

## ENVIRONMENTAL ASSESSMENT

On an Application for an

### OPENCUT MINING PERMIT or AMENDMENT

This Environmental Assessment (EA) is required under the Montana Environmental Policy Act (MEPA). An EA functions to identify, disclose, and analyze the impacts of a proposed action. This document may disclose impacts that have no legislatively required mitigation measures, or over which there is no regulatory authority.

The state law that regulates gravel mining operations in Montana is the Opencut Mining Act. This law and the rules adopted hereunder place operational guidance and limitations on a project during its lifetime, and provides for the reclamation of land affected by opencut mining operations.

Local governments and other state agencies may have authority over different resources and activities under their regulations. Approval or denial of this Opencut Application will be based on a determination of whether or not the proposed operation complies with the Opencut Mining Act and the Rules adopted hereunder.

**Applicant:** Baker/MO Services, Inc.

**SITE NAME:** Jim and Tom Temple

**LOCATION:** Sections 26, 27, and 34 T18N, R56E

**COUNTY:** Dawson

**DATE:** June 4, 2009

**PROPOSAL:** Baker/MO Services intends to mine and crush 1.6 million cubic yards of gravel in 2 phases from a 106-acre site. The property is along the south side of Highway 16 about 15.5 miles north of Glendive. Phase I mining would begin at the south end of the site in sections 27 and 34, and then proceed to the north across section 34.

The site would be reclaimed to rangeland by 2014. The Phase I bond on 36 acres of disturbance is \$86,482.

This application contains all items required by the Opencut Act and Rules. Proponent commits to properly conducting opencut operations and would be legally bound by his permit.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
<b>1. TOPOGRAPHY, GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:</b>	<p>The site is on the second bench above the Yellowstone River which is almost 1 mile to the south. The site slopes about 100 vertical feet over one third of a mile toward the first bench above the river. Thirteen Mile Creek is just to the west of the site.</p> <p>Soil is very thin and rocky, averaging only a few inches deep.</p> <p><i>Impacts:</i> Irreversible and irretrievable removal of gravel from the site. It would be difficult to salvage the soil because it is so thin and rocky, but it should be capable of supporting replacement vegetation.</p> <p>There are no unusual topographic, geologic, or special reclamation considerations that would lead to reclamation failure.</p>
<b>2. WATER QUALITY, QUANTITY AND DISTRIBUTION</b>	<p>The Yellowstone River is almost a mile to the south and between 60 and 200 feet in elevation below the site. Thirteen Mile Creek is to the west and between 160 and 60 feet below the site.</p> <p>The groundwater is about 80 feet below the lower elevation of the site. Mining would remove about 10 feet from the surface. No springs are visible on site.</p> <p>An existing stock well by the landowner's corrals would be use as the</p>

<b>IMPACTS ON THE PHYSICAL ENVIRONMENT</b>	
<b>RESOURCE</b>	<b>POTENTIAL IMPACTS AND MITIGATION MEASURES</b>
	<p>water source. The only water uses would be for dust control and crusher water bars.</p> <p><i>Impacts:</i> The applicant has applied for a stormwater permit. The proposed activities would have a minimal effect on the quantity and quality of the surface and groundwater resources.</p>
<b>3. AIR QUALITY</b>	<p>Air quality standards are based upon the Clean Air Act of Montana and pursuant rules and is administered by the DEQ Air Resources Management Bureau. Its program is approved by the Environmental Protection Agency (EPA). These rules and standards are designed to be protective of human health and the environment.</p> <p>Air quality permits would be required on the processing equipment before installment. Machinery, such as generators, crushers and asphalt plants, are individually permitted for allowable emissions. Best Available Control Technology (BACT) is the usual standard applied.</p> <p>Fugitive dust is that which blows off the pit floor, stockpiles, gravel roads, farm fields, etc. It is considered to be a nuisance but not harmful to health.</p> <p><i>Impacts:</i> Air quality standards as set by the federal government and enforced by the ARMB would allow minimal detrimental air impacts.</p>
<b>4. VEGETATION COVER, QUANTITY AND QUALITY</b>	<p>Vegetation is sparse, consisting of ground juniper, sagebrush, yucca, prickly pear cactus, and mixed grasses. Average precipitation is about 15 inches in the area.</p> <p><i>Impacts:</i> Impacts to vegetation would be nominal. Precipitation is good, but because of the thin soils revegetation to grasses might require more that one or two years to reestablish.</p>
<b>5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:</b>	<p>The area is used primarily for rangeland. It supports populations of deer, rodents, song birds, coyotes, and various other animal species. Population numbers for these species are not known.</p> <p><i>Impacts:</i> The proposed mine is expected to temporarily displace some individual species and it is likely that the site would be re-inhabited following reclamation to similar habitat.</p>
<b>6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:</b>	<p>There are 10 species listed for the vicinity of the site, all of which except the bald eagle and a mayfly, are aquatic. There is no aquatic or riparian habitat on site.</p> <p><i>Impacts:</i> None of the listed species have been found on this site. Even if suitable habitat did exist on this site, the disturbance area would be small and large areas of similar or identical habitat surrounds the site. The possible impact to these species would be minimal.</p>
<b>7. HISTORICAL AND ARCHAEOLOGICAL SITES</b>	<p>The Montana State Historic Preservation Office was supplied with the application materials. It reported no sites have been discovered previously on this property. A pedestrian survey of the area by DEQ personnel did not reveal any artifacts or signs of occupation. No signs were evident at depth in the previously disturbed area.</p> <p><i>Impacts:</i> If during operations resources were to be discovered, activities would be temporarily moved to another area or halted until SHPO was contacted and the importance of the resources was</p>

<b>IMPACTS ON THE PHYSICAL ENVIRONMENT</b>	
<b>RESOURCE</b>	<b>POTENTIAL IMPACTS AND MITIGATION MEASURES</b>
	determined.
<b>8. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY</b>	<i>Impacts:</i> Negligible impacts to land, water, air, or energy would occur.

<b>IMPACTS ON THE HUMAN POPULATION</b>	
<b>RESOURCE</b>	<b>POTENTIAL IMPACTS AND MITIGATION MEASURES</b>
<b>9. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS</b>	There are no special, local plans in this area.
<b>10. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING</b>	As seen on the aerial photo of the surrounding area, this is a rural, sparsely populated area. <i>Impact:</i> There would be negligible impacts to surrounding residences.
<b>11. AESTHETICS</b>	The landowner is the only nearby resident. <i>Impacts:</i> There is no need for reduced hours of operation, noise berms, or other mitigation for aesthetics.
<b>12. QUANTITY/ DISTRIBUTION OF EMPLOYMENT</b>	<i>Impacts:</i> New employment opportunities would be limited. This is a relatively short term operation.
<b>13. INDUSTRIAL, COMMERCIAL, AGRICULTURAL ACTIVITIES AND PRODUCTION</b>	Range production is very light on this site – less than half ton per acre. <i>Impacts:</i> Agricultural production would be reduced on the site for the life of the permit.
<b>14. LOCAL, STATE TAX BASE AND TAX REVENUES, PERSONAL AND COMMUNITY INCOME</b>	Local, state and federal governments would be responsible for appraising the property, setting tax rates, collecting taxes, etc., from the companies, employees, or landowners benefitting from this operation. Following reclamation, it is assumed the tax base would revert to pre-mine levels.
<b>15. DEMAND FOR GOVERNMENT SERVICES</b>	<i>Impacts:</i> The increase in truck traffic on Highway 16 would not require any change in government services.
<b>16. HUMAN HEALTH AND SAFETY</b>	Any industrial activity will increase the opportunities for accidental injury. There are agencies that require specific safety measures are in place. If followed there is no reason to believe that significant safety issues would be present.
<b>17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES</b>	This activity would not inhibit the use of the identified resources.

**18. Alternatives Considered:**

- A. Denial Alternative: The Department would deny an application that does not comply with the Act and Rules. No impacts to the natural or human environment would occur.
- B. Proposed Action Alternative

