

Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. *Applicant/Contact name and address:* Spring Creek Coal LLC
67 Lakeshore Drive
PO Box 67
Decker, MT 59025

2. *Type of action:* Application to Change Water Right No. 42B 30062719 to change Beneficial Water Use Permit No. 42B 73493 00

3. *Water source name:* Ground water well

4. *Location affected by project:* The place of use is Sections 22, 23, 24, and 25, Township 8S, Range 40E, Big Horn County. The point of diversion is a 75-foot deep well in the NESWSW of Section 34 Township 8S, Range 40E, Big Horn County.

5. *Narrative summary of the proposed project, purpose, action to be taken, and benefits:*

The applicant seeks to change a Beneficial Use Permit for 200 GPM flow and 150 AF diverted volume from ground water for mining operations, which include pollution abatement, dust control, and dust suppression on mine haul roads. The period of use and the period of diversion is January 1st to December 31st. The applicant will replace a previously used well that was mined over, expand the place of use to include the entire Spring Creek Coal mine, and add three existing places of storage to the provisional permit. The DNRC shall issue a change authorization if an applicant proves the criteria in 85-2-402 MCA are met.

6. *Agencies consulted during preparation of the Environmental Assessment:
(include agencies with overlapping jurisdiction)*
 - U.S. Fish and Wildlife Service and Montana Natural Heritage Program; Endangered, Threatened Species and Species of Special Concern, wetland mapper

 - Montana Department of Fish Wildlife & Parks (MFWP); Dewatered Stream Information

 - Montana Department of Environmental Quality (MDEQ); TMDL Information

 - U.S. Natural Resource Conservation Service (NRCS); web soil survey

Part II. Environmental Review

1. Environmental Impact Checklist:

<h2>PHYSICAL ENVIRONMENT</h2>

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity - *Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

The proposed well is located 1,940-ft west of the Tongue River Reservoir (Reservoir). The Reservoir is not listed on the 2005 Department of Fish, Wildlife and Parks Impaired Stream List; however the Tongue River from the state line to the T &Y Diversion is listed. The Reservoir is upstream of the T &Y Diversion. The shallow clinker/coal and gravel aquifer in this area is unconfined and appears to be in direct hydraulic connection with the Reservoir. Calculations by the Applicant and DNRC both predict less than 1.0 foot of drawdown at the pumping well in 5-years. The new well will cause slight changes in the rate and timing of depletions to the Reservoir, but over the course of the year depletions to the Reservoir will remain unchanged. 5 GPM out of 200 GPM of water put to beneficial use will eventually recharge the aquifer as it percolates through the soil profile to the aquifer; the rest will be lost via evaporation from storage ponds and dust control application. The Tongue River will not be depleted by the well. Any depletion to the Reservoir should be overcome by the ability of the Reservoir to store water, resulting in no change in depletions downstream of the Reservoir. The proposed ground water well will not worsen the dewatering of the Tongue River from the state line to the T&Y Diversion.

Determination: No significant impact

Water quality - *Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

MT DEQ's 303 (d) list states the Tongue River from the state line to the T&Y Diversion is impaired due to iron, salinity and sedimentation. The Tongue River Reservoir (Reservoir) is impaired because of dissolved oxygen and solids (suspended/bedload). Water quality should not worsen due to ground water pumping associated with this application because depletions to the Reservoir will remain unchanged over the course of the year and the Tongue River above and below the Reservoir will not be affected by well operations. The diverted volume will be used for pollution abatement and dust control on mine haul roads. This use reduces the amount of fine particulate matter in the air and therefore reduces the amount of fine particulate matter that could settle on nearby water body surfaces. The beneficial use associated with this application will not negatively affect water quality of the Tongue River or the Reservoir.

Determination: No impact

Ground water - *Assess if the proposed project impacts ground water quality or supply. If this is a ground water appropriation, assess if it could impact adjacent surface water flows.*

The Tongue River Reservoir (Reservoir) acts as a positive boundary and water will be drawn into the shallow aquifer from the Reservoir due to pumping. The mixing of surface and ground water will slightly alter the geochemical properties (minus pollutants) of the ground water, however due to historic hydraulic connections between the two and similar lithologies below and around the Reservoir any chemical changes to ground water are predicted to be negligible. Predicted drawdown effects to nearby users should in-fact decrease because the Applicant proposes to locate the new well further from the closest existing ground water user. Calculations by the Applicant and DNRC both predict less than 1.0 foot of drawdown at the pumping well in 5-years. As to surface water users below the dam, any changes in seasonal depletions above the dam should be overcome by the ability of the Reservoir to store water, resulting in no change in depletions for these downstream users.

Determination: No significant impact

DIVERSION WORKS - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

The proposed ground water well is located approximately 1,940-ft. from the west shore of the Tongue River Reservoir. Hwy. 314 is between the well and the Reservoir. The well will be located in a dry upland area and will not impact critical riparian habitat (Montana's Natural Heritage Wetland and Riparian Map Viewer). Well(s) will be completed to a depth of approximately 80-feet by a licensed water well contractor. Ideally, a single well will be constructed and a 30 hp pump capable of producing 200 GPM will be used. If one well is inadequate to achieve the required flow rate, additional wells may be constructed (up to four wells total). Water from the well will be pumped to holding ponds, where it will then be pumped into water trucks. The wells construction and operation will not cause any channel/bank modifications to the Reservoir nor modify surface flow into the Reservoir. The rate and timing of ground water depletions into the Reservoir will change slightly because the new well is closer to the Reservoir, but will remain the same over the course of the year. The proposed wells' construction and operation will not create a barrier to fish or affect the Tongue River Dam.

Determination: No impact

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species - *Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For ground water, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

According to the US Fish and Wildlife Service and Montana Natural Heritage Program in Township 8S, Range 40E there are no endangered plants or plant species of concern. There are 17 animal species of concern: Townsend's Big-eared Bat; Black-tailed Prairie-Dog; Golden Eagle; Great Blue Heron; Greater Sage-Grouse; Yellow-billed Cuckoo; Loggerhead Shrike; Sage Thrasher; Brewer's Sparrow; Spiny Softshell; Snapping Turtle; Western Hog-nosed Snake; Milksnake; Common Sagebrush Lizard; Plains Spadefoot; and Suager. Drilling the well will

produce noise and disturb a small tract of land (< 1/4 mi²). Once completed, trucks will make regular trips to storage ponds to fill up their water tanks. The noise and commotion associated with the construction and operation of this project are of short duration and will minimally impact species of special concern, when compared to current activities occurring at the mine. The rate and timing of ground water depletions into the Tongue River Reservoir will change slightly, but the total quantity of water withdrawn from the Reservoir will remain the same over the course of the year. Therefore, pumping will not influence threatened, endangered, current or potential species of concern.

Determination: No significant impact

Wetlands - Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.

Determination: N/A project does not involve wetlands or critical riparian habitats.

Ponds - For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.

Determination: N/A project does not involve ponds.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.

According to soil survey data provided by the NRCS, soil within the place of use consists mostly of clays and loams and are non-saline to very slightly saline (0.0 - 4.0 mmhos/cm). The water diverted for dust suppression on mine haul roads would either be evaporated or absorbed by the soils. Saline seep would be minimal if it did occur. Soil moisture content would parallel geospatial patterns of water use. Water use is typically greatest during the summer months (up to 450 GPM) and least during the winter months (25-50 GPM). Soil moisture would be slightly greater than average during the summer and winter due to the beneficial use. Soil stability below the road should stay the same; slight erosion could occur on the sides of mine haul roads due to high velocity water falling from the truck, though this should be minimal due to the mine historically applying water for dust abatement. The quality of the soils would not be altered by the application of ground water.

Determination: No significant impact

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.

Soil and vegetation will be disturbed during the construction of the well. There is a possibility of noxious weeds being spread and establishing themselves within the disturbed site. It is expected that Spring Creek Coal LLC will take an active role to reduce that risk.

Determination: No significant impact

AIR QUALITY - Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.

There should be no deterioration of air quality or adverse effects on vegetation due to increased air pollutants from this proposed project. The Applicant is required to keep dust levels in the ambient air down to comply with MT DEQ air quality permit no. 1120-10. Applying water to haul roads and the coal processing plant areas enable the Applicant to meet these standards.

Determination: No impact

HISTORICAL AND ARCHEOLOGICAL SITES - Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands. If it is not on State or Federal Lands simply state NA-project not located on State or Federal Lands.

Determination: NA - project not located on State or Federal Lands

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - Assess any other impacts on environmental resources of land, water and energy not already addressed.

There should be no significant impacts on other environmental resources of land, energy, and water from this proposed use.

Determination: No impact

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.

This proposed use is not inconsistent with locally adopted environmental plans and goals for Bighorn County.

Determination: No impact

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.

Seeing how no designated wilderness exists within or near the Spring Creek Coal mine, this proposed activity will not impact access to or the quality of recreational and wilderness activities.

Determination: No impact

HUMAN HEALTH - Assess whether the proposed project impacts on human health.

There should be no significant impact on human health from this proposed use.

Determination: No Impact

PRIVATE PROPERTY - Assess whether there are any government regulatory impacts on private property rights.

Yes___ No_x__ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.

Determination: No impact

OTHER HUMAN ENVIRONMENTAL ISSUES - For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.

Impacts on:

- (a) Cultural uniqueness and diversity? No significant impact
- (b) Local and state tax base and tax revenues? No significant impact
- (c) Existing land uses? No significant impact
- (d) Quantity and distribution of employment? No significant impact
- (e) Distribution and density of population and housing? No significant impact
- (f) Demands for government services? No significant impact
- (g) Industrial and commercial activity? No significant impact
- (h) Utilities? No significant impact
- (i) Transportation? No significant impact
- (j) Safety? No significant impact
- (k) Other appropriate social and economic circumstances? No significant impact

2. *Secondary and cumulative impacts on the physical environment and human population:*

Secondary Impacts: All secondary impacts of this water use are overshadowed by the impacts of the larger mine operation that is occurring around the project.

Cumulative Impacts: This water use is expected to have little negative impact on surface water and will not impact the quantity and quality of ground water.

3. Describe any mitigation/stipulation measures:

No mitigations or stipulations exist for the application.

4. Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:

The proposed activity is reasonable, and is within accepted practices for the ongoing mine operations and mineral exploration. The no action alternative may force the Spring Creek Coal LLC to truck or fly the water they need for this activity to the site. This would require more traffic and equipment that may create more impacts on the environment.

PART III. Conclusion

1. Preferred Alternative: To issue the permit and allow this project to continue.

2. Comments and Responses: None to report

4. Finding:

Yes ___ No x Based on the significance criteria evaluated in this EA, is an EIS required?

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action: No significant environmental impacts were identified. No EIS required.

Name of person(s) responsible for preparation of EA:

Name: Melissa Brickl

Title: Hydrologist/Water Specialist

Date: 10.03.2012