final unless 15-days have elapsed and there is no request for a hearing under this section. The filing of a request for a hearing postpones the effective date of the department's decision until the conclusion of the hearing and issuance of a final decision by the Board.
- F. Permit Inspection - As required by ARM 17.8.716, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by department personnel at the location of the permitted source.
- G. Permit Fees - Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by Colstrip may be grounds for revocation of this permit, as required, by that Section and rules adopted thereunder by the Board.
- H. Construction Commencement - Construction must begin within 3-years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked

(ARM 17.8.731).

Attachment 1

AMBIENT AIR MONITORING PLAN  
 PP&L Montana, LLC - Colstrip  
 Permit #0513-04

1. This ambient air monitoring plan is required by air quality permit #0513-04 that applies to the PP&L Montana, LLC facility located in Colstrip, Montana. This monitoring plan may be changed from time to time by the department, but all current requirements of this plan are also considered conditions of the permit.
2. Colstrip shall operate and maintain three air monitoring sites in the vicinity of Colstrip Units #3 and #4. The exact locations of the monitoring sites must be approved by the department and meet all the requirements contained in the Montana Quality Assurance Manual, including revisions; the EPA Quality Assurance Manual, including revisions; the EPA Ambient Monitoring Guidelines for Prevention of Significant Deterioration, including revisions (EPA-450/4-87-007); Parts 53 and 58 of the Code of Federal Regulations; and any other requirements specified by the department.
3. Colstrip shall continue air monitoring for at least 2-years following issuance of this permit. The air monitoring data will be reviewed by the department and will determine if continued monitoring or additional monitoring is warranted. The department may require continued air monitoring to track long-term impacts of emissions from the facility or require additional ambient air monitoring if any changes take place in regard to quality and/or quantity of emissions, or the area of impact from the emissions.
4. Colstrip shall monitor the following parameters at the sites and frequencies described below.

Airs Number and Site Name	UTM Coordinates (All Zone 13)	Parameter	Frequency
30-087-0700 Cedar Ave Hill #3	N 5082557 E 373676 Elev. 3250 ft.	SO <sub>2</sub> <sup>1</sup> , NO <sub>2</sub> <sup>1</sup> , PM <sub>10</sub> <sup>2</sup> , PM <sub>10</sub> Collocated <sup>3</sup>	Continuous Every Third Day Every Sixth Day
30-087-0701 Hiway 39 Industrial Park #1	N 5084239 E 372956 Elev. 3290 ft.	SO <sub>2</sub> , NO <sub>2</sub> , Wind Speed and Direction, Sigma Theta <sup>4</sup> , Temperature, PM <sub>10</sub>	Continuous A @ Every Sixth Day
30-087-0702 Pond Six West #2	N 5079887 E 379079 Elev. 3300 ft.	SO <sub>2</sub> , NO <sub>2</sub> , Wind Speed and Direction, Sigma Theta, Temperature	Continuous A @
<sup>1</sup> SO <sub>2</sub> = sulfur dioxide, NO <sub>2</sub> = nitrogen dioxide. <sup>2</sup> PM <sub>10</sub> = particulate matter less than ten microns. <sup>3</sup> The requirement for a collocated sampler may be waived if the monitor's operator operates a collocated sampler at another site. Theta = standard deviation of horizontal wind direction.			

5. Data recovery for all parameters shall be at least 80% computed on a quarterly and annual basis. The department may require continued monitoring if this condition is not met.

6. Any ambient air monitoring changes proposed by Colstrip must be approved, in writing, by the department.
7. Colstrip shall utilize air monitoring and quality assurance procedures that are equal to or exceed the requirements described in the Montana Quality Assurance Manual, including revisions; the EPA Quality Assurance Manual, including revisions; the EPA Ambient Monitoring Guidelines for Prevention of Significant Deterioration, including revisions (EPA-450/4-87-007); 40 CFR Parts 53 and 58 of the Code of Federal Regulations; and any other requirements specified by the department.
8. Colstrip shall submit quarterly data reports within 45 days after the end of the calendar-quarter and an annual data summary within 90 days after the end of the calendar-year. The annual data summary shall be included in the fourth quarter report as a separate section of that report.
9. The quarterly report shall consist of a narrative data summary and a data submittal of all data points in AIRS format. This data must be submitted in ASCII files on 3½" computer diskettes in IBM-compatible format. The narrative data summary shall include:
  - a. A topographic map of appropriate scale, with UTM coordinates and a true north arrow, showing the air monitoring site locations in relation to the PP&L Montana LLC facilities, the town of Colstrip, and the general area;
  - b. A hard copy of the individual data points;
  - c. The quarterly and monthly means for SO<sub>2</sub>, NO<sub>2</sub>, PM<sub>10</sub> (monthly means only), wind speed and direction;
  - d. The highest hourly concentrations for SO<sub>2</sub> and NO<sub>2</sub>;
  - e. The highest, rolling 3-hour concentrations for SO<sub>2</sub>;
  - f. The highest, block 24-hour concentrations for SO<sub>2</sub>;
  - g. The highest 24-hour concentrations for PM<sub>10</sub>;
  - h. The quarterly and monthly wind roses;
  - i. A summary of the data collection efficiency;
  - j. A summary of the reasons for missing data;
  - k. A precision and accuracy (audit) summary;
  - l. A summary of any ambient air standard or PSD increment exceedances; and
  - m. Calibration information.
10. The annual data summary shall consist of a narrative data summary containing:
  - a. A topographic map of appropriate scale, with UTM coordinates and a true north arrow, showing the air monitoring site locations in relation to the PP&L Montana LLC facilities, the town of Colstrip, and the general area;

- b. The annual means for SO<sub>2</sub>, NO<sub>2</sub>, PM<sub>10</sub>, wind speed and direction;
  - c. The highest hourly concentrations for SO<sub>2</sub> and NO<sub>2</sub>;
  - d. The highest, rolling 3-hour concentrations for SO<sub>2</sub>;
  - e. The highest, block 24-hour concentrations for SO<sub>2</sub>;
  - f. The highest 24-hour concentrations for PM<sub>10</sub>;
  - g. The annual wind rose; and
  - h. An annual summary of data collection efficiency.
11. The department may audit, or may require Colstrip to contract with an independent firm to audit the air monitoring network, the laboratory performing associated analysis, and any data handling procedures at unspecified times. On the basis of the audits and subsequent reports, the department may recommend or require changes in the air monitoring network and associated activities in order to improve precision, accuracy, and data completeness.

PERMIT ANALYSIS  
PP&L Montana, LLC  
Permit #0513-04

I. Introduction/ Process Description

A. Facility Description

PP&L Montana, LLC Colstrip (Colstrip) operates the Units 1, 2, 3 and 4 tangential coal-fired boilers and associated equipment for the generation of electricity. Colstrip is located in Section 2, Township 2 North, Range 41 East, Rosebud County, Montana. The facility location is on Willow Avenue and Warehouse Road.

B. Permitted Equipment

Colstrip operates the following equipment, including, but not limited to:

Units 1 and 2

- Auxiliary Propane Boiler
- Coal Handling System
- Coal Piles
- Emergency Diesel Generators
- Internal Combustion Engine
- Plant Roads
- Process Ponds
- Scrubber Relining Process
- Underground Gasoline Tank
- Unit #1 Tangential Coal-Fired Boiler
- Unit #2 Tangential Coal-Fired Boiler
- Syncoal facility
- Petroleum Coke rail dump system
- Petroleum Coke truck dump system

Units 3 and 4

- Two coal-fired steam-generating electric power plants with a nominal heat input of 7573 MMBtu/hr each (778 Megawatts each). Maximum heat input capacity to the boilers may be as high as 8000 MMBtu/hr, which would also increase the electrical production capacity.
- 16 venturi-type wet scrubbers (8 per unit) for particulate and SO<sub>2</sub> control.
- Two stacks - 692 feet in height.
- Coal transportation, storage and handling facilities.
- Coal sampling facilities.
- Auxiliary equipment.

C. Permit History

On April 23, 1973, permit #513-111472(#0513-00) was issued to the Montana Power Company Colstrip (Colstrip) for the construction of Colstrip Units 1 & 2, and on August 26, 1981, a permit with the same number was issued to Colstrip for the operation of Colstrip Units 1 & 2.

Permit #0513-01 was issued to Colstrip to include the installation and operation of a

Syncoal Truck Dump and a lime silo bin vent. Syncoal fines and coarse product are combined to form a blend product that will be supplied to Units 1&2. The installation and operation of these sources will increase the allowable particulate emissions for Units 1&2 by 1.12 ton/yr. Permit #0513-01 replaced permit #0513-00 (513-111472).

Permit #1187 was issued to MPC on January 20, 1977, for the construction of Colstrip Units #3 and #4. Because the proposed facility was a major source under the Prevention of Significant Deterioration (PSD) program, the additional review requirements of the PSD program applied to the project. The state did not have authorization to implement the PSD program at the time of the application; therefore, the PSD review was conducted by the Environmental Protection Agency (EPA). EPA issued a PSD permit for the construction of the facility on September 11, 1979.

State permit #1187-M was issued on February 5, 1980, and permit #1187-M2 was issued on May 26, 1981. The modifications were completed because of changes to the applicable rules and standards of the Administrative Rules of Montana (ARM).

On October 13, 1996, permit #1187-03 was issued and correctly identified the actual maximum heat input capacity of Colstrip Units #3 and #4. The units are each rated at a heat-input capacity of 7573 MMBtu/hour with a production capacity of 778 Megawatts. These are nominal capacities for the facility and, depending on plant operating conditions, actual heat input to the facility may be as high as 8000 MMBtu/hour.

Permit #1187-M2 and the EPA permit contained emission limits for particulate, SO<sub>2</sub>, and NO<sub>x</sub> with units of lb/MMBtu. To ensure that emissions from the facility were not higher than those on that the original analysis was based, this permit established emission limits for these pollutants in the units of lb/hour. The new emission limits were established based on the nominal heat input to the boilers of 7573 MMBtu/hour multiplied by the current emission limits in lb/MMBtu. Permit #1187-03 also placed a yearly fuel consumption limit on each unit. The limit was equal to the heat input of each unit operating at the nominal heat input rate of 7573 MMBtu/hr for 8760 hours per year. This ensured that emissions of pollutants, that don't have limits in the permit, were not increased above current levels. The permit also incorporated requirements from the PSD permit issued by EPA in 1979. These requirements were incorporated at the request of MPC for the purpose of developing a comprehensive document, that contained pertinent requirements from both the state permit and the EPA PSD permit. Permit #1187-03 replaced permit #1187-M2.

On September 30, 1998, permit #1187-04 was issued to MPC for the Colstrip 3&4 facility. The alteration included incorporation of a 3-hour rolling average SO<sub>2</sub> limit, the 1% inlet sulfur standard that was inadvertently removed during the previous modification, and the removal of the inlet monitor requirement.

The 3-hour SO<sub>2</sub> limit was incorporated in the permit to ensure protection of the 3-hour SO<sub>2</sub> standard. During the last permit action, the maximum heat inputs for 3&4 were discovered to be 8,000 MMBtu/hr. Because these heat inputs were higher than those in the original permit, the department and MPC agreed that short-term SO<sub>2</sub> and NO<sub>x</sub> emission limits would be implemented. The department completed modeling for the short-term SO<sub>2</sub> emission limits. MPC was limited to a maximum of 4273 lb/hr of SO<sub>2</sub>, averaged over any rolling 3-hour period from both stacks combined. These limits allowed MPC the flexibility of operating unit 3 or unit 4 at a higher level at any one time, while continuing to ensure protection of the standard.

The 1% inlet sulfur limit existed in the original permit, but was inadvertently removed during a previous permit action. MPC continued to maintain compliance with the 1% inlet sulfur limit, even though it was not stated in the permit.

The requirement for the inlet sulfur monitor as a compliance demonstration for the inlet sulfur content was replaced with an on-going fuel-sampling analysis. The on-going fuel-sampling analysis yielded a more accurate account of the sulfur content of the fuel, as compared to the sulfur content being correlated to SO<sub>2</sub> emissions.

The permitting action was an alteration of permit #1187-03 because of the change in the compliance demonstration for the 1% sulfur content limit. The 1% sulfur content limit and demonstration of compliance was included in the February 28, 1978, Board of Health and Environmental Sciences Findings of Fact and Conclusions of Law and Order. The alteration process allowed public involvement in the change in the compliance demonstration method. However, the permitting action did not result in any change in the emissions from the facility. Permit #1187-04 replaced permit #1187-03.

In letters dated June 18, 1999, and August 16, 1999, the Montana Power Company and PP&L Montana, LLC requested that the permits for Colstrip 1&2 and Colstrip 3&4 be transferred to reflect the new ownership. The transfer of the permits was to occur when the transfer of ownership to PP&L Montana, LLC was final. Through the department's review, it was determined that Colstrip Units 1&2 and 3&4 would now be defined as one source. Therefore, the permit modification transferred ownership, as well as combined permits #0513-01 and #1187-04. The permit conditions remained the same, but were simply combined into one permit. Permit #0513-02 replaced permits #0513-01 and #1187-04.

On September 10, 2000, Permit #0513-03 was issued to Colstrip to conduct a test burn of petroleum coke/Syncoal/Rosebud coal fuel combination in Units 1&2. A petroleum coke consumption limit was placed in the permit to ensure that the proposed test burn did not exceed 15 tons per year of any pollutant. Because the emissions from this project were less than 15 tons per year of any pollutant, the project occurred in accordance with the ARM 17.8.705(1)(r). Permit #0513-03 replaced permit #0513-02.

#### D. Current Permit Action

On May 1, 2001, Colstrip submitted a complete application to the Department of Environmental Quality (department) proposing to add petroleum coke to the list of fuels to be used in Units 1&2, that are currently permitted to burn Syncoal and Rosebud coal. The permitting action will be an alteration to permit #0513-03 and will limit the amount of petroleum coke that may be burned in Units 1&2. The conditions that have been included in the permit for the burning of petroleum coke are Section II.A.9, 10, 11, 12, and 13, Section II.B.3 and Section II.F. The permitting action was not considered a major modification under the PSD regulations because the facility was capable of accommodating petroleum coke. Permit #0513-04 replaces permit #0513-03.

#### E. Additional Information

Additional information, such as applicable rules and regulations, Best Available Control Technology (BACT) 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 Administrative Rules of Montana (ARM) and are available, upon request, from the department. Upon request, the department will provide references for locations 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. ARM 17.8.101 Definitions. This section 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 emissions 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.

Colstrip 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 in 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 that a public nuisance is created.

### B. ARM 17.8, Subchapter 2 - Ambient Air Quality, including, but not limited to:

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 Standard for Ozone
5. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
6. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
7. ARM 17.8.221 Ambient Air Quality Standard for Visibility
8. ARM 17.8.222 Ambient Air Quality Standard for Lead

9. ARM 17.8.223 Ambient Air Quality Standard for PM-10  
Colstrip 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. (1) This rule requires that no person may cause or authorize emissions to be discharged into an outdoor atmosphere from any source installed on or before November 23, 1968, that exhibit an opacity of 40% or greater averaged over 6 consecutive minutes. (2) This rule requires that no person may cause or authorize emissions to be discharged to an 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. Under this section, Colstrip 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 section 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 section.
4. ARM 17.8.310 Particulate Matter Industrial Process. This section 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 section.
5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. 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(3) Hydrocarbon Emissions--Petroleum Products. 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 a tank is equipped with a vapor loss control device as described in (1) of this rule, or is a pressure tank as described in (1) of this rule.
7. ARM 17.8.340 Standard of Performance for New Stationary Sources. This section incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). The Colstrip truck dump and silo bin vent are considered NSPS affected facilities because these sources meet the definition of a coal storage system and transfer and loading system constructed after October 24, 1974, under 40 CFR 60, Subpart Y, Standards of Performance for Coal Preparation Plants. Colstrip Units #3 and #4 are considered NSPS affected facilities, subject to the requirements of the following subparts.

Subpart D, Standard of Performance for Fossil-Fuel Fired Steam Generators. This subpart does apply to Units 1, 2, 3, and 4 because they have the capabilities of firing fossil fuel at a heat input rate of more than 250 million Btu per hour and were constructed after August 17, 1971.

Subpart Da, Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978. This section does not apply to Units #3 and #4 because construction on the units had commenced prior to 1978. However, some sections of Subpart Da have been incorporated by reference into this permit.

D. 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 section 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. Colstrip submitted the appropriate permit application fee for the current permit action.
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; and 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 pro-rate the required fee amount.

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

1. ARM 17.8.701 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.704 General Procedures for Air Quality Preconstruction Permitting. This air quality preconstruction permit contains requirements and conditions applicable to both construction and subsequent use of the permitted equipment.
3. ARM 17.8.705 When Permit Required--Exclusions. This rule requires a facility to obtain an air quality permit or permit alteration if they construct, alter, or use any air contaminant sources that have the potential to emit more than 25 tons per year of any pollutant.

4. ARM 17.8.706 New or Altered Sources and Stacks--Permit Application Requirements. This section requires that a permit application be submitted prior to installation, alteration or use of a source. Colstrip submitted the appropriate permit application for the current permit action.
5. ARM 17.8.707 Waivers. ARM 17.8.706 requires the permit application be submitted 180 days before construction begins. This section allows the department to waive this time limit. The department hereby waives this limit.
6. ARM 17.8.710 Conditions for Issuance of Permit. This section requires that Colstrip demonstrate compliance with applicable rules and standards before a permit can be issued. Also, a permit may be issued with such conditions as are necessary to assure compliance with all applicable rules and standards. Colstrip has demonstrated compliance with applicable rules and standards as required for permit issuance.
7. ARM 17.8.715 Emission Control Requirements. This section requires a source to install the maximum air pollution control capability which is technically practicable and economically feasible, except that BACT shall be utilized. A BACT analysis is included in Section III of the Permit Analysis.
8. ARM 17.8.716 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 17.8.717 Compliance with Other Statutes and Rules. This rule states that nothing in the permit shall be construed as relieving Colstrip of the responsibility for complying with any applicable federal or Montana statute, rule or standard, except as specifically provided in ARM 17.8.701, *et seq.*
10. ARM 17.8.720 Public Review of Permit Applications. 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. Colstrip submitted proof of publication of a public notice from both the Billings Gazette and the Independent Press.
11. ARM 17.8.731 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 altered 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 17.8.733 Modification of Permit. An air quality permit may be modified 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 which do not result in an increase in emissions because of those changed conditions. A source may not increase its emissions beyond those found in its permit unless the source applies for and receives another permit.

13. ARM 17.8.734 Transfer of Permit. This section states 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.

F. 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 Federal Clean Air Act (FCAA) that it would emit, except as this subchapter would otherwise allow.

Colstrip is a major source; however, this permitting action does not trigger a major modification because the source was capable of accommodating petroleum coke in Units 1&2 at the time of construction. Therefore, PSD does not apply to this permitting action.

G. 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 stationary source having:

- a.
  - i. Potential to Emit (PTE) > 10 ton/year of any one Hazardous Air Pollutant (HAP),
  - ii. PTE > 25 ton/year of a combination of all HAPs, or
  - iii. Lesser quantity as the department may establish by rule.

b. PTE > 100 ton/year of any pollutant.

c. Sources with the PTE > 70 ton/year of PM-10 in a serious PM-10 nonattainment area.

2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. (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.

a. The facility's PTE is greater than 100 ton/year for several pollutants.

b. The facility's PTE is less than 10 ton/year of any one HAP and less than 25 tons/year of all HAPs.

c. This source is not located in a serious PM-10 nonattainment area.

d. This facility is subject to 40 CFR 60, Subpart Y.

e. This facility is not subject to any current NESHAP standards.

- f. This source is a Title IV affected source.
- g. This source is an EPA designated Title V source.

Based on these facts, the department has determined that Colstrip is a major source of emissions as defined under Title V. Colstrip was issued Title V operating permits #OP0513-01 and #OP1187-00. The current permit action will require a significant modification to the Title V permits.

### III. BACT Determination

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

All visible emissions from the petroleum coke truck dump system and the petroleum coke rail dump system are limited to 20% opacity. Also, Colstrip must treat all haul roads, access roads, parking areas, and the general plant property with water and chemical dust suppressant, as necessary, to maintain compliance with the reasonable precautions limitations. The department has determined that reasonable precautions will constitute BACT for this permitting action and no additional controls are required.

The control options selected have controls and control costs comparable to other recently permitted similar sources and are capable of achieving the appropriate emission standards.

### IV. Emission Inventory

Table A below references the potential controlled emissions from burning a combination of petroleum coke/Syncoal/Rosebud coal in Units 1&2. Colstrip is permitted to burn all Rosebud coal and the potential emissions from the associated emitting units are shown in Table B. A detailed emissions inventory is on file with the department.

Table A. Petroleum Coke/Syncoal/Rosebud Coal Potential Emissions (ton/yr)

	PM	PM <sub>10</sub>	NO <sub>x</sub>	SO <sub>2</sub>	CO	VOC
Lowering Well No.6	18.7	9.35	0	0		
Lowering Well No.7	6.29	3.15	0	0		
Dead Storage Pile	34.5	17.25	0	0		
Syncoal Facility	10.5	5.25	0	0		
Petroleum Coke Facility	33.2	16.62	0	0		
Units 1&2	2995	62	13480	35946	809.1	104.9
<b>Total</b>	<b>3098.7</b>	<b>113.6</b>	<b>13480</b>	<b>35946</b>	<b>809.1</b>	<b>104.9</b>

Table B. Rosebud Coal Potential Emissions (ton/yr)

	PM	PM <sub>10</sub>	NO <sub>x</sub>	SO <sub>2</sub>	CO	VOC
Lowering Well No.6	18.7	9.35	0	0		
Lowering Well No.7	6.29	3.15	0	0		
Dead Storage Pile	34.5	17.25	0	0		
Syncoal Facility	0	0	0	0		
Petroleum Coke Facility	0	0	0	0		
Units 1&2	2995	76.6	13480	35946	854.2	119.6
<b>Total</b>	<b>3055</b>	<b>106.4</b>	<b>13480</b>	<b>35946</b>	<b>854.2</b>	<b>119.6</b>

In the current permitting action, the NO<sub>x</sub> emissions do not change because Colstrip is limited by the early election limitation that was taken to comply with the acid rain regulations.

V. Existing Air Quality

The current permit action will allow Colstrip to use petroleum coke as a fuel for Units 1&2, as well as the currently permitted use of Syncoal and Rosebud coal. The only increase in potential emissions will be from PM and PM<sub>10</sub>. The potential emissions of the other pollutants will either decrease or remain the same. Modeling was not required because of the minor increase in potential emissions. Also, in the view of the department, the action will not cause concentrations of any pollutant in the ambient air that exceed the set standards.

VI. Taking or Damaging Implication Analysis

As required by 2-10-101 through 105, MCA, the department has conducted a private property taking and damaging assessment and has determined there are no taking or damaging implications.

VII. Environmental Assessment

An environmental assessment, required by the Montana Environmental Policy Act, was completed for this project. A copy is attached.

DEPARTMENT OF ENVIRONMENTAL QUALITY  
Permitting and Compliance Division  
Air and Waste management Bureau  
P.O. Box 200901, Helena, Montana 59620  
(406) 444-3490

FINAL ENVIRONMENTAL ASSESSMENT (EA)

*Issued To:* PP&L Montana, LLC  
303 North Broadway, Suite 400  
Billings, MT 59101PP&L

*Air Quality Permit number:* 0513-04

*Preliminary Determination Issued:* 06/05/01

*Department Decision Issued:* 06/21/01

*Final Permit Issued:* 07/07/01

1. *Legal description of Site:* Colstrip Units 1, 2, 3, and 4 are located at Township 2 North, Range 41 East, Rosebud County, Montana
2. *Description of Project:* Colstrip is proposing to alter permit #0513-03 to add petroleum coke to the list of fuels for burning in Units 1&2. Colstrip is currently capable of accommodating petroleum coke in Units 1&2; however, would be required to obtain permits from the State of Montana because the potential emissions increase from the project would be greater than 15 tons per year of particulate matter. The project would also include moving the coke via a truck dump system and a rail dump system.
3. *Objectives of Project:* Colstrip would be permitted to burn petroleum coke in Units 1&2. The petroleum coke would be blended with the currently used Syncoal and Rosebud coal. The petroleum coke would have a higher heating value than the use of only Rosebud coal or the blend of Syncoal/Rosebud coal.
4. *Alternatives Considered:* In addition to the proposed action, the department also considered the “no-action” alternative. The “no-action” alternative would deny issuance of the air quality preconstruction permit to the proposed facility. However, the department does not consider the “no-action” alternative to be appropriate because Colstrip has demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the “no-action” alternative was eliminated from further consideration.
5. *A Listing of Mitigation, Stipulations, and Other Controls:* A list of enforceable conditions, including a BACT analysis, would be included in Permit #0513-04.
6. *Regulatory Effects on Private Property:* The department has considered alternatives to the conditions imposed in this permit as part of the permit development. The department has determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do not unduly restrict private property rights.

7. The following table summarizes the potential physical and biological effects of the proposed project on the human environment. The “no-action” alternative was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Terrestrial and Aquatic Life and Habitats				X		Yes
B	Water Quality, Quantity, and Distribution				X		Yes
C	Geology and Soil Quality, Stability and Moisture				X		Yes
D	Vegetation Cover, Quantity, and Quality				X		Yes
E	Aesthetics			X			Yes
F	Air Quality			X			Yes
G	Unique Endangered, Fragile, or Limited Environmental Resources				X		Yes
H	Demands on Environmental Resource of Water, Air and Energy			X			Yes
I	Historical and Archaeological Sites				X		Yes
J	Cumulative and Secondary Impacts			X			Yes

SUMMARY OF COMMENTS ON POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS: The following comments have been prepared by the department.

A. Terrestrial and Aquatic life and Habitats:

The current permitting action would not have an impact on any terrestrial and aquatic life in the area because it would occur at an existing industrial site.

B. Water Quality, Quantity and Distribution:

The current permitting action would not have an impact on the water quality, quantity and distribution in the area because it would occur at an existing industrial site.

C. Geology and Soil Quality, Stability and Moisture:

The current permitting action would not have an impact on the geology and soil quality, stability and moisture in the area because it would be occur at an existing industrial site. Also, the truck dumping would occur as is currently being done on site and the rail dump system would utilize the current railroad tracks at the facility.

D. Vegetation Cover, Quantity, and Quality:

The current permitting action would not have an impact on the vegetation cover, quantity, and quality in the area because it would occur at an existing industrial site. The petroleum coke stockpiles would occupy the same space as current stockpiles of material.

E. Aesthetics:

The use of petroleum coke for units 1&2 would have only minor impacts on the area. The operation of the rail dump system would slightly increase the noise level from the facility. However the site is a large existing industrial site and the increase is not expected to be noticeable.

F. Air Quality:

The proposal to burn petroleum coke in Units 1&2 would increase both particulate matter (PM) and PM<sub>10</sub> emissions from the facility. The increase in emissions would be small and would be controlled by enclosures, water, and/or chemical dust suppressant as required by permit #0513-04. With the minor increase, the facility would still be required to comply with the National Ambient Air Quality Standards (NAAQS).

G. Unique Endangered, Fragile, or Limited Environmental Resources:

The current permitting action would not have an impact on any unique endangered, fragile, or limited environmental resources in the area because it would occur at an existing industrial site.

H. Demands on Environmental Resource of Water, Air and Energy:

The current permitting action would have a minor impact on the demands on air in the area because of the slight increase in PM and PM<sub>10</sub> emissions. However, no impact would be expected on the environmental resource of water and energy.

I. Historical and Archaeological Sites:

The current permitting action would not be expected to have any impact on any historical and archaeological sites in the area because it would occur at an existing industrial site.

J. Cumulative and Secondary Impacts:

The only cumulative and secondary impacts from the proposal would be in an increase for both particulate matter (PM) and PM<sub>10</sub> emissions from the facility. The increase in emissions from the burning and handling of petroleum coke would be minor and would be controlled by enclosures, water, and/or chemical dust suppressant, and control on the Units 1&2 stacks as required by permit #0513-04. With the minor increase, the facility would still be required to comply with the NAAQS.

8. The following table summarizes the potential economic and social effects of the proposed project on the human environment. The “no-action” alternative was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Social Structures and Mores				X		Yes
B	Cultural Uniqueness and Diversity				X		Yes
C	Local and State Tax Base and Tax Revenue				X		Yes
D	Agricultural or Industrial Production				X		Yes
E	Human Health			X			Yes
F	Access to and Quality of Recreational and Wilderness Activities				X		Yes

G	Quantity and Distribution of Employment				X		Yes
H	Distribution of Population				X		Yes
I	Demands for Government Services				X		Yes
J	Industrial and Commercial Activity				X		Yes
K	Locally Adopted Environmental Plans and Goals				X		Yes
L	Cumulative and Secondary Impacts			X			Yes

SUMMARY OF COMMENTS ON POTENTIAL ECENOMIC AND SOCIAL EFFECTS: The department has prepared the following comments.

A. Social Structures and Mores:

The current permitting action would not have any impact on the social structure and mores of the area. The proposed project would occur at an existing industrial site.

B. Cultural Uniqueness and Diversity:

The current permitting action would not to have any impact on the social structure and mores of the area. The proposed project would occur at an existing industrial site and mainly utilize existing equipment.

C. Local and State Tax Base and Tax Revenue:

The current permitting action would not be expected to have any impact on the local and state base and tax revenue. Units 1&2 would continue to produce the same amount of electricity but in a more efficient manner.

D. Agricultural or Industrial Production:

The current permitting action would not be expected to have any impact on agricultural or industrial production. The site is an existing industrial site and the production from the facility would remain the same.

E. Human Health:

The proposal to burn petroleum coke in Units 1&2 would increase both PM and PM<sub>10</sub> emissions from the facility. The increase in emissions would be minor and would be controlled by enclosures, water, and/or chemical dust suppressant as required by permit #0513-04. With the minor increase, the facility would still be required to comply with the NAAQS. These standards are set to protect public health and the environment.

F. Access to and Quality of Recreational and Wilderness Activities:

The current permitting action would occur at an existing industrial site and would not be expected to impact the quality of recreational and wilderness activities in the area.

G. Quantity and Distribution of Employment:

The proposal to burn petroleum coke would not impact the distribution of employment. No jobs are

expected to be cut or added because of the project.

H. Distribution of Population:

The current permitting action would not have any impact of the distribution of population.

I. Demands for Government Services:

The current permitting action would not be expected to cause any demand for government services.

J. Industrial and Commercial Activity:

The current permitting would be an industrial activity at the site that is currently an existing industrial site. Therefore, no change in industrial activity would be seen. Also, no change in commercial activity would be seen.

K. Locally Adopted Environmental Plans and Goals:

The current permitting action would not have any impact on any local adopted environmental plans and goals.

L. Cumulative and Secondary Impacts:

The only cumulative and secondary impacts from the proposal would be in an increase for both particulate matter (PM) and PM<sub>10</sub> emissions from the facility. The increase in emissions from the burning and handling of petroleum coke would be minor and would be controlled by enclosures, water, and/or chemical dust suppressant, and control on the Units 1&2 stacks as required by permit #0513-04. With the minor increase, the facility would still be required to comply with the NAAQS.

Recommendation: No EIS is required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permitting action is for the ability to use petroleum coke in Units 1&2 at the PP&L facility. Permit #0513-04 includes conditions and limitations to ensure the facility would operate in compliance with all applicable rules and regulations. In addition, there are no significant impacts associated with this proposal.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

Individuals or groups contributing to this EA: Department of Environmental Quality – Air and Waste management Bureau, Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

EA prepared by: Vickie Walsh

Date: May 25, 2001