

**MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY COAL AND URANIUM PROGRAM CHECKLIST
ENVIRONMENTAL ASSESSMENT
FOR SURFACE AND UNDERGROUND MINING PERMIT**

DATE: December 3, 2015

SITE: Rosebud Coal Mine Area B

PERMITTEE: Western Energy Company

CITY/TOWN: Colstrip

PERMIT ID: C1984003B

COUNTY: Rosebud

PROJECT: Amendment AM4

LOCATION: Area B is located in the following:

T1N, R40E; Sections 8, 9, 11, 12, 13, 14, 15, 16 and 17

T1N, R41E; Sections 2, 3, 4, 5, 7, 8, 9, 10, 11, 17 and 18

MINERAL PROPERTY OWNERSHIP (Area B):

Federal State Private County Tribal

SURFACE PROPERTY OWNERSHIP (Area B):

Federal State Private County Tribal

BACKGROUND: Rosebud Mine Area B was originally permitted on January 18, 1978. A total of three amendments to the original permit area have been previously approved. Additionally, the permit area has been adjusted with a couple of incidental boundary changes (surface disturbance only – no additional mining).

TYPE AND PURPOSE OF ACTION: Western Energy Company (Western) applied to the Montana Department of Environmental Quality (DEQ) for an amendment to the Rosebud Mine Area B surface mining permit (the permit). This amendment request proposes the following changes to the permit: a 49 acre or 0.8% increase in area permitted (6,182 to 6,231), a 146 acre or a less than 3% increase in the proposed amount of surface disturbance limit (5,531 to 5,677), 8.6% increase in the minable coal reserve (approximately 12.1 million tons), 306 more acres of coal removal or 8.3% increase in the amount of coal aquifer disturbed (3,686 to 3,992), re-calculation of the performance bond to account for current practices and conditions (increase from \$48,403,696 to \$73,650,000), and changes to the post mine topography (PMT). The additional proposed disturbance and mining would be a continuation of existing operations to the south and east. Performance bond associated with the additional proposed disturbance and mining would be an insignificant portion of the before mentioned bond increase. As coal is removed, the operator would proceed with reclamation according to the requirements of the Reclamation Plan, as described in Section 17.24.313 of the currently approved permit. Topsoil would be removed prior to mining and either direct-hauled to areas graded to the approved PMT or stockpiled. Soil stockpiles would be marked with an identification sign and stockpiles would be protected from erosion. Currently approved permit maps depicting vegetation plans would need to be reviewed and updated as a general course of permit renewal, mid-permit review or an additional minor revision to the permit. Regardless of future permit revisions, the vegetation plan would be monitored over time and adjusted as necessary to achieve successful establishment of plant communities which would support the approved post-mine land use.

N= No Present or No Impact will occur.

Y= Impacts may occur (explain under Potential Impacts).

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
<p>1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are soils present which are fragile, erosive, susceptible to compaction, or unstable? Are there unusual or unstable geologic features? Are there special reclamation considerations?</p>	<p>[N] There were no soils identified as fragile, erosive, susceptible to compaction, or unsuitable in the premine soil survey. A majority of the area was previously disturbed through agricultural practices, and the remaining areas are contiguous gently sloping rangeland. No special features or reclamation considerations are present.</p> <p>Soils for reclamation will be handled following currently established mining practices as designated in permit C1984003B of which this action is amending. Two 12 inch soil lifts will be salvaged and used directly on reclamation or stockpiled separately for later use when there are no areas ready for resoiling.</p> <p>Stockpiled soils will be protected from degradation and loss with standard best management practices and seeding with non-noxious species. Prior to redistribution the spoil surface is evaluated for suitability per the DEQ soil and spoil quality guideline. This process aims to ensure there is an adequate rooting zone for targeted species, and aims to leave a useful topography with substrates for establishing diverse and effective vegetation.</p>
<p>2. WATER QUALITY, QUANTITY AND DISTRIBUTION: Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?</p>	<p>[Y] <u>Groundwater</u></p> <p>Mining of the proposed AM4 amendment would continue removal of overburden and Rosebud coal to the south of existing mining, resulting in an increase of 306 acres (8.3%) of disturbance to the Rosebud coal aquifer in the east part of Area B. Mining has caused and will continue to cause changes to both the quantity and the quality of the groundwater in the mine area.</p> <p><u>Possible impacts to groundwater quantity.</u></p> <p>Head decline in the Rosebud coal aquifer, the aquifer most profoundly impacted by mining, would increase in depth and extent with mining proposed in AM4. Modeled head decline in the eastern most cuts of Area B at the end of mining proposed under AM4 in 2026 is predicted to be 110 feet, an increase of approximately 30 to 40 feet over the decline anticipated from modeling for the same location at the end of currently</p>

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approved mining by 2020. An increase of 5 feet of head decline in McKay coal is predicted as the result of expanded mining under proposed AM4. After 50 years of postmining recovery, modeling results indicate that Rosebud coal head decline is anticipated to remain approximately 15 feet greater from mining under proposed AM4 than it would from currently approved mining. The difference in aerial extent of anticipated decline indicated by comparison of modeling results of currently approved operations and proposed operations under AM4 is not significant. The steepest decline in head that is anticipated to result from expanded mining under AM4 would take place within the permit boundary, with head decline dropping to 5 feet approximately two miles south of the permit boundary. It is not expected that head decline attributable to expansion of mining in Area B will adversely affect any wells located outside the area of any permit for the Rosebud Mine.

Although it could take considerable time, the premine groundwater flow gradient inside and outside the permit area is expected to recover because recharge and discharge areas for the Rosebud coal aquifer will not be affected by mining. The hydraulic characteristics of the spoils are similar to that of the Rosebud coal and will facilitate storage and transmission of groundwater between the undisturbed up-gradient and down-gradient coal aquifers.

Existing and anticipated groundwater uses outside the permit area include wildlife and livestock drinking water and domestic supply. The proposed expansion of mining operations under AM4 is not expected to reduce the quantity of water in affected areas to a level that would impair an existing source of water during and after mining. The extensive groundwater monitoring system will identify decreases in groundwater head inside and outside the permit area. Private wells unexpectedly affected by diminished supply due to mining drawdown must be replaced by the operator.

Potential Impacts to Groundwater quality.

During mining, disturbed overburden (spoil) from each successive cut is cast into the previous cut and then slowly saturates. The source of this recharge is groundwater migrating mainly laterally from unmined Rosebud coal to the unsaturated spoil backfill, although surface water may also contribute locally. Concentrations of total dissolved solids (TDS) in the spoil backfill are, on average, greater than that of the Rosebud coal that they replace. Increases in the concentrations of sulfate, calcium, and magnesium dissolved from overburden minerals contribute to the increase in TDS. It is anticipated that concentrations of

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TDS in spoil water will increase by approximately 2% of the median and 4% of the average TDS concentration in overburden groundwater, and an approximate increase of 41% of the median and 48% of the average TDS concentration of Rosebud coal groundwater. Based on bench tests and paste extract modeling, spoil water quality is expected to improve as upgradient water moves through the spoil and returns to concentrations closer to those of the Rosebud coal. Proposed AM4 mining would increase the amount of spoil and thus the volume of groundwater affected by mining. This would also increase the amount of time for spoil water quality to improve in Area B.

Based on the flow direction of groundwater, spoil water in the southeast part of Area B is expected to move east and southeast toward the coal crop in Rosebud Mine Area E and Big Sky Mine Area A. Saturated thickness of the Rosebud coal seam typically thins toward and becomes dry at the coal crop, lessening the lateral extent and area of impact of spoil water with higher concentrations of TDS.

Mixing of spoil with the background Rosebud coal water will take place as groundwater from the spoil moves to the south. There are no wells identified in the private well inventory that are completed in the Rosebud coal in the area between the Rosebud Mine and Big Sky Mine. No uses are expected to be impacted and numeric water quality standards are not expected to be exceeded based on spoil water quality. Due to the natural spatial and temporal variability of water quality in Area B spoils, the unmined coal between Area B and the Big Sky Mine, and Big Sky Area A spoils there is no generally accepted methodology to predict impacts with any certainty. Due to a large deposit of clinker throughout much of the area between the two mines, enhanced aquifer recharge will serve to dilute spoil water quality impacts in this area, therefore it does not appear that a parameter will increase to a level that would violate a numeric water quality standard for groundwater or render the water unsuitable for domestic use or livestock and wildlife watering or domestic use, or harmful, detrimental, or injurious to the beneficial uses listed for Class II and Class III groundwater. As such, adverse impacts to the hydrologic balance outside the proposed AM4 permit area are not expected, and the hydrologic regime will remain suitable in terms of water quality for all listed beneficial uses for groundwater.

Because expanded mining proposed under AM4 is restricted to the southeastern boundary of Area B, it is not anticipated that the proposed expanded mining operations will result in intensification of any potential impacts in other areas in the expanded permit area, the other permit

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	<p>areas, and in the area of drawdown for the Rosebud Mine.</p> <p>Deeper units including the interburden, the McKay coal seam, and the sub-McKay underburden are protected from vertical leakage by mudstones and silty sandstones with low conductivity, and it is not anticipated that proposed expanded mining operation under AM4 will result in intensification of any potential impacts to water quality in those units.</p> <p><u>Potential impacts to water quality-parameters governed by numeric standards.</u></p> <p>Exceedances of numeric standards that have been observed at the Rosebud mine area for cadmium, fluoride, lead, nickel, selenium, and zinc. Some of these exceedances, especially in the 1970s and early 1980s may be attributable to imprecise sampling methods or problems with laboratory analysis and are considered to be anomalous.</p> <p>Arsenic occurs naturally at concentrations which can exceed human health standards in aquifers in the Fort Union Formation. There is no indication that mining has caused or created a situation that has contributed the occurrence of arsenic inside or outside the mine areas. None of the exceedances reported for arsenic are may be attributed to mining operations.</p> <p>Exceedances in nitrate/nitrite are generally attributable to causes other than mining. One nitrate/nitrite exceedance that may be attributable to mining operations is located within the Area B permit boundary and is not expected to cause contamination, but require expanded monitoring by placing monitoring wells between the location of the exceedance and the permit boundary.</p> <p>[Y] <u>Surface Water</u></p> <p>The drainage system of the greater Colstrip area consists of mainly ephemeral streams which feed into Armells Creek or Rosebud Creek. These two main creeks in turn are minor tributaries to the Yellowstone River. Both Armells Creek and Rosebud Creek have ephemeral, intermittent, and occasional perennial stretches. All of the drainages within the Rosebud Mine permit areas are classified as C-3 with a majority considered C-3 ephemeral.</p> <p>The proposed increase in mining would result in an expansion of the life of mine disturbance area. The proposed mine cuts would be located near the drainage divide with Rosebud Creek and cut into small tributaries of</p>

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East Fork Armells Creek. These tributaries have already been partially mined through, and many of the lower reaches of the tributary drainages have already been reclaimed. The existing haul roads that would be used to access the additional proposed mining areas were built along the premine drainage channels, and these roads are proposed to be reclaimed as the postmine tributary channels. The proposed amendment area and mine cut area does not currently contain any springs or stock water ponds.

Potential impacts to surface water quantity.

The proposed expansion of mining operations under AM4 would not significantly increase anticipated hydrologic impacts to surface water resources within and adjacent to Area B and other permitted areas, including the East Fork Armells Creek drainage. Since the acreage to be added under AM4 is upstream of current mining activities and would not disturb new drainage basins, the proposed expansion would not result in any further decrease in the quantity of natural runoff to drainages downstream of the mine during operations. The results of surface water runoff models were used to assess potential impacts to surface water quantity for downstream users after final reclamation. The results of modelling indicate that proposed changes to postmine drainage basin size, land use, and vegetation would not result in a significant change in the quantity of runoff or peak discharge anticipated under currently approved postmine reclamation.

Potential impacts to surface water quality-total suspended solids (TSS).

Modeling of storm driven runoff indicates that water quality from flows in well-vegetated postmine channels proposed under AM4 is expected to be similar to premine runoff water quality or contain less sediment. During mining and while vegetation is re-establishing, sediment ponds and other best management practices would treat or retain runoff preventing excess sediment from entering native drainages. Surface water quality from the affected tributaries to East Fork Armells Creek should be similar to previous expectations for postmine water quality with no changes expected for stock or wildlife use attributable to TSS.

While the proposed postmining topography for the amendment would approximate the premine landscape, there would be some changes in drainage basin size, channel location, and upland topography. The proposed mine plan would include more mining into steeper, more diverse upland and ridge topography. These areas would be reclaimed to less steep terrain with fewer headwater tributaries and reduced

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	<p>topographic diversity. AM4 changes the postmine topography throughout the Area B east permit. The overall distribution of the terrain's aspect would be similar between the proposed PMT and the approved PMT; 39% of the Area B permit area would have north or northeast aspects in both the approved and proposed PMT. The premine permit area landscape had approximately 46% of the area with north or northeast aspects. North aspects aid in the retention and slower release of snow in the winter and spring.</p> <p><u>Potential impacts to surface water quality.</u></p> <p>The proposed AM4 amendment and associated disturbance area in Rosebud Area B do not contain any springs or stock water ponds. The amendment area would mine through upstream ephemeral reaches. No wetlands have been identified in the amendment area.</p> <p>East Fork Armells Creek (EFAC) is an ephemeral to intermittent stream that flows through the Rosebud Mine between Area B and Area C to the west, and Area A and Area B to the east. Rosebud Mine Area A, Area B, Area C, and the west part of Area D drain to EFAC. Most of the stream reach upstream of Area A is ephemeral. Short stretches of intermittent flow have been identified downstream. Some areas of intermittent flow support aquatic life. Discharges from Rosebud coal and McKay coal contribute locally to flow and alluvial recharge in EFAC.</p> <p>Stocker Creek is an ephemeral stream that drains the north parts of Rosebud Mine Area C and the northwest part of Area A, joining EFAC north of Colstrip. The proposed mining under AM4 will not affect water quality in Stocker Creek.</p> <p>The west and northwestern most parts of Rosebud Mine Area C drains to West Fork Armells Creek (WFAC). The proposed mining under AM4 will not affect water quality in the WFAC drainage,</p> <p>Cow Creek, South Fork Cow Creek and Pony Creek are ephemeral tributaries to Rosebud Creek and drain Rosebud Mine Area D and Area E. The proposed action will not affect water quality in the Cow Creek drainage basin.</p> <p>Spring Creek flows northeast from Rosebud Mine Area D. The proposed mining with AM4 is located away from Area D and will not affect the water quality in Spring Creek drainage.</p> <p>Lee Coulee is an ephemeral to intermittent stream that flows through Big Sky Mine Area B into Rosebud Creek. The proposed expansion of mining</p>

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in Rosebud Area B in AM4 will not affect the water quality in the Lee Coulee drainage. Spoil water from expanded mining in Area B under AM4 will not contribute to surface flow in Lee Coulee.

Potential impacts to surface water quality-narrative standards.

Expanded mining operations under AM4 is located along the southeast boundary of Area B and is removed from intermittent and perennial streams. It is not anticipated that expanded mining under AM4 will impact existing or designated uses for surface water governed by narrative standards.

In 2014, a second macroinvertebrate survey was conducted in a reach of EFAC that exhibits standing water. The sampling methodology differed from the methodologies used in the previous studies so that taxa richness may not be directly comparable. However, the survey demonstrated that a diverse community of macroinvertebrates was using the stream reach. Therefore, the intermittent reach of EFAC currently meets the narrative standard of providing a beneficial use for aquatic life.

In baseline samples, the sulfate thresholds for aquatic life in EFAC were exceeded published threshold for aquatic life. Macroinvertebrate communities in Eastern Montana are likely adapted to high sulfate water. Concentrations of chloride in the intermittent reach of EFAC have been measured above 100 mg/L which is greatly above normal background levels for creeks in this area. The current uses of the water in the vicinity of the intermittent reaches EFAC are for livestock, wildlife, and aquatic life. Further downstream on EFAC, the water is also used for irrigation. Because the stream still maintains its C-3 uses (primarily aquatic life, non-salmonid fishes, and agriculture) per ARM 17.30.629, the beneficial use of the stream for the most sensitive use is expected to be maintained. The proposed mine plan is designed not to contribute additional chloride to the stream because lignin sulfonate will be used on roads instead of magnesium chloride.

Baseflow in the intermittent reaches of EFAC is predicted to experience a postmine increase in TDS of 13%, elevating the average concentration of TDS to almost 2,600 mg/L. The increase in TDS comes from spoil replacing the Rosebud coal as a source feeding the alluvial groundwater which supplies baseflow to the stream. This increase will not occur until the spoil has resaturated and groundwater flows from the spoils to the alluvium of EFAC. The proposed action will increase the volume of spoils generated by the mine, and groundwater from the recharged spoils may

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	<p>ultimately become baseflow in the creek. The postmine water quality should continue to support livestock use, although the water quality in the stream may be diminished from premine quality. Western Energy Company will continue to periodically conduct macroinvertebrate surveys to monitor the vitality of both aquatic life and habitat available in EFAC. Surface water quality and quantity sampling will continue at SW-55 on EFAC. Because the creek should be able to support its designated beneficial uses, even when spoil water contributes to baseflow, the proposed mine plan is designed to prevent material damage. Postmine baseflow in EFAC by SW-55 will be influenced by spoil water quality, and the baseflow will have increased TDS, mainly in the form of increased sulfates.</p> <p>While changes to EFAC have been seen adjacent to the Rosebud Mine (areas A, B, and C), the magnitude and extent of surface mining impacts to EFAC downstream of mining (Colstrip and beyond) are difficult to quantify because of the contributions of additional industrial and municipal surface and groundwater water impacts in the Colstrip area. Because alluvial water connected to EFAC flows from EFAC to the Area B spoil backfill, proposed mining operations under amendment AM4 would not significantly increase anticipated hydrologic impacts to surface water resources within and adjacent to the mine area or downstream in EFAC.</p> <p>The operator would continue to monitor surface water resources surrounding proposed mining to determine quantity and quality characteristics during and after mining. If needed, the operator would be required to provide alternate water supplies to replace water supplies diminished in quantity or quality by mining activities.</p>
<p>3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?</p>	<p>[N] Proposed changes would not affect conditions anticipated in the original assessment and as observed during operation of the mine. Dust would be generated during the mining and reclamation operations; however, Western Energy must operate within the confines of the approved Air Quality Permit. The proposed amendment area is not directly influenced by the more stringent air quality requirements of a Class 1 air shed. The mined coal is destined to be combusted at a nearby power generation facility. Emissions from the coal combustion are regulated by that power generation facility's air quality permits which contain enforceable conditions for maintaining compliance with the Federal and State Clean Air Acts. There is no increase to the maximum potential emission levels from the power generation facility related to the combustion of this coal and it would be delivered using the same existing equipment and methods. Greenhouse gas emissions from that facility are regulated in accordance with current federal and state laws.</p>

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<p>4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?</p>	<p>[Y] An additional 146 acres would be disturbed. Vegetation communities would be removed and vegetation resources would be impacted in the short term. Reclamation commitments in the permit are designed to mitigate the vegetative community loss and provide for the approved postmine land uses of grazing and wildlife habitat. One reclamation commitment is for a PMT that approximates the premine condition. Changes proposed to the PMT would help mitigate impacts to vegetation because the changes would better approximate premine conditions.</p> <p>No threatened plants or vascular species of concern are known to inhabit the area.</p>
<p>5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?</p>	<p>[N] The proposed new disturbance would be adjacent to currently approved operations and would result in approximately 146 acres of additional disturbance into higher cover reserves. No impacts above those addressed in previous environmental assessments would be expected.</p> <p>There would be a short-term loss of habitat from initiation of soil salvage through mining and reclamation. Once the disturbed area is graded, soiled and seeded, vegetation would become established. While the initial vegetation would provide wildlife habitat, it would not be of the similar quality of the premine habitat. As the reclaimed vegetation becomes better established, vegetation diversity and structure would better approximate what was present premine. Shrubs and trees take longer to establish and grow to a size where they would provide the structural diversity found in premine shrub and tree habitats.</p> <p>The loss of structural diversity would affect nesting, roosting, and foraging habitat for a variety of avian species.</p> <p>Mitigations have been incorporated into the Fish and Wildlife Plan to minimize soil salvage during the nesting season. This would minimize impacts to nesting birds (e.g. loss/destroyed nests, loss of eggs, nestlings, adults, etc.). If raptor nests will be destroyed by mining, the proper permit will be obtained from the USFWS. Nests will be destroyed or moved outside of the normal nesting period.</p> <p>The proposed reclamation plan would provide suitable postmine habitats for the wildlife species currently utilizing Area B and the</p>

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	surround areas.
<p>6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?</p>	<p>[N] No known listed, threatened or endangered species or important habitat would be impacted by the proposed activities. Five species (Interior least tern, red knot, black-footed ferret and pallid sturgeon) are federally listed threatened, endangered, or candidate species in Rosebud County. The greater sage grouse, a species of state concern, has been observed during two years during the annual wildlife monitoring at the Rosebud Mine. Both observations were at Sharp-tailed Grouse Lek 20 and consisted of one male each year. The proposed mine expansion would have insignificant impact on sage-grouse as the area contains grasslands and mixed grass/shrublands. No extensive areas of sagebrush habitat is found within the proposed mine expansion. No impacts to the five listed species are expected as the area does not contain the appropriate habitats (e.g. river habitat for pallid sturgeon) or the habitats are considered marginal for a particular species (e.g. marginal grassland habitat for the Sprague’s pipit).</p> <p>Bald eagles may use the area for hunting and during migration; however, no concentration/roosting habitats or breeding territories have been identified within the Rosebud Mine area. Golden eagles are found throughout the year in the area of the Rosebud Mine; however, no nesting territories are located in or adjacent to the proposed expansion.</p>
<p>7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?</p>	<p>[N] The proposed amendment would result in no adverse effect upon the known cultural, archeological and paleontological resources, and the operator’s approved cultural resource memorandum of agreement (MOA) for Area B protects incidental discoveries. No changes in the Area B MOA are necessary and Western Energy accordingly remains in Section 106 compliance for Area B.</p>
<p>8. AESTHETICS: Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?</p>	<p>[N] Additional mining disturbance would be in a remote area and not located near prominent topographic features. The project area would not be visible from any designated scenic areas. The nearest community, Colstrip, Montana, is located approximately 1.5 air miles from the project area. No noise above that associated with ongoing operations would occur.</p>
<p>9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY: Will the project use resources that are limited in the area? Are there other activities</p>	<p>[N] The area to be included for mining is surrounded by active mining and reclamation operations. The project is not expected to create demands on limited resources. Coal from this mine area is used to fuel two of the four coal-fired power plants located in Colstrip. Lower quality coal from this mine area is also used to fuel a smaller coal-fired power plant north of Colstrip.</p>

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nearby that will affect the project?	
10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project?	[N] Other impacts to environmental resources are not anticipated.

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11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	[N] Heavy equipment, trucks, loaders, and blasting would create hazards; however, the operator must comply with all MSHA and OSHA regulations. The operator currently utilizes proper precautions to enhance safety and would continue in the best interest of its employees. Public access would be controlled by the operator. The proposed operation would not add or reduce the affects to human health or safety.
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	[N] The project would add an additional 12.1 million tons to the minable reserve base. At current rates of consumption, the additional mining would extend the life of the Area B permit by approximately three years. Historically, the area within the permit area and the expanded mine area was pastureland, grazing land, and wildlife habitat. The final reclamation plan is designed to return the area to its previous use, with equal to or greater vegetation production than pre-mining. There would, however, be a short-term loss of vegetative production during mining and reclamation of the proposed additional area. There is no alluvial valley floors associated with this revision.
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	[N] The proposal is not expected to create new jobs; however, if permitted the additional mining would continue jobs presently in place for a longer period of time.
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	[Y] The project would create added coal severance tax revenue due to additional coal recovery. The proposed project should not eliminate any tax revenues. It is expected that the mine would sustain production at current levels or at a somewhat increased level and not change the state or local tax base resulting from mine production.

IMPACTS ON THE HUMAN POPULATION

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<p>15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?</p>	<p>[N] No changes would occur as a result of the proposed action.</p>
<p>16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?</p>	<p>[N] No locally adopted environmental plans and goals would change as a result of the proposed action.</p>
<p>17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?</p>	<p>[N] The proposed mine area is not located in or adjacent to any wilderness or recreational areas. Recreation potential within the site is limited due to current operations.</p>
<p>18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?</p>	<p>[N] The project is not expected to significantly affect local populations. Neither population increase nor residential decrease would be incurred by approving the project</p>
<p>19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?</p>	<p>[N] Disruption of lifestyles is not expected since there is minimal human activity within or near the proposed project area. State Highway #39 passes within visual observation of the proposed mining. No changes from currently approved operations would occur.</p>
<p>20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?</p>	<p>[N]</p>
<p>21. PRIVATE PROPERTY IMPACTS: Are we regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and</p>	<p>[N]</p>

IMPACTS ON THE HUMAN POPULATION	
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the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required.	
22. PRIVATE PROPERTY IMPACTS: Does the proposed regulatory action restrict the use of the regulated person's private property? If not, no further analysis is required.	[N]
23. PRIVATE PROPERTY IMPACTS: Does the agency have legal discretion to impose or not impose the proposed restriction or discretion as to how the restriction will be imposed? If not, no further analysis is required. If so, the agency must determine if there are alternatives that would reduce, minimize or eliminate the restriction on the use of private property, and analyze such alternatives.	[Y] DEQ has a level of discretion in its permitting decisions.
24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	[N] No other social and economic circumstances would be expected.

25. Alternatives Considered:

- a) No Action: Under the "No Action" alternative, DEQ would deny approval of additional mining. This alternative would decrease the amount of disturbance, decrease the amount of coal produced and thereby, shorten the potential life of the mine by limiting development to the currently approved mine area. Additional mining would not be conducted. The mineral owners and mine operator would not utilize the resource. The potential use of this coal reserve would not be realized.
- b) Approval: If approved, an estimated 12,100,000 tons of recoverable coal would be added to the mine plan and extend the life of the Area B permit by approximately three years. An additional 146 acres of surface area and 306 acres of coal aquifer would be affected by mining.

- c) Approval with Modification: DEQ found no need to modify the proposed revision from what was presented in the amendment application.

26. Public Involvement: Availability of this Environmental Assessment was published in:

The availability of the EA was included in the Acceptability Notice, anticipated to be published in the Billings Gazette on July 10 and 17.

27. Other Governmental Agencies with Jurisdiction: Other agencies with jurisdiction include Office of Surface Mining Reclamation and Enforcement, Bureau of Land Management, US Fish and Wildlife Service, Montana Fish, Wildlife and Parks, Montana Department of Natural Resources, and Rosebud County.

28. Magnitude and Significance of Potential Impacts: The magnitude of impacts would be small given the size of additional disturbance. Potential impacts would be insignificant given requirements for reclamation of all disturbances and the reclamation performance bond.

29. Cumulative Effects: None

Recommendation for Further Environmental Analysis:

- EIS
- More Detailed EA
- No Further Analysis

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