



Montana Department of
ENVIRONMENTAL QUALITY

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October 16, 2014

Eric Detmer
Spring Creek Coal, LLC
P.O. Box 67
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Dear Mr. Detmer:

Montana Air Quality Permit #1120-012 is deemed final as of October 16, 2014, by the Department of Environmental Quality (Department). This permit is for a surface coal mine operation 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 #1120-12

Spring Creek Coal, LLC
P.O. Box 67
Decker, MT 59025

October 16, 2014



MONTANA AIR QUALITY PERMIT

Issued to: Spring Creek Coal, LLC
P.O. Box 67
Decker, MT 59025

MAQP #1120-12
Application Complete: 08/01/2014
Preliminary Determination Issued: 09/10/2014
Department's Decision Issued: 09/30/2014
Permit Final: 10/16/2014
AFS#: 003-0003

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Spring Creek Coal, LLC (Spring Creek), 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

Spring Creek operates a surface coal mine located approximately 11 miles north of Decker, Montana. The mine covers portions of Sections 13, 14, 15, 21, 22, 23, 24, 25, 26, 27, 35, and 36 of Township 8 South, Range 39 East, and Sections 18, 19, 20, 27, 28, 29, 30, 31, 32, and 34 of Township 8 South, Range 40 East, and Sections 1 and 12 of Township 9 South, Range 39 East, and Sections 3, 6, 7, 10, 11, and 15 of Township 9 South, Range 40 East, in Big Horn County, Montana.

B. Current Permit Action

On September 11, 2013, Spring Creek submitted an initial application for modification of MAQP 1120-11 proposing an expansion of mining operations to increase maximum allowable coal production from the current level of 24 million tons per year to 30 million tons. The current permit action provides for the increase in coal production and incorporates a single de minimis change.

Section II: Conditions and Limitations

A. Emission Limitations

1. Maximum coal production shall be limited to 30 million tons per rolling 12-month time period (ARM 17.8.749).
2. Spring Creek 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 17.8.308).
3. Spring Creek shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal an opacity in excess of the following (ARM 17.8.340 and 40 Code of Federal Regulations (CFR) 60, Subpart Y):

- a. For sources constructed, reconstructed, or modified on or before April 28, 2008: 20%
- b. For sources constructed, reconstructed, or modified after April 28, 2008: 10%
4. All visible emissions from any non-NSPS affected equipment shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).
5. Spring Creek shall comply with the following limitations and emission control technologies and techniques as described in the application (ARM 17.8.749 and ARM 17.8.752):

- a. Coal Conveyors (Facilities Area)

The above ground conveyor shall be enclosed on the sides and roof by metal siding. The conveyor floor shall be partially enclosed by stairs or walkways and the remaining space shall be covered by expanded metal.

- b. Truck Dump

The truck dump pit shall be enclosed on two sides, a partial third, and the top. The opening shall face the prevailing wind direction. A dust suppression system shall be installed at the top of the truck dump hopper to suppress dust as the trucks are unloaded. The sprays shall provide a curtain across the top of the hopper to contain the dust generated by falling coal. Overhead sprays shall be used to control dust near the bed level of the trucks as they dump. Dust suppression systems application is only required when coal is being dumped. Such systems are to be designed for year-round use.

- c. Truck Dump Primary Crusher

An ADSTM (Agglomeration Dust Suppression) system shall be used to control dust during the primary crusher's operations. The ADS system shall also be used at strategic points in the primary crusher to minimize particulate matter as necessary.

- d. Overland Conveyor In-Pit Crusher

The in-pit crusher emissions shall be controlled by a combination of an ADS system and a PEC system.

- e. Secondary Crusher

An ADS system shall be used to control dust during operation of the secondary crusher. The ADS system shall also be used at strategic points in the secondary crusher to minimize particulate matter as necessary.

f. Rail Load-Outs

An ADS system shall be used to control dust during the loading of the 200-ton load-out bin. A baghouse shall be used to control dust during the loading of the 400-ton load-out bin. A combination of an ADS system and a Passive Enclosure Containment (PEC) system shall be used to control emissions from the transfer of coal onto belt conveyor #5. Telescoping chutes shall be used during railcar loading.

g. Coal Storage Barn

The 40,000-ton coal storage pile shall be completely enclosed in a storage barn. The coal storage barn stacker shall be designed to minimize the free fall distance of the coal in order to minimize the creation of coal dust.

h. Open Coal Storage Pile

An open coal stockpile not exceeding 1 acre in size may be maintained adjacent to each of the truck dumps for blending purposes.

i. Overburden and Coal Removal

Minimize fall/drop distance on all coal and overburden handling activities.

j. Coal and Overburden Blasting

Blasting shall be conducted in such a manner as to prevent overshooting and to minimize the area to be blasted.

k. Topsoil Stockpiles

Wind erosion shall be controlled by the use of temporary vegetative covers.

l. Coal and Overburden Haul Roads

Haul roads shall be graded and maintained as necessary to minimize fugitive dust emission; including the removal of loose debris and the application of chemical dust suppressants and water.

m. Access Road

The paved access road shall be maintained as necessary to minimize fugitive dust emissions; including washing, sweeping or vacuuming to remove loose material and prevention of material being tracked out from unpaved areas.

n. Wind Erosion From Disturbed Areas

Upon completion of mine activities reclamation of disturbed areas shall begin within one growing season.

o. Overland Conveyor System

The conveyors shall be covered. The conveyor drop distance shall be minimized at the transfer point from the buffer conveyor to the overland conveyor. A combination of an ADS system and a PEC system shall control emissions at the transfer point from the buffer conveyor to the overland conveyor.

p. Coal Quality Analytical Laboratory

The emissions from the Coal Quality Analytical Laboratory shall be controlled by a baghouse.

q. Lump and Stoker Production

Emissions from the reject product shall be controlled by the truck dump suppression system. Stoker coal shall be coated with used oil for dust suppression prior to placement into the stoker silos.

6. Spring Creek shall maintain a fugitive dust control plan. Elements of the plan shall include, but not be limited to, the conditions established within Section II.A.2 through II.A.5 and the elements of the Best Available Control Technology (BACT) determination provided within the MAQP analysis (ARM 17.8.749 and ARM 17.8.752).
7. Spring Creek shall comply with all applicable standards and limitations, and the reporting, recordkeeping, testing, and notification requirements contained in 40 CFR, Subpart Y, Standards of Performance for Coal Preparation Plants and Processing Plants (ARM 17.8.340 and 40 CFR 60, Subpart Y).
8. Spring Creek 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).
9. Spring Creek 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.8 (ARM 17.8.749).
10. All visible emissions from any Standards of Performance for New Stationary Source (NSPS) – affected crusher shall not exhibit an opacity in excess of the following averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO):
 - a. For crushers that commence construction, modification, or reconstruction on or after April 22, 2008: 12% opacity
 - b. For crushers that commence construction, modification, or reconstruction after August 31, 1983, but before April 22, 2008: 15% opacity

11. All visible emissions from any other NSPS-affected equipment (such as screens and conveyors) shall not exhibit an opacity in excess of the following averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO):
 - a. For equipment that commence construction, modification, or reconstruction on or after April 22, 2008: 7% opacity
 - b. For equipment that commence construction, modification, or reconstruction after August 31, 1983, but before April 22, 2008: 10% opacity
12. Water and chemical dust suppressants shall be available on-site at all times and operated as necessary to maintain compliance with the opacity limitations in Sections II.A.2, II.A.3, II.A.4, II.A.10 and II.A.11 (ARM 17.8.749 and ARM 17.8.752).
13. Spring Creek shall not operate more than one scoria rock crusher at any given time and the maximum rated design capacity of the crusher shall not exceed 400 TPH (ARM 17.8.749).
14. Spring Creek shall not operate more than one scoria rock screen at any given time and the maximum rated design capacity of the screen shall not exceed 400 TPH (ARM 17.8.749).
15. Spring Creek shall not operate more than one scoria rock stacker-conveyor at any given time and the maximum rated design capacity of the stacker-conveyor shall not exceed 400 TPH (ARM 17.8.749).
16. Spring Creek shall comply with all applicable standards, limitations, and the reporting, record keeping, and notification requirements contained in 40 CFR 60, Subpart Y, Standards of Performance for Coal Preparation and Processing Plants and 40 CFR 60, Subpart OOO Standards of Performance for Nonmetallic Mineral Processing Plants (ARM 17.8.340, 40 CFR 60, Subpart Y, and 40 CFR 60, Subpart OOO).
17. The designated emergency diesel-fired engines shall be used for emergency or back-up operations only and shall be limited to 500 hours of operation during any rolling 12-month time period. Preventative maintenance activities shall be included in the hours of operation limit (ARM 17.8.749).
18. Spring Creek shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* and 40 CFR 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, for any applicable diesel engine (ARM 17.8.340; 40 CFR 60, Subpart IIII; ARM 17.8.342 and 40 CFR 63, Subpart ZZZZ).

B. Testing Requirements

1. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
2. The Department may require further testing (ARM 17.8.105).

C. Ambient Monitoring Requirements

Spring Creek shall install and operate an ambient air quality monitoring network to measure concentrations of particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) when the mine achieves a coal production rate of 24 million tons during any rolling 12-month period (action level).

1. Spring Creek shall notify the Department within 60 days of achieving the prescribed monitoring action level.
2. The requirements of Ambient Monitoring Plant (Attachment 1) shall take effect within 180 days of Spring Creek achieving the prescribed monitoring action level.
3. The monitoring plan shall conform to the requirement established within Attachment 1 of MAQP #1120-12 (ARM 17.8.749).

D. Operational Reporting Requirements

1. Spring Creek 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 identified in the most recent emission inventory report and sources identified in Section I.A of the permit analysis. This information submitted shall include the amount of coal produced (ARM 17.8.749).

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. Spring Creek 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 start up 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 17.8.745(l)(d) (ARM 17.8.745).
3. All records compiled in accordance with this permit must be maintained by Spring Creek 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. Spring Creek shall document, by month, coal production levels. By the 25th day of each month, Spring Creek shall total the coal production levels for the previous month. The monthly information will be used to verify compliance

with the rolling 12-month limitation in Section II.A.1. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

Section III: General Conditions

- A. Inspection – Spring Creek 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 (continuous emissions monitoring system (CEMS) or continuous emissions rate monitoring system (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 Spring Creek fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Spring Creek 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 actions 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 therefore, 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 Department personnel at the location of the permitted source.
- G. Permit Fee – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by Spring Creek 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 1

AMBIENT AIR MONITORING PLAN SPRING CREEK COAL LLC Montana Air Quality Permit (MAQP) #1120-12

1. This ambient air-monitoring plan is required by Montana Air Quality Permit (MAQP) # 1120-12, which applies to Spring Creek Coal LLC's (Spring Creek) mining operation located in Sections 13, 14, 21, 23, 24, 25, 26, and 27 in Township 8 South, Range 39 East, and Sections 3, 10, 11, 15, 18, 19, 20, 27, 28, 29, 30, 31, 32, and 34 in Township 9 South, Range 40 East, in Big Horn County, Montana. The Department of Environmental Quality (Department) may modify the requirements of this monitoring plan. All requirements of this plan are considered conditions of the permit.
2. The requirements of this attachment shall take effect within 180 days of Spring Creek achieving an annual production level of 24 million tons during any rolling 12-month period.
3. Spring Creek shall install and maintain a minimum of four air monitoring sites in the vicinity of the mine and facilities. The exact locations of the monitoring sites shall be approved by the Department and meet all the siting requirements contained in the Montana Quality Assurance Manual, including revisions, the EPA Quality Assurance Manual, including revisions, and 40 Code of Federal Regulations (CFR) Part 58, or any other requirements specified by the Department. At least one monitor site must be in reasonable proximity to the location of highest PM₁₀ concentrations as determined by the modeling assessment performed in conjunction with MAQP #1120-12.
4. This Ambient Air Monitoring Plan will be updated to reflect actual monitoring network arrangements upon Department approval of the monitor siting locations and demonstration of conformance to the Montana Quality Assurance Manual, including revisions, the EPA Quality Assurance Manual, including revisions, and 40 Code of Federal Regulations (CFR) Part 58, or any other requirements specified by the Department.
5. Within 30 days prior to any changes of the location of the ambient monitors, Spring Creek shall submit a topographic map to the Department identifying UTM coordinates, air monitoring site locations in relation to the facility, and the general area present.
6. The Department will review the air monitoring data and 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 or analyses if any changes take place in regard to quality and/or quantity of emissions or the area of impact from the emissions.
7. Spring Creek shall monitor the following parameters and frequencies described below:
 - a. Four PM₁₀ samplers with a sample collection frequency of every sixth day.
 - b. One of the PM₁₀ samplers shall be collocated

- c. One continuous meteorological monitor to measure;
 - i. Wind Speed and Direction
 - ii. Sigma Theta
 - iii. Temperature

Trace metal analyses of sample filters will not be required at this time; however, the Department may require these analyses in the future.

- 8. Data recovery for all parameters shall be at least 80 percent computed on a quarterly and annual basis. The Department may require continued monitoring if this condition is not met. (Data Recovery = (Number of data points collected in evaluation period)/(number of scheduled data points in evaluations period)*(100%)).
- 9. Any ambient air monitoring changes proposed by Spring Creek must be approved in writing by the Department.
- 10. Spring Creek shall utilize air monitoring and Quality Assurance (QA) 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; 40 CFR; Parts 50 and 58 CFR; and any other requirements specified by the Department.
- 11. Spring Creek shall submit quarterly data reports within 45 days after the end of the calendar quarter and two hard copies of the annual data report within 90 days after the end of the calendar year.
- 12. The quarterly data submittals shall consist of a hard copy narrative data summary and a digital submittal of all data points in AIRS batch code format. The electronic data must be submitted to the Air Monitoring Section as digital text files readable by an office PC with a Windows operating system.
- 13. The narrative data hard copy summary must be submitted to the Air Compliance Section and shall include:
 - d. A hard copy of the individual data points.
 - e. The first and second highest 24-hour concentrations for PM₁₀.
 - f. The quarterly and monthly wind roses.
 - g. A summary of the data completeness.
 - h. A summary of the reasons for missing data.
 - i. A precision data summary.
 - j. A summary of any ambient air standard exceedances.
 - k. Q/A-Q/C information such as zero/span/precision, calibration, audit forms, and standards certifications.

14. The annual data report shall consist of a narrative data summary. The narrative data hard copy summary must be submitted to the Air Compliance Section and shall include:
 - a. A topographic map of appropriate scale with UTM coordinates and a true north arrow showing the air monitoring site location in relation to the mine site and the general area,
 - b. The year's four highest 24-hour concentrations for PM₁₀,
 - c. The annual wind rose,
 - d. A summary of any ambient air standard exceedances, and
 - e. An annual summary of data completeness.
15. All records compiled in accordance with this Attachment must be maintained by Spring Creek 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).
16. The Department may audit, or may require Spring Creek to contract with an independent firm to audit, the air monitoring network, the laboratory performing associated analyses, and any data handling procedures at unspecified times.
17. The hard copy reports should be sent to:

Department of Environmental Quality
Attention: Air Compliance Section Supervisor
18. The electronic data from the quarterly monitoring shall be sent to:

Department of Environmental Quality
Attention: Air Monitoring Section

Montana Air Quality Permit (MAQP) Analysis
Spring Creek Coal LLC
MAQP #1120-12

I. Introduction/Process Description

Spring Creek Coal LLC (Spring Creek) operates a surface coal mine located approximately 11 miles north of Decker, Montana. The mine covers portions of Sections 13, 14, 15, 21, 22, 23, 24, 25, 26, 27, 35, and 36 of Township 8 South, Range 39 East, and Sections 18, 19, 20, 27, 28, 29, 30, 31, 32, and 34 of Township 8 South, Range 40 East, and Sections 1 and 12 of Township 9 South, Range 39 East, and Sections 3, 6, 7, 10, 11, and 15 of Township 9 South, Range 40 East, in Big Horn County, Montana.

A. Permitted Equipment

The Spring Creek surface coal mine includes a centralized coal processing and handling system with two coal dumps, crushing, conveying, storage, and two train load-outs. Operations also include various auxiliary and associated equipment, including; dragline, trucks, shovels, scrapers, drills, dozers, etc., as applicable. Specific permitted equipment identification and capacities are as follows;

- Main Truck Dump:
 - Coal Truck Dump – 8,000 TPH (tons per hour) with water spray bars
 - Primary Truck Dump Coal Crusher – 7,500 TPH with Agglomerated Dust Control System (ADS)
 - Truck Dump Conveyor – 8,000 TPH (fully enclosed)
- Overland Conveyor Dump:
 - Primary Coal Crusher – 4,000 TPH with ADS control System and Passive Enclosure Containment (PEC) system
 - Overland Conveyor – 8,000 TPH metal enclosure with ADS and PEC systems
- Secondary Coal Crusher – 7,500 TPH with ADS control System
- Coal Storage Barn – 40,000 tons
- Rail Loadout #1 – 7,000 TPH with ADS control system
- Rail Loadout #2 – 9,000 TPH with ADS control system
- Coal Analysis Lab – 80 tons per year (tpy) with baghouse control
- Emergency Diesel-Fired Engines:
 - DMT Inc. Backup Generator Set – 13 brake-horsepower (bhp)
 - DMT Inc. Backup Generator Set – 47 bhp
 - Detroit Diesel Fire Pump – 238 bhp
- Scoria Rock Crusher (portable) – 400 TPH
- Scoria Screen Plant (portable) – 400 TPH
- Stacker Conveyor (portable) – 400 TPH

B. Source Description

The Spring Creek Mine is a surface-coal mining operation, where overburden removal is accomplished by a combination of dragline, cast blast, dozer, and truck/shovel methods. Coal removal is accomplished by truck and shovel type systems.

Prior to any mining disturbance, soil is salvaged and stockpiled. Following soil salvage operations, overburden is drilled, blasted and removed. Associated equipment operations include production dozing, scraper hauls, and other similar ancillary activities.

The coal mined is from the Anderson-Dietz coal seam, averaging approximately 80 feet thick. The coal is blasted in lifts of varying depths and loaded out by typical mining equipment such as, but not limited to electric shovels, hydraulic shovels, front end loaders, and mining haul trucks. Removal is typically conducted in more than one pass, because of the thickness of the coal seam, quality and operational considerations. The coal is transported to the primary crusher at the truck dump or the in-pit crusher for the overland conveyor by haul trucks. Production frequently takes place simultaneously from more than one location in the mine, so as to blend the coals to create a marketable product and meet various consumer specifications. Coal is crushed in a primary and secondary crusher plant and loaded onto trains for market delivery.

Final placement of overburden consists of dragline placed spoils as part of the normal overburden removal process. Final grading of overburden follows the contours specified in the approved post-mine topography plan. Topsoil and subsoil is placed with scrapers or other equipment at prescribed depths and the reclaimed areas are then seeded.

Product from the scoria rock crushing/screening operation will be used for road construction and various construction projects.

C. Permit History

MAQP #1120 was issued to Spring Creek Coal Company (SCCC) on May 11, 1979, for the operation of a coal processing and handling facility.

MAQP #1120-01 was issued March 15, 1993, for the construction and use of an in-pit truck dump and crusher and an overland conveyor system. MAQP #1120-01 replaced MAQP #1120-00.

On December 9, 1994, **MAQP #1120-02** was issued increasing the allowable coal production rate from 7 million tons per year to 15 million.

The permitted area changed from 4,793 to about 4,482 acres. The coal seam being mined was the Anderson Dietz Seam. Overburden removal continued to be done by dragline, with truck/shovel assist. The mine used standard mining and reclamation techniques and equipment. The facility's area included a truck dump, crushers, conveyors, storage barn, and rail load-out. Some coal was directly hauled to the facility's area. Coal from pit #1 was hauled to an in-pit crusher and then carried by an overland conveyor to the facilities area. MAQP #1120-02 replaced MAQP #1120-01.

SCCC was issued **MAQP #1120-03** on May 18, 1995, to correct language in the permit relative to the truck dump and to include a baghouse on the coal quality analytical laboratory. MAQP #1120-03 replaced MAQP #1120-02.

On March 22, 1998, **MAQP #1120-04** was issued to SCCC to change the ambient monitoring plan in Attachment 1 from requiring monitoring every third day to requiring monitoring every sixth day. The modification also corrected the volume processed by

the laboratory from 11 tons per year to 80 tons per year, and identified the lump and stoker production as permitted equipment. The lump and stoker production increased particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) emissions by 1.38 tons per year. Also, the rule references used by the Department of Environmental Quality (Department) in the permit were updated. MAQP #1120-04 replaced MAQP #1120-03.

On September 14, 1999, SCCC requested a modification to MAQP #1120-04 proposing to install an Agglomeration Dust Suppression (ADS) system at four locations in the facility: the primary crusher, the conveyor #1 head pulley, the secondary crusher, and the rail loadout area. The ADS system replaced the existing dust control system, which included baghouses and surfactant and water application. SCCC proposed no changes in emissions as a result of the ADS system. A reduction in fugitive emissions was actually expected. The permit conditions were revised to reflect the changes in control equipment. **MAQP #1120-05** replaced MAQP #1120-04.

On December 31, 2001, the Department received a letter from SCCC which requested approval for the relocation of their upwind ambient air monitoring site. The request included a facility map identifying two potential new locations. The Department determined that either site location indicated on the facility map would be appropriate and approved the location transfer. Further, the Department indicated that SCCC must provide the Department with the actual site chosen for the new Hi-Vol site.

Subsequently, on May 2, 2002, the Department received a letter and site map indicating the actual site that was selected for the new Hi-Vol site. The actual site selected is identified in Attachment #1 to air quality MAQP #1120-06. **MAQP #1120-06** replaced MAQP #1120-05.

On July 6, 2005, the Department received a MAQP Application from Kennecot Energy for a proposed coal production increase at SCCC. The application requested a modification to MAQP #1120-06 to increase maximum annual coal production from 15 million tons to 20 million tons and to include another rail load-out facility. On December 22, 2005, the Department received additional information and the MAQP Application was considered complete. **MAQP #1120-07** replaced MAQP #1120-06.

On March 8, 2007, the Department received a MAQP Application from Rio Tinto Energy America (Rio Tinto) for a modification to MAQP #1120-07. The modification changed the Best Available Control Technology (BACT) determination by replacing the baghouse requirement at the overland conveyor in-pit crusher with a combination of an ADS system and a Passive Emission Control (PEC) system and changing the baghouse requirement at the transfer point from the buffer conveyor to the overland conveyor with a combination of an ADS system and a PEC system.

The overland conveyor extension was intended to shorten the length of haul road required for off-site transport of the coal. **MAQP #1120-08** replaced MAQP #1120-07.

On September 23, 2008, the Department received a complete MAQP Application from Rio Tinto for a proposed project at SCCC. The application requested a modification to MAQP #1120-08 to increase the maximum annual coal production from 20 million

tons to 24 million tons. In addition, SCCC requested to relocate two air monitoring stations that are currently located in areas that will be mined in the near future. **MAQP #1120-09** replaced MAQP #1120-08.

On January 14, 2009, the Department received notification that a reorganization had taken place within Rio Tinto. SCCC was merged into Spring Creek Coal LLC. The Department amended the permit pursuant to the Administrative Rules of Montana (ARM) 17.8.764 to change the name to Spring Creek Coal LLC. **MAQP #1120-10** replaced MAQP #1120-09.

On July 19, 2012, the Department received an application from Spring Creek to modify MAQP#1120-10 to add a 400 TPH scoria rock crushing/screening operation at the mine. The rock crusher, screen, and stacker conveyor are driven by direct-drive diesel engines. The crusher, screen and stacker equipment are track mounted units, therefore the diesel engines associated with these units are mobile, non-road engines and are excluded from permitting. The application also requested the removal of the ambient air monitoring requirements specified in Attachment 1 of the permit. The Department previously approved discontinuation of ambient PM₁₀ monitoring in a letter dated September 8, 2009. **MAQP #1120-11** replaced MAQP #1120-10.

D. Current Permit Action

On September 11, 2013, Spring Creek submitted the initial application for the modification of MAQP 1120-11 for the proposed expansion of mining operations to increase permit maximum allowable coal production from the current level of 24 million tons per year to 30 million tons. Subsequent application updates were received on March 17, 2014, May 27, 2014 and August 1, 2014. Based on the conclusion of the modeling assessment, conduction in conjunction with this permit action, the Department shall require Spring Creek to reinstate ambient air monitoring when total annual coal production achieves 24 million tons. No changes or additional permitted equipment will occur as a result of this permit action. The current permit action provides an increase in coal production to the proposed amount and incorporates changes to the emission inventory. **MAQP #1120-12** replaces MAQP #1120-11.

E. Additional Information

Additional information, such as applicable rules and regulations, 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 operation. The complete rules are stated in the 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 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).

Spring Creek 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 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide (SO₂)
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide (NO₂)
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide (CO)
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone (O₃)
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide (H₂S)
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀

Spring Creek 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 are taken to control emissions of airborne particulate matter. (2) Under this rule, Spring Creek 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 Processes. This rule requires that no person shall cause or authorize 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. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this rule.
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 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 Code of Federal Regulations (CFR) Part 60, Standards of Performance for New Stationary Sources (NSPS). Spring Creek 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 OOO – Standards of Performance for Nonmetallic Mineral Processing Plants. In order for a crushing/screening plant to be subject to NSPS requirements, two specific criteria must be met. First, the crushing/screening plant must meet the definition of an affected facility and, second, the equipment in question must have been constructed, reconstructed, or modified after August 31, 1983. Based on the information submitted by Spring Creek, the portable scoria rock crushing, screening, and conveying

equipment to be used under MAQP #1120-12 is subject to this subpart because it meets the definition of an affected facility and was constructed or modified after August 31, 1983.

- c. 40 CFR Part 60, Subpart Y – Standards of Performance for Coal Preparation and Processing Plants - This rule applies to affected facilities in coal preparation and processing plants that process more than 181 megagrams (Mg) (200 tons) of coal per day. The affected facilities include thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), and coal storage systems, transfer and loading systems that commenced construction, reconstruction or modification after October 27, 1974, and on or before April 28, 2008. An owner or operator shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system gases which exhibit 20 percent opacity or greater as described in Section II of the permit. Based on the information submitted by Spring Creek, the coal preparation and processing equipment to be used under MAQP #1120-12 is subject to this subpart because it meets the definition of an affected facility and was constructed or modified after October 27, 1974, and on or before April 28, 2008.
 - d. 40 CFR 60, Subpart III – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE). Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are manufactured after April 1, 2006, and are not fire pump engines, and owners and operators of stationary CI ICE that modify or reconstruct their stationary CI ICE after July 11, 2005, are subject to this subpart. An ICE is considered stationary if it remains at the permitted location for more than 12 months, or a shorter period of time for an engine located at a seasonal source. Based on the information submitted by Spring Creek, the multiple CI ICE equipment are to be operated under MAQP #1120-12 which are affected sources as defined within 40 CFR 60, Subpart III.
1. 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. Spring Creek is considered a NESHAP-affected facility under 40 CFR Part 63 and is subject to the requirements of the following subparts:
 - a. 40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to an NESHAP Subpart as listed below:
 - b. 40 CFR 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants (HAPs) for Stationary Reciprocating Internal Combustion Engines (RICE). An owner or operator of a stationary reciprocating internal combustion engine (RICE) at a major or area source of HAP emissions is subject to this rule except if the stationary RICE is being tested at a stationary RICE test cell/stand. An area source of HAP emissions is a source that is not a major source. A RICE is considered stationary if it remains or will remain at the permitted location for more than 12 months, or a shorter period of time for an engine located at a seasonal source. A seasonal source remains at a

single location on a permanent basis (at least 2 years) and operates 3 months or more each year. Based on the information submitted by Spring Creek, multiple pieces of diesel-fired equipment are to be installed and operated under MAQP #1120-12 which are defined as affected sources within 40 CFR 63, Subpart ZZZZ.

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 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. Spring Creek 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. 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 17.8.740 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. The Spring Creek facility has a PTE greater than 25 tons per year of particulate matter and PM₁₀; 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. Spring Creek submitted the required permit application for the current permit action. (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. Spring Creek submitted an affidavit of publication of public notice for the September 26, 2013, issue of the *The Sheridan Press*, a newspaper of general circulation in the Town of Sheridan in Sheridan County, Wyoming and the *Billings Gazette*, a newspaper of general circulation in the City of Billings in Yellowstone County Montana, as proof of compliance with the public notice requirements.
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 Spring Creek 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.
- F. ARM 17.8, Subchapter 8 – Prevention of Significant Deterioration (PSD) 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.

This facility is not a major stationary source since this facility is not a listed source and the facility's potential to emit is less than 250 tpy of any pollutant (excluding fugitive emissions).

- 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 source having:
 - a. PTE > 100 tpy of any pollutant;
 - b. PTE > 10 tpy of any single Hazardous Air Pollutant (HAP), PTE > 25 tpy combined HAPs, or lesser quantity as the Department may establish by rule; or
 - c. PTE > 70 tpy of PM₁₀ in a serious PM₁₀ 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 #1120-12 for Spring Creek, the following conclusions were made:

- a. The facility's PTE is less than 100 tpy for any pollutant (excluding fugitive emissions).
- b. The facility's PTE is less than 10 tpy for any single HAP and less than 25 tpy for combined HAPs.
- c. This source is not located in a serious PM10 nonattainment area.
- d. This facility is subject to a current NSPS standard (40 CFR 60, Subpart Y; 40 CFR 60, Subpart OOO; and 40 CFR 60 Subpart IIII).
- e. This facility is subject to a current NESHAP standard (40 CFR 63, Subpart ZZZZ).
- f. This source is not a Title IV affected source, nor a solid waste combustion unit.
- g. This source is not an EPA designated Title V source.

Based on these facts, the Department determined that Spring Creek is a minor source of emissions as defined under Title V. Therefore, Spring Creek is not required to obtain a Title V Operating Permit. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit in the future, Spring Creek will be required to obtain a Title V Operating Permit.

III. Best Available Control Technology Determination

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

The application of water and/or chemical dust suppressants represent the most common and readily available method for controlling fugitive dust from open surface coal mining activities. In addition, passive control methods are employed through isolation and/or enclosure of sources with a potential to generate fugitive dust emissions. These practices are addressed with the reasonable precaution requirements prescribed within ARM 17.8.308 for minimizing particulate emissions from access roads, haul roads, and general mine areas and the additional work practices conditions established within MAQP Section II.A.5 Spring Creek currently maintains a Fugitive Dust Control Plan in accordance with ARM 17.24.761 and the requirements established within MAQP 1120-12.

The increase in coal production from Spring Creek mine will result in an increase in fugitive dust emissions from the various aspects of surface coal mining. Coal extraction techniques, including associated material handling and processing methods, employed within the mine will remain unaffected with the current permit action and no new equipment or activities are to be installed or operated. As such, Spring Creek proposed the use of existing BACT methods in the control of fugitive dust to address any additional particulate emission generated from the proposed coal production increase.

Specific elements of BACT include;

A. Unpaved Roadways:

1. Application of water as necessary.
2. Restriction of vehicle speeds.
3. Chemically stabilized with nontoxic soil cement or dust palliatives mixed into the upper portion of road surface as necessary.
4. Routinely maintain roadway, including but not limited to; scraping or surfacing, sanding, and replacement of surfacing materials.

B. Paved Roadways:

1. Removal of dirt and loose materials on roadway (wash, Sweep, vacuum, etc.).
2. Clean wheels and undercarriage of vehicles to prevent material trackout from unpaved areas prior to entering paved roadways as necessary.

C. Material Handling – Coal:

1. Truck Dump:

- a. Use and maintenance of enclosure at the Truck Dump; two sides, partial third, and the top.
- b. Maintain opening towards the prevailing winds.
- c. Use and maintenance of dust suppression system which applies atomized water as trucks are unloaded.

2. Overland Conveyor System Control:

- a. Use and maintenance of a PEC System to mitigation and control dust during material transfer. The PEC system includes an enclosure containment structure and engineered transfer chute to direct a bulk stream of material from the upper tiered conveyor to the lower tier. An adjustable deflector contains and funnels the material onto the lower transfer chute and eventual transfer to belt. The system design maintains a constant velocity of the bulk material through the transfer process and eliminates the typical free-fall and impact of materials onto the lower belt, present in a typical conveyor transfer. This design effectively lays the flowing stream of material onto the lower bed, whereby reducing dust formation. A stilling zone is provided downstream of the transfers to inhibit dust propagation and provide pressure reduction.
- b. Operation and maintenance of the ADS to mitigate dust formation during material handling and transfer. The ADS system applies a continuous atomized water stream directly on the material through spray nozzles located in to ports provide within the conveyor enclosure. The water droplets collide with airborne particulate forming agglomerates which readily drop out of suspension.

- c. Full enclosure of conveyors.
- d. Minimize material drop heights.

3. Aboveground Coal Conveyors (Facilities Area):

Use and maintenance of enclosures on the sides, roof and floor of the aboveground conveyors by means of metal shell or other equivalent method.

4. Railcar Load-Out Facility:

- a. Operation and maintenance of an ADS on the 200 ton load-out bin to minimize dust during bin loading.
- b. Operation and maintenance of a baghouse on the 400 ton load-out bin to capture and control dust during bin loading.
- c. Use and maintenance of a combination of ADS and a PEC System to mitigation and control dust during material transfer onto belt conveyor #5.
- d. Operation and maintenance of a telescoping chute for the railcar load-out.

5. Coal Storage:

- a. Complete enclosure of the 40,000 ton coal storage pile.

D. Material Handling – General:

- 1. Utilize covers or wind breaks where possible and practical (full/partial enclosures, curtains, hoods, wind fencing, etc.).
- 2. Application and re-application of water and/or chemical dust suppressants as necessary.
- 3. Minimize material drop height (loaders, dragline, conveyors, etc.).
- 4. Maximize conveyor system utilization to minimize use of haul truck.
- 5. Install active engineering controls where possible and practical, such as capture ventilation with baghouse control or other equivalent control technique.

E. Coal Primary Crushers and Secondary Crusher:

- 1. ADS – Continued operation and maintenance of the ADS to mitigate dust formation during material processing and handling at the primary and secondary crushers.
- 2. PEC System – Continued use and maintenance of a PEC System to mitigation and control dust during material transfer from the crusher (Overland Conveyor In-Pit Crusher only).

F. Overburden and Coal Blasting:

1. Minimize emissions from drilling activities through the use of dust curtains, water sprays or other equivalent techniques.
2. Conduct blasting in such a manner as to minimize emissions, including but not limited to; prevent overshooting, provide stemming of holes, and minimize area to be blasted.
3. Minimize the number of blasts.
4. Restrict blasting area.

G. Open Material Stockpiles (topsoil and overburden):

1. Stabilize materials immediately upon placement.
2. Minimize activity or disturbance of stockpiles.
3. Apply water or chemically stabilized periodically as necessary
4. Promptly vegetate or mulch temporary overburden/topsoil stockpiles.

H. General Facility-Wide Practices:

1. High wind contingency planning;
 - a. Pre-wind event watering or chemical stabilization.
 - b. Cease or reduced dust producing operation during high wind events.
2. Minimize area(s) of surface disturbance.
3. Promptly reclaim post mine exposed/disturbed.
4. Restricting travel to established roads.
5. Use of windbreak vegetation at critical point of mine area.
6. Extinguish areas of burning or smoldering coal.

Spring Creek proposes the ongoing implementation and maintenance of the dust control plan, which includes the aforementioned techniques as BACT for the control of fugitive particulate matter. The control options selected contain control equipment and control costs comparable to other recently permitted similar sources and are capable of achieving the appropriate emission standards. The Department determined that implementation and maintenance of a formal dust control plan, which includes but is not limited to the work practice and dust control techniques listed above constitutes BACT.

IV. Emissions Inventory

A. Annual Fugitive Source PM₁₀ Emissions

Activity Description	PM ₁₀ Emission Factor			Controlled PM ₁₀ Emission Factor			Activity Rate ¹	PM ₁₀ Emissions [tons]
	PM ₁₀	Units	Emission Factor Reference	Ce	Rate	Units		
Topsoil Removal ²	0.0145	lb/ton	AP-42 Table 11.9-4	--	0.0145	lb/ton	720,710 tons/year	5.23
Topsoil Dumping	0.001	lb/ton	AP-42 13.2.4	--	0.001	lb/ton	720,710 tons/year	0.36
OB Drilling	0.325	lb/hole	AP-42 Table 11.9-4	--	0.325	lb/hole	27,111 holes/year	4.41
OB Blasting ³	855.95	lb/blast	AP-42 Table 11.9-1	--	855.95	lb/blast	50 blasts/year	21.4
OB Removal (Truck/Shovel) ²	0.0008	lb/ton	AP-42 13.2.4	--	0.0008	lb/ton	81,780,368 tons/year	34.37
OB Replacement (Truck/Shovel)	0.0008	lb/ton	AP-42 13.2.4	--	0.0008	lb/ton	81,780,368 tons/year	34.37
OB Removal (Dragline)	0.015	lb/yd ³	AP-42 Table 11.9-1	--	0.008	lb/yd ³	40,144,085 tons/year	294.96
OB Removal (Cast Blast)	0.0008	lb/ton	AP-42 13.2.4	--	0.0008	lb/ton	19,235,946 tons/year	8.08
OB Replacement (Cast Blast)	0.0008	lb/ton	AP-42 13.2.4	--	0.0008	lb/ton	19,235,946 tons/year	8.08
Overburden Haul	3.94852	lb/VMT	AP-42 13.2.2	85%	0.5923	lb/VMT	934,577 VMT/year	276.76
Coal Drilling	0.055	lb/hole	AP-42 Table 11.9-4	--	0.055	lb/hole	20,770 Holes/year	0.57
Coal Blasting	164.73	lb/blast	AP-42 Table 11.9-1	--	164.73	lb/blast	120 Blasts/year	9.88
Coal Removal	0.00005	lb/ton	AP-42 13.2.4	--	0.0001	lb/ton	30,000,000 tons/year	0.82
Coal Haul	3.94852	lb/VMT	AP-42 13.2.2	85%	0.5923	lb/VMT	532,525 VMT/year	157.7
Coal Dump (Truck Dump)	0.00005	lb/ton	AP-42 13.2.4	90%	0	lb/ton	19,857,130 tons/year	0.05
Coal Dump (conveyor)	0.00005	lb/ton	AP-42 13.2.4	--	0.0001	lb/ton	10,142,870 tons/year	0.28
Wind Erosion (open acres)	0.53	lbs/acre-yr	AP-42 13.2.5	--	0.53	lbs/acre-yr	2,400 Acres	264.11
Haul Road Repair	1.54255	lb/VMT	AP-42 Table 11.9-1	85%	0.2314	lb/VMT	32,726 Hrs/year	26.88
Water trucks	3.94852	lb/VMT	AP-42 13.2.2	85%	0.5923	lb/VMT	343,891 VMT/year	101.84
OB manipulation – Dozers	2.4506	lb/hr	AP-42 Table 11.9-4		2.4506	lb/hr	91,438 hrs/year	112.04
Wind Erosion (Storage Pile at Conveyor)	0.19	ton/acre-yr	EPA web fire	--	0.19	ton/acre/yr	1 acres	0.19
Wind Erosion (Storage Pile at Truck Dump)	0.19	ton/acre-yr	EPA web fire	--	0.19	ton/acre/yr	1 acres	0.19
Lump Coal Production	0.00005	lb/ton	AP-42 13.2.4	--	0.0001	lb/ton	18,561 tons/year	0
Stoker Coal Loadout	0.00005	lb/ton	AP-42 13.2.4	--	0.0001	lb/ton	107,598 tons/year	0
KPI-JCI 400 tph Scoria Crusher	0.0005	lb/ton	AP-42, Table 11.19.2-2	--	0.0005	lb/ton	3,504,000 tons/year	0.95
Metso 400 tph Scoria Screen	0.0007	lb/ton	AP-42, Table 11.19.2-2	--	0.0007	lb/ton	3,504,000 tons/year	1.30
Scoria Conveyor Transfer Points (10)	0.00005	lb/ton	AP-42, Table 11.19.2-2	--	0.00005	lb/ton	3,504,000 tons/year	0.81
Fragmented Stone Load-in	0.00002	lb/ton	AP-42, Table 11.19.2-2	--	0.00002	lb/ton	3,504,000 tons/year	0.03
Storage Pile Load-in and Load-out (2 piles)	0.0008	lb/ton	AP-42 13.2.4	--	0.0008	lb/ton	7,008,000 tons/year	2.79
Scoria Haul Road	3.32	lb/VMT	AP-42 13.2.2	--	3.32	lb/ton	1,840 VMT	3.05
Access Road	0.0771	lb/VMT	AP-42 13.2.2	--	0.0771	lb/VMT	19,250 VMT	0.74
Nonroad Engine Sources	--	--	AP-42, Table 3.3-1 or Engine Specs.	--	--	--	--	24.52
Total Fugitive Emissions [tons/year] ►								1396.76

B. Annual Stationary Source PM₁₀ Emissions [Non-Fugitive]

Activity Description	PM ₁₀ Emission Factor			Controlled Emission Factor			Activity Rate ¹		PM ₁₀ Emissions [tons]
	Rate	Units	Emission Factor Reference	Ce	Rate	Units			
Train Loading	0.0059	lb/ton	EPA WebFIRE SCC 30501044	99%	0.0001	lb/ton	30,000,000	Ton/year	0.88
Coal Loadout from stockpile (Truck Dump)	0.00005	lb/ton	AP-42 13.2.4	--	0.0001	lb/ton	1,985,713	Ton/year	0.05
Primary Crusher (Truck Dump)	0.006	lb/ton	EPA WebFIRE SCC 30501010	99%	0.0001	lb/ton	19,857,130	Ton/year	0.6
Secondary Crusher	0.006	lb/ton	EPA WebFIRE SCC 30501010	99%	0.0001	lb/ton	30,000,000	Ton/year	0.9
Coal Loadout from stockpile (Conveyor)	0.00005	lb/ton	AP-42 13.2.4	--	0.0001	lb/ton	1,014,287	Ton/year	0.03
Primary Crusher (Conveyor)	0.006	lb/ton	EPA WebFIRE SCC 30501010	99%	0.0001	lb/ton	10,142,870	Ton/year	0.3
Stationary Combustion Sources	--	--	AP-42, Table 3.3-1 or AP-42, Table 1.3-1	--	--	--	--	--	0.41
Total Stationary Source Emissions [tons/year] ►									3.17

Notes:

- ¹ Activity rate and corresponding emission estimates are based on projected 2018 mine year production data.
- ² Includes material handled by scraper.
- ³ Includes particulate emission contributions from ANFO blasting.

Ce, control efficiency	PM ₁₀ , particulate matter with an aerodynamic diameter of 10 microns or less
ft ² , square foot	SCC, source code classification
lb, pound	VMT, vehicle miles travelled
PM, particulate matter	Yd ³ , cubic yards

V. Existing Air Quality

Spring Creek is located approximately 11 miles north of Decker, Montana. The air quality in this area is currently unclassifiable/attainment for all National Ambient Air Quality Standards (NAAQS) and Montana Ambient Air Quality Standards (MAAQS) pollutants. The closest nonattainment areas (NAA) are the 1-hour and 24-hour SO₂ NAA in Billings and Laurel, located approximately 86 and 98 miles, respectively, northwest of the mine. A CO maintenance area also exists in the Billings area.

Monitoring of PM₁₀ concentrations at the site was performed from initial mine development through 2012. The recorded values confirmed the designated PM₁₀ ambient air quality status throughout the monitoring period. This data is on file with the Department. At the request of Spring Creek, the Department authorized discontinuation of monitoring in 2012 as recorded PM₁₀ values were sufficiently below the state and federal standards throughout the monitoring period.

VI. Ambient Air Impact Analysis

Mining operations occur in six pit areas within the mine permit boundary. SCM owns or controls all lands within the permit boundary and the mined areas will be reclaimed after mining is complete. The proposed modification will result in an emissions increase of particulate matter (PM₁₀ and PM_{2.5}) from the currently permitted levels. Particulate emissions will primarily occur from material handling activities, stationary combustion sources, nonroad sources, blasting, fugitive emissions from wind erosion, haul road fugitive emissions, and crushing processes. Particulate emission estimates were developed for the years from 2013 through 2025. Mine production years 2016 and 2018 were selected as the worse-case years to be modeled based on the maximum project particulate emissions and relative proximity to the permit boundary.

As part of the cumulative impact analysis a single off-site facility was directly included in the modeling demonstration. At the time of this modeling demonstration Wolf Mountain Coal Inc. (Wolf Mtn.) was not constructed. However, the facility is permitted under MAQP 4962-00 to install and operate a stoker coal processing and load out facility to be located immediately north and adjacent to the Spring Creek Mine site. The legal site location description for Wolf Mtn. is the Northwest ¼ of Section 18, Township 8 South, Range 40 East in Big Horn County. The total permitted PM₁₀ and PM_{2.5} emissions are 11.22 and 1.27 tons per year (tpy), respectively. Impacts from the Decker Coal mine, located approximately 1.4 miles to the southeast, were considered to be accounted for within the background concentration that was derived from historic on-site monitoring.

Mine plan production year 2018 presented the highest modeled results, with the exception of the modeled annual PM_{2.5} concentration. In this case, a slightly higher concentration was estimated using the 2016 emissions compared to the 2018, but the difference was insignificant. Therefore, the results of the 2018 modeling demonstration are presented in Table 1. For the 24-hour PM₁₀ modeled concentration, the high-second-high (H2H) concentration was selected since one exceedance is allowed per year whereas the highest (H1H) is selected for the annual averaging for both PM₁₀ and PM_{2.5}. The 98th percentile or high-eighth-high (H8H) was selected for the modeled 24-hour PM_{2.5} concentration according to USEPA guidance.

Table 1 – Modeled PM₁₀ and PM_{2.5} Concentrations

Pollutant	Averaging Period	Modeled Concentration (µg/m ³) ¹	Background Concentration (µg/m ³)	Total Concentration (µg/m ³)	NAAQS/MAAQS ² (µg/m ³)	Percent of Standards (%)
PM ₁₀	24-Hour	91.0 (H2H)	38.0	129.0	150	86.0
	Annual	24.0 (H1H)	14.5	38.5	50 ³	77.0
PM _{2.5}	24-Hour	13.6 (H8H)	15.0	28.6	35	81.7
	Annual	4.0 (H1H)	5.5	9.5	12	79.2

¹ µg/m³ = micrograms per cubic meter.

² NAAQS/MAAQS = National Ambient Air Quality Standards/Montana Ambient Air Quality Standards.

³ The annual PM₁₀ NAAQS has been revoked by the USEPA but an annual PM₁₀ MAAQS still exists.

In summary, the dispersion modeling results indicate the proposed increase in production will not likely cause or contribute to a violation of the federal or state ambient air quality standards. However, due to concerns regarding the effectiveness of current available emission estimates to accurately depict emissions from surface coal mines and the directives established by the Department's Ambient Monitoring Requirements Guidance Statement (10/09/98), Spring Creek shall be required to install and operate an ambient air quality monitoring network when annual coal production level achieves 24 million tons during any rolling 12-month period to ensure the proposed increase in production will not cause or contribute to a NAAQS/MAAQS violation.

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.

VIII. Environmental Assessment

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

MAQP Analysis prepared by: Doug Kuenzli

Date: August 26, 2014

DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Air Resources Management Bureau
P.O. Box 200901, Helena, Montana 59620
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FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued To: Spring Creek Coal, LLC

Montana Air Quality Permit Number: MAQP#1120-12

Preliminary Determination Issued: 09/10/ 2014

Department Decision Issued: 09/30/2014

Permit Final 10/16/2014:

1. *Legal Description of Site:* Spring Creek Coal, LLC (Spring Creek) operates a surface coal mine located about 11 miles north of Decker, Montana. The mine covers portions of Sections 13, 14, 15, 21, 23, 24, 25, 26, and 27 in Township 8 South, Range 39 East, Sections 18, 19, 20, 27, 28, 29, 30, 31, 32, and 34 in Township 8 south, Range 40 East; Sections 1 and 12 in Township 9 South, Range 39 East; and Sections 3, 6, 7, 10, 11, and 15 in Township 9 South, Range 40 East, all in Big Horn County, Montana.
2. *Description of Project:* Spring Creek submitted a permit application to modify MAQP#1120-11 for the proposed increase in total mine production limit from 24 million tons to 30 million tons per year. No new equipment or activities would be permitted under the current permit action.
3. *Objectives of Project:* The issuance of MAQP #1120-12 would authorize Spring Creek to expand facility operations to increase annual coal production.
4. *Alternatives Considered:* In addition to the proposed action, the Department of Environmental Quality – Air Resources Management Bureau (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 Spring Creek 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 MAQP #1120-12.
6. *Regulatory Effects on Private Property:* The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department 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.

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

Air quality impacts from the current permit action would be minor, though there would be a potential increase in air emissions which could result in an increase of deposition of pollutants within terrestrial and aquatic life habitats. The activities associated with the current permit would be conducted within the boundaries of the existing Spring Creek coal mine and conditions which control fugitive dust are required within MAQP #1120-12 to ensure significant air quality impacts would not occur. Such conditions include; specific best management practices, requirement to maintain a fugitive dust control plan, as well as, inherit reasonable precautions requirements. In addition, Spring Creek does extensive monitoring of wildlife as part of their State Mining Permit C1979012. Results of the monitoring are on file with the Montana Department of Environmental Quality - Industrial and Energy Minerals Bureau (IEMB). Based on these conclusions, the Department has determined that the impact to terrestrial and aquatic life and habitats related to the current permit action would likely be minor.

B. Water Quality, Quantity and Distribution

This project would expect to have a limited effect on the water quality, quantity, and distribution due to the use of water for fugitive dust suppression. Particulate matter emissions from disturbance of soils and underlying subsurface material would be deposited at varying distance within the mine boundary and beyond depending upon particle size, location of release and immediate meteorological conditions. However, with the nature of pollutants and generally good dispersion in the area, only minor pollutant deposition on surface waters near the project area are expected to occur from these disturbances and

associated roadways. Any air emissions from this source would not likely impact groundwater. Water would be required for fugitive dust suppression within the mine site; however water use is not expected to increase substantially with the current permit action and any water spray for dust suppression would likely result in the water being evaporated to the atmosphere shortly after its application which minimizes water quality concerns. Therefore, the Department has determined that the impacts to the water quality, quantity, and distribution would likely be minor.

C. Geology and Soil Quality, Stability and Moisture

The activities associated with the current permit action would be conducted within the boundaries of the existing Spring Creek coal mine. Additionally, Spring Creek performs extensive testing of soils and geology as part of their State Mining Permit C1979012. The results from this testing are on file with the IEMB. Further, the air quality permit associated with this project would contain limitations and conditions to minimize emissions to areas beyond the permit boundary effectively reducing the potential impact. Therefore, the Department has determined that the impacts to the geology and soil quality, stability, and moisture related to the current permit action would likely be minor.

D. Vegetation Cover, Quantity, and Quality

The particulate matter emissions increase from this project would be expected to have a limited impact on the surrounding vegetation with respect to cover, quantity and quality. Any impacts from emissions or deposition of pollutants would be minor due to dispersion characteristics of the pollutants, prevailing atmospheric conditions, and the conditions that would be placed in MAQP #1120-12. The activities associated with the permit action would be conducted within the existing boundary of the existing Spring Creek coal mine. Further, Spring Creek performs extensive testing of soils and geology as part of their State Mining Permit C1979012. Results from the testing are on file with the IEMB. Therefore, the Department has determined that the impacts to the vegetation cover, quantity, and quality related to the current permit action would be expected to be minor.

E. Aesthetics

There will be no additional equipment added to the mine site and activity levels, including noise, would be consistent with existing coal mine operations. There are visual emissions associated with the proposed coal mine; however, conditions would be placed in MAQP #1120-12 to limit these visible emissions. The Department has determined that the impacts to the aesthetics related to the current permit action would be minor.

F. Air Quality

The area surrounding the proposed project is unclassifiable/attainment for the NAAQS for all criteria air pollutants. The Department believes that current concentrations of criteria pollutants in the area are at or near background levels and well below any NAAQS levels. The proposed production increase would impact receptors and resources within the proposed project area due to an increase in fugitive emissions of particulate matter. However, conclusions from the current modeling analysis and past monitoring indicate the current action will not likely substantially degrade air quality.

The Department has determined that the amount of increased particulate emissions resulting from the proposed project would not cause a significant degradation and any impact to air quality from the proposed project would be expected to be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The current permit action would occur within the previously disturbed industrial site at the mine. As part of the MEPA analysis on initial mine development, assessments of potential impacts to unique endangered, fragile, or limited environmental resources were done by the Department, including contact with the Montana Natural Heritage Program – Natural Resource Information System (NRIS) to identify species of special concern at the mine site. The Department determined that impacts to unique endangered, fragile, or limited environmental resources associated with the current permit action would be minor because of the lack of change to the mine boundary and the conditions placed in MAQP #1120-12.

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

The current permitting action would have a minor impact to the demand on environmental resources of water, air, and energy. Additional demand for water and energy will be required for coal extraction activities and fugitive dust suppression. However, these demands are expected to be representative of current levels. Pollutant emissions generated from the proposed permit action would have limit demands on air because of the conditions placed in MAQP #1120-12. Overall, the Department determined that the demands on the environmental resource of water, air, and energy related to the current permit action would be minor.

I. Historical and Archaeological Sites

The current permit action would occur within the previously disturbed industrial site at the mine. According correspondence from the Montana State Historic Preservation Office, there is low likelihood of adverse disturbance to any known archaeological or historic site because of previous industrial disturbance within the area. Therefore, the Department determined that the likelihood that the current permit action would have an impact on historical or archaeological sites would be expected to be minor.

J. Cumulative and Secondary Impacts

The cumulative and secondary impacts from the proposed project on physical and biological receptors in the immediate area due to an increase in emissions from the proposed project would be expected to be minor. Air pollution from the facility would be controlled by Department-determined BACT, as discussed in Section III of the permit analysis, along with the limitations and conditions in MAQP #1120-12. The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as outlined within the air quality permit.

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.*

Potential Social and Economic Effects							
Item	Description	Major	Moderate	Minor	None	Unknown	Comments Included
A	Social Structures and Mores				✓		yes
B	Cultural Uniqueness and Diversity				✓		yes
C	Local and State Tax Base and Tax Revenue			✓			yes
D	Agricultural or Industrial Production			✓			yes
E	Human Health			✓			yes
F	Access to and Quality of Recreational and Wilderness Activities			✓			yes
G	Quantity and Distribution of Employment				✓		yes
H	Distribution of Population				✓		yes
I	Demands for Government Services			✓			yes
J	Industrial and Commercial Activity			✓			yes
K	Locally Adopted Environmental Plans and Goals				✓		yes
L	Cumulative and Secondary Impacts			✓			yes

SUMMARY OF COMMENTS ON POTENTIAL ECONOMIC AND SOCIAL EFFECTS: The following comments have been prepared by the Department.

A. Social Structures and Mores

The current permitting action would not create additional disruption to any native or traditional lifestyles or communities (social structures or mores) in the area as the area surrounding project area is currently undeveloped agricultural or livestock grazing land. Furthermore, the project will occur within the boundary of the existing mine and the increase in activity would be representative of current use. The Department is not aware of any current utilization by native or traditional communities. Therefore no known impact to social structures and mores would be expected.

B. Cultural Uniqueness and Diversity

The Department determined that the current permit action would not have any additional impact on the cultural uniqueness and diversity of this area of operation because the proposed project would occur within the previously disturbed industrial area. The surrounding area would remain unchanged as a result of the proposed project.

C. Local and State Tax Base and Tax Revenue

The current permit action could potentially increase the impact on the local and state tax base and tax revenue due to an increase in coal production. However, the increase in coal production is scheduled to progress over an extending time period with peak production occurring in a two year period and decrease beyond peak production. In turn, no additional employees are planned as a result of this project. Therefore the cumulative impact to the tax base and revenue would be to be minor.

D. Agricultural or Industrial Production

The current permit action would occur within the previously disturbed industrial area; therefore, the Department would not expect an impact to or displacement of agricultural production. The proposed project does increase coal production from the current permitted amount of 24 million tons per year to 30 million tons per year; therefore an increase in industrial production will occur. The overall impacts to agricultural or industrial production would be expected to be minor.

E. Human Health

The proposed project would result in a minor increase in emissions due to an increase in coal production levels. However, MAQP #1120-12 contains limitations and conditions including, but not limited to, the BACT requirements discussed in Section III of the permit analysis, to ensure that the operations would maintain compliance with all applicable rules and standards. These rules and standards are designed to be protective of human health. Any impact to human health from the proposed project would be expected to be minor.

F. Access to and Quality of Recreational and Wilderness Activities

The current permit action would occur within the existing mine boundary and would not impact access to recreational and wilderness activities. Emissions from the proposed project may potentially present an increase in impacts to the quality of recreational activities; however these impacts would be minimized as a result of the conditions that would be placed in Permit #1120-12. No designated wilderness areas would be impacted by the project. Therefore, the associated impacts on the access to and quality of recreational and wilderness activities would likely be minor.

G. Quantity and Distribution of Employment

According to Spring Creek the proposed project would not necessitate the hiring of additional employees; therefore no effect on the quantity and distribution of employment would be expected as a result of the expansion.

H. Distribution of Population

There are approximately 260 employees at the Spring Creek mine and no full time or permanent employees would be added as a result of proposed project associated with MAQP #1120-12. Therefore the distribution of population in the area would not be impacted as a result of the current permit action.

I. Demands for Government Services

Government services would be required for acquiring the appropriate permits from government agencies and for ongoing interaction with Spring Creek. The proposed project would not likely increase the need for government service resources beyond the current capacity. As a result of this project any addition demands for government services would be expected to be minor.

J. Industrial and Commercial Activity

The proposed project would result in a substantial increase in production from the mine site; however, the industrial activity would be commensurate with current operations and not additional equipment or manpower would be requirement. Furthermore, the proposed increase progression would occur over multiple years culminating in a peak production for two years (2017 & 2018) and a steady decline thereafter. As such, only minor increases to industrial and commercial activity would be expected to occur.

K. Locally Adopted Environmental Plans and Goals

The Department is not aware of any locally adopted environmental plans or goals that would be affected by the proposed project.

L. Cumulative and Secondary Impacts

Overall, cumulative and secondary impacts from this project would result in only minor impacts to the social and economic aspects addressed. The Department believes that Spring Creek would be expected to operate in compliance with all applicable rules and regulations as outlined in MAQP #1120-12.

Recommendation: No Environmental Impact Statement (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 a proposed increase in coal production which results in only minor impacts to items addressed within this EA. MAQP #1120-12 includes conditions and limitations to ensure the facility will 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 Resources Management Bureau

EA prepared by: Doug Kuenzli

Date: August 26, 2014